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GYMNASTS AND GYMNASTICS.

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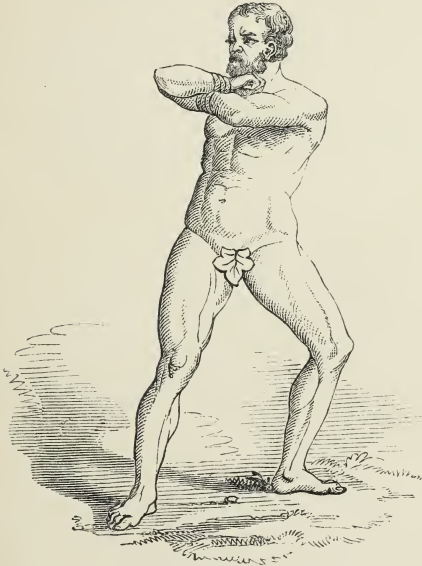
HERCULES

GYMNASTS AND GYMNASTICS.

BY

JOHN H. HOWARD,

Author of 'Athletic and Gymnastic Exercises': late Professor of Gymnastics,
Commercial College, Ripponden, Halifax, Yorkshire.




Samson bursting his bonds.

SECOND EDITION, REVISED AND ENLARGED,

WITH NUMEROUS SELECTIONS FROM THE BEST AUTHORS, CONTAINING 455 EXERCISES,
AND ILLUSTRATED WITH 135 ENGRAVINGS, INCLUDING THE MOST
RECENT IMPROVEMENTS IN THE DIFFERENT APPARATUS
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PREFACE

TO

THE SECOND EDITION.



SUCH IS THE RAPID ADVANCE which has been made in Gymnastics since the first issue of this work, and with it a desire of further increase in the number of the Exercises to be achieved on the different apparatus by the athletes of the present day, that any attempt to lay before the public a series of Exercises on this now essential branch of education, must be received with eagerness; for it is well known that the desire of further knowledge is as great in the Gymnasium as in the schoolroom or college, if not greater, and where that longing after new Exercises exists, whereby the whole system is wonderfully improved, that want must in some way or other be supplied.

In the present edition the number of Exercises has not only been increased threefold, but the whole of the former edition has been thoroughly revised and corrected, and in many instances entirely rewritten, and

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though some few have been expunged, they having been deemed of too dangerous a character, it will be found that they have been replaced by those of greater value to the Gymnast; whilst, on the other hand, the Exercises themselves have been so arranged, that the embryo Gymnast may begin at the beginning, and, by following the order in which they have been arranged under the heads of the several apparatus, gradually learn and practise those which are more difficult, without having to go from one Exercise to another. The most simple Exercises are placed first, and consequently each succeeding one is more difficult to achieve than its predecessor, in accordance with the required position of the body, or the nature of the Exercise to be performed.

Having for the past three years been intimately connected with many of the leading Gymnasts in Manchester and the neighbouring towns, both in connection with their clubs and the athletic festivals now held annually, at two of which I have acted as judge and referee, I am enabled to present to the public at large the result of my experience, viz. additional Exercises, many of which are quite new. In addition to which, a copious description of each apparatus is prefixed to each series of Exercises, the whole being engraved from photographs of the most recent improvements in the manufacturing and arranging of the same, and now in use in the various clubs and military schools. When last in London I availed myself of the opportunity to visit the Gymnastic Apparatus Manufactory of

Messrs. Snoxell and Spencer, and feel convinced, from the numerous specimens of the various apparatus I saw there in the process of being manufactured, and from those ready for immediate use, that the quality of the materials with which they are made cannot be surpassed.

Therefore, from the foregoing remarks, the author hopes that the time he has devoted to the enlargement and improvement of this edition will not be as 'chaff before the wind;' but that it will be sown as seed on good ground, some, if not all, of the Exercises herein contained yielding good and beneficial results to all who now form the ATHLETIC SCHOOL OF ENGLAND.

MANCHESTER :
November 1, 1867.

P R E F A C E

TO

T H E F I R S T E D I T I O N .

IN PRESENTING the following collection of Exercises to the public, I have much pleasure in stating that the whole of them have been performed by myself and pupils, and are, consequently, within the capacity of any who may deem them worthy of their time and attention.

Were I to have attempted to describe every feat which is capable of being performed, I fear I should tire many of the youthful aspirants to these recreative exercises ; nevertheless, I have selected such as, I sincerely trust, will give the greatest satisfaction ; and I am of opinion that any student of the Gymnasium who may enter upon the simplest of the following, will not rest contented until he has accomplished the most difficult, and will thus be enabled to outstrip the whole of his companions.

When the young Gymnast has achieved the whole of the following Exercises, he need never fear to venture upon any other kind of athletic exercise which may be proposed for his performance.

In France and Belgium Gymnastic Exercises form a part of the education of youth, and happy is he who succeeds in achieving any one feat which leaves him sole master of the Gymnasium.

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GYMNASTS AND GYMNASTICS.



INTRODUCTION.

GAMES of every description formed a most important part of the national events of the ancient Greeks and Romans. The principal of the four games publicly solemnised in Greece were the Olympic; but games of different kinds were exercised by the early Romans, which consisted of chariot and horse-racing, combats, and theatrical sports. They likewise exercised themselves before bathing in leaping, running, throwing the javelin, quoit, &c.

The athletic exercises practised among these nations consisted of wrestling, boxing, and other such exercises, requiring great strength. Prizes were given to those who came off victors, likewise many privileges were granted to them.

The Olympic Games, the chief of the festivals of the Greeks, were celebrated every fifth year, and consisted of religious ceremonies, athletic contests, and races.

Under the emperors of ancient Rome places were built in which the Romans were to perform athletic exercises. These places were called Gymnasia, but they

were imitations of those buildings erected by the Spartans, the inhabitants of Sparta, the capital of the mountainous country in Greece, and bounded by the Messenian, Laconian, and Argolic Gulfs.

The word gymnastic is derived from a Greek word signifying *naked*, it being customary among the Greeks to strip themselves of the whole or a part of their clothes before engaging in any of the athletic feats.

As early as the time of Plato gymnastic was made a part of medicine, for the purpose of counteracting the sad effects of luxury and indolence, which at that time were greatly increasing, and after it was reduced to a complete system officers were appointed by the State to superintend the performances in the gymnasia built for that purpose; the chief officer being termed a GYMNASIARCH.

The immediate effects of gymnastic exercises is an increase, both in size and power, of the parts exercised, and that in proportion to the amount of exertion made use of; so the part increases not only in strength, but also in size. When a person engages in a certain avocation which requires an amount of muscular exertion, he not only improves in strength, expertness, and dexterity, but the muscles are brought into unusual action, which causes them rapidly to increase in size and vigour; whilst the rest of the body, which has not been so much exerted, will be found to lack that which the muscles have gained. Therefore it must be evident that, if the whole body be exerted and brought into action as near as possible at the same time, and for the same length of time, the amount of additional strength gained will be distributed all over the body alike. Still,

if the body be not over-fatigued, all the other parts of the body sympathise with the improving condition of that part which is chiefly exercised, the circulation acquires new vigour, and all the functions are carried on with increased activity, owing to the blood being thrown into all the parts with unusual force.

Besides, by exercising the body as just described, the mind is made capable of enduring a more prolonged application to the various and necessary branches of education. If a person, who for the greater part of the day is confined to an office, finds his health declining, he is sure to be recommended more bodily exercise to relieve the over-burdened state of the mind. Yet excessive exercise produces very nearly the same injurious results as inactivity, and should therefore be carefully avoided. But if gymnastics formed a part of the education of youth, the health of the young, of whichever sex they might be, would be greatly benefited; for every school or place of learning should have the means at hand by which youth may, after the mental labours of the day are over, exercise themselves to give that exertion to their bodies which would be acknowledged by all who took advantage of those means, having given them sufficient proof that health in after life is owing greatly to the active exertions in which they were engaged in earlier days.

Gymnastics should be taught by the master, and practised by the pupil, as combining amusement and education with the best means of obtaining bodily strength and activity; for gymnastics exercise on the mind as well as on the body, thereby securing beneficial influences to both.

Mr. Long, M.D., writes,—‘I wish to say a few words to “whom it may concern,” on the use of the swing—one of the gymnastic exercises—as a preventative and cure of pulmonary disease. I mean the suspending of the body by the hands, by means of a rope or chain fastened to a beam at one end, and to the other a stick of three feet long, convenient to grasp with the hands. The rope should be fastened to the centre of the stick, which should hang six or eight inches above the head.

‘Let a person grasp this stick, with the hands about two feet and a half apart, and swing very moderately at first, and gradually increase as the muscles gain strength from the exercise, until it may be freely used three or four times a day.

‘The connection of the arms with the body (with the exception of the clavicle with the sternum or breast-bone) being a muscular attachment to the ribs, the effect of this exercise is to elevate the ribs and enlarge the chest; and, as nature allows no vacuum, the lungs expand to fill up the cavity, increasing the volume of air—the natural purifier of the blood—and preventing the congestion or deposit of tuberculous matter.

‘I have prescribed,’ says he, ‘the above for all cases of hæmorrhage of the lungs and threatened consumption for thirty-five years, and have been able to increase the measure of the chest from two to four inches within a few months, and always with good results. But especially as a preventative I would recommend this exercise.

‘Let those who love life cultivate a well-formed, capacious chest. The student, the merchant, the sedentary, the young of both sexes—aye all, should have a swing

upon which to stretch themselves daily ; and I am morally certain that if this were to be practised by the rising generation, in a dress allowing a free and full development of the body, thousands, yes, tens of thousands, would be saved from the ravages of that *opprobrium medicorum*, consumption.'

From the above it will be seen, that by using such a simple apparatus as a swing, strength and health are ensured. What, therefore, must be the benefit to be derived from the daily practice of various other exercises upon differently constructed apparatus ! As various as are the different apparatus and the numerous exercises to be accomplished on them, so must the benefits be increased in due proportion—is the answer that ought to be given by everyone.

Then cultivate the strength of the body as well as the mind, and let both grow together, and the boy will make a better man, in every respect, than the boy whose mind only was thought of. There is an old saying, and a very true one it is,—

All work and no play
Will make Jack a dull boy ;

and chances are against him, if a certain time every day be not allotted to him for recreative exercise of some sort or other, that he will not arrive at mature years. Can anyone, when the body is indisposed, take his place or position in life with as good a will as when the body is in possession of its full health and strength ? I answer, No !

It must be remembered, that the muscles in the arms and legs do not alone constitute a strong man, for, to be

so, his strength must be equally distributed all over his body, from his head to his toes alike, including the knees, hips, spine, wrists, shoulders, &c., &c.

THE GYMNASIUM.

To give a correct method of arranging the several necessary apparatus in a gymnasium would be an utter impossibility, as gymnasiums differ so much in size and shape; and then again, so many more different or additional apparatus are required in some gymnasiums than in others, that unless the size of the building or room to be used as such were known, no definite arrangement could be decided upon. The three essentials for a gymnasium are LENGTH, BREADTH, and HEIGHT, not because all rooms are of that shape, but because the relative sizes of the apparatus, and the different manner of fixing them, require those dimensions to be of such proportions, that no one apparatus shall be in so great a proximity with its neighbour, as to be at all in the way of a gymnast practising on the latter; consequently, no room used by a club should be less than 40 feet long, by 25 feet broad, and from 16 feet high. The Liverpool Gymnasium measures $105 \times 75 \times 60$, and a noble building it is.

Having a suitable place for a gymnasium, the next thing is to construct and arrange the several apparatus, such as is selected to be therein fixed; and this requires as much, if not more attention than the building itself. The following list will serve as a guide to show what apparatus are now in use in the several clubs in the United Kingdom and on the Continent.

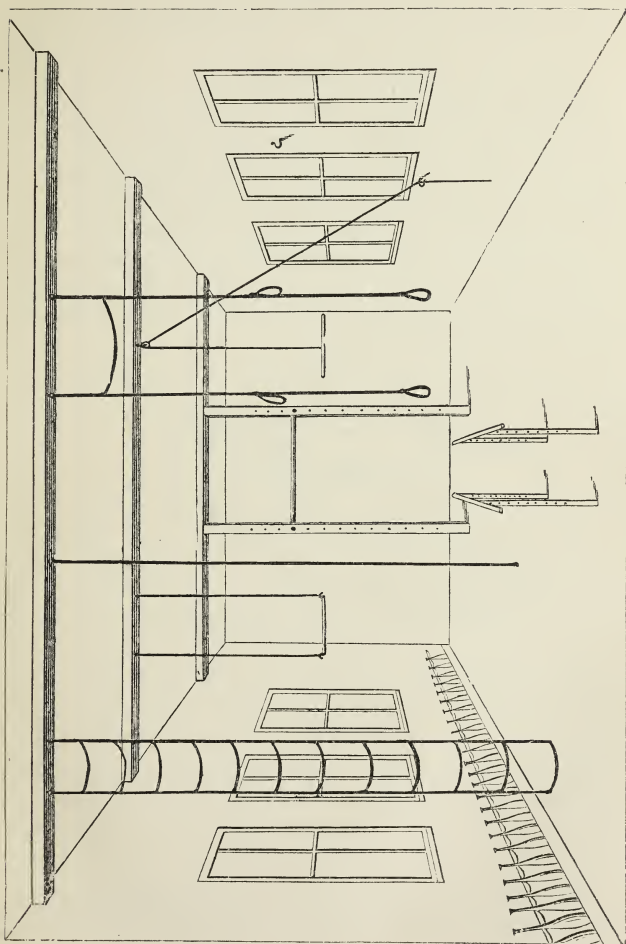
- Horizontal bar, with bar to shift up and down (see pages 17 to 25).
- Parallel bars (see page 118).
- Hand rings, with ropes complete (see page 175).
- Trapeze bar, with ropes, &c. complete (see page 202).
- Vaulting horse, 6 ft. long (see page 219).
- Short ditto, 4 ft. long (see page 219).
- Buck, 2 ft. long (see page 223).
- Giant stride: if the height of the building will admit of its being fixed in the centre of the ceiling, no pole will be required; but if out of doors, with a pole (see page 281).
- The chest machines (see page 286).
- The gymnastic wheel.
- The gymnastic see-saw ladder or swing (see page 289).
- Ladders to be fixed perpendicularly (see page 264); horizontally (see page 265); or obliquely (see page 269).
- Storming board and stand complete (see page 293).
- Jumping stands (see page 298).
- Pole leaping ditto (see page 299).
- Ropes of different makes (see pages 255 to 260).
- Poles, plain and sparred (see pages 260 to 263).
- Planks, plain and sparred (see pages 275 to 278).
- Clubs and dumb bells (see pages 11 to 14).
- Bar bells (see page 14).
- Round cast shot.
- Jumping pole.
- Sets of boxing gloves.
- Pairs of foils, with viziers, leather jackets, &c.
- Belts and lungers (see page 10), &c., &c.

Now, supposing a good selection to be made from the above list, we will proceed to arrange them. Assigning the best places to the horizontal and parallel bars, we arrange the clubs, dumb bells, &c., round the room, either leaning against or on the walls themselves, placing a gymnometer or chest machine, containing one or more of the numerous movements, here and there where space will admit, and if made like a pillar, it will greatly add to the appearance of the place. The trapeze and rings should be suspended from a cross beam, one on either side of the room, to swing lengthwise; but if placed at

the end, they will then swing across the room ; if space will not admit of both being hung at once, the same pair of hooks may serve for them, or the two pairs of hooks can be placed close together, when the one not in use may be raised, by means of a small pulley, up to the ceiling, and out its full length. The climbing apparatus should be arranged in two rows lengthwise of the room, but here and there will do, if space will not admit of its being done otherwise. The ladders, planks, &c., whether horizontal or oblique, may lean against the wall or a beam in any part of the room. The horse is generally put *anywhere* out of the way when not required, but it generally has an out-of-the-way place assigned to it. Let it now be supposed that the whole is arranged to the complete satisfaction of every one, and that sufficient room is left between each apparatus to admit of an exercise being done on all, or nearly so, by several gymnasts at the same time. If the floor, or a portion of it where required, be not covered with sawdust or tan, two or three strong straw mattresses, or, if preferred, thick wool ones, should be at hand for the use of any gymnasts when needed. They should be six feet square, or perhaps 6×8 would be a better size ; they can then be placed lengthwise, and should a gymnast chance to fall upon one, he cannot by fair means hurt himself in so doing.

The arrangement of the apparatus in the accompanying cut (fig. 1) is merely inserted to give an idea of the space required, though but seven apparatus are fixed or hanging in the room, which is of small dimensions ; but it is hoped that the foregoing remarks, and the descriptions of each apparatus hereafter given (see list of

FIG. 1.



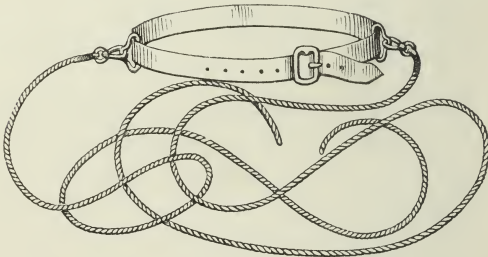
INTERIOR OF A GYMNASIUM

contents), will be found sufficiently explicit to enable any one to arrange their own with very little trouble.

THE LUNGERS.*

REMARKS.—This is an article of which there should be some two or three in every gymnasium, and be constantly used by gymnasts, especially by beginners, whenever any fear is entertained of being unable to go through any exercise without help of some kind. Its use is clearly evident, and no one, once knowing its utility from practical experience, would abandon it when he could get the use of one.

FIG. 2.



DESCRIPTION.—The lungers is composed of a strong leather belt or strap, about $1\frac{1}{4}$ or $1\frac{1}{2}$ inch wide, with a strong buckle wherewith to fasten it round the waist of the gymnast : two metal fastenings or swivels are fastened to the sides of the belt (see fig. 2), to which two ropes, about $\frac{5}{8}$ of an inch in diameter and 4 feet long, are fixed.

* The price of the lungers, 7s. 6d., places them within the reach of every gymnast, and no one should be without them. (See p. 82.)

The strap being adjusted round the waist of the gymnast, two assistants, each taking hold of a rope, stand, one on either side of him ; and, no matter what exercise he is about to try—be it a somersault, in the achieving of which he may fall upon his head, or any exercise on any apparatus—he need be under no fear of any mishap, for, should a slip occur, all that the assistants have to do, they having had their eyes fixed upon him all the time, is quickly to pull the rope firmly upwards, and he is safe. The assistants, knowing well the responsibility of the task imposed upon them, are bound to keep their attention fixed upon your movements and act according to your requirements, be it as above stated, or to let you take your course, whereby you have gained confidence and the exercise is achieved.

INDIAN CLUBS.

This branch of gymnastics being one strongly recommended to all classes of society, it is the intention of the author to issue a separate work thereon, as in using the clubs the chest is expanded, greater freedom is given in the use of the arms, the muscles of the legs and arms, as well as those of the whole body, are brought into full use, the wrist is strengthened, the grasp of the hand is made firmer, the circulation of the blood is regulated, and moreover, the health in general is greatly improved.

These clubs are intended to give such freedom to the limbs as it is reported the Indians have in using their war-clubs or hatchets (tomahawks), although they differ somewhat in shape and use (fig. 3). One of the shapes is shown in fig. 4. Some have flat bottoms to enable them

to be stood on end, while others have nearly straight sides, with shoulders to them to form the handles. The illustration (page 13) represents the largest and smallest sizes, there being at least seven different sizes between these two, making nine sizes in all.

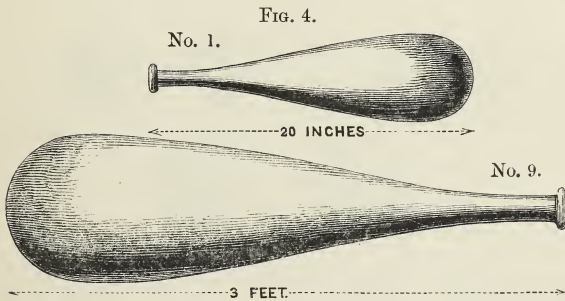
FIG. 3.



As these clubs increase in length they increase in diameter at the bottom, and weight also. The following table will serve as a guide to their respective sizes; the weights will depend upon the kind of wood used, and many judge them by their weight only.

No.	Length in inches	Diameter in inches	Weight in lbs. each	No.	Length in inches	Diameter in inches	Weight in lbs. each
1	20	3½	6	6	30	6½	17
2	22	4	8	7	32	6¾	20
3	24	4½	10	8	34	7	23
4	26	5	12	9	36	8	26
5	28	5½	14				

Two clubs must be made of each size, and each fellow in size should be as nearly as possible of the same weight as the other.* They are usually made of hard wood, to



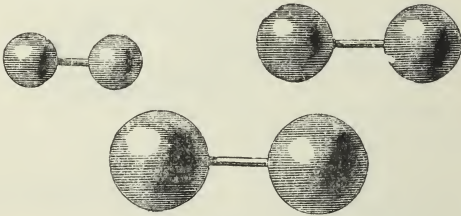
withstand any accidental blow, for it will frequently happen that they will be brought in contact one against the other, especially by beginners. Again, it is for their weight that they are used; were it not for that, the using of them would not have the required effect.

* Indian clubs are generally sold by the weight; those supplied by Snoxell and Spencer, 35, Old Street, London, and which they turn to any design, are 9*d.* per pound.

DUMB-BELLS.—BAR-BELLS.

These are likewise much used in gymnasiums, and will be dwelt upon at greater length in the author's future work, specially devoted to the subjects of this and the previous articles. Dumb-bells are heavy pieces of metal, like two round shots, joined together by a piece of round metal a few inches apart. They are used in pairs like the clubs, consequently the weight must be the same in each pair; the weight varies from two to fifty-six pounds or more (see fig. 5, which represents

FIG. 5.



three different sizes). The movements in using the dumb-bells are very similar to those of the clubs, but those of the larger ones are merely lifted from the ground and carried over the head, and a few such like simple movements.*

The bar-bell† consists of two round solid pieces of

* Price of dumb-bells, $2\frac{1}{2}d.$ per lb., or, with handles covered with leather, $2\frac{3}{4}d.$ per lb.

† Price of bar-bells, $3\frac{1}{2}d.$ per lb., or, with handles covered with leather, $4\frac{1}{2}d.$ per lb.

metal, like the dumb-bells, but the bar that joins them is much longer (see fig. 6), and it is used singly, the movements being totally different to the preceding.

FIG. 6.



For ladies and children they are made of wood, though the exercises are the same. Numerous exercises will be given in the author's future work.

DRESS.

According to the derivation of the word gymnastic, which, as is before stated, means naked, so should the gymnast be, or nearly so, when performing any athletic exercise; for, as a greater amount of strength is required, more room will be necessary in the clothes he may at the time wear, for him to exercise that strength; therefore a pair of flannel trousers, made rather tight round the waist, or kept in their place by means of a strong leather belt, fastened with a strong buckle, an ordinary flannel vest, with long or short sleeves (the former looks the neater), and light white cloth boots without heels, would be the most suitable. When competing or practising out of doors, a cap similar to those worn by cricketers should be worn, and a flannel jacket, or other kind of coat, should be at hand, to put on after performing any exercise, more especially if warm; and, above all, avoid standing in a draught, but allow the body to cool gradually.

In contests and festivals, gymnasts dress in colours, such as—

A blue, red, or striped shirt.

Blue stripes down the sides of the trousers.

Knickerbockers instead of trousers.

A coloured sash worn round the waist, or else over one shoulder and fixed at the side.

A white Maltese cross on a coloured shirt, front or back, or both.

A blue or red Maltese cross on a white shirt.

A coloured cap.

All blue or any other colour throughout.

Coloured trimmings.

Coloured belts, &c., &c., &c.

And, like jockeys at races, the gymnasts in their various dresses sometimes present a very lively appearance, especially if their left breast, or perhaps both left and right, as is the case with some few lucky gymnasts in the north of England, be covered with well-earned medals, silver and bronze, and, here and there, a champion GOLD medal.

THE HORIZONTAL BAR.

Remarks.—This being the most simple, and without exaggeration it may be said, the most useful of all apparatus in a gymnasium, it is placed first in order. Its strength and adaptability to being raised or lowered, as the nature of the exercises, or the age of the gymnast requires, makes it the most varied and attractive; varied, because no one part of the body is at a stand-still, the chief parts exercised, and which, moreover, derive the greatest benefit, are the muscles of the arms, wrists, hands, chest, spine, loins, hips, legs, abdomen, &c.; men increase very much round the chest, and likewise in their weight, and their muscles enlarge and harden; and attractive, from the number and variety of the exercises capable of being accomplished thereon. One celebrated author and gymnast, in writing on the subject, states that ‘It is not necessary to describe these movements,’ alluding to the preliminary exercises, ‘as any one, without instruction, can place himself under a bar and pull himself up by his hands any number of times he chooses.’ Now, were such true, we should have many more clever gymnasts than we already have, for, in my opinion, the example set in the above extract is one of the most difficult to a beginner, and to a skilful gymnast, if he is to reckon the ‘number of times he chooses.’ I therefore deem it advisable to treat largely

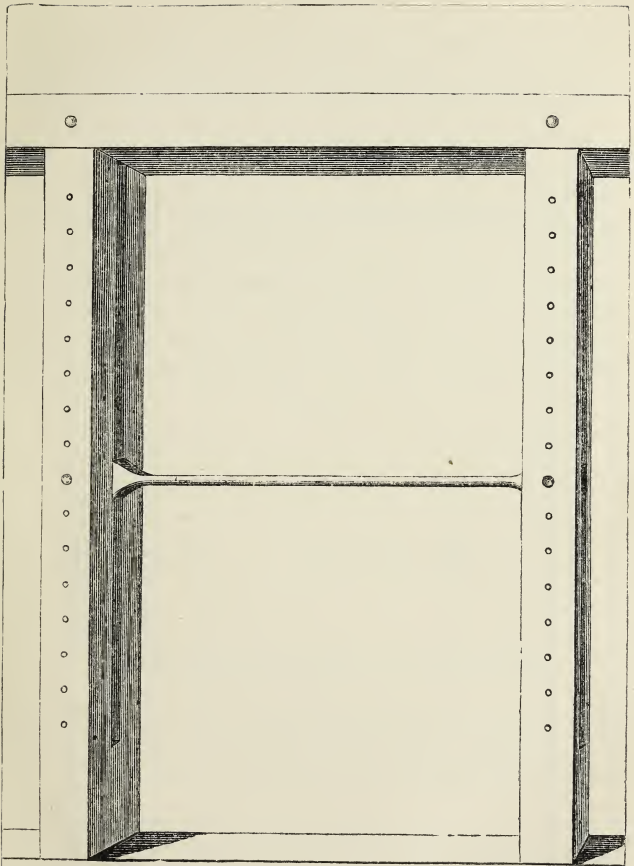
on preliminary exercises, and there are many so-called gymnasts, who could not go through, perhaps, any of the more simple exercises in a manner that may be said to have been properly done: they aim at 'something showy,' not useful. Again, the same author errs greatly in saying that 'it is not necessary to have an instructor standing by, looking on,' in alluding to the same subject. Where is the gymnast who had *no* instruction in the preliminary exercises, and who could undergo a thorough examination as to whether he was entitled to the name of GYMNAST? It is at the commencement that instruction is required, and if there is to be no instructor, and no book containing his first lessons, how is he to get on?

DESCRIPTION OF APPARATUS.—Gymnastic apparatus, since our early experience, has been of the most clumsy construction, and that is the principal reason why the practice of Gymnastics is so much neglected in England as compared with Continental nations. We have only to look at the apparatus erected in some of our public parks, and we shall find horizontal bars two and a half inches in diameter, which renders it almost impossible for anyone to perform even the most simple exercise with ease and safety. Besides, clumsiness of construction likewise destroys that amount of confidence so essential to a beginner in the enjoyment of this the most healthy and manly of exercises. Why have gymnastic feats been often considered as dangerous? Simply because of this mal-proportioned apparatus, they are not only unsafe to practise upon, but it is very likely that nothing worth describing will be ever learnt upon them.

The horizontal bar is manufactured in various ways.

The *first*, which may be made at home, without the

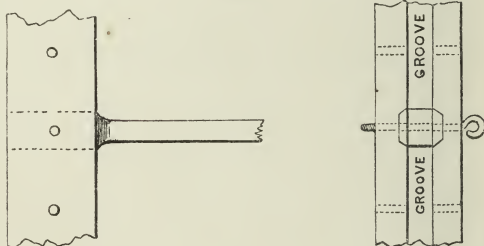
FIG. 7.



HORIZONTAL BAR.

aid of a workman, is very simple in its construction, and consists of two uprights about six inches by eight inches on its sides, and about fourteen feet long, having a groove an inch and a quarter wide cut in the widest part to within three or four feet of the ground, in which the bar is to slide. These posts must be firmly fixed, six feet apart, to the floor, at the bottom, and to a beam at the top (see fig. 7), so as to withstand almost any amount of work without its being loosened. A series of holes, half an inch in diameter, should be bored as shown in the cut, through which an iron pin can pass to keep the bar in its place. The bar must be made of straight-

FIG. 8.

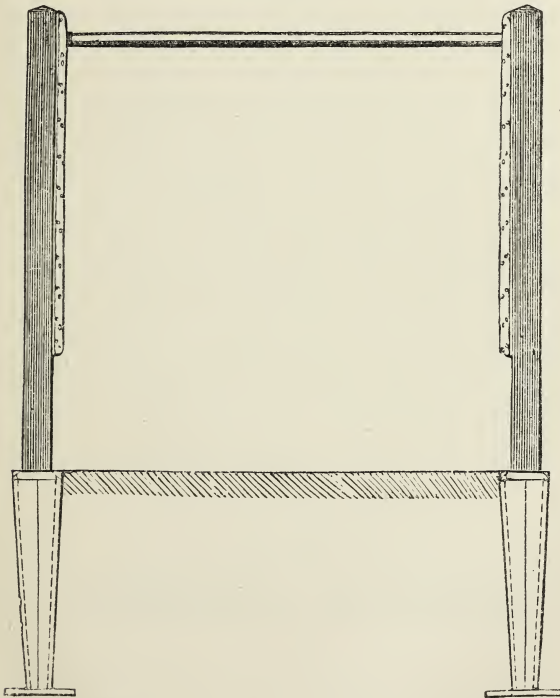


grained ash, and not more than two inches in diameter ; it should have a strong shoulder at each end wherewith to rest firmly against each post (see fig. 8).

Second.—A more substantial and at the same time neater method of constructing this apparatus, is to have two uprights about seven and a half inches square, and if for a public gymnasium out of doors, they should fit firmly into iron sockets, as shown in fig. 9, but if for indoors, they may be fixed in the floor, and a cross beam

as before. On the insides of these uprights are two iron plates, seven and a half inches wide, with holes and openings cut in them, as in fig. 10. These holes are to

FIG. 9.



be perfectly square, and all of the same size, the hole *a* corresponding, when in its position, to the one at *c*. In addition to the above, extra grooves are cut on both

sides of one of the plates, also one and a half inch wide, and reaching to the opposite side of the former ones (see fig. 11). The plate need not be very thick, say about five-eighths of an inch, but then the uprights will have

FIG. 10.

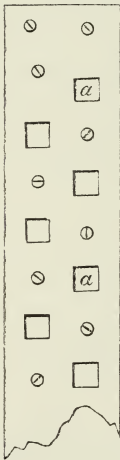


FIG. 11.

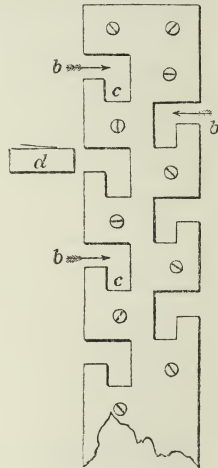


FIG. 12.



to be cut away in like manner, to admit of the end of the bar, which is an inch and three-quarters long, passing in freely. One end being put in the hole, *a*, is passed through the opening, *b*, when, dropping down into the square, *c*, it is kept secure in its place by a wooden plug,

d, the same width and height as the opening *b*, but to project beyond it a little to enable it to be removed easily when required; it should fit sufficiently tight to prevent its being worked out by the constant moving of the bar. If preferred, it might have a strong spring on the top of it, to assist in keeping it in its place. This bar is to be made of the best straight-grained ash, seven feet long, and with a diameter of one inch and three-quarters, this reduced size increasing the firmness of the grasp; but being increased in length, its strength is likewise increased by having a steel core of about an inch in diameter, or a trifle less, inserted through its whole length: this is the most improved and best method of constructing a horizontal bar. Such an apparatus,* complete, with wooden uprights, &c., as shown in fig. 9, would cost about 7*l.* 10*s.* The bar itself, with steel core, one inch in diameter through the centre, can be had for 2*l.* (see fig. 12). It is absolutely essential for the square projecting part at each end of the bar to be made true, and to fit exactly in the grooves before alluded to, and marked *a*, *b*, and *c*, in figs. 10 and 11.

Third.—A very neat and durable construction of the uprights of the horizontal bar is represented in figs. 13 and 14, and consists of two uprights rather smaller than the preceding ones, say about six inches square, with two $1\frac{1}{2}$ inch square iron plates strongly fixed on its whole length, or nearly so. They are placed $1\frac{1}{2}$ inch apart to admit of the ends of the bar being passed up and down when required, the bar being kept in its place

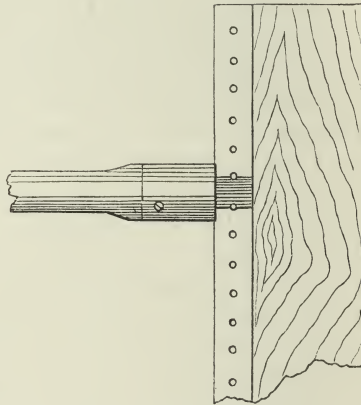
* Specimens can be seen at 35 Old Street, Goswell Street, E.C.

by means of an iron pin, the top and bottom of which fit exactly the size of the end of the bar (see fig. 13). If two small grooves be made in this square end, whereby the bar may be kept from working to and fro, and in which the pins will pass (see fig. 14), it will greatly add

FIG. 13.



FIG. 14.



to the security of the gymnast when attempting any exercise requiring great muscular exertion.

Fourth.—This is a cheap horizontal bar, manufactured by Messrs. Snoxell and Spencer, for young beginners to fix in any room, and is the cheapest ever yet presented to the public; the price, which is arranged to bring it within the reach of the million, is but 1*l.* 10*s.*, therefore all who value physical health and strength should possess one. It is light, portable, easily fixed in

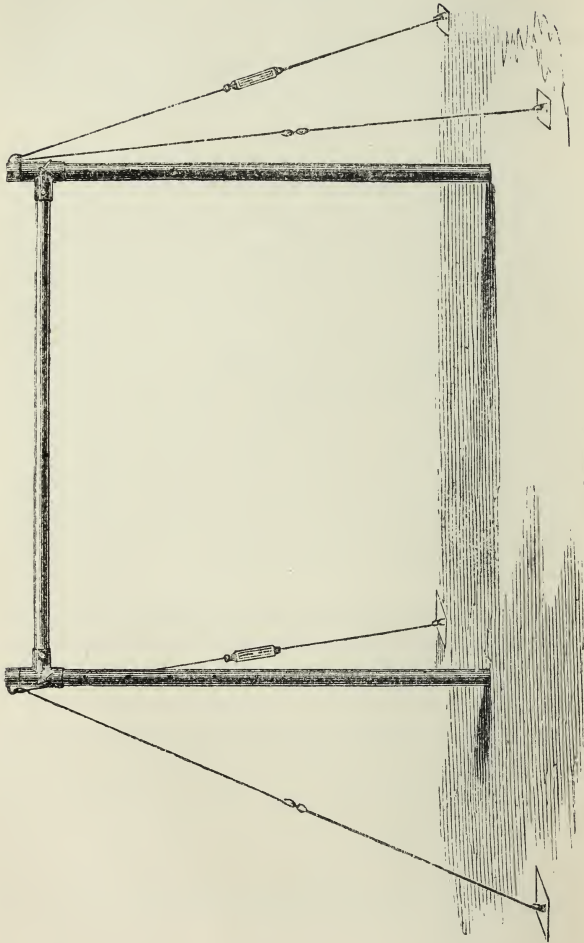
a few minutes, either in or out of doors. The bar, which is made of the very best ash quartering, with a case-hardened iron core three-quarters of an inch through its entire length, is supported with strong wooden uprights having strong cord stays on each side to secure it to staples in the floor or the ground. Price 1*l.* 10*s.*

Fifth.—Fig. 15 shows a very light and strong horizontal bar, made by the before-mentioned firm.* It consists of a bar with a steel core fixed in iron sockets, which, by a simple contrivance, can be raised and lowered as required. The uprights, which are of iron tubing, require to merely stand on the floor or ground, being kept in their places by means of stays or guys, as shown in the accompanying illustration. The price of such an one as the above is 5*l.* 10*s.*, though, with a bar of the best ash, it can be had for 3*l.* 15*s.*; but should the bar be required to be permanently fixed, the price of one is 3*l.*, which proves that all parties can be accommodated according to the length of their purses.

Sixth.—A very neat and durable horizontal bar is likewise made to hang from a beam and steadied with two strong wires only, the bar having a steel core and brass ends, with coupling screws to tighten up with. Price, 4*l.* 10*s.* A series of bars such as this, placed at a distance of nine feet apart, forms a very excellent arrangement whereon to practise some of the exercises given in the following pages.

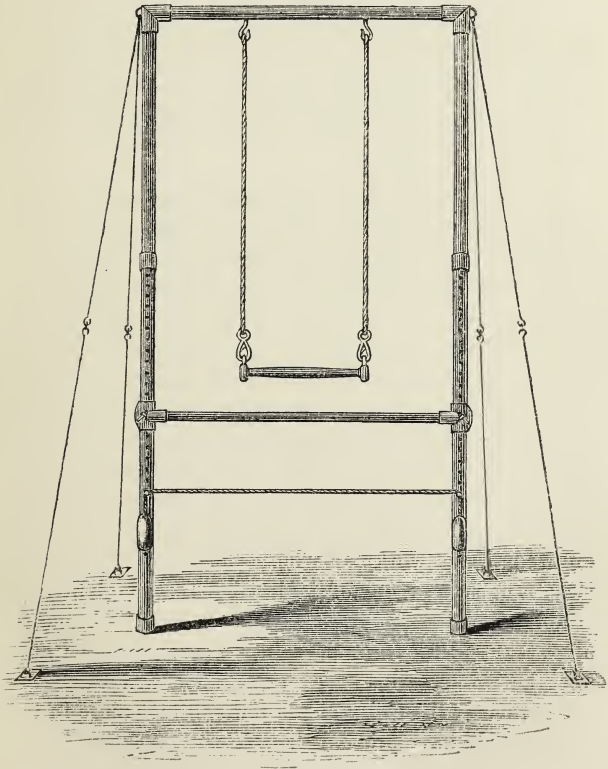
* Snoxell and Spencer, 35 Old Street.

FIG. 15.



Seventh and Last.—The accompanying illustration (fig. 16) shows a very good combination of many apparatus in one, and possessing the advantage of being

FIG. 16.



portable, is very suitable for fêtes, private parties, &c. It consists of an iron frame with stay rods for supporting it and keeping it in its place as before. The horizontal bar with ends, the trapeze, the rings, the foot and hand swings, and forming a jumping stand for pole leaping and foot jumping, are among the chief appliances represented. The whole complete is manufactured by Messrs. Snoxell and Spencer for 6*l.* 10*s.* Though each part may be had separately, still, as a whole, it is the most perfect and useful apparatus yet presented to the public.

In a recent visit to the gymnastic apparatus manufactory of Messrs. Snoxell and Spencer,* the author had an opportunity of inspecting their large stock of apparatus—from those fixed and ready for use in their temporary gymnasium to those in the workshop in the several stages of manufacture, and to any one who may require a thoroughly good article, be it the most simple or the most expensive, he can confidentially recommend that all purchases be made at that establishment; for it is well known that those who are accustomed to the manufacturing of any one article are better acquainted with the different qualities and strengths of the materials required, than a workman who perhaps never made, and perhaps never saw, one of the like before, though he may be able to make it cheaper. But it must be borne in mind, that as life and limb are in the scale, the apparatus must be properly made, or repentance will come too late to remedy the evil which a few shillings more in the outset would have prevented.

* 35 Old Street, Goswell Street, London, E. C.

EXERCISES ON THE HORIZONTAL BAR.

FERMETÉ.*

1. To Hang on the Bar by the Hands (No. 1). *Arm and hand practice.*—Place the bar so that, when standing flat on the feet, and stretching the arms well above the head, it shall be about six inches above the tips of the fingers; then jump up, and by passing the hands over it towards the back, lay hold of it and grasp it firmly, letting the thumbs be on the same side as the fingers, and the knuckles as far upwards as possible (see fig. 17), grasping it firmly without any fear of not being able to retain your hold very long, as that is sure to come by practice. Therefore at first suspend yourself as long as convenient without overtiring yourself, yet after a time the pupil should so hang as long as he can; and by the continual practice of this, the most simple of all exercises, the strength of the arms and hands is considerably developed. But though not fatiguing at first, it becomes much more so the longer the body is suspended, and it is stated that a soldier once held himself by the hands for forty-two minutes, whilst many others have been known thus to suspend themselves in the air for thirty-five minutes.

This exercise should be likewise practised by hanging

* The suspending of the body in the air, as above, is called by Colonel Amoras 'Fermeté,' which name is accordingly adopted.

by one hand, letting the other drop straight down by the side each time. It would be well for the gymnast to practise jumping up to the bar and grasping it with

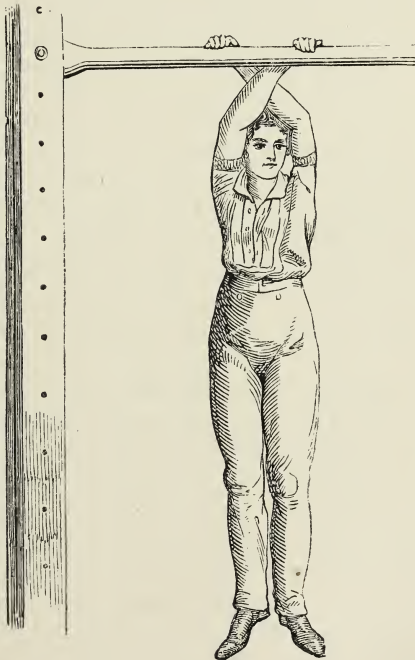
FIG. 17.



one hand only, and not with both hands and afterwards letting go with one of them. Do not always use the same hand, but let the right and left hands alternately bear the weight of the body.

Grasping the bar with the fingers turned towards you should be likewise practised, as many exercises require the hands to be so placed.

FIG. 18.



2. To Hang by the Hands (No. 2). *Arm and hand practice.*—Stand under the bar with the face towards its length, and in jumping up to grasp it place one hand on

either side of it, and proceed as stated in the last exercise.

3. To Hang by the Hands (No. 3). *Arm and hand practice.*—Jump up as in the first exercise, but grasp the bar with the arms crossed about half way between the elbows and the wrists, and letting the face come between the arms so as to look between them, at the same time keeping the body perfectly straight by not allowing it to turn either to the right or to the left according to whichever arm is underneath.

This exercise must likewise be practised with the hands turned and grasping the bar on the other side, thereby bringing the fingers towards you (see fig. 18), and proceeding according to the directions previously given. It would be better if, on letting go with the hand underneath, it were passed over the other each time: this would render the exercise a little more difficult.

4. To Hang by the Hands (No. 4). *Arm and wrist practice.*—Jump up and grasp the bar with the knuckles and thumb towards you, then, by giving a slight upward motion, move first the right hand to the right, and then the left to the left, and by short and regular steps repeat the exercise until the arms are as open as it is possible for them to be, when reverse the movement and bring the hands gradually together again. The exercise must now be repeated with the hands turned the reverse way, and on no account are they to slide along the bar, but be lifted fairly from it each time. A slight pause should be made between each movement.

5. To Hang by the Hands (No. 5). *Arm and wrist practice.*—Hang by the hands with the knuckles towards

you as before, and widen the distance between the hands as in the last, but in this exercise they must be moved towards their respective ends of the bars both at once, and the movement continued until the same distance along the bar is reached, when reverse the motion and bring the hands together. Repeat the exercise with the fingers towards you, and without letting the hands slide along the bar in the least.

6. To Walk (No. 1). *Arm practice.*—1. Grasp the bar with both hands on the same side and move them alternately along it, beginning with short and even steps, and increasing their length until able to take them with ease, and when capable of so doing let each step be as long as it is possible to open the arms, but without any kind of a jerk, or any sign of over-exertion, and this must be persevered in.

2. When well up in the above let the hands be crossed over each other in advancing, thus: if going to the *left* pass the *right* arm over the *left*, and *vice versâ*.

Let the legs be kept perfectly straight, and the toes well pointed to the ground. Nothing shows a careless and unskilful gymnast so much as throwing his legs or body about while achieving any of the essential preliminary exercises; therefore strive to carry all exercises into effect with the legs, &c., kept in their proper position without any undue stiffness.

7. To Walk (No. 2). *Arm practice.*—Grasp the bar with one hand on either side, as in the second exercise, page 31, and proceed as in the last, but the hands must now always advance one before the other in going forward, and in returning walk backwards, when they

are passed each in turn behind the other. Let the legs be kept perfectly steady, as in the last.

These two exercises should be well persevered in, though many would-be gymnasts pass such preliminary exercises over, or at least practise them but little, as being scarcely worthy of their time or trouble; but a man is not worthy of the name of gymnast if he cannot go through any preliminary exercise that may be set him, as they are the essential groundwork for the more difficult ones as he advances. Note the manner this simple exercise is practised and persevered in in France, more especially by the French firemen, on account of which it is called the firemen's exercise, though they themselves call it 'La Persévérance.' These men have a large gymnasium 392 feet round the sides, and around this gymnasium are a series of horizontal bars or small poles, and it is recorded that one once walked twice round this gymnasium by his hands on the bars, which was equal to a distance of $261\frac{1}{3}$ yds. or more than $\frac{1}{7}$ of a mile; therefore persevere, and accomplish the like.

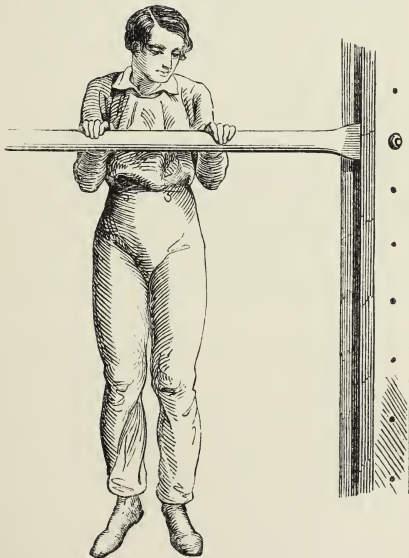
8. To Jump. *Arm practice.*—This exercise is very similar to the last, as the learner places his hands first, both on the same side; second, one on either side of the bar; but he here must move them both at the same time instead of alternately, and to assist the pupil in making the spring requisite to advance, the legs may be brought up a little and carried down again suddenly; but after he can achieve the next exercises, he must effect the spring by the arms alone, when the legs must be kept perfectly still, when after a little time he can try to jump as far along the bar as possible, then to and fro, *ad libitum*, the length of the jump being in proportion to

the impetus given to the body. If the legs be thrown about too much the desired effect upon the muscles of the arm will be in part lost.

9. Breasting the Bar, or To Rise and Fall (No. 1).

Muscle practice; slow movement.—This exercise is very similar to No. 22, page 141, it being nothing more than

FIG. 19.



the pulling up of the body as high as the arms will allow. It is done by hanging on the bars by the hands and gradually raising the body, by bending the arms at the elbows, until the breast is as high as the bar (see fig. 19), then steadily lowering yourself again.

It should be repeated at least three times, and if not able to succeed in doing it the first time of trying do not despair, for on the being able to effect this exercise likewise depends the being able to accomplish many others herein given; besides which, it tends greatly to strengthen the muscles of the arms and wrist (see Ex. 51, page 62).

This must likewise be practised with the hands turned, thereby grasping the bar on the opposite side, when the fingers will be towards you, the thumb being on the same side as the fingers.

The gymnast should so persevere in the rise and fall exercise that he may be able to do so with one arm only, the other hanging loosely by the side, or carried out a little in front to assist in balancing himself. The legs, which should be straight, are, in achieving this exercise, either raised quite horizontally or else projected a little to the front; this renders it rather easier to carry into effect.

10. To Rise and Fall with one Arm at a time. *Arm and muscle practice.*—Grasp the bar with both hands, letting them be a little wider apart; then, keeping the *left* arm straight, raise the body up by contracting the muscles of and bending the right arm; now straighten the *right* and bend the *left* in like manner, repeating the exercise at least three times with each arm alternately at first, afterwards it may be done a few times with one arm, and then with the other. When perfect in the above, and able to do it freely, proceed with the next exercise.

11. To Change Hands (No. 1). *Arm and wrist practice.*—Hang on the bar with both hands, as in the first exercise,

keeping the body and legs perfectly straight and steady, then with a sudden motion turn the hands inwards, and, carrying them out a little, grasp the bar on the outer side, when the fingers will point towards you. This is excellent practice, not only for the arms and wrists, but also to ensure a quick and firm grasp; it should therefore be repeated three or four times, without separating the legs and throwing them about, which can only be prevented by raising the body a little, as in the last exercises.

12. Changing Hands across (No. 1). *Arm and wrist practice.*—Grasp the bar with the arms crossed one over the other, say the *right* over the *left*, and letting the backs of the hands be towards the face, then, keeping the body perfectly straight, with a sudden movement change the position of the arms, and bring the *left* over the *right*, when continue the exercise a few times. (See Ex. 59, page 67.)

The arms and wrists will be found to derive great benefit from practising this and the next exercise; but it must be borne in mind that, in crossing the arms, the point of intersection is to be half-way between the elbows and the wrists, and on no account must the body be allowed to turn round towards that side of the arm which is underneath, but kept in the same position as in Ex. 3, page 32. To ensure this, the pupil should endeavour to bring his face between his arms and look through them.

13. Changing Hands across (No. 2). *Arm and wrist practice.*—Grasp the bar with the arms across, as in the last, but with the fingers pointing towards you, and endeavour, while keeping the body perfectly straight, to effect the change as before. (See Ex. 60, page 68.)

The reason why this exercise was not included in the

last, though they are very nearly to all appearances alike, is twofold: first, because it is more difficult; and secondly, because it will be required to refer to each separately, in pages 46 and 47. (See remarks upon last exercise, which are equally applicable to this one.)

14. Right about face. *Arm and wrist practice.*—Grasp the bar with both hands as before; then raise the body a little, and, turning it round towards the *right* somewhat suddenly, release your hold of the bar and regrab it again on the other side; now repeat the exercise by turning the body to the *left*, but, being rather difficult to accomplish, it should at first be done very slowly; when, however, perfect in it, the quicker the change is made, and without any apparent exertion on the part of the gymnast, the better. The several parts exercised will be wonderfully improved by its being practised, as likewise the grasp.

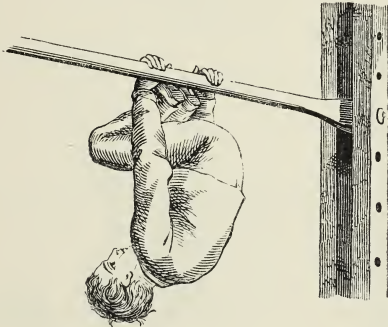
15. To Touch the Bar with the Feet. *Muscle practice.*—Hang on the bar as before described, and, with a gradual motion, bring the legs up towards it; bend the knees, and pass them between the arms under the bar together with the toes, which must be pressed against it. (See fig. 20.)

A slight swing might be used at first, if not able to bring up the legs without; but it is improper to do so, as, in all exercises where the legs are to be brought up, it ought to be so done entirely through the muscular force of the arms, &c.

16. To Hang by the Toes. *Toe practice.*—Proceed as in the last, and, instead of placing the feet under the bar, hitch them over it, keeping the toes pointed towards the ground as much as possible.

Let go your hands, and gradually allow your body to hang straight down by alternately catching hold of your clothes until you are more expert, which you will be after trying it a few times.

FIG. 20.

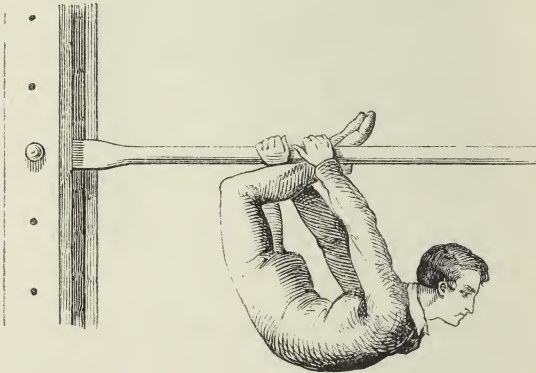


But the most difficult part of this exercise is to be able to replace your hands on the bars. To do so, pull yourself up by catching hold of your clothes, using your hands alternately in so doing; but if not able to, and the distance be not too great, unhitch the toes and drop to the ground on the hands, letting the feet come down lightly. For this purpose the bar should be at first only placed as high as the gymnast can reach standing on his flat feet, as this will enable him to place his hands on the ground, and so drop, in the event of his not being able to raise himself up as above directed.

17. To Truss a Fowl. *Spine practice.*—Grasp the bar with both hands and bring up the legs, passing the knees between the arms, and hitching the toes against the bar, then force the whole body through so as to

bring the face downwards, as in fig. 21, without relaxing your hold of the bar or unhitching your toes, as, after having remained in that position a short time, the body must be brought back through the arms again. (See the next exercise.)

FIG. 21.



The difficulty of this exercise depends partly upon the length of the gymnast's arms and legs, as, the longer his arms are, the more easy will it be for him to carry his body through as above stated.

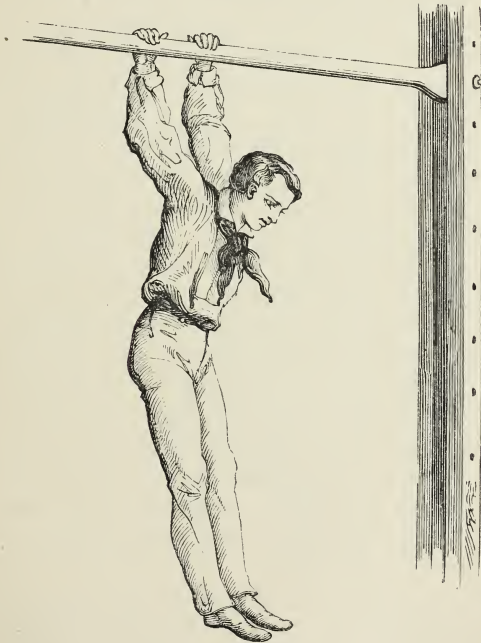
18. To Bring the Body through. *Spine and muscle practice.*—Proceed as described in the last exercise, and allow the legs to pass through together with the body, which must fall as low as the arms will allow, when the body, arms, and legs ought to be nearly in a line with each other. (See fig. 22.)

After remaining in that position for a short time return through the arms again without allowing the

hands to lose their hold, or the feet to touch the ground.

It will be found very difficult for beginners to return : until able to do so, release the hands and fall to the

FIG. 22.



ground ; but after a little practice, especially with a little assistance at first, it will become very much easier than it would at first appear.

If, on bringing the legs through, the feet be crossed,

in which case they will pass between the arms first, it will be found to be much easier to achieve.

19. The Everlasting Twist. *Wrist practice.*—This is an excellent exercise for beginners, and one strongly recommended, as in performing it the gymnast must, if he have not yet done so, suspend himself by one hand, thereby testing the strength of each wrist.

Proceed as last described, but, in lieu of bringing the body again through the arms, let go with one hand, when the body will swerve half round, then grasp the bar again and repeat the exercise as often as convenient. If it be done six times without stopping, and always letting go the same hand, it will appear as if the arm were being twisted completely round; but the pupil need not always use the same hand, as it may be varied by doing the exercise three times with each, or by changing it every time the body is brought through.

20. To Hang by the Legs (No. 1). *Knee practice.*—Grasp the bar firmly, and bringing the legs through the arms as described in No. 18, hitch them over the bar as far as the bend of the knee, when, by keeping the toes well pointed to the ground, and pressing the legs against the bar as firmly as possible, let go with the hands, letting them hang down loosely, and gradually lower the body as in fig. 23.

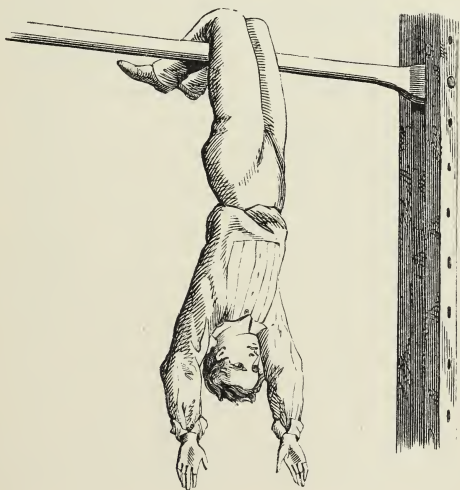
After remaining in that position as long as convenient, bring the arms up, and, by drawing the body up a little, as stated in Ex. 16, page 39, grasp the bar again, and allow the body, after having unhitched the legs, to fall as in No. 18, and drop to the ground, taking care to alight on the toes.

Another method will be described in a future exer-

cise (see No. 83, page 80), as it will be necessary to achieve one or two exercises to bring the body above the bar in order to sit on it, ere that can be thought of.

21. To Hang by the Legs (No. 2). *Knee practice.*—Proceed as in Ex. 18, page 40, and carry the *right* leg only through and over the bar as far as the bend at the

FIG. 23.



knee, and throw the *left* leg over the *right* foot, also as far as that joint; then, by letting go your hands, let the body hang down loosely, the hands hanging down also, or folded across the chest à-kimbo. After having remained in this position a short time, raise the body up, grasp the bar with the hands, and change the position

of the legs, viz., throw the *left* leg over the bar, and carry the *right* leg over the *left* foot, and hang as before.

This exercise, if constantly practised, will be found to so materially strengthen the knee joint, that the benefit derived from it will be of great advantage in climbing.

22. To Hang by the Legs (No. 3). *Knee practice.*—Again proceed as described in Ex. 18, and, on throwing the *right* leg over the bar, let go the bar with the hands and hang by the knee joint only. After having remained in that position a short time, carry up the *left* leg over the bar, and, unhitching the *right*, support the body by that instead. This exercise, as well as the last, tends greatly to strengthen the knee joint, and is often useful in climbing. In making the change as above from one leg to the other, the body is not to be raised, as, being a knee exercise, it must be effected without.

23. To Hang by the Legs (No. 4). *Leg practice.*—Hang by the hands, one on either side, and throw the *right* leg over the bar, as far as the bend of the leg, letting the foot, with the toes well pointed to the ground, be towards the *left*, when the *right* fore-arm may be carried over in like manner by bending it at the elbow, and letting the hand be over the head. Now, let go your hold of the bar with the *left* hand, and let the *left* leg and arm hang loosely down while the body is suspended as above directed.

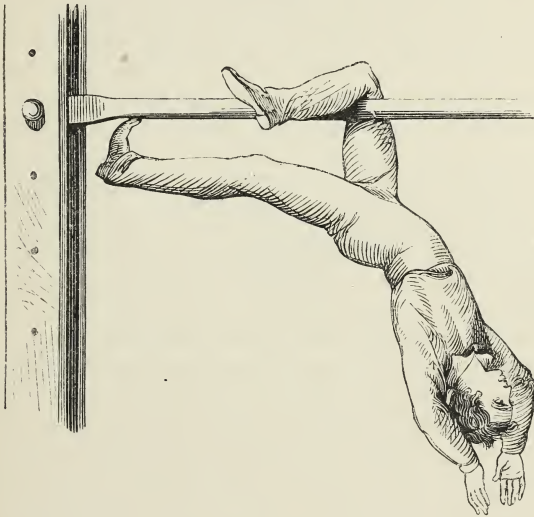
This exercise may be varied by hanging by the *left* arm and leg in like manner.

Or, if preferred, the *left* arm and *right* leg may be the means of carrying out the directions.

Or, the body may be suspended by the *right* arm and *left* leg.

All the above ought to be well practised, as they tend greatly to strengthen the knee joint, and, like Ex. 22, are often useful in climbing. The changes are not to be done slowly, first the leg, then the arm, and so on; but

FIG. 24.



both leg and arm, for whichever part of the exercise is to be done, must be carried over the bar as quickly as possible.

24. The Suspender. *Spine and leg practice.*—This exercise is meant to strengthen the grasping of the bars with the legs, and especially with but one leg, therefore it should be practised with the right and left alternately over the bar.

Stand under the bar and grasp it with both hands,

one on either side, and with a sudden spring throw the right leg over it towards the left, then place the toes of the left foot under the bar, as in fig. 24; let go the hands, and allow your body to lower itself as much as possible, remaining in that position as long as convenient, or else raise the body up and down a few times; this latter would bring the spine of the back into full play, and it would derive great benefit therefrom. The hands may either hang loosely, as in the illustration, or be folded across the chest; in either case, they must remain in the same position while raising or lowering the body. The leg under the bar must be kept perfectly straight.

25. Bow and Ends. *Spine, leg, and wrist practice.*— This amusing, and to all appearance grotesque, exercise tends nevertheless to strengthen the grasp, and, in effecting it, it will be seen that the wrists come in for their share of the benefits to be derived therefrom.

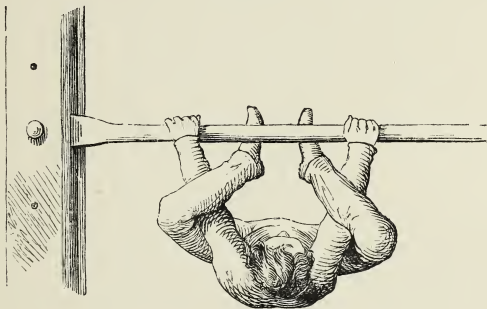
Place both hands some little distance apart on the bar and grasp it firmly, letting the thumbs be on the same side as the fingers, then bring up the legs, and, passing one on either side of the arms, instead of between them, bend them over as near to the shoulders as possible, hitching the toes, one at a time, under the bar, as in fig. 25, when the exercise is complete; after a few attempts it will become much easier.

Owing to the great strain upon the wrists by the legs pressing upon the arms, it will be utterly impossible to vary this, or achieve any other exercise while in this position.

26. To Breast the Bar (No. 2). *Muscle practice.*— Grasp the bar with the arms crossed and the knuckles towards you, as in Ex. 12, page 37; then achieve the rise

and fall, raising the body up quite as high as in the former one, and repeating it two or three times, though it will be found rather more difficult to accomplish.

FIG. 25.



27. To Breast the Bar (No. 3). *Muscle practice.*—Grasp the bar with the arms crossed as in the last, but with the hands turned and the fingers pointing towards you, as directed in Ex. 13, page 37, and proceed with the rise and fall exercise as before. This exercise will have to be persevered in much more than either of the preceding, as, owing to the position of the arms, it will be found to be very difficult to effect, more especially as the body is on no account to be carried on one side, either to the right or left, according to whichever arm is nearest the bar.

28. Rise and Fall (No. 4). *Muscle practice.*—Hang on the bar with one hand on either side, then gradually pull the body up by bending the arms, until, by moving the head on one side, one shoulder touches the bar, when, after remaining in that position a short time, the

body may be lowered, and, raising it again, let the other shoulder touch the bar.

This exercise is strongly recommended in Capt. Clias's 'Elementary Course of Gymnastic Exercises,' in the following manner: 'Let the learners,' say four or five at a time, 'try who can hang on the bar the longest,' but no one must overtire himself in so doing.

29. Breasting the Bar (No. 5). *Wrist and muscle practice.*—Clench the fists well and place them on the bar with the wrist bent over it, then, without moving either hand or opening the fingers, raise the body up as before as high as possible, when lower it again, the whole movement being done very slowly; and after a few trials go through the exercise three or four times simultaneously, but not to overtire yourself. Being excellent exercise for the wrists, it should be well practised, though somewhat more difficult to effect than No. 1, page 35.

30. To Change Hands (No. 2). *Muscle practice.*—Proceed as described in Ex. 9, page 35, and when the legs and body are well raised, let go the *right* hand and grasp the bar on the other side, then let go the *left* and grasp the bar on the same side; this will cause the body to turn round towards the right, and as, during the passing of either hand, the whole weight of the body is suspended by one arm, it will cause the muscles of that arm to be brought into full use, and they will consequently be greatly strengthened.

Repeat this exercise by passing the *left* hand to the other side of the bar first, thereby reversing the motion of the body.

31. The Letter L. *Muscle practice.*—This exercise only differs from Ex. 22, page 141, in one respect, that,

instead of the legs being allowed to hang straight down, they are brought to a right angle with the body, by bending the body at the hips, thereby forming the letter L. When in this position raise the body, as in the last exercise, or the legs may be brought into the required position after the body is raised; yet it would be better to practise the exercise both ways as the relative motions are reversed, thus:—Firstly, raise the body *after* having brought up the legs; secondly, raise the body *before* raising the legs; yet, in whichever way it is done, the muscles must derive benefit from it.

This may seem more difficult to the learner than the other, partly owing to the difference in the position of the body, but practice will soon overcome that difficulty.

32. The Walk (No. 3). *Arm and muscle practice.*—As another variation in the walk, which, though simple in itself to look at, is more difficult to achieve than the two former exercises already given in page 33, it would be well for the gymnast to grasp the bar with both hands on the same side, then breast the bar, and proceed along it with slow and even steps as previously described, and, when well up in it, let the hands be placed one on either side, and proceed in like manner. While walking the body will be slanting, and the legs projected a little, but the straighter the body is kept the better.

33. The Walk (No. 4). *Arm and muscle practice.*—Proceed as in the last, with the hands in both positions alternately, and achieve the Rise and Fall either with both or only one arm, between each step; the latter will be found to be the more difficult, as it is in itself an exercise, without any addition.

34. The Walk (No. 5). *Spine and muscle practice.*—

Hang by the hands with one on either side, when, raising the body a little, as in Ex. 9, page 35, lift both legs and carry the feet in like manner over the bar, resting the heels only on it, but allowing the feet to be kept as far over as possible, to prevent their slipping off. Now in this position walk backward and forward, as in Ex. 7, page 33, but this will be found a little more difficult, as, at every step taken by the hands, the feet have to be drawn or pushed along the bar, according to the way in which the hands move. Let the steps be taken very slowly, and do not let the feet be jerked, but allow them to slide along easily.

35. Elbow Practice.—Breast the bar, and, when sufficiently high, let go with the right hand and carry the fore-arm over the bar from the front, hitching it over it at the bend of the elbow, then carry the left over in like manner and sustain the body in that position, letting the elbows be as close together, and the hands as far apart as possible, and when perfect in the above take one arm off the bar, and letting it drop down by the side support the body by the other, then repeat this portion of the exercise by changing arms. This will be found to be excellent practice for the arms, the muscles being likewise thereby greatly developed.

36. The Arm Chair (No. 1). *Fore-arm practice.*—Breast the bar, and rest the fore-arms about three inches below the elbow on it, keeping them bent at the elbow and remaining in that position but a short time, as, the nearer the bar is to the wrists, the more difficult will it be to support yourself. The legs should be perfectly straight with the body, and close together, and the head leaning a little forward, yet, for the sake of variety, the

legs may be raised as in Ex. 31, page 48, and lowered again while thus supported; this would add greatly to the difficulty of the exercise.

37. The Arm Chair (No. 2). *Upper arm and muscle practice.*—Breast the bar, and, grasping it firmly with the *left* hand, stretch the *right* arm out over it, letting it rest upon the bar about half-way between the elbow and the shoulder; then, letting go with the *left* hand, support the body in that position for a short time, when regrab the bar, and repeat the exercise by stretching the left arm over it in like manner.

This is a very trying feat to the gymnast, although not so to the spectator; but he has only to try it to be convinced of its difficulty, especially if his muscles be not up to the mark.

As you cannot face the bar in this as in the last exercise, the legs must be carried a little sideways towards the bar, thereby acting as a counterpoise. And it must be borne in mind that the arm on the bar must be kept perfectly straight while supporting the body, though the hand may be either open or clenched, but this as best suits the gymnast.

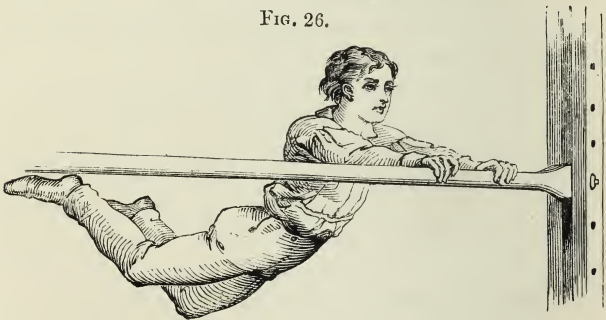
38. Spine Practice.—Place the bar as high as the breast of the gymnast, and let him stand some distance from it, say about the distance of his height from it, when, holding his arms straight above his head, with the palms of his hands turned towards the bar, and keeping the legs straight and the feet close together, let him fall straight forward without bending the body at the hips, and, grasping the bar on reaching it, let the body drop as far towards the ground as possible, but without

moving the toes from their place, although the heels are of necessity raised from the ground.

As the body will now form a perfect semicircle, the more difficult part of the exercise is to follow, viz., for the gymnast to raise the body into an upright position again as easily and as regularly as he fell forward; this will not at first be accomplished without great difficulty, but patience is all that is required, as by practice alone is every difficulty in the like exercises overcome.

39. The Swing. *Spine, leg, and arm practice.*—Hang by the hands about the middle of the bar, bring the legs up in front a little and suddenly drop them, as it were,

FIG. 26.



not with a jerk, but by endeavouring to carry them out farther than they were before, thereby causing them to describe a semicircle, at the same time carrying the body a little forward: this motion will give a sufficient impetus to the body to carry it back beyond, and after a while above, the bar (see fig. 26). Now, by giving a somewhat similar motion to the body and legs, on the body dropping again from behind, it will be again

carried to the front, when the above movements must be repeated to continue the swing.

It will be found that a certain strain will come upon the wrists; the gymnast must therefore make the utmost use of them when wishing to carry the body forwards, and he must likewise ease his hands in the backward swing when required, whereby he will be able to retain his hold of the bar for a much longer time.

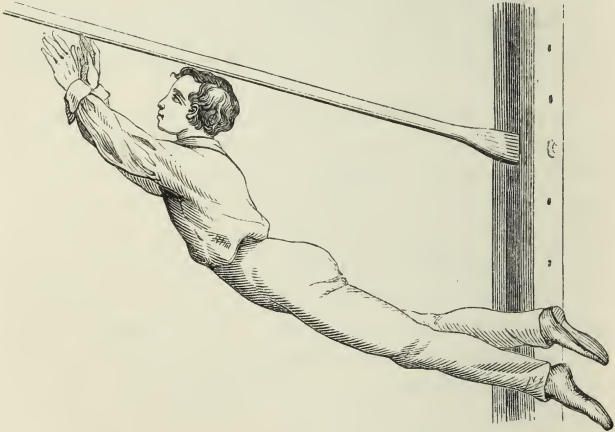
Do not be afraid of swinging too high, as many feats, to be hereafter mentioned, depend greatly on the neatness of the swing, and the facility with which the requisite height, be it in the forward or backward swing, is obtained.

Swing to and fro at least half a dozen times, not more at first, and on leaving the bar do so in the forward swing, and when your feet are rising to a level with your face; when, by giving the body a slight impetus forward by a spring from the wrists, you may let go your hold of the bar and alight on the ground, which you must do on your toes. After a little practice you may try how far you can spring from the bar on alighting, but the higher the bar the greater the distance the momentum given to your body will carry you. This is a very neat way to leave the bar, and the farther the gymnast can alight on his feet from it, the greater will be his after success, and the more graceful will his performance appear. Let him avoid, above all things, jerking the legs in swinging.

40. The Pancake. *Wrist practice.*—Place the bar about two feet above the head of the gymnast when standing on the ground, and proceed as described in the last, and when the body has been swung nearly as high

as the bar, let go your hands (the farther the gymnast springs from it the greater the effect), and after bringing them smartly together (see fig. 27), renew your hold of the bar and continue to swing each time the exercise is to be repeated, which should be at least three times before allowing the feet to touch the ground. It is a difficult exercise to beginners, but very soon overcome; therefore persevere in doing it until able to do it grace-

FIG. 27.



fully and to perfection, the former only to be obtained by constant practice, whilst the latter consists in the smartness with which the hands are brought together.

It must be borne in mind, that on letting go the bar the gymnast must not do so as if he were trying to carry himself back from it as far as possible, but a slight forward spring must be given to, if possible, enable him

to bring his hands together close to, if not just above the bar.

41. To Turn a Pancake. *Wrist practice.*—Proceed as in the last, and when the body is in the forward swing (when the back will be towards the ground), let go the bar, give a smart turn, and grasp it again quickly, i.e. before the body has time to descend, and after a little practice the body should be turned nearly every time, but not always the same way. One thing must be borne in mind, that, on turning the body, it must be done on letting go with both hands at once, and not, as many do it, by letting go with one hand, and grasping the bar again on the body being turned, before the other is released.

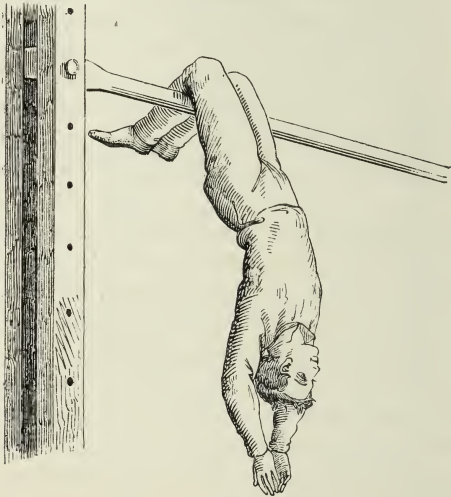
42. To Swing by the Legs (No. 1). *Spine and knee practice.*—Hang by the legs as in Ex. 20, page 42, and keep the feet well towards the ground, then move the arms and body to and fro (fig. 28) to get into a good swing, the body being drawn up in the forward, and carried with the arms as far back as possible in the backward swing, and this should be practised until you are able to raise the body either way level with the bar. This exercise will be found to be of great benefit to the knees and legs (see Ex. 83, page 80).

43. The Fall, or Leg Swing off (No. 1). *Leg practice.*—Hang by the legs and keep the feet well towards the ground (fig. 28), then proceed with the Leg Swing, as in the last, and when sufficiently high in the backward swing, i.e. with the face downwards on the body rising, unhitch the legs as in fig. 29, and you will alight safely on your feet. (See Ex. 123, page 111).

It will frequently occur, until you are able to do this

exercise properly, viz. until you learn the precise time when the legs ought to be disengaged from the bar, that you will fall on all-fours: this is owing to the legs being unhitched too soon; but this is of no importance, as by practice that slight mishap will be soon overcome.

FIG. 28.

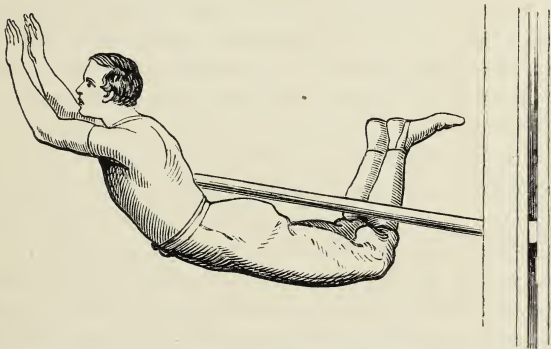


44. The Leg Swing (No. 2). *Hip and leg practice.*— Swing by the legs with the knees a few inches apart, then in the forward swing bring the body up, grasp the bar between the legs with both hands, and opening the legs straight, thereby unhitching them, carry them back clear under the bar, and either alight on the ground, or accomplish some other exercise.

This exercise requires but little practice, but it may

be as well to do it slowly at first, and, when perfect in bringing the legs from over the bar as required, it should be done as if the whole were one simultaneous movement, no pause taking place from the time the body is raised until the feet are free; therefore the whole must be effected before the body returns in the *backward* swing, and, to look well, it should be done very quickly.

FIG. 29.



45. Leg Swing Catch.—Proceed as described in the last exercise but two, and on the body rising sufficiently high, and just as the legs are being unhitched, turn the body, and, bringing it up while in the swing, grasp the bar with both hands, without allowing the feet to touch the ground.

As a finish to this exercise the legs may now be again carried between the arms and hitched over the bar, when, by letting go the hands, achieve the last exercise but one.

46. Arm and Wrist Practice.—Hang on the bar, and pull the body slowly up; then raise one of the elbows well up above the bar, say the *right* one, so as to throw the whole weight of the body on the *right* wrist, which can only be done by getting the fore-arm as perpendicular as possible; then, as soon as the elbow is raised, let go with the *left* hand, which will cause the body to turn a little out of its position, and suspend the body by the right arm. On letting go with the *left* hand, let it drop straight down by the side, and bringing it up again, grasp the bar with it, then lower the elbow of the *right* arm, and lower the body by straightening both of them. Pull the body up again, and repeat the exercise with the *left* elbow up.

One of the difficulties of this exercise consists in the lowering of the body and raising it again directly between each change, which might be made three times, whereby each arm will be brought into use twice.

As this is somewhat difficult at first, the gymnast would do well not to tire the body too much by trying to do more than one change at first; and until that can be effected clearly, without the least hitch in doing it, he ought not to attempt a second. The same advice is equally applicable to the making of the third change, yet the exercise has many good points to recommend it.

47. Arm and Wrist Practice.—Proceed as described in the last exercise, and, on letting go with the *left* hand, and the body turning round as there stated, pass it behind you and grasp the bar under firmly, when the fingers of that hand will be uppermost, letting the hands be as close together as possible, then let the body drop below the bar as far as practicable.

Now for the difficulty. Reverse the motion and raise the body on the *right* arm as before, let go with the *left* hand, bring it round, and, grasping the bar, let the body drop with straight arms; then pull the body up again, and repeat the exercise with the *left* elbow up. The pull up is to be done between each change, as in the last; still, that part of the exercise may be left out in the first three or four attempts, or it may be the means of preventing the gymnast from making a change.

Steadiness and perseverance is all that is required in mastering these exercises, which, when once overcome, will be a very good illustration of the capabilities of the gymnast to do many such and much more difficult ones.

48. To Touch the Bar with the Toes (No. 1). *Leg practice.*—Grasp the bar near to the end with both hands, one on either side, and with the face towards the length of it.

Draw the body gradually up by bending the arms well until the head touches, or, if preferred, until it be above the bar, when the shoulder will touch it, then slowly raise the legs straight up until able to touch the bar with the toes, without either altering the position of the body by moving the arms, or by bending the legs otherwise than at the hips.

This and the next exercise (which see) should be well practised and persevered in to succeed, for, though great strength is required to bring the body up, still greater exertion on the part of the muscles will be necessary to achieve the required feat, viz., that of touching the bar with the toes.

As in many other exercises where both of the legs are to be brought into use, the young gymnast would do

well, in practising this, to bring, at first, but one leg up at a time, allowing the other to hang loosely, or he may bring one leg up at the same time that he carries the other down, but either must be persevered in to accomplish it as it should be done; yet I should not, as a rule, recommend this latter practice, as, if practicable, it would be far preferable to learn to bring up both legs at once.

The legs are to be carried up to the bar very slowly; they are not to be swung in the least, but rather let the feat be done by the sole exertions of the muscles, otherwise the effect will be destroyed, and the feat will appear much more easy to accomplish than it really is.

This exercise may be varied by straightening the arms and lowering the body, and raising it again, at the same time keeping the toes touching the bar. (See next exercise.)

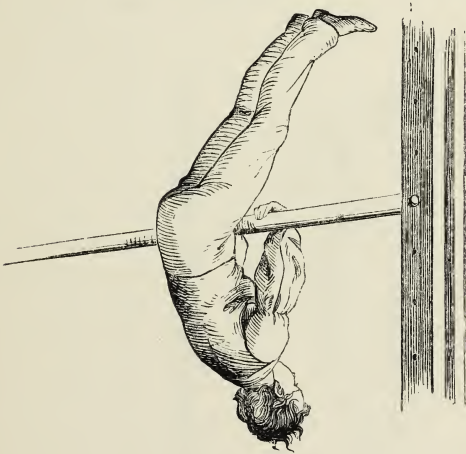
49. To Touch the Bar with the Toes (No. 2). *Leg practice.*—Hang by the hands, with the arms perfectly straight, and, without bending the legs, bring them up very slowly and touch the bar with the toes, and as slowly carry them down again. In doing this exercise the body is to be kept perfectly straight, for if it be bent but a little and carried up with the legs, the feet will be thereby projected beyond the bar, and the effect of the exercise lost. (See remarks upon last exercise.)

50. To Rise above the Bar (No. 1). Circling the Bar (No. 1). *Arm and muscle practice.*—Hang on the bar and proceed with No. 18, but carry the legs above the bar instead of under, then, by pulling the body up with the arms, as in No. 9, and with a slight motion of the wrist, carry the legs completely over the bar, in going over which they will act as a sort of balance to your

body, and with the assistance of your arms the body will be brought into the required position.

As a means of enabling a young gymnast to circle the bar sooner than by the method just described, let him fix the bar about as high as his breast, when, after having placed his hands on the bar, with a step forward, he might give his legs that impetus upwards which will

FIG. 30.



carry him over the bar much more quickly; but in so doing the legs must be straightened (see fig. 30), and carried over the bar by the simultaneous motion of the arms, especially the wrists. This will, in a very short time, enable him to do it as first described, when the bar should be raised high enough to cause the gymnast to jump up to reach it. (See Ex. 1, page 29.)

This, to a beginner, is a difficult and annoying exer-

cise. Difficult, because he is very likely to be a long time before he is able to do it to perfection; annoying, because his shins are sure to suffer if he does not go over the bar as he intended. Yet, when once accomplished, no exercise will be found more easy.

51. To Rise above the Bar (No. 2). The Slow Pull up.—Breast the bar, then endeavour to raise the body above the bar. This must at first be done by bringing

FIG. 31.



one arm up at a time, first the right arm, then the left, raising the elbows up as high as possible (see fig. 31), when, by leaning the head forward over the bar, and carrying the legs a little out in front, which greatly assist you, as all your strength will be required, you must raise the body up by straightening the arms. This will call all the muscles of the arms into full use, as well as the

wrists, and consequently requires some little practice to be able to achieve it. The thumbs must be on the opposite side of the bar to the fingers, and the exercise

should be persevered in until you are able to bring up both arms at once. (See Exercises 57 and 58.)

52. To Rise above the Bar (No. 3). The Slow Pull up.—Hang by the bar, with the hands so far over it that the body shall be suspended entirely by the wrists, and proceed as described in the last, but with this difference—that in this the arms are both made use of together; and the slower the exercise is done the better, as the main difficulty is in the raising of the body up without holding the bar at all with the hands. (See Exercises 57 and 58, pages 65 and 66.)

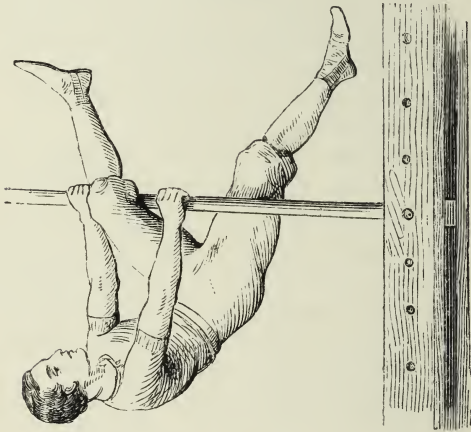
53. To Rise above the Bar (No. 4).—Hang by the hands and throw the right leg over the bar on the right hand side of them, then, by swinging the left leg to and fro somewhat similarly to the ordinary swing, give it a kind of jerk on the backward swing, which, assisted by the wrists, will enable you, by throwing the body a little forward, to raise it above the bar. Repeat the exercise by throwing the left leg over the bar.

54. To Rise above the Bar (No. 5). Quick movement.—Hang by the hands and swing, then, in the forward swing, suddenly throw the *right* leg over the bar as in the last exercise, and with a kind of stronger impetus with the *left* leg on the backward swing to increase the momentum of, and to give a kind of send to the body, assisted as before by the wrists, raise the body above the bar. The whole must be done as quickly as possible, and practised until you are able to do it as required, without the least pause, as the leg ought to be carried over the bar and the body raised without that swinging to and fro alluded to in the last.

Repeat this likewise with the left leg over the bar.

55. To Rise above the Bar (No. 6).—Hang by the hands, and bring the *right* leg between the arms (fig. 32), and bend it firmly over the bar, pointing the toes towards the ground, then, with the impetus as in the last, bring the body above the bar. (Fig. 33.)

FIG. 32.



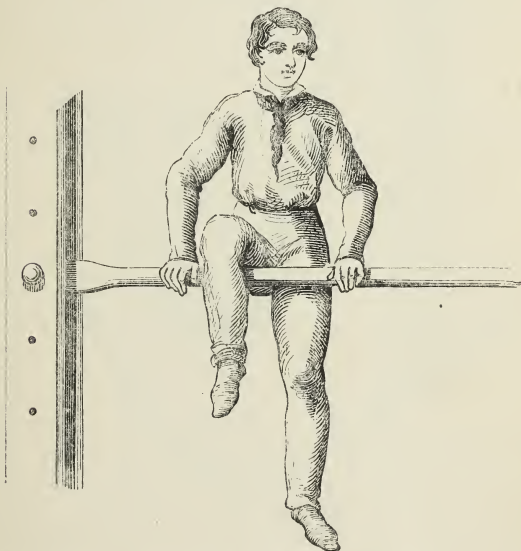
This exercise should be repeated with the *left* leg over the bar.

56. To Rise above the Bar (No. 7).—Swing, and in the *forward* swing bring up the *right* leg and carry it over the bar in the manner described in the last two exercises, but, in doing this, carry it over the bar on the *other side of the left hand*, then, at the turn of the swing, give the requisite downward motion with the left leg, and with the aid of the wrists rise above the bar. Let this be practised well, and, when able to do it freely, carry the left leg over the bar

instead, and repeat the exercise, and do not be satisfied unless able to make use of the one as well as the other.

It being somewhat more difficult than either of the two preceding methods, it should be well persevered in, as it is a decided improvement in the style of the exercise.

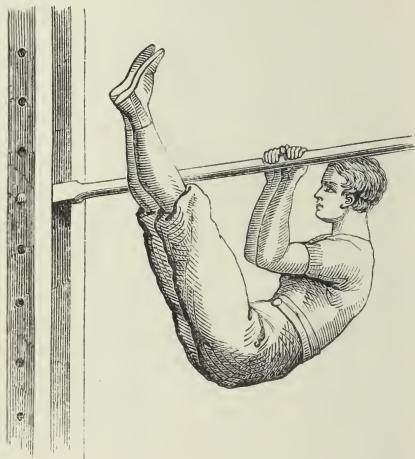
FIG. 33.



57. To Rise above the Bar (No. 8). The Upstart. *Wrist practice.*—Hang by the hands, which must be well over the bar, and swing *once* to and fro, then in the forward swing bring the legs up straight, raise the body up by bending the arms (fig. 34), lean the head back a little, and jerk or carry them down suddenly, thereby making the feet describe part of a circle, and give a kind of

impulse to the body, when, throwing the body somewhat forward towards the bar, you will be able to rise above it, in doing which the wrists must not be idle (see The Slow Pull up, Ex. 52, page 63).

FIG. 34.

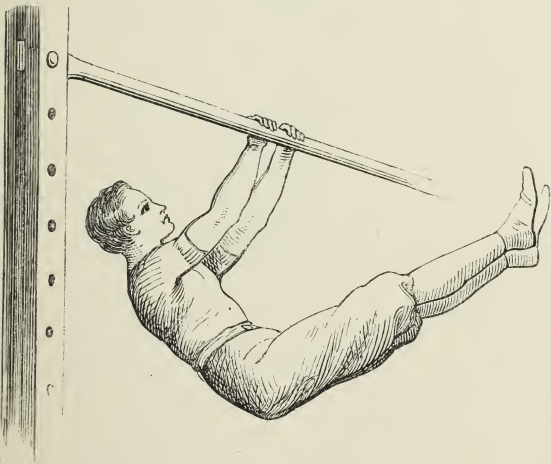


This exercise will require constant practice, but the difficulty is easily overcome by patience and perseverance: yet, until the wrists have been well schooled into what is required of them by other minor exercises, it will be useless for the gymnast to attempt either this or the following exercise.

58. To Rise above the Bar (No. 9). The Jerk (No. 1).
Wrist practice.—This exercise differs in two things only from that previously described, viz. first, that it is done without a swing; and secondly, that the arms are here to be kept straight.

Hang on the bar, bring the legs up in front straight, and, leaning the head back a little (fig. 35), jerk or carry the legs down suddenly, making the feet describe a semicircle, and by the strength of the wrists, without bending the arms in the least, raise the body above the bar. The momentum given by the sudden motion of the legs greatly assists the wrists in the fulfilment of their duty.

FIG. 35.



This exercise, as well as the former, will require constant practice to overcome all difficulties, and, when able to achieve it, let the gymnast practise it with the hands reversed, thereby bringing the fingers towards him.

59. To Rise above the Bar (No. 10). Circling the Bar (No. 2). *Arm and muscle practice.*—Grasp the bar

with the arms across, as in Ex. 12, page 17, and, without letting the body turn either to the right or to the left, according to whichever arm is underneath, circle the bar as in a former exercise (page 37); but it will be found to be a little more difficult to achieve, yet a little perseverance will enable it to be sooner overcome.

60. To Rise above the Bar (No. 11). Circling the Bar (No. 3). *Spine, arm, and muscle practice.*—Grasp the bar with the arms across, as in Ex. 13, page 37, and proceed to circle it as before, but in so doing the body is to be carried up perfectly straight, and on no account is it to be allowed to slide off sideways on to the bar. The chief obstacle that presents itself in this exercise is the pressing of the elbows against the stomach on bringing the body up, by which it will be seen that this method of circling the bar is very difficult, even to a skilful gymnast, until he has practised it a few times; yet, with a little patience and perseverance, it is to be accomplished.

61. Wrist and Arm Practice.—Rise above the bar by any method preferred, then, grasping it firmly with the *right* hand, which should be close to the side, let go with the *left*, stretching it over the bar towards the *right* as the body turns a little round, and support the body a short time with the right arm without bending it, then grasp the bar with the *left* hand, and repeat the exercise. As the exercise consists in keeping the body as upright as possible above the bar, the grasp must be very firm, the hand on no account to be allowed to slip.

62. Muscle Practice.—Proceed, by any method preferred, to raise the body above the bar, then, grasping it firmly, with the hands a little more over it than usual,

lean a little backward and support the body without letting it touch the bar, and the further it is carried from it the better. This should be practised and persevered in, until those who have great strength of muscle are able to lower themselves in this manner without bending the arms in the least, and without increasing the motion of the body after having once begun.

63. To Sit on the Bar (No. 1). — Mount above the bar by either method preferred, and, when in an upright position bring one leg over the bar at a time, lifting either hand alternately to allow of your assuming the

FIG. 36.

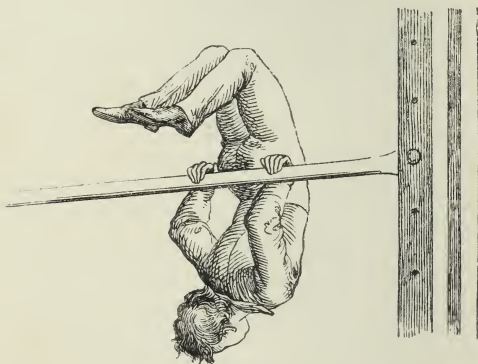


sitting posture, and when fairly balanced without fear of falling backward, bring up the fore-arms, as shown in fig. 36.

64. To Sit on the Bar (No. 2). The Plymouth. *Spine*

practice ; slow movement.—Bring the legs through, as described in Ex. 18, page 40, and in carrying them over the bar let them be a little bent, then, bending the body well back, and turning the head back as far as possible, i.e. the face towards the ground, and the farther you look along the ground the better, whereby the body is the better kept in that position, and which

FIG. 37.



enables the exercise to be the more easily done, raise the body up by the aid of your arms, similar to Ex. 9, page 35 ; then, when the bar is a little over the seat (fig. 37), by bending the legs more over it, which acts as a sort of leverage to the body, you will be enabled to bring it over it and assume a sitting posture. But your own judgment must be used as to the best time to do so, for, when the bar touches the centre of the back, the arms must do the remainder of the work, but do not pull yourself too far over the bar, otherwise, in

assuming the sitting posture, a beginner is very likely to fall forward, which would not be very pleasant for his arms; but should such a mishap occur, it will be well for him to give a slight spring forward and alight on the ground in front of the bar, as in the next exercise. This method of sitting on the bar is sure to give greater satisfaction than by simply circling it, and it requires but a little constant practice to be able to achieve it adroitly, the one chief point, next to the raising of the body, being to bend the head well back and bend the legs well over the bar. Omit these, and the exercise is rendered all the more difficult to be achieved.

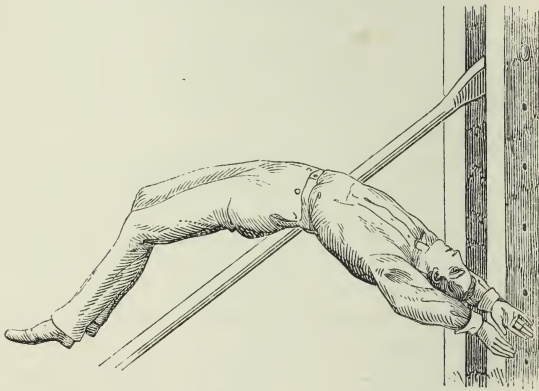
65. The Slide. *Spine practice.*—Proceed as described in the last exercise, and, when your body is fairly over the bar, let it slide forward, and, on its dropping, give a little sudden spring forward with the wrists, letting go the bar and alighting on the ground as far from it as possible, but let the arms be brought up a little to free them from the bar.

66. The Balance. *Spine practice.*—Again proceed as described in the preceding exercise, and, when the bar reaches the centre of the back, allow the head to hang down backward, and by letting go your hands in order to sustain yourself on the bar without falling over either side, thereby balancing yourself. (See fig. 38.) Stretching the hands over the head, or waving them backward and forward will greatly assist you, but it needs a little practice to be able to do it fearlessly.

67. Slide Catch.—Achieve the Slide, as in Ex. 65, and on the bar reaching the centre of the back, balance yourself for a moment, throwing the arms well over the head, which bend back as far as able, then let the body

slide forward over the bar, without altering the position of the hands; but, when it is fairly dropping, raise the head, and, giving the body a turn to bring the face towards the bar, grasp the bar with your hands. This is a very pretty and neat exercise, if cleanly done, and only requires a little practice.

FIG. 38.



68. Sitting on the Bar (No. 3). *Balance practice.*—Mount at one end of the bar, and sit on it by any method preferred; let the fore-arms be extended in front as in the last exercise, and give a slight spring sideways along the bar, and continue until the opposite end be reached, when return with the reverse motion.

When able to do this, fold the arms à-kimbo, and repeat the exercise both ways. In either case the arms may be jerked up to assist the gymnast in making the spring, but in neither case are the positions of the hands to be altered after having begun the exercise, as this will tend to show a sign of fear.

69. Sitting on the Bar (No. 4). *Balancing practice.*

—Sit on the bar as in the last exercise, but, in the middle of it, then, keeping in the position shown in fig. 36, work the body forward by very slight jumps or jerks, or otherwise, until the bar is quite under the seat, then carry the body gradually the reverse way until the bar reaches the bend of the knees, when the body must be leaned a little forward, and the feet be carried a little back to assist in effecting the balance, which should be done at nearly every jerk forward or backward, and on no account are the hands to touch the bar while carrying the exercise into effect.

These balances are of great utility to the gymnast, as by them he is often able to save himself from a mishap, which might otherwise occur; in addition to which, it enables him to achieve many other exercises, with much greater ease.

70. Balance Practice.—Mount above the bar by either of the methods described in the foregoing exercises, and throw either leg over it, when, by placing the hands in front of you, with the fingers of each hand on opposite sides of the bar, thereby causing the elbows to be brought towards the body, sit astride it as on a saddle. (See fig. 42.) Now, by keeping the arms perfectly straight and upright, bend the body up in front, which will cause the head to be carried somewhat forward, and enable you to raise yourself completely off the bar; but in doing this, the legs should be bent both at the hips and knees, thereby assuming a sitting posture.

While achieving this exercise, the bar is not to be touched by any other part of the body than the hands,

as the body is to be supported in equilibrium upon them. In grasping the bar the thumbs should not be on the same side of the bar as the fingers of each hand.

71. To Stand on the Bar (No. 1). *Balancing practice.*

—Proceed as in the last exercise, and continue to raise the body and legs until the feet can be placed upon the bar, the *right* before the *left*, when let go your hold of it, and slowly rise, but while so doing hold the arms out, one on either side, to assist you in balancing yourself while endeavouring to effectuate the exercise, which should be well persevered in until able to carry it through without the least hesitation or sign of fear. If preferred, the bar may be put at about three feet from the ground until perfect in it.

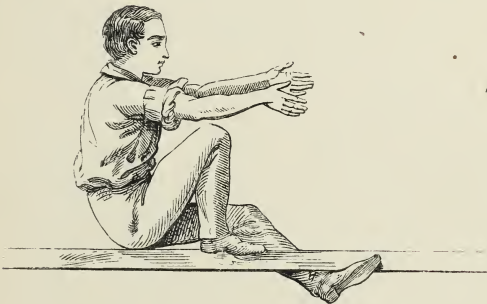
72. To Stand on the Bar (No. 2). *Leg and toe practice.*

—Place the hands on the bar, spring up, and sit on it with the legs on the outside. Now turn the body on one side (say to the right), raise the right leg up, bending it at the knee, and place the foot upon the bar, as close as possible to the body, then hitch the left foot under the bar, lean the body forward with the arms extended in front to balance yourself (fig. 39), and by the aid of the toes under the bar, with which you are to steady yourself, raise your body up so as to stand on the right leg, but do not unhitch the toe under the bar until you are firmly standing on the other foot, when straighten the leg, or gradually lower yourself again, taking care how you slide the toe along under the bar, and likewise to maintain a good balance. It must be tried two or three times to learn the exact movements required; and, when able to do it as above, let the *left*

foot be placed on the bar and the *right* foot hitched under it, and repeat the exercise.

73. The Spring (No. 1).—Mount by any method preferred, and sit on the bar with the arms bent, the fore-arms being extended in front as in fig. 36. Now give a sudden spring off the bar, and alight on the ground.

FIG. 39.



Care must be taken to give a good spring, assisted by throwing the arms up a little, but on leaving the bar they are not to be thrown back, nor are the hands to touch the bar whilst and after making the spring.

The body is not to be allowed merely to slip off, but the gymnast must endeavour to alight as far from the bar as possible.

74. The Spring (No. 2).—Sit on the bar by any method preferred, letting go your hold of it, and placing the arms, a little bent at the elbow, at the sides, as in the last. Now give a sudden spring a little forward, sufficient to carry you off the bar, throwing the arms up to assist you, at the same time giving the

body a sharp turn so as to bring the face towards the bar, then, on the body dropping, grasp it with both hands at once, when finish with any showy exercise, always making up your mind what you will do prior to achieving the above, so as to lose no time when it is effected.

Let the body be turned sometimes to the *right*, sometimes to the *left*, and do not always turn it the same way, and, in turning it, let it be done very neatly while making the spring, or the effect will be destroyed, as it may be done prior to the accomplishing of many exercises *below* the bar.

75. The Whirligig. *Balancing practice.*—This is a very amusing exercise, not only as regards a gymnastic feat, but it tests the learner's full balancing powers, and likewise nerves him to do others much more daring, without having the least fear.

Circle the bar (or mount by either of the other methods), and sit on it. Work your body a little on one side, and throw the *right* leg over the bar without any fear of falling, or resting the hands on the bar, then throw the *left* over, and repeat the same as often as convenient and as quickly as possible, and, when perfect in the above, the exercise may be reversed by throwing the *left* leg over the bar first; then, for sake of variety, throw both legs over at once, twice each way.

Though difficult at first, it will be found to be much easier after having tried it a few times, especially if the legs be kept perfectly straight in carrying them over the bar, and without the slightest pause or hesitation.

76. The Vault (No. 1).—Mount above the bar, and grasp it firmly with the fingers on the outside, then,

after moving the legs to and fro sideways two or three times, carry them over the bar, as shown in the illustration (fig. 40), then, letting go with the hands, alight on the ground, which must be done on the toes.

The bar should not be too high from the ground at first, as it is easy, after a little time, to raise it, for, the higher the bar, the greater the effect in achieving the exercise (see the Vaulting Exercises, page 246).

FIG. 40.



77. The Vault (No. 2). *Sitting practice.* — Mount above the bar, and proceed as in the last exercise, but, in carrying the legs over to the *right*, let go with the *right* hand and sit on the bar, then, achieving some other exercise, or simply turning the body round to face the bar, repeat the exercise by carrying the legs over to the *left*. This requires some little practice to be able to keep on the bar. As by right the bar ought not to be regrasped by the hand, let go to allow the legs to pass.

78. The Jerk (No. 2). *Leg and arm practice ; quick movement.*—Achieve Ex. 58, page 66, and on rising above the bar, carry the legs over it, as in Ex. 76, page 76, then, on the body dropping, give it a turn, let go with the hands, regrasp the bar and repeat the exercise at least four times, achieving it as quickly as possible, as, in doing it thus, it clearly shows the freedom with which the gymnast can use his arms and legs, besides being, in itself, a very showy combination of the Jerk and the Vault.

79. The Jerk (No. 3). *Quick movement.*—Proceed as described in Ex. 58, page 66, and, on the body going above the bar, carry it sufficiently high to enable you to carry the legs between the arms over the bar, and to sit on it ; then, without resting or moving the hands, fall back, and, in falling, let the legs pass between the arms again, when, after a little practice, the exercise may be repeated four or five times without stopping.

The peculiarity and difficulty of this exercise is in the keeping of the legs perfectly straight during the execution of it ; added to which, the activity and energy displayed by the gymnast in carrying his body up and his legs through add greatly to show a proficiency which few in any one local club are able to boast of.

80. To Lie on the Bar. *Balancing practice.*—Sit astride the bar as on a saddle, then lean gradually back until your head touches it, then place your legs also on it, keeping them perfectly straight.

Perhaps the above will to some appear *impossible*. If so, do it thus:—in leaning back, place the feet under the bar, to steady yourself. If that is not sufficient, put your hands on the bar behind you, or, in leaning back, let your arms hang over the head until the hands touch

the bar, when steady yourself whilst you place the feet on the bar.

After the body is out straight the arms may be allowed to hang loosely by the side, folded across the chest, or placed in any position the gymnast may think proper.

The arms may likewise be moved about so as to test the feat, or the legs may hang loosely on either side of the bar, all of which will add greatly to the exercise.

81. A Poser. *Wrist practice.*—Mount by any method, and grasp the bar firmly with the fingers on the outside, and the thumb towards you, when, by keeping the arms perfectly straight, pass both legs between them at once, and either assume the sitting posture, or let go your hold

FIG. 41.



and alight on the ground; or the gymnast may reverse the motion, and carry the legs back again over the bar. This will be found to be rather difficult, yet it is to

be achieved by practice, and is much better than simply alighting on the ground.

The legs, as will be seen in fig. 41, are crossed, and the head leans forward, in order to balance the body while the legs are passed between the arms.

The firmer the grasp and the straighter the arms, the more likely you are to succeed, for the legs press very much against the arms in working their way over the bar, thereby intimating that they want *a little more room*.

This is a very clever exercise, if done neatly by bringing the legs through the arms together, and not one at a time, and if the hands do not shift their place during the feat.

82. The Jockey. *Balancing practice.*—This exercise is not much to look at whilst being done by another; but it is more difficult to achieve than will at first appear.

Sit astride the bar, as in the last exercise, bring the elbows against the sides, lean forward so as to lift yourself from the bar (fig. 42); when in that position, move the hands alternately along the bar, very slowly at first, and practise until able to run along the bar very quickly, and when perfect in the above, the gymnast can vary his movements similar to some of the steps in dancing, especially the advancing and retiring step in the quadrille, but the body must not on any account be allowed to touch the bar during the performing of a certain motion or figure.

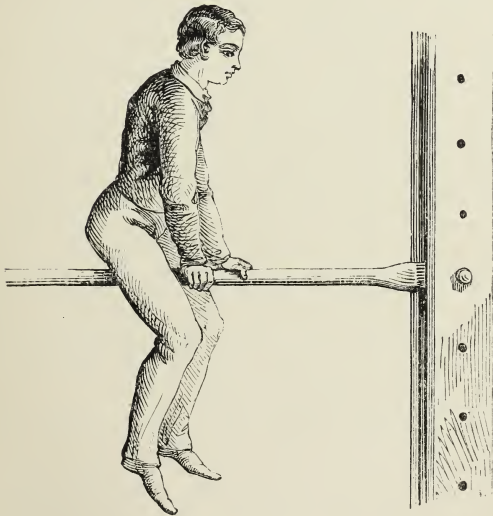
83. To Hang by the Legs (No. 2).—Rise above the bar and sit on it, then, placing one hand on either side of you, gradually slide back over the bar, and lean the body forward until the bar reaches the bend of the knee,

when, grasping it firmly, and bending the legs well under it, let the body fall gently backwards, and when steady let go with the hands.

This is a method often required to hang by the legs, and should therefore be practised, as it enables you to shift from one exercise to another. (See Ex. 74, page 75.)

84. The Drop. *Quick Movement.*—Hang by the legs

FIG. 42.



with the arms straight down, and when the body is perfectly steady, bring the arms up in front and give them a quick forward and downward motion, similar to

that required in the swing, but without moving the body at all, unhitching the legs at the same time; the combined impetus thus given to the body will cause it to turn half round, when you can alight on the feet.

This is a very pretty finish if neatly and quickly done, and is not so difficult to bring about as it at first seems, a few trials only sufficing to enable it to be accomplished without any fear of a mishap, which cannot occur if the legs are unhitched at the same time that the arms are carried down; but if preferred, the Lungers* may be used.

85. The Leg Swing. *Knee practice.*—Mount above the bar, and throw the *right* leg over it between the hands, as in fig. 32, by which it will be seen that it rests on the bar at the bend of the knee; then move the *left* leg to and fro, when with a sudden movement throw yourself backwards with such force as to carry you round the bar into your former position. Therefore the arms must not remain mere supporters of the body, but assist in carrying it round, they being kept perfectly straight throughout, and on the body rising again above the bar it should be retained there; but, when able to achieve the above easily, the body may be thrown back each time it rises, thereby carrying yourself round the bar several times without stopping.

To reverse the swing, change the position of the

* This being the first time that the Lungers (see page 10) are referred to, the gymnast is strongly urged to bear in mind that, in practising any future exercise, in the achieving of which he shows any sign of fear, they should be scrupulously made use of, as then he might attempt the most dangerous on record without the least fear, provided he has two trustworthy assistants to hold the ropes, one on either side of him.

hands by turning the knuckles backwards, then, by raising the body off the bar so as to throw your whole weight upon the arms, lean the head a little forward, and keeping the legs perfectly straight, give the body a forward motion, and practise it until able to carry yourself round the bar several times without stopping. Both methods should be practised with each leg over the bar alternately.

86. The Short Swing or Circle. *Wrist practice.*—Mount above the bar with the fingers and thumbs on the outside, resting the body against it at the pit of the stomach, then move the legs to and fro, and with a gentle yet strong movement throw the head back and the legs forward and upward, which, being assisted greatly by the wrists, will enable you to go completely round the bar, stopping at first between each revolution; but, after a little practice, it may be done five or six times in succession.

This exercise is very difficult to a beginner, as, after having thrown the body back, the position it then assumes is very similar to that in Ex. 50, page 60, more especially if the pupil should not succeed in raising the legs above the bar as he intended.

After some little practice this exercise should be effected without allowing the body to touch the bar at all whilst going round; but this will be found to be much more difficult, as the wrists will then have to do all the work.

87. The Slide (No. 2). *Spine, leg, and wrist practice; quick movement.*—Swing, bring the legs well up in front, and in the backward swing pass them between the arms and shoot them over the bar quickly, which,

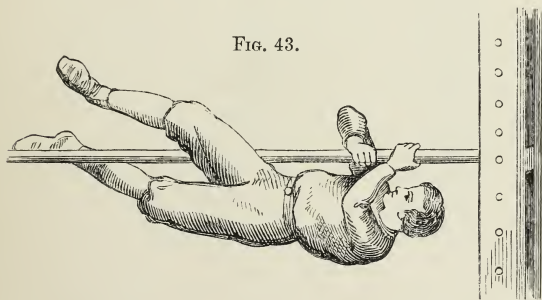
aided by the arms and wrists, will enable you to carry the body completely over it instead of slowly, as in Ex. 64, page 69, when you may either alight on the ground, or support yourself on the bar, or fall back, drop the legs back through the arms and repeat the exercise, or achieve some other exercise by way of a finish. This exercise looks remarkably well if, with as quick a movement as possible, the body be brought up and carried over the bar, when, letting go with the hands, alight on the ground without its having touched it in any part otherwise than the hands. When given as a set exercise, or as one for *STYLE* in competitions, this is the one chief point aimed at; therefore practise it well until perfect in it, as above stated.

88. The Side Slide. *Slow movement.*—Grasp the bar with the hands (one on either side), and with a sudden impetus throw both legs up and backward over the bar, hitching them over it to support the body.

It is now required to carry the body over the bar in the direction of the legs, to effectuate which you must proceed thus:—Lift up the leg nearest the hands and carry it further over the bar, say half-way between the bend of the leg and the hip, clinging firmly to the bar with the other leg; or, if preferred, this leg may be slidden a little further along the bar so as to rest the heel only on it, which will then have to support the body, and with a gradual motion, by bending the arms and back, and, greatly assisted by the wrists, carry the body up as required, but, on dropping over on the other side, you must retain your hold of the bar, consequently the hands must be allowed to work round the bar while the exercise is being achieved.

At first it would be as well, until more perfect, before carrying the nearest leg over, to lift it entirely off the bar, letting it drop forward, and with a sudden impetus, by bending the back, and raising the body up as much as possible, swing it over the bar, carrying the body as far as able. Great exertion will be required to carry the body as far as the hollow of the back, but still greater exertion, perseverance, and practice, to go through with and accomplish the exercise as neatly as it ought to be done.

I have mentioned that the heel of the off leg may be brought to rest on the bar. Now some prefer, instead of that, to hitch the toe of the off foot under the bar (fig. 43), and thus complete the exercise. The choice is, of



course, left to the gymnast, but the execution of it is the same.

The position of the hands and legs may be thus described. If, in standing under the bar with the hands grasping it, and the *right* hand be before the *left*, the legs must be carried over the *left* side of the bar, when the *right* leg will become the nearest, and the *left* the off leg ;

but if the *left* hand be placed before the *right*, then the order is reversed, and the *left* leg becomes the nearest, and the *right* leg the off; consequently the exercise, as it is written, is applicable to either position.

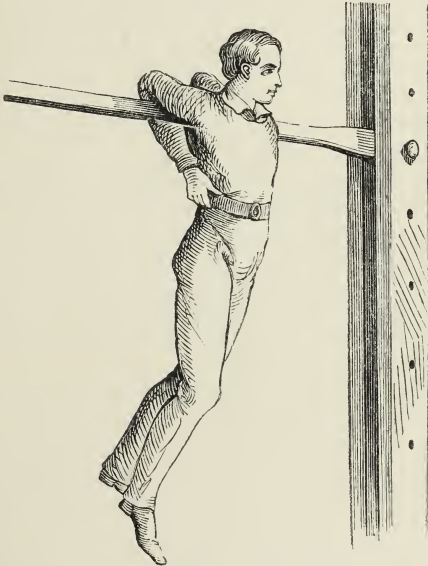
89. To Roll round the Bar sideways. *Spine, leg, and arm practice.*—When the gymnast can accomplish the foregoing exercise to perfection he may advantageously proceed to attempt this one, but it would not be advisable to proceed unless certain of thoroughly understanding the several movements, they being very similar, though reversed.

Achieve the Jerk (Ex. 58, page 66), and vault over the bar and sit on it (Ex. 77, page 77), or else effect the last exercise but one, then place both hands on the right-hand side, with the knuckles of that hand backwards, and those of the left to the front, the left hand being close to the body. Now raise the left leg up behind and hitch the toes under the bar upwards firmly, and slide forward as far as the seat (if well over it the better), with the body leaning back, the head up, and the arms bent; then, passing the hands well backward round the bar, swing the right leg upward and carry it with all the force you are able. The momentum thus given to the body will, after a little practice, enable you to go completely round the bar, with your arms above it as before starting, when the exercise may be repeated two or three times. Though very difficult to many advanced gymnasts, practice is the essential oil to enable you to glide round on to the bar again, therefore persevere and conquer.

90. The Hindoo Punishment, or Muscle Grind. *Muscle and spine practice.*—Sit on the bar and sink

down, but letting the arms slip (one at a time first) backwards over the bar, when the hands can either be clasped across the chest, or grasp a belt, which may be worn round the waist if preferred (see fig. 44); then,

FIG. 44.



moving the legs and body to and fro, similar to the Swinging exercise, page 52, in the backward swing, and with a stronger impetus with the legs, carry the body round the bar, which motion must be repeated, on the body falling over, every time the gymnast wishes to go round. This should not be more than three times at first, owing to the friction and rubbing which the arms will

get until more used to it, and until such is the case they will be very red and tender after each practice—so much so, that the gymnast will not like to repeat it for a day or two ; but that must not be noticed too much, as the oftener the muscles are thus exercised the less will be the notice taken of the results in future.

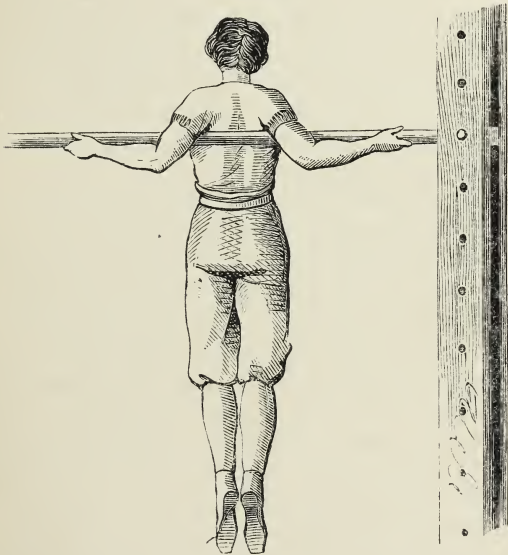
This exercise is reversed by carrying the legs and body up in front instead, thereby revolving round the other way, but the arms remain the same ; and in this, as in many other exercises before and hereafter mentioned, the legs must be made good use of. The gymnast, when perfect in either way, but generally the first, would do well to try how many times he can go round, or at least from twelve to twenty times. Do not descend from the bar for a short time until the giddiness be worn off, or else achieve the reverse way two or three times ; and if not able to do it by yourself, a little assistance should not be refused.

91. Hand Grind.—Proceed as in the last, but instead of bringing the arms down behind the bar and grasping the belt, or folding them across the chest, as therein stated, stretch the arms out at the sides, and grasp the bar a little underneath, but with the thumb uppermost (fig. 45) ; then, while in that position, revolve round the bar as before, though the pressure there will be found to be more upon the back than in the last. It only requires a little practice to be able to achieve it and overcome its difficulty.

92. The Sit Swing (Backward). *Arm practice.*—This exercise, though to all appearance like No. 55, page 64, differs greatly from it, as in this the weight of the body is thrown upon the arms, whilst in the former the leg

over the bar had to bear that weight ; moreover, this exercise is achieved while retaining the body in a sitting posture, it will therefore require much more strength than the leg swing, and is consequently much more difficult to achieve : it is from this posture that it derives its name.

FIG. 45.



Sit on the bar with one hand on either side, and the knuckles uppermost, then straightening the arms, thereby raising the body off the bar, throw yourself backwards with sufficient force to carry you round the bar into your former position again, without letting go your hold or losing your position, and it should

be persevered in until able to carry the body round several times successively without allowing the legs to touch the bar at all.

This is a very clever exercise, yet nothing but continual practice will enable it to be overcome, for it will frequently happen that, owing to the gymnast not having thrown himself back with sufficient force, he will find that he cannot rise high enough, in which case his head will be downwards and his legs pointing upwards, similar to the position acquired Ex. 65, page 71. When this occurs, either achieve that exercise, or else bring the legs through and mount afresh, when try, try again, with a determination to succeed.

93. The Half-fall Back and Swing off.—Sit on the bar with the legs bent well under, so as to hold it close to the bend of the knees, and with the arms extended downwards over the knees, then, leaning the body well forward to balance yourself, and to give it a greater distance to go, throw yourself back over the bar with as great an impetus as you can; in fact, try to throw yourself off it: the momentum thus given will cause the body to rise up on the other side, then, when the head rises nearly as high as the bar, as in fig. 29, you can unhitch the legs, and you will alight safely on the ground. In doing this and the next exercise the using of the arms is indispensable, they should consequently be used freely; therefore do not be afraid of flinging yourself off with too great a force, for the greater the force used the better, as it will lead to the executing of much more difficult exercises (see Ex. 97, page 92); still, when achieved properly, the gymnast will soon learn what amount of impetus must be given to carry the body to the required

height prior to his unhitching his legs. That will come by practice only, but this exercise is sure to receive great approbation, especially if done fearlessly, and with a determination to succeed.

94. The Catch.—Proceed as in the last, but, on unhitching the legs from the bar, give the body a sudden turn and catch hold of it again, without allowing the feet to touch the ground. Though this feat appears more difficult than the last, the gymnast will soon find that it is not so much more so as it here appears, and that it gives a brilliant finish to it (see Ex. 45, page 57).

95. The Awkward Job.—Proceed as described in the last exercise but one, but, instead of throwing your arms back to assist you, you must, on throwing yourself back, grasp the bar between the legs, and let it go again at the same time that you unhitch your legs, when you will alight on the ground.

In throwing yourself back, do not grasp the bar too soon, as that will spoil the required effect; neither must you be afraid to let go the bar, for there is not the least danger of falling, provided you throw yourself back with as great an impetus as possible.

96. The Fall Back, or Hock Swing (No. 1).—Proceed as in the last exercise but two, but, on throwing yourself off, it must be done with a little more force—so much so, that you must try to carry the body quite round the bar, and on the body rising, endeavour to regrasp the bar with the hands, and retain yourself in an upright or sitting position.

This will be found much more difficult to achieve than either of the three preceding exercises, as greater impetus is required in throwing the body back; for the

higher the body rises the more likely are you to succeed, and only continual practice will enable the difficulty to be overcome; but do not despair, for the oftener you try it the more visible will the capability of its being done appear, therefore persevere, regardless of time and trouble.

97. The Hock Swing (No. 2). *Leg practice.*—The only perceptible difference between this and Ex. 92, page 88, is, that in this the hands are perfectly free, while in the latter they grasp the bar at the side; but to the gymnast it will be found to be much more difficult, as, should a failure occur, he will leave the bar much against his will, as in Ex. 43, page 55, consequently it will require greater exertion on his part to effect it properly, the chief points being to throw himself well back, and to carry the arms well up and back; this latter will cause the chest to be thrown out, when, should he revolve round the bar, let him repeat the necessary movements each time he wishes to go round. Persevere with a determination to succeed, and the difficulty will be soon overcome, when he may proceed to the next.

98. The Hock Swing (No. 3). *Leg and balance practice.*—This exercise needs but little explanation, as it is effected in precisely the same way as the last, but the difference between them constitutes the difficulty, viz. that the gymnast must rest and balance himself in the sitting posture, between each revolution, without putting his hands to the bar, one chief point being to give the body a slight jump or jerk forward on the body rising above the bar; but after the gymnast has tried it a few times, with, if he prefer it, some slight assistance, he will soon learn the precise movements required, yet they

are only to be perfected by constant practice, the exercise being much more difficult than the preceding one.

A very showy variation to this exercise is to place the arms in different positions prior to throwing the body back, and retaining them thus until on the bar again, when change them; the following positions are among those chiefly practised.

1. Arms straight over the head (as in the former exercise).

2. One arm thus, the other being carried across the chest (first the right arm, then the left).

3. Fold both arms across the chest.

4. Fold both arms across the middle of the back.

5. Place both hands on the knees.

In fact the arms may be placed in any conceivable position, so long as neither they nor the hands touch the bar, or change that position while going round it.

99. To Truss a Fowl (No. 2). *Spine practice.*—Rise on the bar by any of the former methods, and grasp it with the knuckles and thumbs backwards. Now lean the body forward, and bring the legs up, pass the knees over the bar between the arms, resting the instep on it. It is now required to let the body fall forward, and allow the body to pass through the arms like fig. 21, page 40, still keeping the insteps against the bar, and without letting go your hold of it.

The exercise consists not so much in passing the body through the arms, as in doing it while the body is falling forward, and not either before or after it has fallen. It is a very pretty and useful exercise, if done neatly.

100. The Backward Roll. *Spine practice.*—Sit on the

bar by any method most preferred, but this should always be the most showy or difficult, and one which in itself would be a graceful exercise. Then turn the hands backward, and, grasping the bar firmly with the thumb, on the same side as the fingers, let the body gradually sink forward until the bar touches the middle of the back, when carry the legs up backward over the bar, leaning the head well back, and when sufficiently over it let the hands work a little round to enable you to carry the body completely over the bar into its former position: then either repeat the exercise as often as convenient, and after a little practice a little quicker, or give it a *coup de grâce* by finishing with the slide at once; this may be likewise done as a finishing stroke after repeating the exercise several times, if desired.

The latter portion of this exercise bears some resemblance to 'The Plymouth,' in page 69, though the hands be not in the same position.

101. The Long Swing, or Great Circle (Forward).

Wrist, arm, and spine practice.—Owing to the peculiarity of the method of achieving this exercise, viz. to swing round the bar at arm's length, great energy and strength are required, and the greater the force the gymnast gives to all his actions throughout, the more likely will he be to succeed; therefore, premising that he is well up in the Short Swing, without which it will be waste of time to attempt this, he can proceed to

Mount above the bar, and grasp it firmly with the knuckles outwards, and the thumbs on the same side as the fingers, then, after moving the legs backward and forward two or three times, leaning the body forward a little with the same motion of the legs, fling yourself

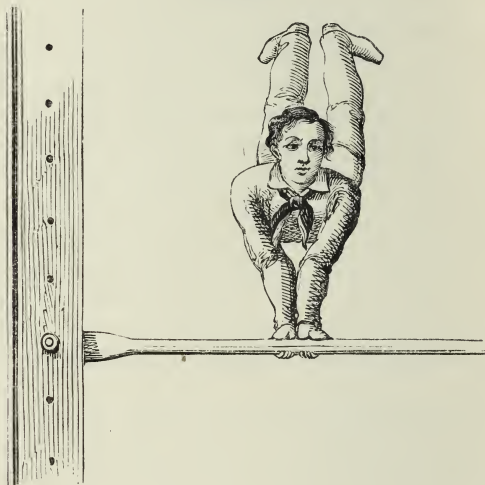
upward and backward at arm's length off the bar. This upward motion will give you increased momentum in the swing; now, on dropping, bend the body as in fig. 93, and on the body rising in front from under the bar, carry the legs up, as in Ex. 30, page 61, at the same time raising the body up by bending the arms; this additional assistance on the part of the arms will enable you, after a little practice, to carry yourself completely round the bar, when, by loosening your hold of the bar, and shifting the hands round, likewise straightening the arms, on throwing the body off again, you may continue the exercise *ad libitum*. Should you not throw yourself from the bar with sufficient strength, you will either not rise high enough to bring the legs near the bar, or they will come against it and not over it, when the shins will suffer for your want of greater energy, therefore the legs should be made to go as great a distance as possible.

102. The Turnover (No. 1).—Mount above the bar, and turning the fingers towards you, bring the hands and elbows close together, then lean forward so as to rest the body on the elbows, and, by a gentle motion, steadying yourself to keep the fore-arms in the same position, carry the legs up behind (see fig. 46), and finally, the whole body (fig. 47), when, on the body passing over the bar and falling, let go your hands, and alight on the ground, taking care to do so on your toes. (See the next exercise.)

The momentum given to the body in turning over is sure to cause the gymnast to alight on his feet; still, until able to do it properly, the lungers should be used by passing the ends of the ropes over the bar, prior to

his beginning the exercise, when they will be in the proper position on his coming over. It requires but a little nerve to do it properly the first time.

FIG. 46.

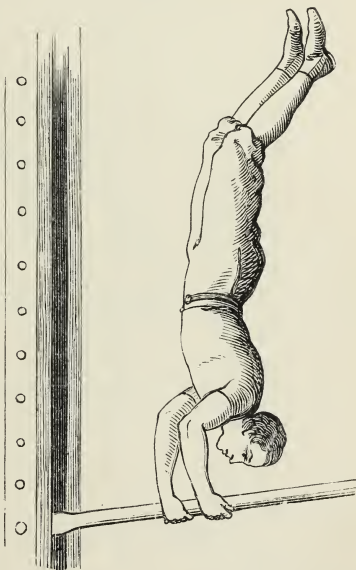


In turning over, the hands must grasp the bar firmly, or from the motion of the body they will be liable to slip; but should any fear arise, although assistance is being rendered him, the pupil may, until he has gained sufficient confidence to accomplish the exercise as required of him, retain his hold of the bar, and allow himself to swing back under it; but this should only be done when the bar is sufficiently high to enable him to do it without his toes touching the ground.

103. The Long Swing, or Great Circle (Backward).
Wrist, arm, and spine practice.—Proceed as directed in

the last exercise but one, and on the body coming directly above the bar, straighten the arms, and bend the legs backward (fig. 48); this will give additional momentum to the body, sufficient to carry it up again, with some considerable aid from the wrists, into your former position (fig. 46), when, after a little practice, and by shifting the hands round each time the body rises to bring them above the bar, the exercise may be repeated as often as convenient, but it will require great perseverance, much more so than in the forward long swing; yet when well up in both, it would look well to repeat each three or four times without stopping, in which case the gymnast must begin with this

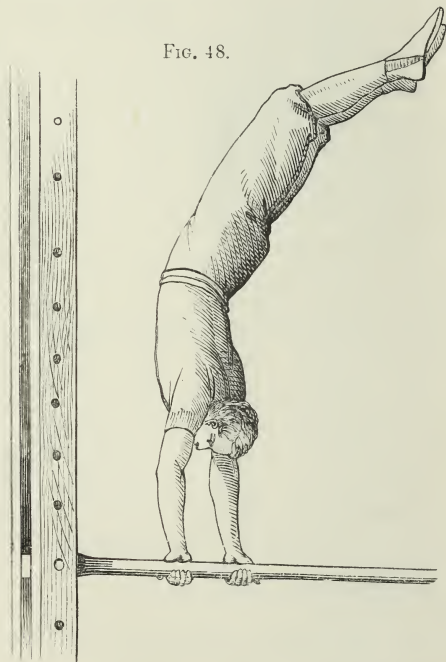
FIG. 47.



exercise, and after having achieved it, say three times, he must, on the body rising up backward, reverse the position of his hands, thereby bringing the knuckles uppermost, then, straightening the arms, and throwing the body off as before stated, he may proceed with the forward motion.

104. The Back Horizontal (No. 1). *Spine and muscle practice.*—This and the following exercise requires great strength in the muscles of the arms, as well as in the spine of the back, and is only to be acquired by practice, with a determination to succeed.

FIG. 48.



Grasp the bar, and go through the arms; but on carrying the legs through raise them up straight with the body, then, keeping them in that position, lower them until they are horizontal, as represented in fig. 49, and,

after having remained thus for a short time, either drop to the ground, or carry the body back again through the arms, or else achieve the Slide. The latter should be preferred. (See Ex. 65, page 71.)

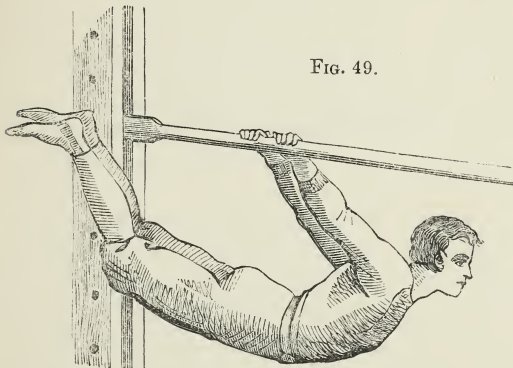


FIG. 49.

Continual perseverance and practice are required to achieve this exercise to perfection, i.e. without any apparent strain upon the muscles.

105. The Back Horizontal (No. 2.) *Spine and muscle practice.*—Grasp the bar with both hands on either side, and, bringing the legs up straight, carry them through the arms, when, on the body going through, either gradually raise the legs so as to assume the Back Horizontal, or else suddenly shoot them out into the required position, but both methods should be practised, although there is very little difference in this and the last; yet the fact of the legs having to be kept straight throughout, renders the exercise so much the more difficult, as is likewise

the case in the sudden strain upon the muscles by shooting the body out.

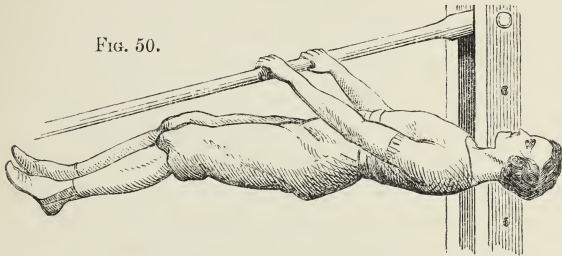
106. The Back Horizontal (No. 3). *Spine and muscle practice.*—Sit on the bar by any method preferred, then, grasping it with the knuckles turned backwards, and the thumb on the same side as the fingers, let the body slide forward until able to bring the legs perfectly straight with it, at the same time keeping the arms perfectly straight. The now relative position of the arms and body must as near as possible be retained, as the gymnast must carry the body forward and downward and the legs backward, grasping the bar very firmly with the hands, and putting the whole of the muscles into full play, to enable him to lower himself gradually without bending the arms, and on no account is the required position to be assumed with a jerk (see fig. 49), as it is to be done by the full use of the wrists and the muscles of the arms, the spine being exercised in keeping the body horizontally.

This method should, in achieving this exercise at assaults-at-arms, contests, festivals, &c., be preferred to the last, it being far more difficult to consummate; but practice will soon enable the gymnast to become master of it, especially if he has any muscles in his arms to boast of.

107. The Front Horizontal (No. 1). *Spine and muscle practice.*—This exercise is better achieved on the rings than here (see Ex. 35, page 194), but it can nevertheless be done by raising the legs well up in front and carrying them above the bar, until straight upright with the body; then, keeping the arms straight and the body also in the same position, lower it gradually until it assumes the

position required (fig. 50). This will be found to be a little more difficult to carry into effect than the Back Horizontal, but persevere and conquer.

FIG. 50.



108. The Front Horizontal (No. 2). *Spine and muscle practice.*—Grasp the bar with the hands on either side, and keeping the body and legs perfectly straight, raise them up in front until perfectly horizontal; though more difficult to achieve, it should be well persevered in, and not passed over as a bad job should success not for some little time attend the pupil; therefore practise it with a determination to succeed, and you will not repent the time spent in endeavouring to overcome it.

109. The Side Horizontal.—Sit on the bar, grasping it with the hands turned so as to have the knuckles behind, letting the thumb be on the same side as the fingers, then let the body slide gradually forward by bending the arms, and allowing it to sink as low as possible, which will be when the arms become perfectly straight, turn the body round sideways and raise it into an almost horizontal position, and parallel with the bar, by bending the *right* arm and keeping the elbow well up. Now allow the body to fall by straightening the right arm, and pull yourself up on the bar again,

when the exercise must be repeated with the *left* arm (see Ex. 113, page 105).

This is a very difficult and trying exercise, and will require continued practice to enable you to master the difficulty. During its performance the hands must not be allowed to change their position, otherwise than the gymnast will be obliged to do when keeping the one arm straight while the other is bent.

110. The Forward Roll (No. 1). *Wrist practice.*—Proceed as in Ex. 52, page 63, and on the body rising, open the hands and let the wrists, or rather the ball of the hand, rest on the bar, then fall forward, keeping the legs still straight and *close* to the bar, at the bend of the hips, when, passing the hands as far round the bar as possible, gradually rise on the bar again, supported as above, the body having made a complete revolution round the bar.

This is a very clever exercise, but rather difficult to beginners, and should therefore be done very slowly at first, and with some slight assistance in raising the legs; then when, by gradually increasing the time, able to achieve it freely, it might be done five or six times successively without stopping, and would be excellent practice for the wrists, muscles, &c., and the gymnast will do well to persevere in it.

111. The Forward Roll (No. 2).—*Hip and arm practice.*—Mount above the bar by any method preferred, then lean against it at the pit of the stomach, pressing the legs up underneath to endeavour thereby to hold yourself on it. Now let go your hold entirely of the bar, and with quick downward motions with the arms, with the hands open, carry yourself round the bar, which,

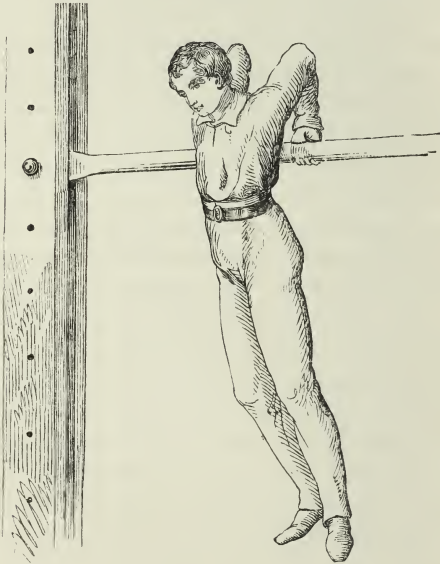
until perfect in it, had better only be done once for the first few times trying, gradually increasing the number of revolutions as you arrive at perfection. Therefore, while so practising, let the lungers be used by throwing the ropes over the bar from back to front, so as to be able to meet the requirements of the gymnast should he need their assistance; but this will not be if done fearlessly, the legs kept well against the bar on going over, and the arms do the work required of them in a proper manner, and when once able to accomplish it, the gymnast will think it more easy than it at first seemed.

112. The Grasshopper (No. 1).—*Wrist, arm, and muscle practice.*—This is a very difficult exercise, especially to beginners, much more so than No. 24, page 142, although in most respects very similar, the difference consisting in the position of the body with the bar or bars. As in this exercise the whole of the weight of the body will be upon the wrists, it need be done the first time with care.

Either circle the bar and sit on it, or proceed as in Ex. 64, page 69, but changing the position of the hands on going over, and, when the body is falling forward, which must be very gradual, allow it to sink until the arms are nearly bent double (see fig. 51), when the bar will be touching the middle of the back. Grasp the bar firmly, and let the fore-arms be as upright as possible; the legs may, to assist in the balance, be bent a little back. On reference to fig. 51, it will be seen that the thumbs are on the same side as the fingers. Now, when in this position, first move the hands alternately along the bar, and when able to do that easily, with a slight jerk with the legs, aided with a strong spring with the wrists, move them to and fro both at once, thereby giving

the action the appearance of a grasshopper. Do not remain too long in this position until the arms and wrists are more accustomed to it, as it will require to be well practised ere it can be effected with freedom and ease.

FIG. 51.



Let this exercise, when the gymnast can accomplish the above, be practised with the hands turned the other way, which will bring the fingers to the front; but though it will be found to be more difficult to achieve, it should be well persevered in. It should be likewise practised with one arm at a time—first the right, and then the left, and practised well until the increased dif-

ficulty be overcome. As an exercise in competitions, this latter position far excels the achieving of the feat with the both arms, and it is moreover one that very few gymnasts can master.

113. The Grasshopper (No. 2).—*Wrist, arm, and muscle practice ; quick movement.*—Proceed with the last exercise, and lower the body until the bar rests against the middle of the back ; then, by giving a slight forward swinging motion with the legs, and leaning the head well back, raise the body up on the bar again, repeating the exercise three or four times.

When able to accomplish the above, strive to achieve it very quickly by carrying the legs back a little on dropping, and, by bringing them forward directly, with a somewhat more sudden motion raise the body up as before, repeating it as often as desired. (See Ex. 88, page 84.)

This will be found excellent practice for the arms, &c., and should on no account be passed by, as it will enable the gymnast to go through with the more difficult ones.

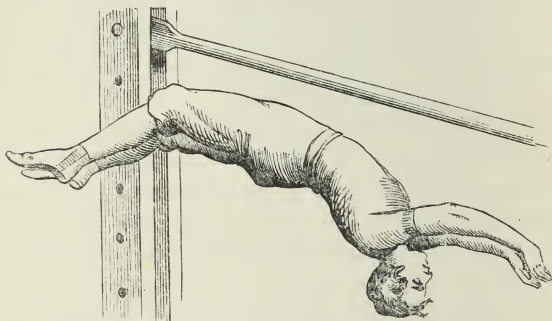
114. The Turnover (No. 2).—Achieve the Reverse Giant Swing, Ex. 103, page 96, and on the body rising directly above the bar, and just as it is falling over, give a slight spring with the hands, which will increase the forward motion of the body, then, by letting go your hold of the bar, alight on the ground.

This is a very good finish to the previous exercise, and, if able to achieve the Turnover in page 95, no difficulty will be found in carrying this into effect.

115. The Backaway, or To Leave the Bar in the Swing.—This exercise, although one of the more advanced, must not be practised without the use of the

lungers at first, yet, if done by a clever gymnast who has any amount of pluck and nerve, he may be able to accomplish it, after once trying, without that aid, as the motion given to the body by the swing is quite sufficient to render it much more easy to accomplish than the position shown in fig. 52 would for the moment verify,

FIG. 52.



the position there represented being just after leaving the bar. Accidents will occur, and they sometimes cause benefits or advantages to be derived therefrom; such is stated to be the case with this now graceful finish to the Swing or Great Circle,* the hands of a gymnast having slipped while practising on a bar of too great a diameter. It is achieved thus:—

Proceed with either of the before-mentioned exercises in pages 52 and 94, and when in the forward swing, and the body rises level with the bar, at which time the back will be towards the ground, the hands must suddenly let go their hold of the bar (see fig. 52). The result of this seeming accident is, that the whole body

* Spencer, in his 'Modern Gymnast.'

will turn a complete somersault, the body at the same time dropping; and if the exercise be carried into effect at the right time, the feet will then be close to the ground, and you will consequently alight in safety;* but let the lungers be used, as a little practice will soon enable it to be accomplished with a certainty, or at least without any fear of any mishap.

116. The Socket (No. 1). *Shoulder practice.*—Grasp the bar backwards, thereby bringing the fingers towards you, letting the hands be wide apart. Now bring the legs up, and passing them beneath the bar carry the body through, and, allowing it to drop as far as possible, dislocate the shoulders (see Ex. 5, page 179), then, without altering the position of the hands, bring the legs up again and circle the bar, when you may drop to the ground.

This exercise may be varied by carrying the body through a second time and alighting on the ground instead of circling the bar, but either will require strong nerve and constant practice to do it neatly, but all such exercises tend to increase the strength of the parts exercised very much.

117. The Pass. *Leg practice.*—Mount above the bar by any method preferred, then, keeping the arms perfectly straight, lean the body forward a little, and raising the *right* leg well up at the side carry it completely round towards the *left* over the bar, letting go with each hand alternately to allow it to pass, and grasping the bar

* Many of my readers have no doubt seen the above exercise performed by that celebrated gymnast AVOLO, who clears the distance of nine feet from one horizontal bar to another easily, the gymnast grasping the second after achieving the exercise, and going on to the third, and so on.

again as soon as it is; the whole to be done as one movement, no pause or rest between to take place, and when perfect in carrying the *right* leg over as required, practise it with the *left*, doing it as quickly as possible, the quicker the better.

Should the above be not sufficiently explanatory, the following may better illustrate the method of its being effected:—On raising the *right* leg and carrying it over the bar, lift the *right* hand off the bar to allow it to pass, grasping it again directly, then lift up the *left* hand, pass the leg on towards the *left*, regrasp the bar with the *left* hand, and on dropping the right leg into its place the exercise is complete.

In practising the above with the *left* leg substitute the word *right* for *left* and *left* for *right*, and persevere in it until able to use the one leg as freely as the other.

118. Leg Exercise.—Place the bar about four feet from the ground, as, in the event of a slip in this difficult exercise, the fall will not be so great.

Mount the bar with the fingers behind and the thumbs in front, put the hands very near together, lean forward, and, raising the body as high as practicable, bring the legs forward, and, by opening them wide, carry them over the bar, one on either side of the hands, when the body will of necessity fall, but sufficient impetus must be given to it to carry it right round the bar.

The difficulty of this exercise consists in carrying the legs over the bar, which will be very difficult and tedious to beginners without constant practice, as, to do it properly, the legs should be kept perfectly straight, though at first you cannot help bending them more or less, but that must not be thought of when able to do it as required. Some assistance should be at hand, or the

lungers used in practising this exercise until perfect in it, though, if the grasp be firm, nothing material can occur, as any skilful gymnast can do it.

119. Hip and Leg Practice.—Hang on the bar, bring up the legs quickly, and opening them wide so as to pass the feet under the bar on the outside of the hands, let go your hold, and alight on the ground. This exercise is achieved precisely like that on the rings (Ex. 3, page 178), but the position of the legs in achieving it makes it much more difficult; therefore, until able to clear the feet easily of the bar, the lungers had better be used, as, when that portion of the exercise is accomplished, the remainder is easy enough, the momentum given to the body on bringing up the legs being sufficient of itself to cause the body to turn completely over as required, and enable you, without fear, to let go your hands. If preferred, the pupil may for practice open his legs, and carry them as far as able without letting go the hands; this would give him an idea as to the right time to let go the bar.

120. The Roll off.—This exercise is, as the name designates, a complete roll off the bar, or, from the mode in which it is done, some would term it a FALL OFF, and perhaps this would have been the more appropriate term for it, since there is no exertion on the part of the gymnast to achieve it; but let the lungers be at first used, though after it has been done three or four times they may, if the gymnast has that confidence in himself which he should always have, be cast aside, the execution of it being so very simple that they should not be used for a longer time than there is any occasion.

Sit on the bar, as far forward as possible, with the hands as in fig. 36, then let the body fall straight back

over the bar ; at the same time carry the arms over the head (fig. 53), which will cause the legs to be raised up in front, though they be bent a little downwards, thereby pressing a little upon the bar. The result of the momentum thus given to the body is, that the gymnast will be carried completely over the bar, and by thus turning a kind of backward somersault, he will alight on his feet in safety, eager to try it again and again until able to accomplish it without any assistance, however slight. There must not be the least sign of temerity or trepida-

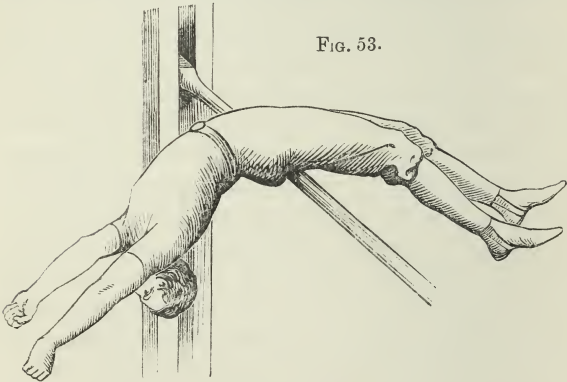


FIG. 53.

tion, as the more free the gymnast goes through with it the better it will in the end be accomplished. It is a pretty finish, owing to the result being so sudden, that no one unacquainted with the exercise can form the least idea of what they are to expect ; therefore practise it (but with the lungers on at first) until perfect. (See note, page 107.)

121. To Leave the Bar.—When able to achieve Exercises 110 and 111, page 102, very easily, and likewise

able to revolve round the bar five or six times in succession, quickly, the gymnast will do well to practise the following showy method of leaving the bar after any like exercise.

On going round in either of the above exercises for the last time, i.e. the revolution after which he wishes to make the finish, let the arms hang loosely over the bar, and perfectly still, the impetus previously given to the body and legs will cause the latter to revolve round as before; the consequence is, that you will alight on the ground in safety, and if done adroitly, and without any fear, it is a very showy and clever finish, and not at all difficult to learn, yet the lungers should be used until perfect in what is required of you. The ropes may therefore be wound round the bar, so as to come right when achieving the finish, the gymnast of course only going round the bar the same number of times that the ropes of the lungers are wound round it.

122. To Alight from the Bar after the Swing.—Proceed as in Ex. 115, page 105, but, on letting go with the hands, instead of carrying the feet forward and higher up in the air, thereby turning a somersault, give the body a sudden turn completely round, after the manner of turning round on the toes, and alighting as far as possible from the bar,* when the back must be towards the bar as before. This is a very pretty variation of the preceding, and is very easy to accomplish.

123. The Leg Swing off (No. 2). *Leg practice.*—Hang

* AVOLO, the celebrated gymnast referred to in page 107, has likewise accomplished the above exercise from one horizontal bar to another, the bars being nine feet apart, the gymnast then going from the second on to the third, and so on in like manner.

by the legs and proceed with the Leg Swing Off, Exercise 43, page 55, and swing the body to and fro well until it rises level with or *higher* than the bar in the forward swing, i.e. when the face is uppermost, then bend the toes well upward, so as to clear the heels of the bar, at the same time lifting the legs to unhitch them as before, when the impetus given will enable them to be drawn off, and after a little practice you will alight on the ground in safety.

This exercise, which is quite new, though at first sight like that in page 55, is nevertheless much more difficult, the gymnast should therefore practise it at first with the lungers, until he has gained sufficient confidence to try it by himself, but when once able to do it freely, and without the least hitch or drawback, it may be with safety tried without them; but though difficult, it is to be achieved after a few determined trials, nerve and practice being all that are required to enable the gymnast to carry into effect an exercise which few as yet can accomplish; it should therefore be persevered in, as it is a decided improvement upon the old and more simple method of unhitching the legs before referred to.

124. The Toe Catch.—Grasp the bar with the hands reversed, then swing and rise above the bar as in Ex. 58, page 66, then, without stopping, carry the body forward over the bar, but in so doing raise it up behind, which will throw the whole strain upon the grasp, and opening the legs wide, hitch the toes over the bar on the outside of the hands as the body begins to drop, and this additional momentum ought to be sufficient to carry you completely round the bar. On rising, let the legs drop into their places, when repeat the exercise at least

three times, hitching the toes over the bar each time. This makes a very clever feat, and tends greatly to strengthen both the wrists and grasp.

125. The Shoot. *Spine and wrist practice; quick movement.*—Hitch the fingers *only* over the bar, bring the legs up in front, and carry them and the body through between the arms, and suddenly shoot them out into the Back Horizontal, but in so doing jerk the body upwards by bending the arms at the elbows and carrying the hand round the bar, which, if properly done, will bring the heel of the hand on the top of it; then, if the arms be bent sufficiently, which will chiefly depend on the momentum given to the body upward, the fore-arms will be nearly perpendicular, and similar to the position they assume in Ex. 112, page 103, when raise the body to the bar by straightening the arms.

Now the difficulty of the exercise consists in raising the body quite on to the bar with the Jerk only, without having to raise the body up afterwards; it should therefore be well practised, and persevered in, and the gymnast should not be content until able to achieve it as required above.

126. Wrist and Toe Practice.—Sit on the bar and grasp it with the *right* hand, with the knuckles and thumb backwards, then, turning on one side towards the *right*, bend the left leg up and hitch the toes well over the bar behind, raise the *left* arm up straight, lift yourself off the bar, thereby throwing the weight of the body on the *right* arm, press the right leg up against the bar underneath, and throw yourself forward with a sufficient force to carry you round the bar, when the exercise may be repeated *ad libitum*.

This is a very showy but difficult exercise, and requires some considerable practice to be able to do it without any seeming exertion.

127. Leg and Wrist Practice.—Mount the bar and turn the *right* hand backward, keeping the *left* just in front of it. Now, with rather a strong impetus raise the body a little, and throw it over the bar to the *left* backward, hitching the *left* leg over the bar, when, on swinging completely round, as you ought to do, bring the body into an upright position again, or repeat the exercise two or three times.

Rather difficult at first, yet to be mastered after a little practice; but, when able to do it as above described, substitute *left* for *right* and *right* for *left*, and then practise it, by which means no one way will be more difficult than the other. This should always be done where a certain arm or leg is given.

128. A Competition Exercise.—Rise *above* the bar by the Slow Pull up movement (Ex. 51, page 62), and sink below it again TWICE; now ease the hands, and circle the bar slowly with straight legs, if able to do it without touching the bar with either legs or body the better; then bring the body through and carry it up over the bar, and sit on it (Ex. 64, page 69). Lastly, turn the hands backward and *very* slowly, the slower the better, and without any jerking, let the body slide forward, as far as the arms will allow without bending them, then let the body fall forward, keeping the body and legs perfectly straight one with the other, until the arms are as far below the bar as they can possibly go, when keep the body in the horizontal position for a short time, and drop to the ground.

This is a very skilful combination, and requires a clever gymnast to achieve it. The feet are not to touch the ground during the going through of this exercise, which is always the case in competitive exercises.

129. To Turn round along the Bar with the Arms bent at the Elbow (No. 1). *Arm and muscle practice.*—When in the position described in the Grasshopper Exercise (No. 112, page 103), release your hold of the bar with the *right* hand; this will cause the body to turn towards the *left*, when grasp the bar again with the *right*, carry the elbow well up, let go with the *left* hand, pass the *left* arm up behind and regrab the bar with the *right* hand with the elbow up and the knuckles back, the body will then be in the same position as at starting. The exercise must be now repeated to the end of the bar, when, by reversing the movement, turn the body round to the opposite end of the bar, letting the whole be achieved very slowly at first, and keeping the elbows well up all the time. This will be found to be a very difficult and tedious exercise, but a little perseverance will render it more easy than when first attempted.

130. To Turn round along the Bar with the Arms bent at the Elbow (No. 2). *Arm and muscle practice.*—The only variation which this exercise admits of from the last is, that the gymnast is required to raise himself up above the bar and sit on it every time his back is brought against it. This addition renders the exercise all the more difficult to repeat, but no such impediment should prevent an advanced gymnast from soon becoming the master of this as well as the former exercise.

131. The Socket (No. 2). *Shoulder and arm practice.*—Sit upon the bar, and turning the hands backwards;

grasp it with arms wide apart, when they will be nearly straight. Now, giving the body and legs an upward and forward motion, carry them out in front into a horizontal position at arm's length, and dislocate the shoulders (see Ex. 5, page 179), as soon as that position is reached, and before the body has time to drop, which it will do; on its rising on the other side of the bar, change the position of the hands, and continue to raise the body above the bar without stopping. This will be found a very difficult exercise, and only to be acquired by practice, with a certain amount of courage.

132. Back Horizontal and Pull up. *Arm and muscle practice.*—Sit on the bar, grasping it with the knuckles back, the thumbs being on the same side, and sink with the arms bent, as in Ex. 112, page 103, then, without any pause, carry the body forward by straightening the arms, at the same time raising the body and legs into the horizontal position behind the bar. Now for the more difficult part of the exercise; so let the muscles perform their full share. Bring the body towards the *right*, turning it *left* side upward in so doing; this will ease the *left* arm, which bend well above the bar until the fore-arm be quite perpendicular; this will give you sufficient purchase on the wrist to enable you after a time to raise the body on to the bar again, when the exercise must be repeated by turning the body towards the *left* instead, when the *right* arm will be brought above the bar first in returning. This exercise will be found very difficult, and it is only to be acquired by perseverance and practice.

133. The Twist, and to Rise above the Bar. *Shoulder, arm, and wrist practice.*—Grasp the bar with the hands

about fourteen inches apart, one on either side; the *left* hand being the nearer, bring the body up, and carry it through, similar to Ex. 18, page 40, but carry it out into a horizontal position, instead of dropping it, when twist the body over, as in Ex. 42, page 196, and let go with the *left* hand, this will cause the body to revolve a little; now regrab the bar with the *left* hand on the other side of the *right*, raising the *left* elbow well above the bar, so that the fore-arm shall be quite perpendicular, when, by letting go with the *right* hand, pass it on to the other side of the *left*, and mount above the bar. The body should now be dropped below the bar, and the exercise repeated, with the position of the hands reversed, thus letting the *right* hand be the nearer, which will cause the *left* to be substituted for *right*, and *vice versa*, in the foregoing description. Though this is another very difficult exercise, it is to be accomplished, if practised with determination and good will.

134. The Turn about. *Muscle and wrist practice.*—Proceed as in Ex. 122, page 111, and in the *backward* swing give the body the same upward motion, to check the rising of the whole body, by springing with the wrists, and in so doing, proceed as therein described on letting go the bar, but with this difference—that in this, instead of carrying the body back away from the bar, it is to be carried up, the turn being given as quickly as possible to enable the gymnast to regrab the bar, ere his body has had time to drop below it, which has a very curious effect on the spectators. This very difficult exercise is one that would do credit to any one who may be able to accomplish it.

THE PARALLEL BARS.

Remarks.—The difference between the action of the body and arms on the Parallel Bars and that on the Horizontal Bar, renders it equally attractive to the spectator and to the gymnast. On no account should they be slighted, and not practised upon, as they tend very much to strengthen and develop the chest, muscles of the arms, muscles of the back, abdomen, &c.; but, owing to the using of the legs in various exercises on the horizontal bar, it enables the gymnast to perform a greater number of exercises upon it than upon this apparatus. Moreover, the manner of changing or passing from one exercise to another, to enable him to consummate from half a dozen to twenty or more different movements without stopping, leaving the bar, or touching the ground with his feet, causes the single bar again to be the favourite; but, on the other hand, there are a great many exercises, both preliminary and otherwise, capable of being achieved upon the parallel bars, that cannot be thought of for the horizontal. Then comes the question, Which ought to be the greatest favourite? Without doubt, the horizontal bar is, and is very likely to continue to be so for some time to come; still, there are no doubt many clever gymnasts who, by having practised upon, and given more attention to the horizontal bar, are quite at a loss to achieve a very simple vaulting exercise upon the parallel bars. (See Vaulting, Ex. 26, page 253.)* To

* The above exercise was given as a set trick for others to follow

be a good gymnast, all apparatus should be alike to him, so far as his being able to achieve any exercise upon any particular one is concerned ; therefore make no favourite in particular, but share the time you have to spare between the whole at your command.

DESCRIPTION OF APPARATUS.—As with the horizontal bar, so with the parallel bars, great improvements in the mode of manufacturing them have entirely done away with their previously clumsy appearance, though I am sorry to say that at the present day parallel bars are used in a certain club where there are upwards of 300 members, whose bar measures the enormous depth of four and a half inches, while the width is two inches and three-eighths : if strength is the only thing needful, it is to be found there. On the other hand, what a hand a gymnast must have to be able to practise upon such bars as are recommended by a certain author of a small work on gymnastics, wherein it is stated that the bars are *four* inches deep, and *three* wide !

First.—The most simple mode of constructing this apparatus for outdoors is, to fix four posts firmly into the ground, in the form of a parallelogram, viz. 5 ft. apart lengthwise, and 18 in. apart at the ends. These posts should be from 2 ft. 6 in. to 3 ft. in the ground, and about 4 ft. 6 in. above ; they should not be less than 3 inches square (see Article in page 120, and fig. 54), and cut off gradually from the outside edge of bar down-

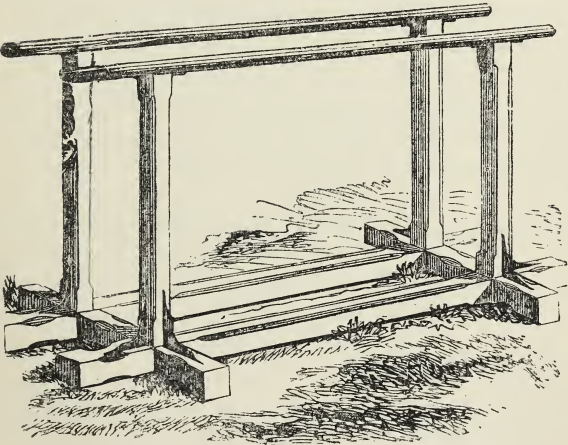
at a recent festival, and a smile passed over the countenances of the whole of the followers on seeing such an easy exercise set them ; but when it came to their turn, it proved to be too much for them, one among the lot being an A 1 gymnast on the horizontal bar.

wards for about 6 or 8 inches, or else rounded as in figs. 57 and 58, the bars being mortised on to the tops of the bars, and fixed with a wooden peg, the inner edge of the bar being quite even with that of the post. The bars should be made of straight-grained ash, i.e. the grain that begins at one end of the bar should, without having left the straight line, or nearly so, terminate at the other end; if it be otherwise, and the grain gets, as it were, lost, the chances are that the bar will break, sooner or later. If a kind of shoulder be made in those parts of the bars that are to rest upon the posts, it will add greatly to their permanent strength, and otherwise render them more secure in their fixings. For the shapes of the bars, which should project at least a foot at each end beyond each post, and the sizes thereof, see figs. 56, 57, and 58. Let the ends of the bars be slightly rounded, to fit the hollow of the hand when required. The above description will answer every purpose where the bars are to be permanently fixed; but, where otherwise required, the following method will be preferred.

Second.—The accompanying illustration (fig. 54) will perhaps convey the best idea of constructing the parallel bars, so as to be able to remove, shift, or take them to pieces when required. As will be seen, the four posts are fixed upon a wooden framework, neatly and strongly mortised together, the frame projecting beyond the posts each way on the outside at least eighteen inches, and, instead of being left square as in the engraving, they should be gradually sloped off about half the distance. Iron brackets fixed against the bottom of each post help greatly to increase their strength, and render them more

steady and secure. The posts of this apparatus may now be a little less in size, say three inches by two and a half, the longest side being placed lengthwise of the bar, which should not be less than seven feet. Such an apparatus as the above could be had from the manufacturers, 35, Old Street, London, E.C., from 3*l.* 10*s.*, for private use, to 4*l.* or 4*l.* 10*s.* for gymnasiums or schools, according to the strength required.

FIG. 54.

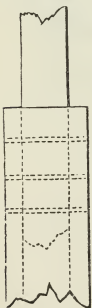


Third.—According to a simple description of parallel bars, that they merely consist of two bars supported side by side at a suitable height from the ground, so may the manner of constructing them be varied ; and this is neither more nor less than to erect two horizontal bars close together, so that the bars may be eighteen inches

apart (*vide* page 23). This plan has, like other things, its advantages and disadvantages. The advantages are, that from the bars being supported at the ends only, a greater spring is given to the body: the ordinary bar would be *seven* feet, but for this apparatus it might advantageously be increased to *eight* feet, consequently the gymnast would have greater scope as regards the distance he could go along them. The disadvantage consists chiefly in the bars having no ends, but should there be another apparatus in the building, as that given in the second Article (page 20), the disadvantage may be then set aside, provided the present plan be adopted. Moreover, many additional exercises might be achieved upon bars constructed upon this principle, as one might be raised higher than the other, according to the requirements of the gymnast. (See Article 3, page 23.)

Fourth.—Another method of constructing the bars is a combination of the last two, viz. to make the post hollow, to allow a pillar to slide up and down inside it. (See fig. 55.) If made wholly of wood, the pillar should not be less than two inches square, the case being made of wood three-quarters or seven-eighths of an inch thick, strongly made and capable of bearing the strain which is continually being put upon the bars by the gymnast. Holes (represented by the dotted lines in fig. 55) must be bored in the direction of the bars, through both pillar and post, to enable the bars to be retained at any required height by an iron pin being placed through them, these holes corresponding in dis-

FIG. 55.

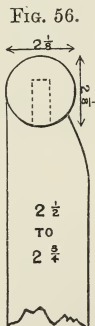


tances apart in the four pillars. But should the inside pillar be made of iron, the case may then be made as much smaller as the iron pillar is than the wooden one : this, though making it heavier to move, would give it a lighter appearance. The bars for this must be of the same size as before.

THE BARS.

SHAPE is the chief point left for decision in this place. We have said that ASH is the best wood to make them of, and that they are to be not less than SEVEN feet, one foot to project beyond the posts at each end.

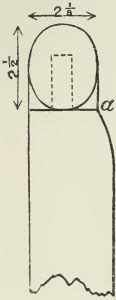
1. Some gymnasts prefer the bars to be *round*, from the fact that the horizontal bar, the trapeze, the rundles of ladders, &c., are round. The argument holds good, as round bars feel more natural, but then they must be increased in size, and should not be less than two inches and an eighth (see fig. 56), by which it will be seen that the top of the post is hollowed to receive the bar, which may be made from two and a half to two and three-quarter inches.



2. The movements given upon the parallel bars being so very different to those given on the horizontal bar, and the manner both of achieving them and grasping the bars being likewise so different, many prefer the bars a little out of the round, as in fig. 57, the dimensions for which are two and one-eighth inches (the same as the preceding in width) by two and a half

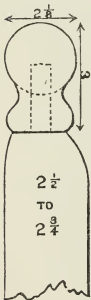
inches in depth, the additional depth being given to give increased strength to the bar. Besides, were the depth the same as the last, viz. two and one-eighth inches, the width must be reduced to obtain the required shape: this narrowing of the bar for that purpose would not only render it more awkward to hold with any security, but it would weaken the bar so much that it would be dangerous to practise upon it, hence the size is increased in the depth. On reference to the illustration it will be seen that it differs from fig. 56, inasmuch as the top of the post is straight; this is caused by the bar having a shoulder made to it (*a*) and which has been previously referred to in page 120.

FIG. 57.



3. In preference to either of the before-mentioned shapes, that represented in fig. 58 is very much in use, the dimensions of this being two and one-eighth inches wide, as before, and from three inches deep (this is the shape of the bar referred to in a previous page as being four inches and a half deep). But as the depth in this shape has not much to do with impeding the gymnast during his practice, an eighth of an inch more or less does not much matter; yet if it be unproportionably deep, an impediment must arise therefrom in some certain exercises hereafter described. The above dimensions, however, will be found the most suitable, the increased depth here given being, as it were,

FIG. 58.



an addition to the round bar, the sides being hollowed to admit of the fingers having a better grasp than if the sides were quite straight; fig. 58 represents them grooved at the sides to the depth of about half an inch, the bottom part merely giving extra strength to the bar.

EXERCISES ON THE PARALLEL BARS.

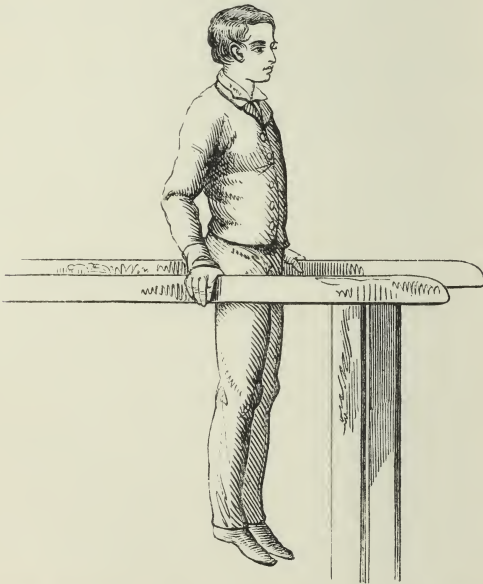
1. To Mount between the Bars (No. 1). Stand between the bars with the hands hanging loosely by the sides, spring up, and placing a hand on either bar, with the fingers on the outside and the thumb inside, keep yourself suspended for a short time. The legs must be kept perfectly straight and close together, and the toes pointing slightly downwards (see fig. 59).

To dismount, give a slight spring upwards, at the same time lifting the hands from off the bars and carrying the arms in front of you, or over your head, else they may come in contact with the bars on your alighting on the ground, which you must do on your toes.

2. To Walk along the Bars (No. 1). *Arm practice.*—Suspend yourself between the bars at the ends, with the face towards their length, and move the hands alternately along them. This must be done without bringing the shoulders out of their place, or hasty and irregular steps being made, the body or legs twisted about, or any like irregularity; and when the opposite end has been reached, the walk must be repeated backwards to the point of starting, which will be a little tedious at first, but after a little practice it will become quite easy.

The arms must be kept perfectly straight, or the exercise, which must be practised well with the fingers on the inside of the bars, as well as outside, will become much more difficult to beginners than it really is. Therefore, to succeed, you must make the steps slowly and regularly, and keep the arms and legs straight.

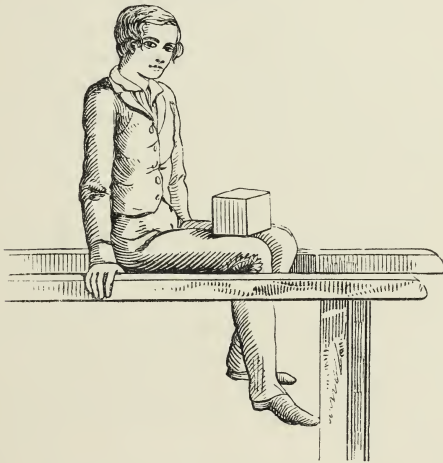
FIG. 59.



3. The Cramp (No. 21). *Leg and wrist practice.*— This exercise is nothing more than walking with the hands, but, in lieu of the legs being straight with the body, they are bent into a sitting posture, and kept in that position during the process of walking. (See fig. 60.)

In order to have the greatest possible weight on the arms, a weight may be placed in the lap, such as a 4 lb. or perhaps a 7 lb., or any weight preferred by the learner; but the nearer to the knees the weight is placed, the greater will be the strength required in the legs to keep them in the required position.

FIG. 60.



A block of wood may be placed between the feet (with or without the other weight), thereby requiring additional strength in the muscles of the legs to keep the feet from separating, so as to prevent the block from falling. (See Ex. 6, page 128.)

4. The Cramp (No. 2). *Leg, arm, and wrist practice.*
—Suspend the body between the bars, and bring up the legs, bent both at the hips and knees, as in the last

exercise, but on bringing them up raise the body up behind, and, by opening them, carry one on either side of the arms, letting the feet be as much over the bars as possible, but without touching them. Then, while in that position, walk slowly backwards and forwards; but care must be taken to sustain a good balance while so doing, which can only be done by grasping the bar firmly, taking the steps slowly, and keeping the legs well forward and the head well up. This exercise will be found to be excellent practice for the arms and legs.

5. The Treadmill. *Leg practice.*—It is hoped the young gymnast will pardon the desire to send him so soon to such a place, but, as it is not a place of punishment, perhaps he will give it a fair trial.

Mount between the bars, and :—

First.—In advancing the right arm lift up the right or left leg, as if ascending a flight of steps, and do the same with the left arm.

Second.—In drawing up the leg on advancing one arm, put it down when the other is advanced.

Third.—Bring up both legs every time one arm is advanced, and send them down sharply when the other is brought forward.

Fourth.—Every time either arm is advanced, lift both legs at once, and jerk them down again smartly before you make another step with your arm.

The whole of the above should be well practised, as by them, especially the latter, the strength of the grasp is very much tested. The arms must on no account be allowed to bend through the action of the legs, as that would show great weakness in those parts.

6. The Burthen. *Arm practice.*—This exercise wonder-

fully increases the strength of the muscles in the arms ; it likewise tests to the fullest extent the balancing powers of a beginner, or it may be one who calls himself a tolerably proficient gymnast, although it consists in nothing more than walking along the bars, both backwards and forwards, with a weight upon the shoulders. A little boy sitting upon them, with his legs hanging down in front, would be a very good load after a while, and the weight might be gradually increased until he be able to carry one of his own age or weight.

While achieving this exercise the arms must be kept perfectly straight, and the advance steps made regularly and not too suddenly, as this would tend to overbalance you. (See *The Cramp*, Ex. 3, page 126, and the remarks to the last exercise.)

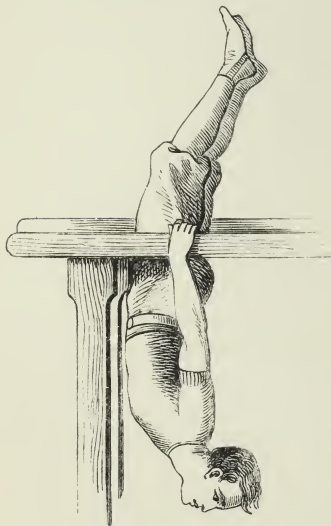
7. To Hop along the Bars. *Arm practice.*—This exercise tries the strength of the wrist very much, and likewise the patience of embryo gymnasts, and to perform it the pupil must mount between the bars as in the last exercise, but instead of moving the hands alternately, they are to be moved both at the same time in very short steps, the legs being kept perfectly straight while it is being performed.

The hop may be done by bending the arms a little, thereby sinking the shoulders, and straightening them again suddenly, or by raising the legs a little, and dropping or jerking them down again directly. In either case it must be done so very slightly as to be scarcely perceptible ; so much so, that some gymnasts will hop backward and forward in such a way, and with such apparent ease, that it is difficult to tell how it is done.

8. Walking (No. 2). *Shoulder and arm practice.*—

Stand between the bars and grasp them from underneath with the fingers uppermost, then, sinking down until the arms are quite straight, raise the legs up and gradually carry them and the body upwards until they assume a position similar to fig. 61 ; though, to be better

FIG. 61.



able to keep in that position here, the back must be bent a little back, then, by turning the face downwards towards the ground, move the hands to and fro along the bars, still retaining the body in the same position. This being an excellent exercise to strengthen the grasp, it should be well practised ; but at first the pupil should take but a few steps while the body is thus inverted, yet, after a while, he may gradually increase the number,

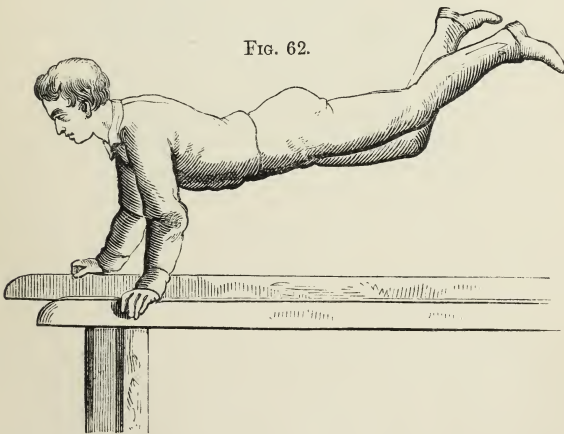
which will be in proportion to the time he can remain thus, and to his success in achieving it.

9. Walking (No. 3). *Hip, shoulder, and arm practice.*—Grasp the bars from underneath and bring the legs up as in the last, but bend the legs at the hips only, and carry them out perfectly straight, though this will cause the body to drop a little that way ; but this may

be counterbalanced by carrying it a little back, and while in that position move the hands alternately along the bars, keeping the face towards the ground and the arms perfectly straight.

10. To Swing.—To get perfect freedom in the arms and wrists the swing is an exercise to be both practised and persevered in; therefore, while suspended between the bars, the learner must swing the legs and body to and fro, very little at first, until he can with safety increase it; but not a mere swaying of the legs and body to and fro, like the pendulum of a clock, where there is no difference in the position of them in either the forward or

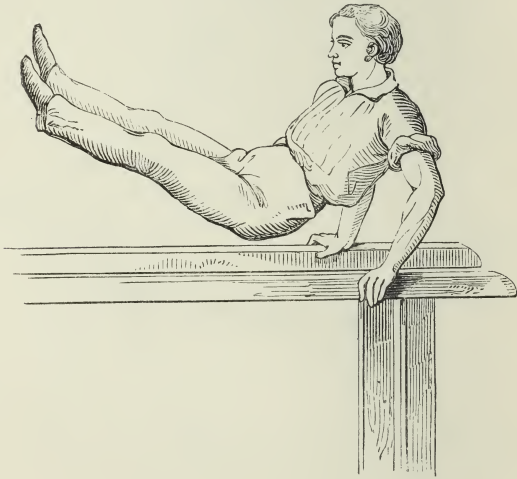
FIG. 62.



backward swing, the centre of gravity being at the shoulders only, which is generally the performance of most embryo gymnasts, more especially if they are not young in years; for, besides the action given at the

shoulders, the legs are also to be bent both at the hips and knees, at the latter but little, and the body is to be raised much higher in the backward (fig. 62) than in the forward swing (fig. 63). The legs must be kept close together, and in increasing the swing they are to be made to do their utmost, more especially in the for-

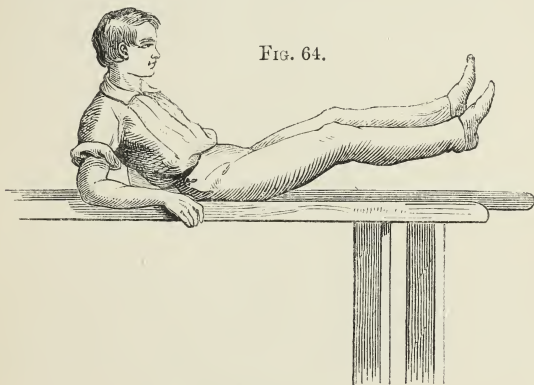
FIG. 63.



ward swing, where they are brought up well in front, as will be seen on referring to the illustration (fig. 63), then carried down with increased impetus, describing a part of a circle in so doing, which gives a sufficient momentum to the body to enable it to be raised up as in fig. 62. In either case, the feet must be carried as high as the head,—if higher, the better: but in the backward swing the body will be parallel with the bars,

although many, in swinging, carry it up nearly as high as required for a hand balance. (See Ex. 57, page 165.)

11. The Arm Swing. *Fore-arm practice.*—Mount between the bars, grasp them firmly, and let the body sink so as to allow the fore-arms to rest on them (fig. 64); then, while in that position, swing the legs to and fro, as



described in the last exercise, without letting the elbows slip off the bars, and practise it, when able to achieve Ex. 57, page 165, until you can raise the body upright above the bar as in the exercise referred to, when straighten the arms.

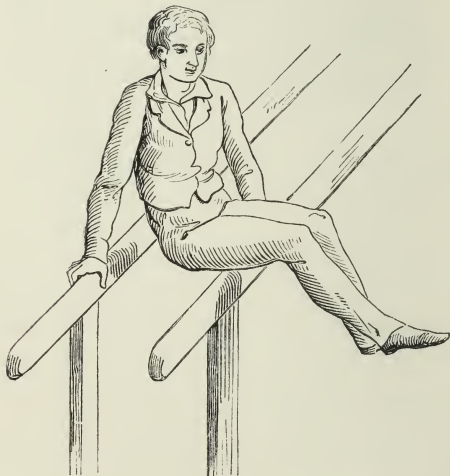
12. The Kick or Spur.—*Leg practice.*—Whilst swinging, as described in No. 4, draw up either leg alternately and send it out again with all your force; or bring up both legs at once, but it must be done in the back swing and when the legs are high above the bars, or you are likely to feel the effects of your own kick.

The sudden motion of the legs is likely to throw the

body a little out of its balance, yet grasping the bars firmly will prevent it after a little practice. It is excellent practice for the legs, and should therefore not be passed over. (See the remarks to Ex. 5, page 128.)

13. To Bring the Legs over (No. 1). Mount between the bars and swing, then, in the forward swing (fig. 63), carry both legs over the *left-hand* bar, as in fig. 65, or allow the body to slide over the bar until it reaches the hips. (See the next exercise.)

FIG. 65.



Now, by giving the legs an upward motion, assisted by the arms, raise the legs over the bar, and allowing them to drop between them, carry them over the *right-hand* bar the next time they rise on the forward swing, which might be repeated *ad libitum*. This exercise may

be thus varied:—throw the legs over the right-hand bar, as already stated, but on bringing them back again, instead of allowing them to drop between the bars, carry them directly over the left, when the exercise might be repeated three or four times to advantage; but this will require greater exertion.

14. The Engaged Seat. *Leg practice.*—This exercise is performed by bringing the legs over the bars a series of times, thus:—

Swing at one end of the bars, and throw the legs over either bar (say the left-hand one first), advance your hands to your front, with a spring bring the legs between the bars, and throw them over the same bar again in front of your hands, advance your hands, and repeat the exercise to the end of the bars.

The difference in going forward on the one bar, and returning on the same or the other, consists in your placing your hands behind you, and carrying your legs behind your hands, *instead of in front, as before mentioned.* Or, in other words, to advance the arms are placed in front of you, but to return they are placed behind you.

The learner might swing between the bars every time the legs come between them, which will assist him greatly in throwing the legs over, especially when returning; but this should not be done, if able to dispense with it.

For practice in this exercise, mount between the bars, in the middle, and carry the legs over the *right-hand* bar in front of you, then give a good spring and carry them over the *left*, as described in the last exercise; then, without resting, bring the legs down between the bars, and carry them over the same bar behind your hand;

then lean the body suddenly forward, give a good spring, raise your legs clear off that bar, and carry them over the other, when they must be again lifted up as just mentioned, letting them drop between the bars, and be carried to the front again. The exercise may be repeated as often as desired.

Another variation to this exercise is, to carry the legs from the *right* bar in front of you, to the *left* bar behind you, then, making the change behind from one bar to the other, as before, lift the legs from the *right* behind, and carry them to the *left* front; then reversing the course, go from *left* front to *right* behind, change to *left* behind, and carry to *right* front. These varia-

FIG. 66.



tions are sometimes very amusing, as it often occurs that the legs are carried over the wrong bar, or else they are carried to the front instead of behind, or *vice versa*.

Another variation to this exercise is, not to allow the body to rest at all upon the bars, either in the front or behind, as shown by fig. 66, in which the legs are perfectly straight.

15. To Jump out.—To bring this about the gymnast must make use of the same motion of the body and legs as in the last two exercises ; but, instead of only throwing the legs over the bar, he must use a greater impetus to enable him to bring the body over it as well as the legs, which must be carried a little higher, when, on letting go of the bars with his hands, he must give a good spring with the wrists, and he will alight safely on the ground ; but he must remember to do so on his toes, as on no account must a gymnast alight on his heels or flat feet. It will therefore be better for him to keep his toes pointed well towards the ground in all such exercises.

16. To Bring the Legs over (No. 2). *Leg practice.*—Mount between the bars with the face towards their length, and carry the legs one over either bar in front, without a swing, letting them be close to the hands. Now raise the body upright, and pass the hands to the front, keeping the legs, and the body likewise, as near as possible, perfectly straight, thereby pressing the legs tightly against the bars ; then, grasping the bars firmly, lean forward and raise the legs up behind over the bars, keeping them still as straight as before, or nearly so, when, on their dropping between the bars, carry them up again over them in front, as before, and repeat the exercise to the end of the bars. (See the next exercise.)

17. To Bring the Legs over (No. 3). *Leg practice.*—Mount between the bars, as in the last, but with the back towards their length instead, which is the position the body is in, after having achieved the preceding one, and carry the legs up behind and over the bars. Now raise the body upright, as be-

fore, pressing the legs well against the bars, and keeping the legs and body in a straight line one with the other, pass the hands behind, then, without moving the body, bend the legs up slowly in front at the hips only, and let them drop between the bars, when, by raising the body up behind, carry the legs over them, as before, and repeat the exercise to the end of the bars. The straighter the legs are kept in these last two exercises, the better will they be done, as it is for that purpose they are here inserted.

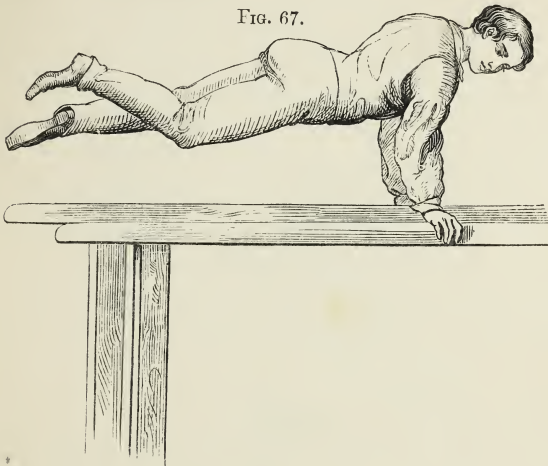
18. To Bring the Legs over (No. 4). *Leg practice.*—Mount between the bars in the centre, raise the legs and body up behind very gradually and easily, by leaning a little forward, and whereby the weight of the body is thrown more upon the arms, then, turning the body slightly to the *right*, throw the *left* leg over the *right*-hand bar, when raise the body again slowly, and carry the *right* leg over the *left*-hand bar, and repeat the exercise as slowly as possible three times at least each way alternately. (See the next exercise.)

19. To Bring the Legs over (No. 5). *Fore-arm practice.*—Proceed as in Ex. 11, page 133, and in the forward swing carry the legs over the right-hand bar, and then proceed according to the directions given in Ex. 14, page 135, the only difference being in the position of the arms, though this will be found rather more difficult, as neither elbow must be either raised from, or allowed to slip off the bar, while carrying the legs over the several ways, and achieving the exercise.

20. The Janus.—Mount between the bars in the middle, and throw a leg over each in front of your hands. Grasp the bars firmly, and with a spring bring

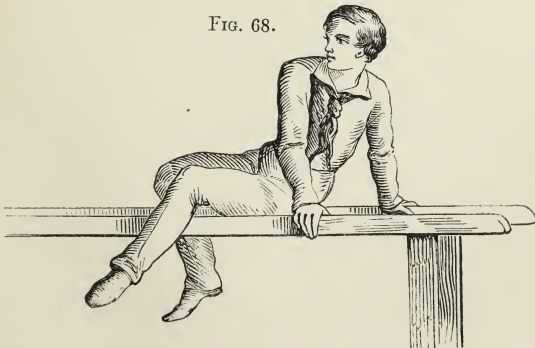
the legs between the bars, and carry them up behind you, but in so doing cross the legs, as in fig. 67, and in

FIG. 67.



giving the body a slight twist allow them to rest on opposite bars, when the right leg will be on the left-

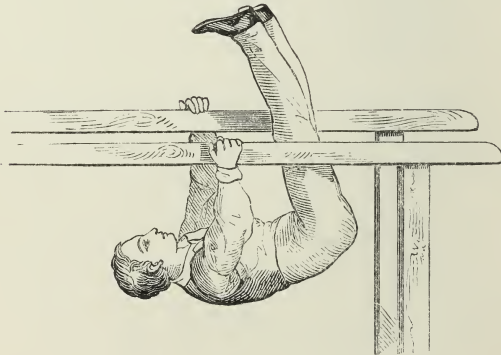
FIG. 68.



hand bar, and the left leg on the right-hand bar. (See fig. 68.) Do not always turn your body the same way, nor let the same leg be always uppermost in crossing them. This exercise should be repeated two or three times in succession by altering the position of the hands, and placing them each on the other bar, thereby bringing the body straight as before, but with the face looking a different way.

21. The Barber's Curl. *Muscle and spine practice.*—Stand between the bars, and grasp them as in Ex. 8, page 129, with the knuckles uppermost and the thumb on the same side as the fingers, then sinking down, straighten the knees into a sitting posture, as in the next exercise. Now bring the legs gradually over between the arms

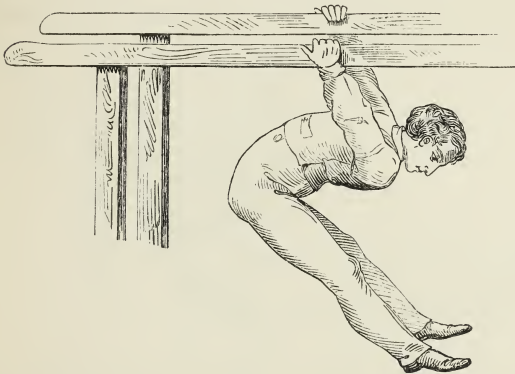
FIG. 69.



(fig. 69), till they perform a circle, or until they come nearly down to the ground (fig. 70), and after staying in that position for a short time, carry them back again quite as slow as you brought them over. The knees

must be kept perfectly straight, and the feet kept off the ground the whole of the time. Though this is difficult to beginners and makes the arms ache, it is nevertheless

FIG. 70.

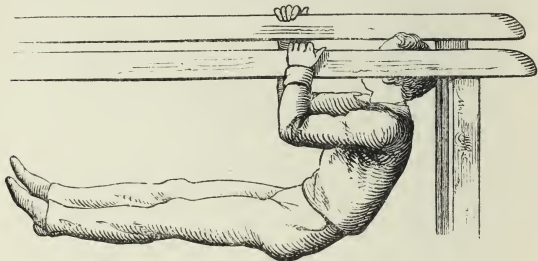


easily performed after a little practice. Therefore do not give up in despair, if unable to do it the first, or even the second time trying, for this is a very pleasing exercise, and tends greatly to strengthen the muscles of the arms, and likewise causes the grasp to be much firmer. (See Exercises 116 and 1, pages 107 and 176.)

22. To Rise and Fall below the Bars, or the Letter L. *Muscle practice.*—Hang from the bars as in the last exercise, and in carrying the legs out in front bend them only at the hips, and raising them up horizontally they will, with the body, assume the shape of a letter **L**, from which the exercise takes its name. Now, while in this position, gradually pull the body up by bending the arms at the elbows and shoulders until the upper part of the arms are parallel with the bars, as in fig. 71, then, after

having remained thus for a short time, gradually lower yourself again. The most difficult part of the exercise is, that on raising the body as just stated, the legs are to be kept in exactly the same position as they were before you began, i.e. horizontal (see fig. 71), and the exer-

FIG. 71.



cise must be persevered in, arms and legs achieving their respective parts, without allowing the latter to bend or drop. Though this is difficult at first to beginners, it is soon to be achieved by practice.

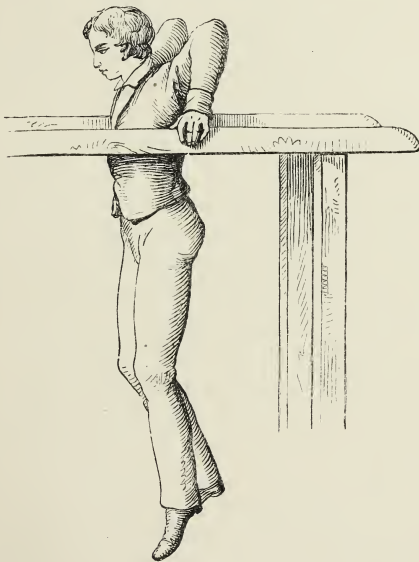
23. The Letter L Walk. *Muscle practice.*—Achieve the last exercise close to the ends of the bars, and raise the body until the upper arms are parallel with them, then move the hands alternately backward and forward along them their whole length, still keeping the body raised, and the legs in their horizontal position.

This exercise ought not to be practised until the pupil is well up in the preceding, as the fact of having to suspend the body in the above position by one hand, even though it be but for a moment, makes it all the more difficult to carry into effect.

24. To Rise and Sink above the Bars (No. 1).

Muscle practice.—Mount between the bars, grasp them firmly, and, allowing the head and chest to project a little forward, lower the body gradually by bending the arms, and carrying the elbows well up over each respective bar, until your body assumes the position shown in fig. 72, but without allowing the feet to touch the

FIG. 72.



ground ; then, by trying to straighten your arms, gradually raise the body again without allowing it or the legs to move or turn about. At first this will test the whole strength of your muscles to their utmost ; but take it easy, as, after a few times trying, you will find that

it is not quite so difficult to execute as it at first appeared.

The muscles of the chest, and more especially those connected with the shoulders, derive the greatest benefit from this exercise. Under these circumstances no pupil ought to be allowed to pass it over, as many are tempted to do, from the seeming pain caused by the weight of the body upon the shoulders by the arms being bent back.

25. To Rise and Fall above the Bars (No. 2). *One arm practice.*—Mount between the bars, grasping them firmly with the fingers outwards and the thumbs inwards, and,

First.—Gradually lower the body as in the last exercise (fig. 72), then lean the body a little towards the left, and straighten the right arm without at all altering the position of the left more than the nature of the exercise will require; now lower it again, and by leaning towards the right raise the left arm in like manner, repeating the exercise very slowly *ad libitum*.

Second.—On sinking down keep the right arm straight and straighten the left before bending the right, or sink down with the right while straightening the left, and *vice versâ*; or else lower one side and then the other before raising it.

Third.—Sink down and rest the fore-arms on the bar, and proceed as given in the first method above.

Fourth.—Achieve the exercise by resting on the fore-arms, but in the manner stated in the second method.

26. To Mount between the Bars (No. 2). *Muscle and wrist practice; quick movement.*—Stand between the bars at a sufficient distance from the ends to enable the elbows to rest upon them, and grasp the bars

firmly with the fingers outwards, the thumbs inwards, and the body upright. It is now required to rise from this position and carry the body above the bars as if you had only mounted them. This is done with a jerk, thus: lean the head and shoulders suddenly forward, at the same time raising the elbows well up from off the bars, when, by straightening the arms directly, rise as stated above, the whole to be done as one simultaneous movement. In itself it looks very simple to be done, and so it is after it has been practised a few times. To beginners it is difficult; but practice makes perfect, and the difficulty of this exercise is soon overcome.

27. To Mount between the Bars (No. 3). *Arm practice.*—Stand between the bars and place a hand on either close to the body, then lift the legs from the ground, which will cause the whole weight of the body to be upon the arms, which from their position, viz. bent, with the elbows uppermost, will cause the head and chest to be thrown forward; therefore, all that is requisite for the pupil to do now is to straighten his arms, thereby raising his body into the required position between the bars. But this requires greater strength in the wrists, as well as in the arms, and should consequently be well practised until those parts are sufficiently strengthened to be able to achieve it easily. (See Ex. 24, page 142).

This exercise must be likewise practised with the fingers on the inside of the bars, when the thumb may be either on the outside or on the same side as the fingers; the latter is preferred.

28. The Stooping Walk (No. 1). *Muscle practice.*—Mount between the bars at the ends, with the face towards their length, and proceed as in the last, and when

the body is as low as it can be conveniently, move the hands alternately along the bars, as in the walking exercise, No. 2, page 125. The consequent pressure upon each shoulder, while achieving this exercise, will cause the elbows to incline towards each other, thereby throwing the chin more forward. The steps must be taken very regularly and steadily, but at first the legs may be brought up a little as occasion requires, though it is better to dispense with that additional aid.

29. The Stooping Hop. *Muscle practice.*—This exercise ought perhaps to have been included in the last, but being, to many, much more difficult, it had better be mentioned separately.

It is effected by hopping on both hands at once, like No. 7, page 129, but whilst in the sinking position as above; and to accomplish it more easily, the legs may be drawn up and suddenly jerked down at the time the hop is made, but it should scarcely be perceptible, and should not be done at all after the exercise can be done without, as the spring ought to be made from the wrist and arms, which raise the body a little in making the hop.

30. The Stooping Swing. *Muscle practice.*—Proceed as in Ex. 24, page 142, then make use of the legs as in Ex. 10, page 131. Swing as high and as long as convenient, but do not tire yourself, as, although this position is very beneficial to the gymnast, he should always know when to stop. When able to swing to and fro easily the pupil may proceed with Exercises 33, 34, and 66, pages 148, 149, and 170.

31. The Long Run. *Arm practice.*—Mount between the bars at the ends as before, and when the body is in a good swing, and raised as in fig. 62, viz. in the *backward*

swing, make as many alternate movements of the hands along the bars as you can before the legs are allowed to drop, and stopping as soon as they do so, repeating the exercise every time the body is thus raised till the opposite ends of the bars are reached.

The pupil must not expect to take more than two, or three steps at the outside, at first, but by a little patience and practice he will soon be able to take five or six easily.

This exercise may be likewise done when the body is in the *forward* swing, but this will be found to be much more difficult; yet it is to be overcome by practice, as will soon be found if any gymnast will give it a fair trial.

32. To Jump along the Bars.—This exercise partakes of the swing, the walk, and the hop, and in order to do it the pupil must get his body into a good swing at the ends of the bars, with his face towards their length, the jump being made between the swing; and as this jump may be made in various ways, it has been divided into six parts, the three first partaking of the swing and walk, and the three last of the swing and hop, thus:—

First.—Swing well, and when the legs are rising in the *forward* swing, advance, first the right arm, then the left, but these movements must be made in the *forward* swing only.

Second.—Swing and advance one arm alternately, as above, in the *backward* swing only.

Third.—Advance the arms alternately, one in the *forward*, and one in the *backward* swing.

Fourth.—Advance *both* arms at once, as in the Hop exercise, page 129, in the *forward* swing only.

Fifth.—Let both arms be advanced only in the *backward* swing.

Sixth, and lastly.—The arms must in this be advanced both in the *forward* and *backward* swing.

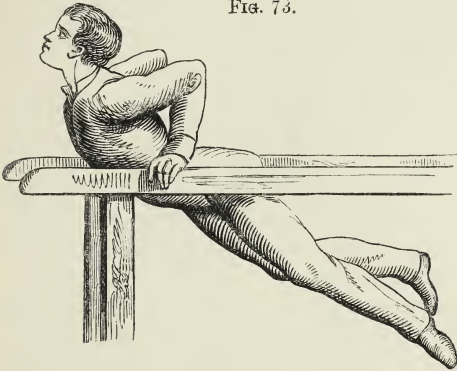
These exercises give good practice for the gymnast, but although they will at first make the arms ache, it will soon wear off, and after having persevered in each and all of them for a short time, this feeling will be but momentary, though these aching pains in a young gymnast are often felt on the following day, more especially if he went into the gymnasium with a determination to have a good spell at it, and have done with the worst at once; but it is in this as in all other like exercises, nothing short of continual practice makes perfect. (See the next exercise and Exercises 34 and 66, pages 149 and 170.)

33. The Long Leap, or The Pumping Movement (forward). *Arm and wrist practice.*—This exercise requires great strength in the wrists and muscles, and must therefore be continually practised, or it will be utterly impossible for the pupil ever to accomplish it to perfection, and with that perfect ease and freedom of action which the nature of the exercise demands, and without which its beauty and advantageous results will be entirely lost.

Proceed with the swing as described in Ex. 10, page 131, and in the *backward* swing (fig. 62) bend the arms, thereby sinking the body as in fig. 73, before the legs have had time to drop; then, on the body rising in the *forward* swing (fig. 63), carry up the legs well in front, at the same time taking a sudden spring with the wrists, somewhat similar to the Hop, Ex. 7, page 129, but in this advance as far along the bars as practicable, but in short

steps at first, as after a little time you will be able so to increase it as to go the length of the bars in three, if not in two, springs or jumps. On alighting on the bars, the

FIG. 73.



arms are to be straightened, as in fig. 63, and proceeding with the *backward* swing, prior to allowing the body to sink again, when it may be repeated as often as convenient, but without overtiring yourself, until able to take the leap as already described.

34. The Pumping Movement (backward). *Arm and wrist practice.*—When the ends of the bars are reached in the last exercise, the gymnast must achieve this exercise by reversing the motion, viz. allow the body to sink in the *forward* swing, and on the body rising in the *backward* swing, give a backward spring, alighting on the bar with straightened arms, then sink down again and continue the exercise to the end of the bars.

More difficult to execute than the last, but to a persevering gymnast that difficulty will be as nothing. (See Ex. 66, page 170.)

35. Kissing the Bars. *Spine, neck, and arm practice.*
—First put the body in the posture described in Ex. 24, page 142, then endeavour to bring the head down close to each bar alternately, so as to kiss them. It should be done behind the hands as well as in front of them, but it will be a little more difficult.

This is a simple exercise after a little practice, but to a beginner it causes a slight pain in the back and neck, though it is only momentary.

36. The Spanish Fly (No. 1).—This is a very pretty finish when the gymnast is at the ends of the bars, and is not near so difficult to carry into effect as it would at first seem.

When at the ends of the bars place the hands over them by capping them, i.e. let the palm of each hand rest on the extreme end of each bar, when the fingers and thumb, by grasping it firmly on all sides, appear to hide it from view, as shown in fig. 74; or, if preferred, the gymnast may grasp the bars in the ordinary way about two inches from the ends: this latter method seems to have superseded the former. Now swing to and fro twice, making the backward swing the last, and in so doing raise the body up behind, and carrying the legs up higher than the bars, open them and carry them one over either bar (fig. 74) with a strong impetus, when, by giving a slight spring with the wrists and letting go your hold with the hands, alight on the ground. Now, in flying thus over the bars the body must be leaned well forward, when the spring given with the wrists will give you greater courage to let go, likewise a better and easier method of bringing the legs together again by straightening

the body a little, without knocking them against the ends of the bars.

The greater the impetus given in bringing the legs

FIG. 74.



forward over the bars, together with the spring with the wrists, the greater will be the success in achieving the exercise.

37. The Spanish Fly (No. 2).—This finish is the reverse movement to the last, consequently the back must be towards the ends instead of the face, the fly over the ends being made in the backward swing, which, aided with a good spring back with the wrists, will, if the legs be lifted well up in front and straight, and opened wide, free you entirely from all chance of encountering the bars, and you will alight on the ground. A little perseverance only is required to enable it to be carried into effect quite easily. (See the Lungers, page 10.)

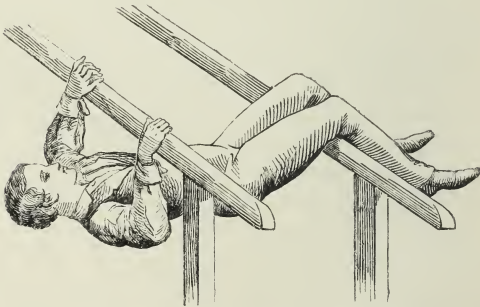
38. The Dance. *Leg and wrist practice.*—This is a very lively exercise, but it requires great nerve to do it,

though it will be rendered much more easy to accomplish after the gymnast has practised the Vaulting Exercises in the 247th and subsequent pages.

Mount between the bars with your face looking towards them, swing pretty smartly, and when your body is raised up behind and fairly balanced, throw the right leg over the right-hand bar by letting go that hand, bring your leg between the bars, and grasp the bar again without allowing either foot to touch the ground. Do so with the left hand and leg, and continue as often as convenient; and when well up in doing it as above, the exercise may be varied by advancing along the bars, but this will render it much more difficult to achieve, as the legs must be lifted higher to carry them over the bars, but it should nevertheless be well practised.

39. The Bend. *Spine practice.*—Stand outside the

FIG. 75.



bars with your face towards them, grasp them firmly with your hands, letting the knuckles be uppermost, and with a spring carry your legs under the bar you are

holding and over the other (see fig. 75), then, by using your arms (without moving your hands from the bar), and with a slight forward motion of the body, carry it over the second bar, and when the middle of the back reaches it, provided your head be free of the first, make a slight spring with your arms which will cause you to slide over the second bar and alight on your feet, but on alighting let the toes be pointed to the ground.

Another method of doing it is to grasp the bar, and, springing up, carry the legs and body over the second, and giving the spring with the arms directly, go over the other without any apparent pause; this would be the more easily done were the gymnast to raise his legs well up in carrying them over, which, with the after spring, would after a little practice enable it to be done without touching, or at least but very little, the other bar.

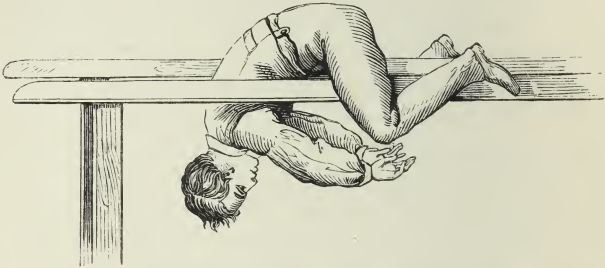
The whole of the body must pass freely between the bars and over the second, and on no account is any part of it to be turned on one side while achieving this exercise, which causes the spine to bend freely, but many a young gymnast abandons it, owing to that action giving him some reason to think it hurts him; yet, after having done it three or four times, 'it will not be found to be so difficult, and therefore he will be able to do it with ease to his back and satisfaction to himself.

40. The Turnover.—Sit astride the bars as across a saddle, stretch the hands out in front, fall forward, dropping the body between the bars with a quick motion, and bringing up the hands underneath (see fig. 76), grasp the bars behind you; this will cause you to release your hold of the bars with the legs, but by bringing them

together directly they are free of them they will drop between them, when you may alight on the ground.

It should be tried slowly at first, so as to understand the

FIG. 76.



mode of catching hold of the bars, therefore until perfect in that one part do not attempt to let go with your legs, then gradually increase the quickness of the motion until you can achieve it without any pause, for to do it properly it must be done quickly.

41. To Roll over the Bars. *Spine practice.*—Sit on one of the bars with both legs on the outside, and grasp that bar with both hands, one on either side of you, with the knuckles uppermost, then lean back on the other bar and rest the back of the neck on it, when bring the legs over the bar on which your neck rests, thereby causing the body to rise with them, as in fig. 77, and by letting go your hands when the whole body is nearly over the second bar, you will alight safely on your feet.

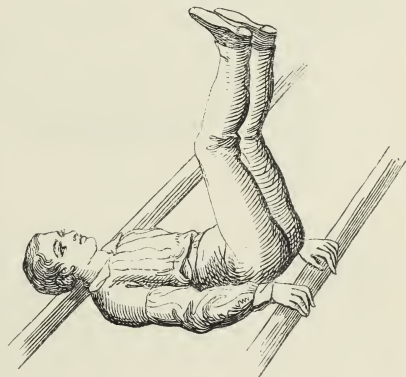
This exercise should at first be practised with the lingers on, until you have sufficient courage to do it by yourself. It must be done tolerably quick, otherwise your legs will not be forward enough to fall when you let go your

hands, and the consequences may be somewhat disagreeable, though it is a very neat exercise if performed with agility and without fear.

42. The Sausage. *Spine practice.*—Mount between the

bars about the middle, with the fingers on the outside, bend up the legs and hitch the toes over them behind the hands, letting them point outwards. Now pass the hands farther towards their ends of the bars, and when they and the feet are

FIG. 77.

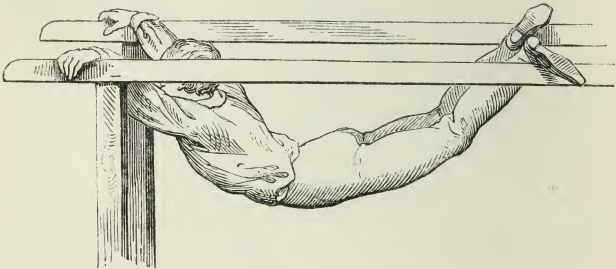


sufficiently far apart, let the body sink down as low as possible; in fact, when in this position you must occupy as great a length of the bars as possible, by working the hands forward and the toes backward (see fig. 78).

The pupil must now endeavour to rise, which at first he will not be able to do properly, for he will either not be able to rise at all, or else he will so far forget himself as to let his toes drop off from the bars; yet after a little perseverance the difficulty will be easily overcome, as the whole secret rests in the muscles and spine, which will be put to their full test. It is accomplished by first raising the head and shoulders above the bars by bending the arms, when the elbows are to be brought upper-

most ; after that is achieved, the rest is easy. Until able to do it otherwise, one arm may be brought up at a time,

FIG. 78.



but this should not be attempted after the first few attempts.

This exercise should be so persevered in, that when accomplished, a weight may be placed in the hollow of the back, and gradually increased ; and the steadier this feat is done the sooner will the difficulty be overcome.

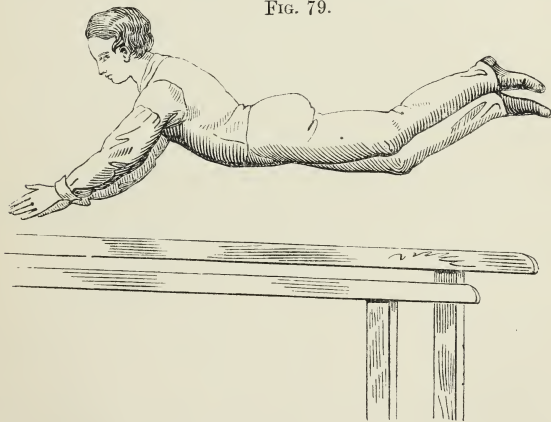
43. The Bridge. *Spine, leg, and arm practice.*—Sit on one of the bars with your legs between them, rest your hands on the same bar you sit on, with the fingers on the inside. Carry your body forward so as to support it by the knees on the other bar, straighten your arms, lean the head back, and by lifting one leg at a time, rest the feet on the bar, and bring the body as straight as possible.

In order to dismount from the bars, or rather to destroy the bridge, spring with your feet sufficiently strongly to carry them over your head, keeping the arms a little bent, and alight on the ground.

In performing this finish, assist yourself as much as possible with the hands; after a little practice it will become quite easy, and you may then add a weight to the body, as described in No. 3, page 126, thereby trying the strength of the bridge.

44. The Pancake. *Arm practice.*—Mount between the bars as in No. 1, and swing until your body in the backward swing be parallel with the bars (see fig. 62), or until you think you can hold on to the bars no longer; when such is the case, release your hold and endeavour, whilst in the air, to clap the hands (see fig. 79), and on

FIG. 79.



falling catch hold of the bars again without allowing the feet to touch the ground, repeating the exercise at least three times without resting. It will make the arms ache at first, but, notwithstanding that, it is to be easily achieved.

45. The Exchange. *Arm practice.*—Suspend yourself

between the bars near the centre of them, and with a sudden twisting motion of the body, aided by a spring with the wrists, let go the bars, and endeavour, by turning half round and catching hold of them again with both hands, to face the opposite ends; thus the bar that was previously held by the right hand will now be held by the left, and *vice versâ*. This exercise might be advantageously repeated three or four times without resting or letting the feet touch the ground.

46. Leg and Spine Practice.—Stand between the bars, place the hands on them, jump up, but in so doing give the body a turn half round, and sitting on either bar, at the same time letting go with the hands, hitch the feet under the opposite bar, and, as it were, throw the body backwards, letting it drop as low as possible, with the arms extended well over the head; then, with a sudden impetus, bring the body up, place the hands on the front bar, leaning well forward upon it to enable you to bring up the legs behind, when, with a slight spring with the arms, carry them backwards over the bar, letting go your hold and alighting on the ground.

This is a very clever exercise, and must be well practised to be able to do it neatly, as the legs are not to be carried on one side, but bent under only sufficiently to enable them to clear the bar.

47. To Circle the Bar (No. 1). *Wrist practice.*—This exercise does not in itself differ from that done on the horizontal bar, but, in accomplishing it here, the rise must not only be done very slowly, but the legs must be kept perfectly straight, as in Ex. 50, page 60, as in carrying them up and over they must not be allowed to touch the opposite bar, neither must the head touch it on

rising; this is easily prevented by carrying the body well round the bar while doing the exercise.

48. To Circle the Bar (No. 2). *Wrist practice.*—Proceed with the last exercise, and on the body dropping below the bar again, let it swing towards the other, when give a slight jump or forward motion, by letting go with the hands, and, without touching the ground with the feet, grasp the opposite one, then circle that as before, guarding against touching the bar behind with the feet on carrying them over. To continue this exercise achieve Ex. 41, page 55, when it may be repeated *ad libitum*.

49. The Front Horizontal (No. 1). *Spine and muscle practice.*—Grasp the ends of the bars with the fingers uppermost, and, stooping down, until the arms are straight, carry the legs straight out in front, when raise them and the body up until they assume the required position as described in Ex. 107, page 100 (see fig. 50).

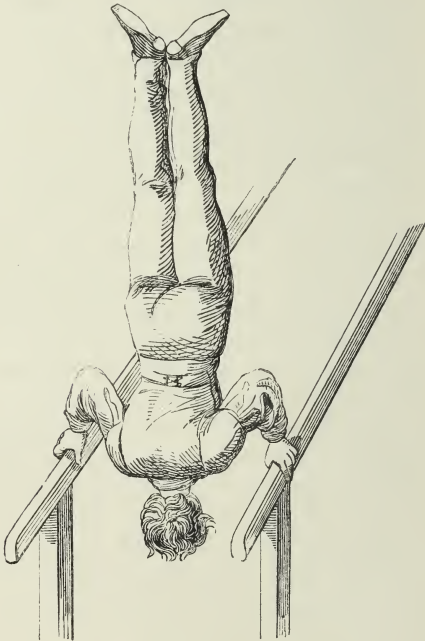
50. The Back Horizontal. *Spine and muscle practice.*—Grasp the ends of the bars with the fingers uppermost, sink down and carrying the legs out in front and raise them and the body upright as in Ex. 106, page 100, then, keeping the whole of the body perfectly straight, gradually lower it until it assumes the position shown in fig. 49.

51. The Balance. *Wrist and muscle practice.*—Mount between the bars, and bending the legs up behind, at the same time lifting the body up, bring the knees upon them, letting the toes point outward, and kneel.

Now lean forward, and rest the *right* shoulder on the *right-hand* bar, as close to the hand as possible, then gradually raise your legs into the air until they are perfectly straight and perpendicular to the bars, when,

after having rested thus for a short time, grasp the bars very firmly, and with a slow motion with the arms carry your body, without altering its position, across the width of the bars (fig. 80), and rest the left shoulder on the other bar.

FIG. 80.



This exercise should be done as often as convenient, without allowing the legs to be bent. The wrists will here be tried very much, but will afterwards be found to have gained strength in doing it.

Should the gymnast be so unfortunate as to over-balance himself, he will do well to practise the next exercise.

52. To Roll along the Bars (No. 1).—Proceed as described in the Arm Swing, No. 11, page 133, with the face towards the length of the bars, and when the body is sufficiently high in the *backward* swing to allow it to fall over, let go with the hands, stretch the arms out, and replace them on the bars in front as soon as able, and continue the exercise to the end.

It must be observed, that, on the body going over, the elbows are lifted from the bars, when the weight of the body will be on the hands and wrists, consequently the hands must not let go their hold until the arms again touch the bars; it is then that they are to be stretched out, and without any fear of falling, as the hands have to grasp the bar again almost immediately after they have let it go behind, the movement being simultaneously from back to front.

It must likewise be remembered, that in carrying the body up and over, the legs must be bent at the hips, and kept straight, and close to the body. This lessening the distance the legs have to go enables the body to be carried over much slower and easier.

This exercise may with safety be repeated three times, and in carrying the body over it will be well to bend it at the hips, and not to keep the legs *too* straight and stiff.

53. To Roll along the Bars (No. 2).—This exercise is neither more nor less than the reverse motion of the last, but it requires a greater amount of energy to carry the legs over. It must be commenced at the ends of the

bars with the back towards their length, the hands grasping them as in the latter position in the last exercise. The body must be carried over in the forward swing, the legs being carried with a much stronger impetus, working the body steadily over by the aid of the arms; and, as in the previous exercise, no fear need be entertained of falling, for, as in all similar exercises, energy and perseverance, intermingled with a certain amount of British pluck, are all that is required.

When this and the former exercise can be both done freely, they might be very advantageously combined, to vary the monotony of either of them alone, by rolling forward and backward alternately two or three times, or two or three times one way and then the same the other. This makes a very pleasing and clever feat, more especially if the gymnast be well up in it.

54. To Roll along the Bars (No. 3).—Proceed as described in the last two exercises, but on grasping the bars, instead of letting the arms be in the position therein stated, let the elbows project so much over them that the body shall rest solely on the upper part of the arms, as close to the shoulders as the width of the bars and the age of the gymnast will admit, the hand then grasping them more at the side; now, on carrying the legs up and the body over, the roll will be entirely on that part where the bars rest; consequently, some five or six revolutions can be easily made each way in succession without any fear of rolling off, which makes this method a decided improvement, as the shoulders remain in the same position throughout, the hands being, as in the last, released of their hold as soon as possible.

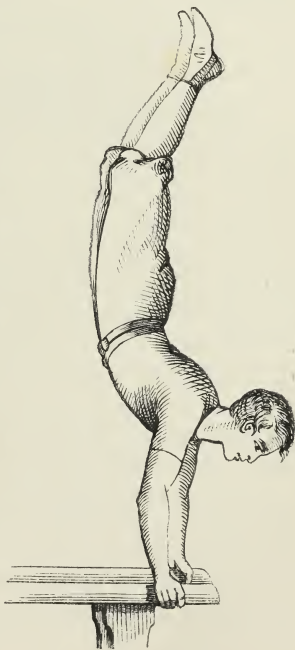
55. The Forward Somersault. *Wrist and spine prac-*

57. The Hand Balance, or To Stand on the Hands (No. 1). *Arm and wrist practice.*—Proceed as in No. 51, and after having fairly balanced yourself as there described, bring your body equi-distant between the bars, and gradually raise it by straightening the arms, when bend the body a little back, to ensure a good balance (see fig. 82).

Stay in that position for a short time, then lower yourself again, and finish with some showy exercise.

58. The Hand Balance, or To Stand on the Hands (No. 2). *Arm and wrist practice.*—After having practised the above for some time, it would be well for the gymnast to mount between the bars, swing very high, especially in the backward swing, and on the legs going over the head to lower the body a little by bending the arms. The greatest balance is necessary in doing this, as one is liable to be too anxious, and overbalance himself when least expected ; but if, in achieving this exercise, the body be a little bent, it will make it much easier for the learner to balance himself in carrying it into effect,

FIG. 82.



when the body might be raised until the arms are perfectly straight, yet after a little practice it could be accomplished without bending the arms at all, which would certainly give it a better effect.

59. To Walk on the Hands. *Arm and wrist practice.*

—Proceed as last described, and move the hands alternately along the bars. This should be frequently practised, as only constant perseverance will enable the difficulty to be overcome. Short steps should be always taken, or, in an over desire to accomplish it by taking long, and consequently uneven steps, the exercise will be rendered all the more difficult to achieve, even to more advanced gymnasts.

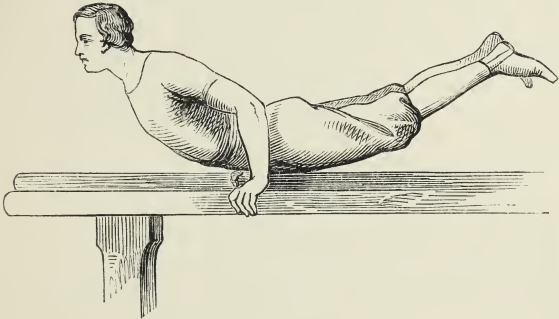
60. La Planche (No. 1). *Spine, shoulder, and muscle practice; slow movement.*—Mount between the bars at the ends, with the face towards their length, and bending the arms up and turning the hands back, cap the ends of the bars, i.e. let the palms of the hands rest upon the ends, and the fingers clasp it downwards, as far as practicable. Now, taking a step forward, if required to straighten the arms, without altering the relative positions of the body, arms, and legs, one to the other, lean well and slowly forward, bending the arms only at the wrists, at the same time raising the legs up behind until the arms rest firmly upon the bars, when the body will be in the position represented in fig. 83, and perfectly even and parallel with them. This, as well as the next, is a very clever, though difficult exercise, and requires great practice and strength of muscle to accomplish it to perfection.

61. La Planche (No. 2). *Spine, arm, and muscle practice; slow movement.*—This exercise consists of lean-

ing the upper part of the body so much forward as to counterbalance the lower part when raised.

Mount between the bars, and grasp them firmly with the fingers on the outside, and the thumb inside, then

FIG. 83.



lean gradually forward by bending the arms *a little only* at the elbow, at the same time raising the body and legs up behind, as in Ex. 132, page 116, when the whole body, with the exception of the fore-arms, should be parallel with the bars. (See fig. 83.)

This is a very clever, though difficult exercise, and like the last (to which again refer), requires practice and great strength of muscle to achieve it.

62. The Front Horizontal (No. 2). *Spine, muscle, and wrist practice.*—Proceed with the last exercise but one, and, instead of resting the upper parts of the arms on the bars, allow them and the shoulders to pass between them as far as able, but still keeping the fore-arms on them. The feet having been kept off the ground in the mean time, and perfectly straight with the body,

they are to be brought up and over, and being carried between the bars, they are gradually lowered until they assume the front horizontal position as required. But perhaps the more difficult part of the exercise is to follow, viz. to bring the body and legs back again, without altering their relative positions; this, which is very difficult, is only to be mastered by practice, it being one that requires a great amount of strength in the muscles of the arm, &c., to be able to achieve it freely, and without the least hesitation or overstraining on the part of the gymnast.

63. La Planche (No. 3). *Spine, arm, and muscle practice; slow movement.*—Mount between the bars, and, turning the hands backward, grasp the bars with the fingers on the inside, and the thumb outside, then sink forward, as in Ex. 59, page 166, until the fore-arms rest well on the bars, with the shoulders down between them, and the body in the position of the Back Horizontal. Now for the trial of the strength of the muscles, viz. to rise up again into the former position, without altering the position of the body, otherwise than the raising of the head and shoulders will require, and it will be found that nothing less than continual perseverance and practice will enable it to be overcome.

64. The Stooping Walk (No. 2). *Wrist, arm, and muscle practice; slow movement.*—Mount between the bars at the ends, with the face towards their length, and pass the *right* hand about a foot in advance of the *left*, then let the body sink by bending the arms, and draw it gradually towards the *right*, at the same time letting go with the *left* hand, and dropping the arm straight down under the bar, when the body will be supported by the

right arm only, which must still be bent (but this is only while the *left* arm is being passed on in advance), and bringing it up in front, regrab the bar, when raise the body up above the bars, sinking down again directly; let go with the *right* hand, drop it underneath as before, pass it to the front, and repeat the exercise to the end of the bars, raising the body, and lowering it again between each step. This, if neatly done, makes a very pretty and showy exercise, though at first difficult to achieve; yet it is of infinite benefit to those parts chiefly brought into use, as the wrist, arm, &c.

65. The Slow Upward Movement (No. 1). *Wrist practice.*—To facilitate and expedite the accomplishing of this, to beginners, most difficult and trying exercise, it being done solely by the strength of the wrists, it has been divided into three exercises, each of which may be practised as a complete one in itself.

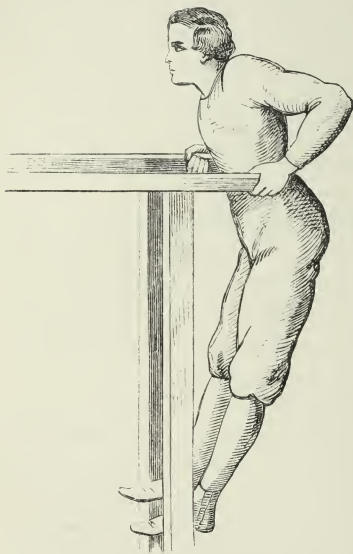
Mount between the bars, with the face towards their length, letting the balls of the hands be a little over the ends, but not too far, and the bars firmly grasped, the fingers being on the outside, and tending, as the exercise is proceeded with, towards the top, the thumb being inside. Sink down by bending the arms, allowing the elbows to fall with the body, as in fig. 84, keeping the head forward and the chin out; when that point is attained, rise (perhaps with some little assistance at first) into the upright position again, and practise it until able to do it easily before attempting to proceed with the next.

Although this greatly resembles the Rise and Fall exercise (No. 24, page 143), it is thought proper to insert it here, not only from the difference in the position of

the hands and body, but from its connection with the two following exercises, of which it forms a part.

66. The Slow Upward Movement (No. 2). *Wrist*

FIG. 84.



practice.—Proceed with the last exercise, and this time drop the elbows as low as possible below the bars, still keeping the body in the same position; the wrists will now be so bent over the ends of the bars that the body will seem to hang from them. On carrying the elbows down the fingers should be brought somewhat over the bars, to have a greater purchase to rise again, which must be done very

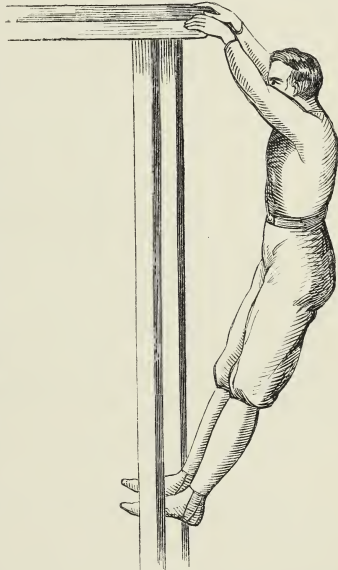
slowly—the slower the better, and well persevered in before attempting to continue the movement, as in the next exercise.

67. The Slow Upward Movement (No. 3). *Wrist practice.*—Having completely mastered the two previous exercises as there given, let the gymnast, now that his elbows are below the bars, let the body drop, by straightening the arms, as low as possible (fig. 85); should there not be room enough for his legs, they may be either ex-

tended out in front, or else bent underneath at the knees ; in either case, they must on no account touch the ground.

Every movement in these three exercises, which though when combined form but one, should be done as slowly as possible ; the gymnast will therefore be now required to bring the whole of the muscles of his arms and wrists into use to raise his body up again, and some slight assistance in the way of a gentle lift under the armpits, at first, may be the means of his overcoming the difficulty much sooner than it otherwise would be, or at least until he attains the position de-

FIG. 85.



scribed in the last exercise, which, in returning, is the turning point of the whole, and when so completely master of it as to be able to raise and lower himself with ease, he would do well, as a brilliant finish, first to achieve 'La Planche,' page 166, then raise himself up into a hand balance (Ex. 57, page 165). Either or both would be very appropriate.

The gymnast cannot fail to observe, that in performing this and the two previous exercises, the main strength

must be in the wrists, and that, as in the second and third movements, that of lowering the elbows and body below the bars, they are so bent over the ends, as before stated, that the body, as it were, seems to hang from them, although the hands are still grasping them.

These exercises must be perseveringly practised until able to lower the body as required, viz. slowly and steadily, or they will never be accomplished as they ought to be, for it will not do to let it be done by sudden movements, as that will not only wholly destroy its effect as an exercise on the whole, but it will do the gymnast no good in thus performing it, though the body will of necessity drop somewhat suddenly at first, but by constant perseverance the difficulty will, if there be any muscle at all in the arms of the performer, be soon overcome; therefore bear in mind, that the slower it is done, the more graceful and difficult will it appear.

Instead of first lowering the body as above stated, and then raising it, the gymnast may reverse it by first hanging down from the ends of the bars, and then, without lowering the body at all, he can, as a variation, achieve the two exercises before referred to.

68. Pumping Movement (No. 2). *Competition practice.*—Mount between the bars in the middle of them, the movements required being very similar to those given in Ex. 34, page 149, but here the gymnast must swing and sink on the legs rising up in front, raising the body again directly, by straightening the arms, on the legs going in the backward swing, when the body and legs must be well raised behind, like that shown in fig. 73, then let the body drop without bending the arms until

the legs rise up in front again, when the exercise is to be repeated in all three times.

Having accomplished the above, he now proceeds with the second part of the exercise, viz. continue the swing, and sinking the body on the legs dropping from behind; strengthening the arms again on their being carried up in front (Ex. 33, page 148), which must here be done as high as possible, when, giving the body a backward swing, the exercise can be continued as before, viz. three times.

This is a very tedious and difficult exercise to beginners, owing chiefly to the hands not having to shift their position, as in the former exercise, but it is nevertheless an exceedingly good one, and is frequently given as a set exercise to test the capabilities of gymnasts in competitions, or otherwise achieved by the gymnasts themselves when exercising for style or neatness of performance, for it will look nothing unless the legs are carried well above the head, either back or front, and the body sunk well each time.

69. Wrist, Arm, and Muscle Practice.—Mount between the bars, and sink as in the Rise and Fall exercise, page 142, then, by straightening the arms as much as you can, lower the body below them, turning it on one side (the *right* first), letting go with the *left* hand, but without removing it from the bar; this will allow the hand to be over on the bar, when regrab it, and, sinking the body still lower, bring the body over as in Ex. 21, page 140. As in the last, the difficult part is to follow, viz. to bring the body back again, and by again rolling the hand, only the reverse way, raise the body above the bars again into its former position.

This will be found to be a very tedious, difficult, and trying exercise throughout, the chief difficulty lying, not in lowering the body, or carrying it over and back again, but in keeping the wrist of the left arm on the bar the whole of the time, and on no account allowing it to be lifted from, or slip off the bar, while turning the hand over either way. Perseverance and patience are the essentials required for a gymnast to become master of this most difficult exercise; and when able to do it as above, let it be repeated with the other arm.

70. The Slow Upward Movement (No. 4). *Wrist practice.*—The gymnast must mount in the middle of the bars, and proceed slowly to carry Exercises 65, 66, and 67, pages 169 and 170, into effect. If preferred, he may practise each division, as in the aforesaid exercises, in the order they are placed. This will enable him to understand the required movements of the arms and hands better, as he will soon find that, although the exercise itself is the same, the execution of it will be more difficult, as the difference in the position of the hands will cause the gymnast to bend his elbows closer to his sides, while lowering his body between the bars; besides which, his hands being then turned out, his wrists will be likewise turned out, as well as down. This evil may be in part remedied by his bringing his hands up on the top of the bars (fig. 84) as the body is lowered, carrying them over on the outside as his body is again raised, thereby getting a greater purchase to bring the elbows up on assuming his original position. This exercise needs but a little practice, if the previous ones can be achieved easily.

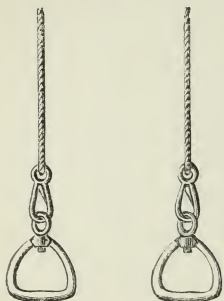
THE RINGS.

Remarks.—The advantage which this apparatus has over the two previous ones is that, from its being suspended from the ceiling, it can be used almost everywhere, even in a passage about three feet wide, room to swing to and fro being the chief requisite. There is scarcely a part of the body, from the hands to the feet, that is not brought into use by practising upon the Rings, and the exhilarating effects of being carried backward and forward in the swing being so well known to every one, what must therefore be the additional benefits to be derived from suspending the body by the hands while being thus swayed to and fro! Though the exercises are not so various upon the Rings as upon the Trapeze, still gymnasts will be generally found practising upon them oftener; though why that should be I know not, as, for my own part, I am more partial to the Trapeze than the Rings.

DESCRIPTION OF APPARATUS.—The rings are suspended by a rope (see page 7) from the ceiling, of a sufficient length to enable the gymnast to grasp it easily, with his arms upstretched. The rings may be made to work in small rings at the bottom of the ropes, or else constructed after the manner of a swivel as in fig. 86, and if preferred, and this would allow of the rings being

removed when required to use the trapeze in the same place without removing the ropes, spring hooks may be fixed at the bottom of them (fig. 86), and this would

FIG. 86.



effect a saving in the original cost, as one pair of ropes would then suffice. The shape of the rings must not be forgotten. The most comfortable to the hands are those called the stirrup shape (*vide* fig. 86), though many prefer them to be perfectly round. The size of the former may be about four inches and a half internal diameter, and about as deep, while the diameter of the latter are generally about six inches. The

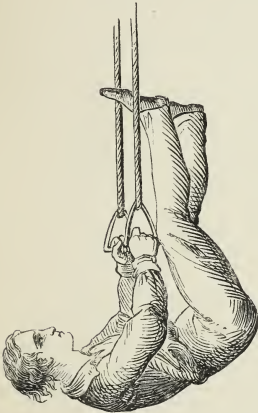
price of those shown in the illustration will be about 15s. ; if covered with leather, a few shillings more. Though they are higher in price than the plain hand rings, they are to be preferred, as they are the most improved shape. The price of the ropes would depend upon their size and length. The hooks to hang them from must not be forgotten, but the whole complete would not cost more than 30s., or about 1*l.* for the plain rings.

EXERCISES ON THE RINGS.

1. The Barber's Curl (No. 1). *Shoulder, wrist, and muscle practice.*—It will be unnecessary to repeat the description of this exercise, as it has been already given in No. 21, page 140, the only difference between the two being, that in this the rings are grasped instead of the bars in the other ; added to which, the liability of the

ropes to sway to and fro; they must therefore be kept perfectly steady while achieving it. Bring up the legs as before (fig. 87), and if done as it ought to be, the body

FIG. 87.



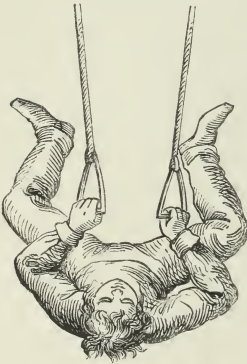
should be lowered so as to let it and the arms be nearly as straight as they were before starting, though it will be somewhat more difficult to bring the body back again. But a little assistance, by having a hand placed under each foot, and only having the body raised as much as needed, will cause that difficulty to be soon overcome, especially if the body be kept well bent at the hips on returning, practice being the thing mostly required.

2. Simplicity (No. 1). *Quick movement.*—Grasp the rings, one in each hand, as in the last, and carry up the legs as therein stated, only in this it must be done as quickly as possible, and on the feet coming over, and the body dropping, let go the ropes suddenly, and you will alight on your feet on the ground. But, just for the first time only, the lungers may be used, for if the gymnast will but exert himself in bringing up his legs as required, he will find that, difficult as it may seem, especially to beginners, there is not one more simple when accomplished; therefore, the quicker it is done the more likely is he to succeed, the chief point being to let go the rings

just as the legs are dropping ; the exact time will soon be learnt.

3. Simplicity (No. 2). *Quick movement.*—This exercise, though somewhat similar to that last described, will be found to be a little more difficult to achieve. Grasp

FIG. 88.



the rings, as therein stated, and in bringing the legs over, open them so as to pass one on either side of them, at the same time bringing the hands closer together (see fig. 88) ; then, when nearly over, let go the rings and alight on the ground. It may likewise be done with one ring only, when both hands must be in the same ring, the other being held on one side while effecting it ; but either must be done

quickly, to succeed.

4. The Everlasting Curl. *Quick movement.*—Proceed as in the last exercise, and on carrying the legs over let the feet touch the ground ; this will give a twist to the ropes, when give a slight spring forward and upward, and repeat the exercise as often as wished, touching the ground every time the body is carried over. The exercise should likewise be practised backward, which, by thus reversing the motion of the body, will enable the pupil to wear away the giddiness he is likely to feel if he achieves it in the forward swing several times without stopping.

The rings must not be let go until the gymnast has finished, but allowed to turn round as many times as the

exercise is repeated. (See description of Apparatus, page 175.)

5. The Socket. *Shoulder practice.*—This exercise differs from the last, inasmuch as the feet *must* not touch the ground while achieving it, and ere that can be allowed the gymnast will have to undergo a very severe punishment, which I shall not here attempt to describe, but will leave him to proceed as before, and, on the feet coming down, spread the arms a little, one at a time, when he will find that they will seem to come out of their sockets; but heed it not, for this exercise, when done three or four times without stopping, will give extra freeness in their use, and likewise greater satisfaction to any one who may see it done.

In doing this exercise, say three or four times without stopping, the feet are not to touch the ground, under any pretence whatever; and when able to do it without feeling the least unpleasant sensation, I will leave the young gymnast to judge of the injuries or benefits obtained by the practising of it.

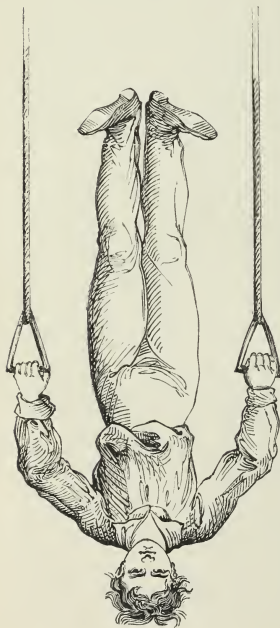
6. The Reverse Socket.—Grasp the rings as before, and hang so as not to let the feet touch the ground, then, by leaning the head and carrying the chest a little forward, and by giving a backward twist of the arm at the shoulder, allow the body to assume the position it attains on achieving the Barber's Curl (Ex. 1, page 176) after the body has been carried over, and dropped as low as possible. Having accomplished this (to beginners) difficulty, raise the body backwards, bending it at the hips, and allow it to assume its original position as at starting, when the exercise may be repeated as often as convenient.

7. The Socket practice.—Hang by the hands, as in the

last exercise, and execute the Reverse Socket ; but, instead of carrying the body up as there stated, let it return to its original position by effecting the previous exercise (No. 5), which might be done forward and backward four or five times in succession, but slowly, concluding with some brilliant and graceful achievement.

8. The Letter L (No. 1). *Leg practice.*—This exercise

FIG. 89.



being already described in No. 22, page 141, it will be unnecessary to repeat it here, the only difference being that the hands grasp the rings instead of the bars.

9. To Truss a Fowl. *Spine practice.*—This exercise has been previously described in Ex. 17, page 39, and only differs from it in one respect, viz. that the toes, in lieu of being placed against the bar, are hitched in the rings with the hands.

The gymnast, whilst accomplishing this feat, should get a little boy to suspend himself by his arms around his waist, which will test the strength of his grasp, and with what surety he can hang to anything with his toes. He should

then increase the weight until able to bear one of his own size.

10. The Lift (No. 1). *Shoulder and wrist practice; quick movement.*—Grasp the rings and throw up the legs as before, but in so doing straighten them and keep them upright between the ropes without allowing them to touch, and letting them and the body be perfectly straight (see fig. 89). While in this inverted position pull yourself up as far as possible, and let your body fall by suddenly straightening your arms, but still keeping the legs and body in the same position.

This is a good exercise to practise, as it not only tends to ensure the gymnast a firm and strong grasp, but likewise strengthens the shoulders and wrists very materially. It may likewise be accomplished slowly, as in the Rise and Fall (Ex. 9, page 35), and it would be to the benefit of the gymnast were he to practise it both ways alternately.

11. The Stretch (No. 1). *Arm and muscle practice.*

—After rising as high as possible, as in Ex. 9, page 35, bring one hand to the front and stretch the other

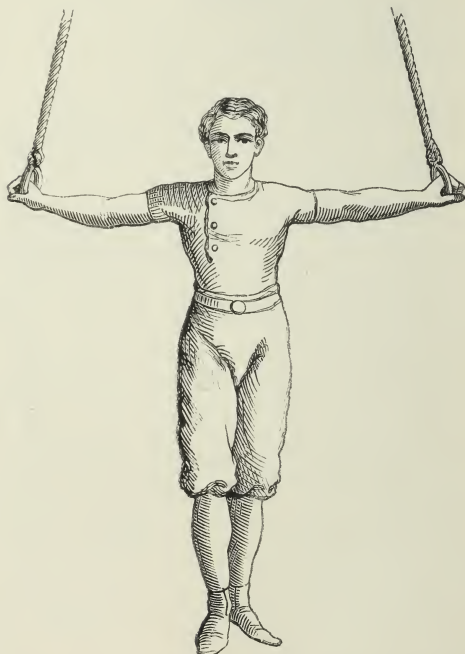


out (see fig. 90). The ring in the front must be grasped

firmly, whilst the other is kept in the required position by the open hand, as seen in fig. 90, the fingers being extended, and the whole strain falling on the hollow of the hand. This should be done with both hands alternately, and the legs should, in the meanwhile, be kept perfectly straight.

To make this exercise more difficult, the hand in front

FIG. 91.



may be carried more towards the shoulder, thus : the left hand towards the left, and the right towards the right,

and this should be so practised that after a time the gymnast can sustain himself as in fig. 91, where both arms are extended at the sides. (See the next exercise.)

12. The Stretch (No. 2).—Rise above the rings with straight arms by any method preferred, then, grasping the rings firmly, or opening the hands as in the last, gradually lower the body by carrying them from the sides, and practise it until able to suspend the body with the arms perfectly straight, one with the other, as in fig. 91. This being decidedly the better method of doing it, it should be well persevered in until all difficulty be overcome, as it tends to show the strength of the muscle, more especially if the arms be bare up to the shoulder.

This exercise has ever been well received at every festival and assault-at-arms the author has attended, and the lucky gymnast * gets no more than his due of the applause that has always followed his exertions in fully achieving the above.

13. Arm Practice (No. 2).—Rise sufficiently high to enable you to pass the fore-arms through the rings, letting them go with the hands, and stretching them out at the side, thereby resting solely on them, which should be about half-way between the elbows and the wrists.

This exercise may be varied by its being performed after the body has been brought into a good swing.

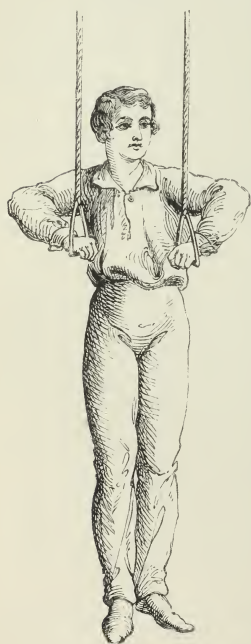
14. The Change. *Wrist and muscle practice.*—Raise the body as in the Rise and Fall (Ex. 9, page 35), then, bringing the *right*-hand ring a little in front, let go with

* Size of muscle of right arm, extended, $13\frac{5}{8}$ inches, bent to shoulder, $14\frac{1}{2}$ inch. Size of muscle of left, extended, $13\frac{1}{2}$ inch., bent to shoulder, $14\frac{1}{4}$ inch. The height of this gymnast was 5 ft. $4\frac{3}{4}$ inch., weight 8 st. 8 lbs.

the *left* hand, and dropping the arm down by the side, keep yourself suspended for a short time with the *right*; then, grasping the other ring with the *left* hand, let go with the *right*, and repeat the exercise, changing the hands as often as convenient. This exercise being of great benefit to the wrists and muscles of the arms, should be well persevered in.

15. To Mount between the Ropes (No. 1). Hang by

FIG. 92.



the hands as last described, pull the body up, and at the same time bring up the legs *straight* in front, as high as possible, then, with a sudden jerk, carry them down, as described in Ex. 58, page 66, at the same time carrying the elbows well above the rings (fig. 92), and rise immediately by straightening the arms.

This is an exercise that should be continually practised until able to do it neatly. (See also Ex. 57, page 65.)

16. To Mount between the Ropes (No. 2). *Muscle practice.*—Hang by the hands, letting them be well over the rings, which are not to be merely grasped, and by main strength bring the elbows up as in the last exercise, but without the

jerk. (See Ex. 52, page 63.)

The young gymnast would do well to practise this exercise with the *right* arm first, bringing the *left* one up after ; practising this until able to accomplish it easily. When this can be done, the *left* arm should be the first to be brought up, and the exercise persevered in until both can be brought up at once as required.

17. To Rise and Fall (No. 1). *Muscle practice.*—Grasp the rings, spring up and carry the elbows well up, throw the head well forward, the chest and chin out, and bending the body a little, carry the legs a little back, when achieve the Rise and Fall above the rings as often as convenient ; the slower and more graceful all such exercises are done the better. The hands must be kept close to the side the whole of the time. This exercise is like that achieved on the parallel bars in page 142.

18. The Letter L (No. 2). *Leg and muscle practice.*—Achieve the last exercise, and proceed according to the several methods of going through with this exercise, as stated in Ex. 22, page 141, the only difference being in the position of the hands ; it should, nevertheless, be well practised and persevered in.

19. The Stretch (No. 3). *Arm and muscle practice.*—Proceed as in Ex. 16, page 184, and when the elbows are well up and the arms bent, stretch the *right* arm gradually out at the side as before, allowing the thumb to be underneath ; then, on bringing the *right* arm back, stretch out the *left* in like manner, and repeat the exercise with each arm alternately, at least two or three times. The hand of the bent arm must be kept close to the side while effecting the stretch with the other.

20. The Swing (No. 1).—In swinging with the rings the ropes are sure to sway to and fro with the body, and

in thus swinging the required impetus must be given at the right time, otherwise a check will occur, and the ropes will be almost brought to a stand-still, for, in swinging, the impetus is given to raise the body higher than it was before, until the arms and legs are brought nearly into a horizontal position (fig. 93), when it is the aim of the gymnast to retain himself at that height, for, were he but to sway to and fro with the mere weight of the body,

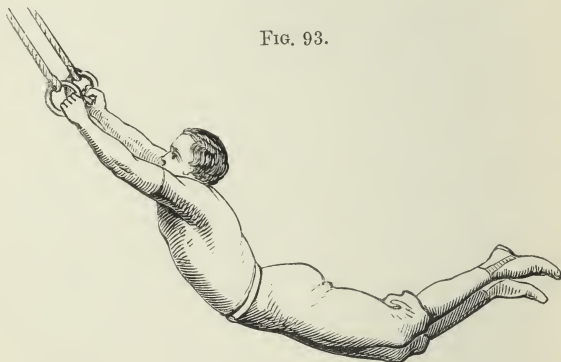


FIG. 93.

like the pendulum of a clock, he would soon find himself getting lower and lower, until the ropes would become perfectly still.

The swing is performed by drawing the body up, on ascending, either in the forward or backward swing, and lowering it rather quickly (not with a jerk) on the body returning, which, if done at the right time, will cause the body gradually to rise higher and higher until the required height is obtained. (See Ex. 9, page 35.)

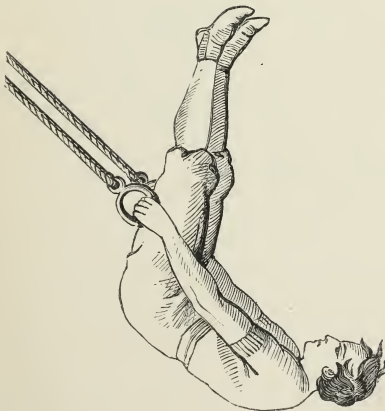
This method of swinging is generally made use of when

the rings are high enough from the ground to prevent the gymnast from touching it when hanging by his hands at arm's length; but should they be low enough to enable them to be grasped easily, the swing may be then obtained by running along at first, and giving a slight spring from both feet alternately every opportunity, either in the forward or backward swing, until the required height be obtained.

As the body should be brought into various positions during the swing, both for practice and their utility in strengthening the muscles, several of the following exercises may be performed.

21. The Swing (No. 2).—Proceed as described in

FIG. 94.



the last exercise, and when the body is sufficiently high bring the legs up between the arms, as in the Barber's Curl (Ex. 1, page 176), keeping them perfectly straight (fig. 94), and returning them to their original position at the other end of the

swing, which motion, if done at the right time, will somewhat keep up the swing instead of checking it; but, were the legs to be kept in one position, the momentum

would be for the time lost (see the next exercise) ; yet the gymnast might to some advantage retain the legs thus, and swing to and fro a few times without lowering them.

22. The Swing (No. 3).—Proceed as last described, and in bringing the legs up carry them over as far as possible, somewhat like fig. 22, page 41, but the body must be almost straight with the arms and legs, when the gymnast may be allowed to swing to and fro a few times without changing his position.

23. The Swing (No. 4).—Proceed as before described, and on bringing the legs up carry the body also up, keeping the legs between the ropes perfectly upright, and the head straight down, as in fig. 89. To keep the body in this position during the swing, without losing your balance, will require but little practice, but it will tend to strengthen the muscles as well as to make the gymnast keep a firmer hold of the rings.

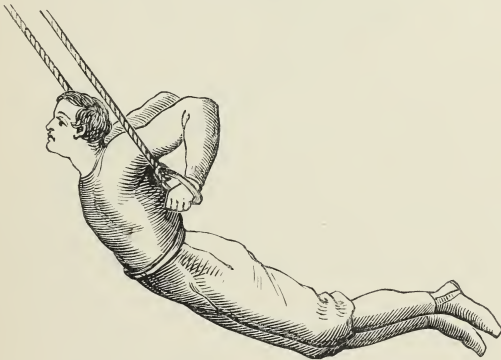
24. Simplicity (No. 3). *Quick movement.*—When fully competent to achieve the foregoing exercise (No. 2, page 177), without any fear of not alighting on the feet in a proper manner, the gymnast may get the body in full swing, as in Ex. 20, page 185, and then in the forward swing, when little more than half-way, bring up the legs as before, and proceed according to the instructions previously given, as the achievement of this exercise, with the exception of the addition of the swing, is precisely the same.

25. To Mount between the Ropes in the Swing.—Hang by the hands and commence swinging, and when the body is high in the forward swing, proceed as in Ex. 15, page 184, by bringing the legs up just before, and continuing the exercise immediately the body attains its

highest, remaining in that position in the backward swing until nearing the opposite end, when the body may be dropped, carrying it off a little to keep up the swing, and repeating the exercise as often as convenient.

26. The Swing (No. 5).—Proceed as described in the last exercises, and when in a good swing bring the elbows up, as in Ex. 16, page 184, and let the body swing to and fro while in that position (fig. 95). The gymnast must not

FIG. 95.



mind this position at first, as, after a little practice, he will soon get used to it. On reference to the engraving, it will be seen that the head is carried forward, the chin and chest are well out, and the hands close to the side.

27. The Swing (No. 6).—When in a good swing mount between the ropes, as in Ex. 16, page 184, and, keeping the hands close to the sides, the arms being but slightly bent, allow the body to swing to and fro a few times.

The only variation which this position admits of is,

that in the backward swing the head is carried well in front and the legs straight back to counteract the balance,

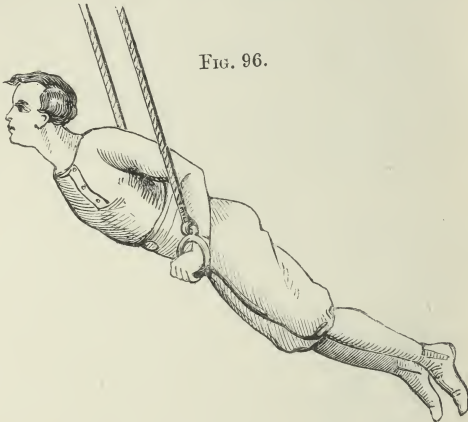


FIG. 96.

and to keep the body from falling forward and turning over (fig. 96); and in the forward swing the legs are

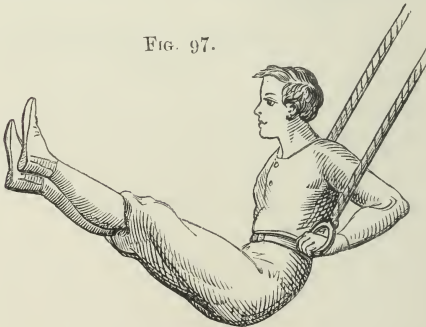


FIG. 97.

brought well up in front (fig. 97), returning them to their former position at the end of the swing.

28. The Barber's Curl (No. 2). *Shoulder, wrist, and muscle practice.*—This is nothing more than effecting Ex. 1, page 176. While in the swing, the legs must be brought up and carried over at the end of the forward, and brought back again at the turn of the backward swing, and it should be well practised, as the strain upon the shoulders is considerably more after the body is carried over than in the former exercise, and consequently that part is so much the more benefited thereby.

29. The Socket in the Swing.—Get the ropes into a good swing, the higher the better, then achieve the exercises as follow :—

1st. Execute the Socket described in No. 5, after every *backward* swing, just as you arrive at the turn.

2nd. Go through the same exercise at the end of the *forward* swing, in the same manner.

3rd. Repeat the above at the turn, in both the *backward* and *forward* swing.

4th. Accomplish the Reverse Socket, No. 6, in the *backward* swing, bringing the body over while returning.

5th. Do the same exercise in the *forward* swing.

6th. Bring the last two exercises about in both the *backward* and *forward* swing.

7th. Achieve the Reverse Socket in the *backward* swing without bringing the legs over, returning to your former position at the opposite end of the swing.

8th. Execute the same in the *forward* swing.

9th. Carry the above into effect alternately ; thus : accomplish the Socket in the *forward* swing, and the Reverse Socket in the *backward* swing.

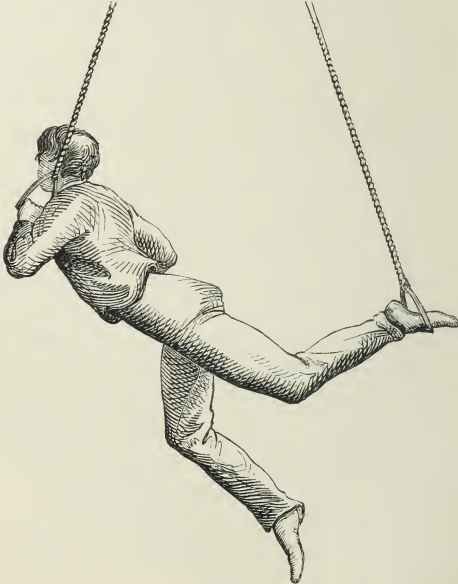
Care must be taken to give the motion to the body at the right time, or a check in the swing will be the con-

sequence, which will in part destroy the desired effect in accomplishing the above.

30. The Barber's Curl (No. 3). *Arm practice.*—Bring the elbows up, as described in Ex. 16, page 184, and do the Barber's Curl, dropping the body as soon as it is brought over, and carrying the elbows up again as quickly as possible, repeating the exercise three or four times.

31. The Barber's Curl (No. 4). *Arm practice.*—Proceed as described in Ex. 13, page 183, and fold the arms

FIG. 98.



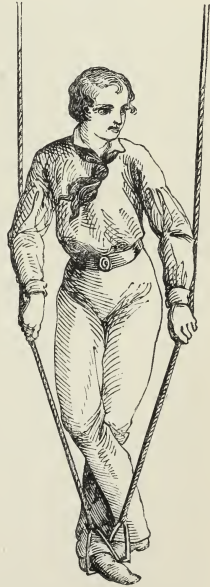
across in front, grasping each firmly by the hands. The arms must now rest on the rings just below the elbows.

Now do the Barber's Curl, or rather circle the bar, your arms being in the place of the bar, and on the body coming over, let go with the hands, stretch the arms out, and allow yourself to hang by the bend of the arm, or repeat the exercise a few times prior to the above finish.

32. The Revolver. *Toe, wrist, and muscle exercise.*— Grasp the rings, one in each hand, throw the legs up and hitch one (left) foot in the left-hand ring, and in so doing let go your hold of that ring, and grasp the other rope with that hand (the left), carrying the other (right) leg over, and allow it to hang as in fig. 98, taking care that, on carrying the leg over as just described, the (left) foot does not slip out of the loop, which is prevented by keeping the toes well bent over the ring.

Now with both hands grasping the one rope, and one foot in the other, pull yourself up by moving the hands alternately, and when up a sufficient height, place the other foot (right) in the spare loop, and grasp a rope with each hand, when cross the feet one over the other and keep them together, then, passing the arms to the front, grasp the ropes about the height of the hips, in the manner shown in fig. 99. Now lean forward, and, by bending the arms, raise the body and legs gradually up behind, and you will turn completely over. If the ropes be held firmly,

FIG. 99.



and the feet kept still in the rings and crossed, there will be no fear of falling.

It should be done at least three times without stopping, or as many more as the gymnast may feel disposed to do ; but the hands will have to be changed after each revolution, by carrying the arms through to the front as before.

33. The Turn-over (No. 2). *Wrist and shoulder practice.*—Rise between the ropes by any method preferred, but keep the arms bent and the elbows well up, as this exercise must be done prior to straightening them, then, keeping the hands close to the side, lean the chest forward, raise the body up, and carry the legs up behind and over the head, allowing the body to fall completely over, but the hands must still retain their hold of the rings ; yet, after a little practice, have the lungs on and let go the ropes on the body dropping, and alight on the ground, which, though at first difficult, can be easily accomplished by perseverance, and a determination to succeed.

This exercise may be repeated as often as desired by achieving No. 16, page 184, between each time, to bring the body above the rings. It may likewise be accomplished more easily by keeping the legs straight and bending them at the hips, instead of carrying them up over the body, which would, I fear, be too difficult for a beginner.

34. The Back Horizontal (No. 1). *Spine and arm practice.*—Grasp the rings, and bring up the legs as in the Barber's Curl, Ex. 1, page 176, but on carrying them over raise them up behind, when, by lowering the body, you may easily assume the required position, as shown in fig. 49.

35. The Front Horizontal (No. 1). *Spine and arm practice.*—Proceed as before, achieving the last exercise or not, then bring the body and legs back again, as in Ex. 1,

page 176, and on the body dropping, carry the legs out until in the horizontal position shown in fig. 50, remaining thus a short time, and dropping to the ground.

36. The Back Horizontal (No. 2). *Spine and arm practice.*—Grasp the rings, and proceed as described in the Lift, Ex. 10, page 181, when gradually let the body fall over in the same position until it is perfectly horizontal, then, after remaining as long as convenient, endeavour to return the reverse way, or else lower the body and drop on the ground.

37. The Front Horizontal (No. 2). *Spine and arm practice.*—Grasp the rings and carry out the instructions given in the Lift, as above, and then gradually lower the body in front until it assumes the position shown in fig. 50, and after remaining thus a short time, drop to the ground.

38. The Back Horizontal (No. 3). *Spine and arm practice.*—Achieve the Slow or Quick Pull up with bent arms, then throwing the head well forward, and raising the legs and body up behind, slowly assume the Back Horizontal, remaining thus but for a short time, when carry the body forward, by straightening the arms, and let it drop suddenly as far as the arms will allow, still keeping in the horizontal position, and without having lowered it or the legs in the least during this change. As this exercise benefits the whole of the muscles in the arms and wrists, it should be frequently practised, and beginners should persevere in it until they succeed.

39. The Front Horizontal (No. 3). *Spine and arm practice ; quick movement.*—Achieve the Socket (Ex. 5, page 179), say six or eight times, as quickly as possible, then, on the legs rising up in front, drop the body sud-

denly, by straightening the arms, and carry it and the legs, both simultaneously, straight out in front, thereby assuming the Front Horizontal, the whole being accomplished very quickly, the latter change especially, the which, the more sudden it is brought about the greater its effect; and, as with the last, the muscles reap their share of the benefits to be derived from its being practised.

40. The Back Horizontal (No. 4). *Spine and arm practice.*—Grasp the ropes as high above the rings as possible, or work the hands up them as in climbing to do so, and, carrying the body over as in the last, achieve the Back Horizontal. With the exception of having to hold the ropes, which makes the exercise somewhat more difficult, it is precisely the same as Ex. 39, page 194.

41. The Pass. *Leg and hand practice.*—Hang by the hands and swing to and fro, and when sufficiently high raise the body by bending the arms, then in the *forward* swing bring the *right* leg up in front, and carry it backward over the right arm, when, by letting go your hold of the ring in your *right* hand, allow the leg to drop into its place, regrasping the ring as soon as possible, which will be while the leg is dropping into its place.

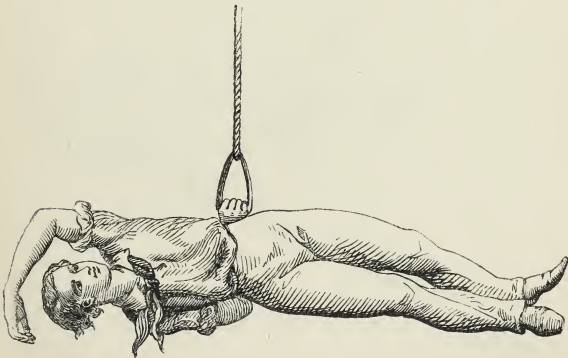
When able to do the exercise with the *right* leg freely, try it with the *left*, and when able to do it with that effectually, practise it with the *right* and *left* legs alternately.

42. The Twist. *Shoulder practice.*—This is a very difficult exercise both to achieve and to describe, and great practice is required before a beginner will be able to accomplish the difficult part of it, as it not only tries the strength of the muscles of the arm, but the twist

given at the shoulder, and the difficulty found in balancing the body evenly, causes many to abandon the exercise as *impossible*. But when a young gymnast has once achieved it, he will feel a pride in doing it in the presence of those who before deemed it *impossible*. I should therefore recommend patience and perseverance.

Hang by the hands and throw the legs over ; but before allowing them to fall too far, give the body a twist so as to bring the back (the nearer to the middle of the back the better) against the arm towards which you turn, and in so doing, let go the other rope, and keep yourself suspended as long as agreeable. (See fig. 100.)

FIG. 100.



The legs and disengaged arm must be kept extended as far as possible, and the body must incline a little backward, so as to rest on the arm more securely.

When thoroughly master of the above, it would be well for the gymnast gradually to let the body fall forward, and endeavour, by making full use of his muscles, to

lower it into a horizontal position without any seeming trouble or exertion.

43. The Jerk. *Spine, shoulder, and wrist practice.*—Grasp the ropes, one in either hand, and throw the right leg over the right arm (as in fig. 101), or the left leg over the left arm, letting the other leg hang loosely in

FIG. 101.



front. Now, with a sudden jerk, at the same time extending the disengaged arm a little, throw the body forward with as great an impetus as possible, when you will turn completely over, and in so doing you must not let go your hold, neither must the leg slip off the arm.

This is a very difficult exercise, and requires great nerve and practice for it.

44. The Barber's Curl (No. 5). *Muscle practice; slow movement.*—Grasp the rings with the hands well over, and pull the body up very slowly, then raise the legs up straight and carry the body over similar to the Barber's Curl (Ex. 1, page 176). Now for the difficulty. On the body going over, and the legs dropping, with the arms still bent, by the sole aid of the muscles and wrists, bring the elbows well above the rings, thereby raising the body above them at the time of going over, when it will assume the position somewhat similar to fig. 81, page 163, making some allowance for difference of apparatus. This exercise, which requires a deal of practice to achieve it well, must be gone through with very slowly, the slower the better.

45. The Lift (No. 2). *Spine and muscle practice.*—Hang by the hands, rise as in the last, and carry the whole of the body above the rings, opening the legs so as to allow the insteps to rest against the ropes. When in this position the elbows ought to be well up, and the hands on a line with and close to the shoulders. The body should be well bent back, forming a semicircle, to facilitate its achievement; in fact, when able to accomplish this feat to perfection (and it is one that always calls for praise whenever it is well and neatly done), the farther the arms are carried away from the body in any respect, the more difficult will the exercise be and appear. It requires continual practice to overcome it.

Now slowly rise by straightening the arms, carrying the feet gradually up the ropes at the same time, until they are as high as they can reach; after remaining a short time, as gradually sink down again. Owing to the

difficulty of achieving this exercise, it will not be well to overstrain the muscles in attempting to do it more than twice, or three times at the outside. A good finish to this exercise would be for the gymnast to drop into the Front Horizontal below the rings, but it will give the arms a good strain in doing it.

To bring the body up as here required, the gymnast may first mount as in Ex. 16, page 184, then, leaning forward, bend the body at the hips and raise it up behind, when carry the legs well up gradually, and hitch the toes round the ropes, but care must be taken that you are not overbalanced in so doing.

46. The Lift (No. 3). *Spine and muscle practice.*— Though this is mentioned as a different exercise, the difference consists only in the method of mounting between the ropes and hitching the toes around them.

This method is a combination of the last two exercises, though it is effected much quicker. The body must be raised by bending the arms, when the legs are brought up and the body further raised, as in the last; then, as soon as possible, the toes must be turned out and hitched against the ropes, the whole achieved as one simultaneous movement; it will be found much more difficult to carry into effect than that mentioned in page 199, but it only requires practice, especially after being able to do the last; become master of that, and this one will become all the easier. Having raised the body as herein described, proceed with the Lift, as in the last. It must be borne in mind, that the toes are to be hitched round the ropes both at once, and not one after the other, though at first that cannot be prevented from occurring; still the right thing must in all cases be the point aimed at.

47. The Lift (No. 4). *Competition practice.*—Mount between the ropes and hitch the toes round them as in the last exercise, and achieve the Lift *twice*, then raise the body up till the arms are perfectly straight, and bring the hands close together, when, pressing the feet firmly against the ropes, very gradually separate the hands, and allow the body to sink until the arms are perfectly horizontal, as in fig. 91, page 182. After having remained thus for a short time, continue to lower the body gradually until the rings are close to the side again, the whole to be achieved without any sudden jerk, and the body to be kept in its inverted position while the latter part is being brought about. This exercise will test the strength of the gymnast's muscles as much as, if not more than any other on the rings, though the movements towards the end are very similar to Ex. 11, page 182, to which the above fig. refers.

48. The Swing (No. 7). When in a good swing mount between the ropes, and, keeping the hands close to the sides :—

First.—Allow the body to sink in the forward swing, and raise it in the backward.

Second.—Sink the body in the backward swing, and raise it in the forward.

Third.—Lower the body in the forward swing, and raise it again immediately, before the turn.

Fourth.—Repeat the above in the backward swing only.

Fifth.—Accomplish the fall and rise quickly, both in the backward and forward swing.

The above movements must be achieved without checking the motion of the swing, as described in Ex. 20, page 185.

THE TRAPEZE.

Remarks.—Leotard, who some few years ago astonished some thousands of persons with his performances on a series of these apparatus, called the ‘Flying Trapeze,’ has done more to bring this apparatus into use than all the previous gymnasts. But it is not to the Flying Trapeze that I wish to call your attention, but to the Single Bar, now called ‘The Trapeze,’ though many exercises upon it are but variations of those achieved upon the flying trapeze; but were the latter ever likely to become more practised upon, it would meet with a ready description at my hands. The movements upon the rings are but to accustom the gymnast to those of the trapeze, and to ensure a firm and safe grasp thereon.

It may not be out of place here to state, that a complete flying trapeze is manufactured by Messrs. Snoxell and Spencer, capable of being temporarily or permanently fixed as desired, on any grass-plot or lawn, without sinking the poles or uprights in the ground, and secured by cross pieces and wire stays and lightening screws, with two trapeze bars, ropes, steps, &c. complete. Price 14*l*. The whole of the apparatus is light, portable, and easily removed or put up as required.

DESCRIPTION OF APPARATUS.—Very little need be added to the description already given for the rings, as the only

difference consists in the bar itself (see fig. 102), which ought to be made in the same manner as the horizontal bar, with a steel core throughout, and capped, &c., at the ends, as in the illustration, though the core may be dispensed with. The price of the former is 1*l.*, whilst the latter, with brass ends, is only 7*s.* 6*d.* Extra ropes will be required if the bar is required to be used or suspended in a different place to the rings.

FIG. 102.



Remarks on the Exercises.—Before proceeding with the following exercises, the pupil is advised to practise several of the exercises mentioned in the horizontal bar, including many of the preliminary exercises thereon, some of which may be achieved while the trapeze is in the swing. From the number of the before-mentioned exercises capable of being practised hereon, it would appear that there is not much difference between the horizontal bar and the trapeze. There is not, nor would there be, were it not for the swinging motion of the latter caused by the performance of the exercises; but that difficulty, if it be one, will be soon overcome after the young gymnast has practised and learned to give the right motion of his body to the never-ceasing vibration of the ropes.

The few exercises here given for this apparatus must not be taken as the whole capable of being carried into effect on it, for it must be borne in mind that at least one half, or perhaps more, of the exercises for the horizontal bar, if also mentioned under this head, would swell the number here given to three or four times as many more;

but the gymnast will have quite enough to do to carry all of them into effect.

1. The Swing.—Although a description of the method of swinging is given in the last chapter for the rings, it may not be out of place to repeat the instructions therein contained, for, as with the rings, so with the trapeze. The ropes are sure to sway to and fro with the body as much with the one as with the other, and in thus swinging the required impetus must be given at the right time, otherwise a check will occur, and the ropes will be almost brought to a standstill, for in swinging the impetus is given to raise the body higher than it was before, until the arms and legs are brought nearly into a horizontal position, when it is the aim of the gymnast to retain himself at that height ; and were he but to sway to and fro with the mere weight of the body, like the pendulum of a clock, he would soon find himself getting lower and lower, until the ropes would become perfectly still.

The swing is performed by drawing the body up on ascending, either in the forward or backward swing, and lowering it rather quickly (not with a jerk) on the body returning, which, if done at the right time, will cause the body gradually to rise higher and higher until the required height is obtained. (See Ex. 9, page 35.)

This method of swinging is made use of generally when the trapeze is high enough from the ground to prevent the gymnast from touching it when hanging by his hands at arm's length ; but should it be sufficiently low to enable it to be grasped easily, the swing may be then effected by running along at first, and giving a slight spring from both feet alternately every opportunity,

either in the forward or backward swing, until the required height be obtained.

As the body should be brought into various positions during the swing, both for practice and their utility in strengthening the muscles, the following exercises may be achieved, Nos. 18, 20, 63, 66, &c., pages 40, 42, 69, 71, &c. ; yet, on the other hand, it must be steady during the performance of certain exercises, though it undoubtedly gives additional beauty to the swing whenever any other exercise is effected in the mean time.

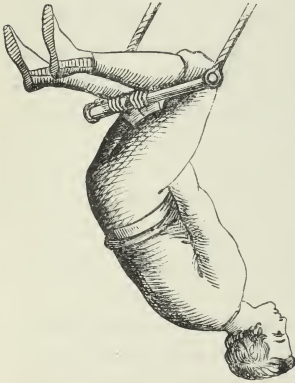
It would be advantageous to ease the hands occasionally on the body rising in the backward swing, as by so doing the exercise may be continued or repeated for a much longer time without the gymnast getting so fatigued.

2. The Leg Swing.—This swing is accomplished by hanging by the legs, keeping the feet well towards the ground, and swaying the body to and fro, bringing it up towards the knees when going the way the face is, and carrying it out to look, as it were, as far as possible along the ground, in going backwards, the arms being made use of sharply during the swing. They are brought up in the forward, and extended with the body in the backward swing.

To swing with the legs the gymnast must proceed with the last exercise to start himself, then bring the legs up, pass them under, and hitch them over the bar outside the hands, as in fig. 103, or else in bringing them up pass them between the hands and then over ; the body must then be dropped so as not to check the swing, viz. either at the turn from the backward swing, as in fig. 103, or else at the turn for it at the opposite end.

3. To Circle the Bar in the Swing (No. 1).—Proceed as described in the last exercise but one, and when you rise fairly in the air, in the forward swing, circle the bar, bringing the elbows

FIG. 103.



between the ropes without touching them, by drawing them close to the sides; and on the trapeze reaching its highest point in the backward swing, with a strong but gradual motion carry the body the full length of the arms from the bar, a little upwards than otherwise (see fig. 26), but not sufficient to check the motion of the swing. On the body falling, give it a

swinging motion without allowing the feet to touch the ground, and circle the bar again, continuing the exercise as often as convenient.

It must be borne in mind that, in doing this exercise, the less exertion used the better the effect, and the greater the impetus in throwing the body back, the more likely is the exercise capable of being repeated, for, if the body be allowed to merely drop, or if carried off at the wrong moment, the result will be a check in the swing, and consequently a failure in the exercise. There must be none of that merely dropping off the bar almost straight down, as if the exercise were finished, but rather as if you tried to hitch the toes on another bar behind you, and a little higher up than the trapeze bar.

4. To Circle the Bar in the Swing (No. 2).—Proceed as last described, and on bringing the legs over in the *forward* swing, drop the body immediately, i.e. as soon as the ropes begin the *backward* swing, and on ascending in it, circle the bar and throw the body off again without any rest or stoppage, and repeat the exercise *ad libitum*.

This variation of the last exercise calls for greater activity on the part of the gymnast, as twice the amount of work has to be accomplished in the same amount of time, and in the swaying of the ropes but once; and to go through this exercise will require but very little additional practice when the last can be achieved properly.

5. To Rise on the Bar (Upstart). *The toe practice.*—Grasp the bar firmly, with the fingers well over the bar, and swing to and fro once, then in the forward swing bring the legs up straight, and carry them down thus with a somewhat strong impetus, which will greatly assist you in executing the feat. Assisted with the strength of the wrists, raise yourself above the bar, when the arms may be straightened. (See Ex. 57, page 65.)

In swinging, and prior to effecting the Upstart, the body should be raised by bending the arms, and in giving the crowning termination required above, the wrists should be put to their utmost in carrying it through.

6. To Rise on the Bar (the Slow Pull up). *The elbow practice.*—Hang on the bar with the hands well over it, and rise by pulling the body up, bending the arms till the chest is well against it, then carry the fore-arms suddenly *sideways on to the bar*, leaning forward to throw the whole weight of the body on them; but in so doing carry the body still higher by raising the elbows,

when, by bringing the muscles into full play, and carrying the legs a little forward, straighten the arms and raise the body up as required. (See fig. 31.)

Practice is all that is needed in achieving this exercise, and, until able to accomplish it without, the body may be slightly jerked by drawing up the legs and carrying them down again suddenly when required to carry the body higher ; but when able to do it without, the less exertion used the neater will the exercise appear. It should be likewise practised in the swing.

7. The Balance in the Swing. *Wrist practice.*—Proceed as described in Ex. 1, page 204, and when the body is in a fair swing, bring it suddenly above the bar by Ex. 57, page 65, then, at the turn for the *backward* swing, carry the body well up, as in Ex. 64, page 69. The momentum of the swing will greatly assist you in raising the body, but on the body attaining its required position the bar must be firmly grasped, and the muscles of the arms brought into full use to steady the body, more especially when the body returns in the *then backward* swing, which would be the *forward* swing were the body not raised above the bar, as the swing has now a tendency to cause the body to overbalance, and it is to prevent this that the gymnast must exercise his full powers.

This is a very difficult exercise, and the gymnast would do well to practise it at first with but a slight motion of the ropes ; yet, when able to accomplish it to perfection, it is a very clever achievement.

The arms must be kept perfectly straight and not too close together, and the body must be well bent, the legs so bent as to counterbalance the different motions of the swing.

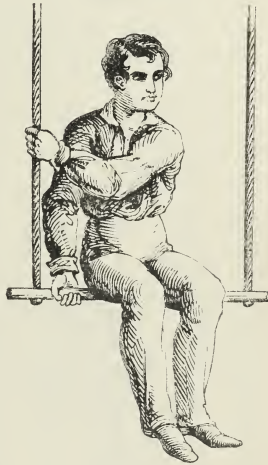
8. The Turn. *Arm and wrist practice.*—Circle the bar and sit on it, place the right hand on it with the fingers backwards and the thumb in front, close to the right-hand rope, which must be grasped with the left hand about the height of the shoulder (see fig. 104), then throw the weight of the body upon the right arm, by lifting it off the bar, and carrying it round the right-hand rope, raise the legs over the bar, and resume your position upon it. Now repeat the exercise with the left-hand rope, when the left hand will grasp the bar, and the right hand the rope.

In carrying the body round, the legs should be well lifted up, and the hand grasping the bar should turn it towards the legs to enable them to be carried over a little sooner than they otherwise would be, thereby likewise relieving the arm of the weight of the body.

9. To Stand on the Bar (No. 1).—First mount and sit on the bar, then grasp the ropes as high as possible, and with a gradual motion similar to the Rise and Fall exercise, page 35, pull yourself up until, by bending the legs a little if needed, you can place the feet on it; the hands can then be placed a little higher for ease, or the gymnast may proceed with the next exercise.

10. To Stand on the Bar (No. 2). *Balancing prac-*

FIG. 104.



tice.—Turn the body sideways and grasp the rope in front with both hands, then, placing both feet, one in advance of the other, straight on the bar, stand perfectly upright, and when the ropes are steady, gradually let go your hold and stand thus for a short time. Until able to do so with confidence, it would be as well to keep the hands at a little distance only from the rope on each side; but after a time the gymnast will be able either to stretch his arms out at the side, or fold them across the chest.

FIG. 105.



This exercise is varied in many ways; for instance, standing on one leg; achieving the balance on both or one leg only while swinging as in the ordinary way, or to and fro sideways, which latter may be effected before the balance, or either position of the balance may be achieved and the swinging motion given afterwards, &c.; but these movements must be attempted by none but practised gymnasts.

11. To Stand at Ease.—

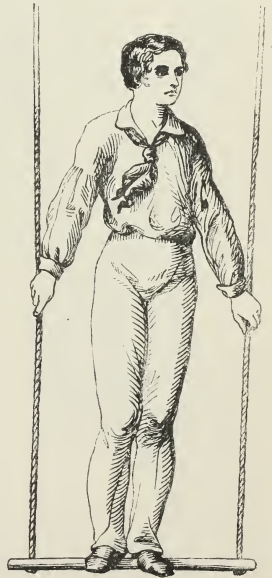
Having stood upon the bar, as in the last, turn your back against one of the ropes, with the feet on the bar, as in fig. 105, and when perfectly steady, fold the arms across

the chest. Do this sometimes against one rope, sometimes against the other, and do not always keep the same foot in front.

The feet may be placed as in fig. 105, or the front foot may be slid forward, so as to rest the hollow of it against the bottom of the rope, and the other laid across it, as when sitting in a chair a person stretches out his legs for ease and comfort.

12. The Overthrow. *Arm and wrist practice.*—Stand on the bar and grasp the ropes firmly, as shown in fig. 106, by which it will be seen that the knuckles are in front, and the thumbs downwards; the elbows may be a little up, but the hands should be as high as the hips. Then, by leaning forward and downward, and lifting your feet off the bar, allow yourself to turn quite over, when you may either alight on the bar in the sitting posture, or place your feet on it again. The latter you will be able to do if your hands be high enough before you turn over; and should the gymnast wish to return to his original position, he must not move his hands from the ropes, when all he will have to do will be, to reverse the motion of the body, which will at first be a little

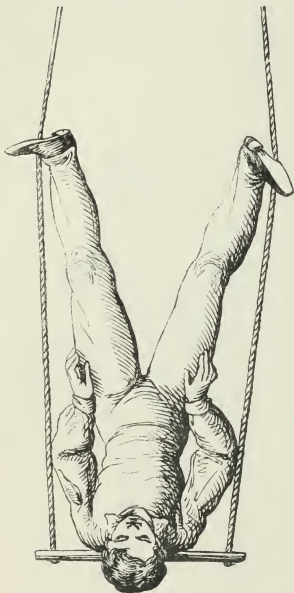
FIG. 106.



more difficult. Or, if it be his wish to achieve the reverse portion of the exercise only when sitting on the bar, it will be advisable for him to notice the position of the arms and hands, after having accomplished the above.

13. The Rest. *Spine practice.*—Sit on the bar, and

FIG. 107.



grasping the ropes about level with the shoulders, slide down until low enough to rest the back of the neck against the bar, when throw the legs well up, and bending the body a little at the hips, rest the feet against the ropes (see fig. 107). The hands may now be folded across the chest, or placed as shown in the illustration.

This being merely an exercise for the spine, care should be taken in doing it, and the hands should be ever ready to grasp the ropes, in the event of a slip, which will not happen if the gymnast balances himself properly.

14. The Catch (No. 1). *Instep practice.*—Hang by the legs, then by opening them wide, and lifting the feet up, at the same time turning the toes well out, and keeping the heels well down, allow yourself to slide off the bar, when the feet will be as shown in fig. 108.

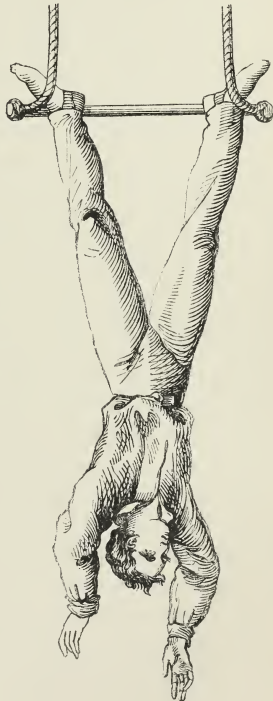
After having remained in that position for a short time, pull the body up, and grasp the bar, when, unhitching the feet, achieve some other exercise as a finish to the above (see the next exercise). This exercise is very useful, in the event of a slip at any time, and the gymnast should always be prepared to carry it into effect when required.

15. The Catch (No. 2).

Instep practice.— Sit on the bar, and after getting it to swing to and fro well, let go the ropes, and throw yourself back in the backward swing, in such a manner that by the time the body has descended as far as practicable, the swing will return the other way; but in so doing, turn the toes well out, and keep the heels well down, then by opening the legs wide, the toes will hitch round the ropes, as shown in the last exercise (see fig. 108), and when in that position let

the body sway to and fro a few times; then raise it up, and unhitching the feet, achieve as before some other exercise for a finish.

FIG. 108.



16. The Back Horizontal. *Spine and muscle practice.*—Mount and sit on the bar, pass the hands as high up the ropes as possible, grasping them firmly, then bring the body up, as in Ex. 1, page 176, and achieve the Back Horizontal, which will be found to be a little more difficult, owing to the hands having to grasp the ropes, which, being pliable, press more upon the hands.

17. The Leap.—After swinging to and fro, as in Ex. 1, page 176, and when you think yourself sufficiently high from the ground, let go your hold of the bar, either in the backward or forward swing, and alight on the ground, letting the toes bear the weight of the body, and not the heels, as that always gives a very great shock to the system. It should be practised with a very slight swing at first, as the position of the body is not the same on alighting in the forward as in the backward swing, and after a little practice the gymnast may try how far he can leap from the bar, as the higher he swings the farther will he be able to leap. Practice will be the best instructor as to the motion required to be given to the body on making the leap.

18. The Flying Jump.—The chief difference between this exercise and the Half-fall back, Ex. 93, page 90, or the Leg Swing off, Ex. 43, page 55, is in the swinging motion of the ropes, which in part dispenses with the motion necessary to be given to the body in those exercises; consequently no difficulty ought to arise in carrying this exercise into effect.

Grasp the bar with both hands, and, when in a good swing, bring the legs up, and hitch them over the bar, either between the hands or outside them; if the latter, they should be very close to the hands, or the feet are

very likely to come in contact with the ropes ; then let go with the hands, and gradually lower the body ; when at the end of the backward swing carry the arms and head well back, at the same time unhitch the legs (see fig. 29), and you will alight safely on the ground. Perhaps the lungers had better be used the first time, or at least until you know the precise time when the legs should be unhitched, as you are very likely to hold on too long until that knowledge be obtained. (See Ex. 43, page 55.)

19. The Shoot in the Swing. *Arm practice.*—Though this exercise is referred to in page 113, it is deemed advisable again to mention it, owing to the additional difficulty to be experienced in achieving it as here required.

In accomplishing the Shoot in the Swing, the body must not be carried through, and the shoot effected as in Ex. 125, page 113. It is better to carry it into effect by bringing the body through at the turn for the backward swing, giving the necessary jerk on reaching the opposite end: this is when the shoot is required at the end of the backward swing ; but when it is to be achieved at the end of the forward swing (which will be found to be more difficult), the body must be brought through at the end of the backward, and the shoot effected at the turn for the backward swing again, though it would perhaps be better to raise the body well up, prior to the turn of the swing, as, if done after, the motion of the swing is likely to throw the body out of balance, and thus render it more difficult to achieve than if done as last stated.

Such an exercise as the above is a very good one to

give as a set exercise in competitions, when it should be done *twice* at each end of the swing.

20. The Flying Somersault.—It almost seems out of place to repeat an exercise that has been already given (the Backaway, page 105) in the exercises to be achieved on the horizontal bar; but the reason for its being inserted here is, that it is to be achieved while the trapeze is in the swing, and consequently to beginners it would appear much more difficult. Now, as it is quite the reverse, it is hoped that all gymnasts, at least the more advanced, who can accomplish the Backaway exercise referred to, will give this a fair trial, that is, let go the bar fearlessly, as the nature of the exercise requires, and all must go well, as the swaying of the ropes greatly assists the performer in achieving it, and the higher he swings the easier will it be found. The chief secret of the exercise consists in drawing up the legs in front at the time you let go the bar, when the arms and head must be carried well back, thereby curving the body a little, and throwing the chest out; therefore persevere, and succeed.

21. The Stretch. *Arm and wrist practice.*—Sit upon the bar, grasp the ropes as high as the shoulders, lean the body back to straight arms, raise the *right* leg up and carry it backwards over the *right* arm, thereby raising the body off the bar and bending the ropes outwards; the legs being straight towards the right, the whole weight of the body will fall upon the right arm, though the strain will be equally as great upon the left. These movements must be carried into effect as quickly as possible, and should be practised with the left *leg* over the *left* arm, when a change from one to the other can be made.

THE HORSE.

Remarks.—The Horse, so called from its somewhat resembling that animal as it at first catches the eye, likewise denominated ‘The Vaulting Horse,’ ‘The Wooden Horse,’ &c., is now much more practised upon than formerly, owing perhaps to the variety of the evolutions to be performed upon it, many more than upon any other gymnastic apparatus. Although the several actions of the different parts of the body partake of those of the horizontal bar and parallel bars combined, yet, as a whole, they differ materially from both, or either, as upon the horse exercises can be achieved, and movements made, that it would be utterly impossible to accomplish on any other apparatus. It is for this reason that it finds a place in every gymnasium; in fact, it would not be worthy of that title, were this now most useful apparatus not to be found in it.

In my opinion, no exercise on the horse can be compared either to the parallel bars, or the horizontal bar, for these reasons:—the body, when simply supported on the horse, as in the first exercise, when the arms are perfectly straight, is not in the same position as it is when mounted between the bars, consequently certain preliminary exercises must be gone through to get the whole frame accustomed to the difference of the attitude;

for there is no single movement on the horse which, although similar to the corresponding one on the parallel bars, can be said to be like it. For instance: in the use of the legs in the former, they must be either carried up at the side, or else the body must be carried out of place, if they are to be brought up in front. Again, if the exercises themselves are, for the sake of argument, allowed to be like those on the parallel bars, the very position of the arms with respect to the body would be sufficient to prevent their being classed as the same. Again, any exercise on the horse, which is in many respects similar to that achieved on the horizontal bar, must, owing to the position of the hands, differ from it; therefore, under these circumstances, it is hoped that any young would-be athlete, who intends to become master of any of the following exercises, will not attempt to go through it, unless he has thoroughly worked his whole body into what will be required of him, by beginning at the beginning, and going through the whole of the preliminary exercises, ere he attempt to achieve any of the more difficult, as in every instance he will find that he will have greater difficulty in learning any one exercise, unless thoroughly well schooled previously, and the exercise itself will appear much more difficult than it otherwise would be. However, let two beginners enter upon their duties, each going his own road, the one doing what he likes, the other following the directions here given; and by the time the latter has reached the end, compare the performances, and judge for yourself which is the better of the two.

All gymnasts must bear in mind that, in making the spring, after a run, it must be made from the *flat foot*,

and not from the *toes*, as if you were standing by the side of the horse, and likewise from *both feet at once*, therefore a kind of jump on to the board, or starting-point, must be made prior to making the beat off; for if the spring be made otherwise, the exercise to be effectuated will be entirely spoilt, and the chances are that it will not be done at all.

Another thing must be borne in mind, i.e. on alighting on the ground, no matter on which side of the horse, it must *always* be done on the *toes*, and not on the *flat foot*, or a sudden shock will be the consequence; besides, if the legs are bent on alighting, it will be made much easier than keeping the legs straight, which must not be.

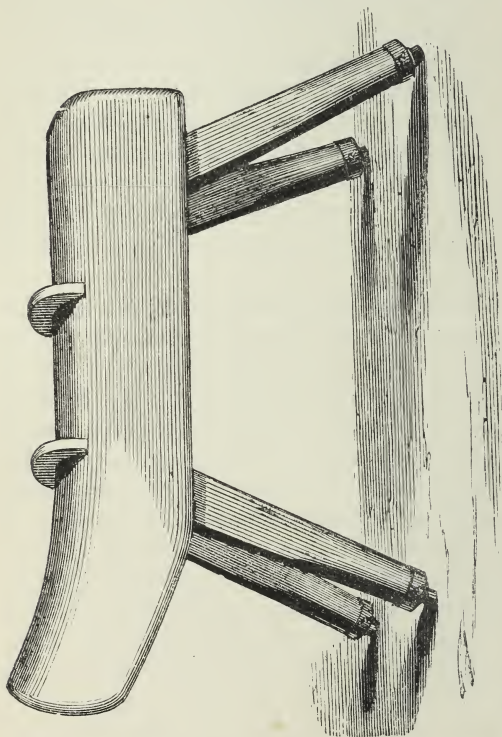
DESCRIPTION OF APPARATUS.—One writer, in describing this apparatus, says on its construction, that ‘The wooden horse is made of a great cylinder of wood.’ Now this we all know, that it would be difficult indeed to construct a *wooden* horse from aught else but wood. True enough it is, that the horse is made of wood, but the following particulars will give a pretty clear idea of it; sufficiently so, I hope, to enable one to be constructed from them.

The horse is made of various lengths, but the two sizes mostly in use are those of 6 feet and 4 feet long, the former having one end slightly raised (see fig. 109), while the latter may or may not have this addition.

The width or diameter of the horse should be somewhat less than the distance between the parallel bars, say from 15 to 16 inches, the neck-piece in the larger horse tapering a little towards the end, and raised about

3 inches above the level of the back of the horse ; in the larger horse this neck-piece begins about 4 feet from the opposite end, it will therefore be 2 feet long. If the

FIG. 109.



Side view and position of the Horse as referred to in all the exercises, the gymnast being supposed to stand facing it as above represented, the neck-piece being on his left hand.

body of the horse be made a little deeper than broad, say from 2 to 3 inches, and then planed or sawn off to the requisite depth, viz. the same as the width, the

shape of it will be much improved. Of course this shape can be given to it in making it, without the necessity of proceeding exactly as above; but that is stated to show how the shape is to be obtained, if in no other way.

The horse is generally covered with leather, or, as some prefer, with stout canvas, and padded at the sides to make it a little softer, in the event of the legs coming in contact with it when not required, and likewise to ensure its being perfectly smooth all over, and to prevent the chance of a splinter being met with while being used.

This being the body of the horse, it is mounted on four legs, two in front, and two behind, each one leaning towards, or rather standing away from, its neighbour on either side, yet perfectly parallel, as will be seen on reference to fig. 109. These legs being made hollow, and having a loose leg inside, it can be raised to any height, varying from the exact height of the horse, which should be about 3 feet 6 inches, to about 6 feet, the horse being kept at the required height by an iron pin, passing through one of the holes made in each sliding or loose leg. According to the nature of the ground upon which the horse has to stand, or be used, the bottom part of the loose legs may be made the same size as the outer part of the leg, so as to prevent its sinking down into the sawdust or pan, if placed upon it, but this is optional.

One more addition is to be made, and then the horse itself is complete, viz. the pommels, or saddle. These pommels are cut circular, and fit into two grooves cut across the back of the horse, about 6 inches down the sides, and are kept in their places by means of an iron

pin fixed to each, which, passing through the body of the horse, is screwed tight with a nut underneath. These pommels are to be placed the same distance apart as the parallel bars, viz. 18 inches, which they also resemble in point of size, to enable them to be readily grasped, and should therefore be about 4 inches above the back of the horse, and placed about the middle of it as it stands upon the legs. The pommels may be covered in the same manner as the horse, and they should be hollowed a little on the sides, to allow the fingers to have a firmer grasp. Besides the above, two flush pommels must be made, which are to replace the others when not required, and which, when fixed in their places, make the back of the horse apparently smooth.

Should the gymnasium not allow of a portion of it being boarded (when the horse is placed on the tanned part close to the edge of the flooring), a kind of spring board is necessary to give the feet a firm footing in making a spring, or 'beat' off. This board is made of thick wood about 3 feet long by $2\frac{1}{2}$ feet broad, and composed of narrow pieces of 5 or 6 inches wide, securely fastened, having it thinned off at one end and raised a little at the other, by means of a thicker piece being fastened to it.

NOTE.—These horses, covered with hide, and made of the best material, are supplied by Messrs. Snoxell and Spencer, London, at the following prices:—6 feet long, with 2 pommels and raised neck-piece complete, 12*l.*; 4 feet ditto, 10*l.*; Buck, 2 feet long with 2 pommels, 6*l.* 10*s.*

THE BUCK.

This is a small kind of horse, and is very useful both for children and youths prior to their practising upon the larger ones. It is made in the same manner as the horse, without the neck part, and about 2 feet in length, rounded a little at the ends, and 14 or 15 inches in diameter. This apparatus may or may not be covered like the horse. The legs are likewise a little shorter, though they may be made to be raised.

The buck may be used in the same manner as the horse, in many exercises, and it may, in addition, be used to leap over in that play-ground game 'Leap Frog,' until able to leap over its full height, and after a while over the other horses.

EXERCISES ON THE HORSE.

1. Stand on the near side of the horse, directly opposite to the pommels, and place a hand on either. Spring up and straighten the arms, bringing the body sufficiently forward to let them assume a perpendicular position; project the chest well forward, and carry the feet and legs well backward, without bending them, but at the same time leaning well against the side of the horse.

On leaving the horse and alighting on the ground, do so on your *toes*, and *always* carry the legs as far away from the horse as possible, when, assisted a little with the wrists, you may touch the ground at a distance of from three to four feet.

2. Repeat the foregoing exercise by first taking a short run, and by springing from *both feet at once*, and *not from one foot only*, and also from the *flat foot*, and not

from the *toes*, placing the hands on the pommels at the same time that the spring is made. Leave the horse in the same manner as the last.

3. Repeat the first exercise; but do not stop while doing it, as the *final* movement, i.e. the leaving of the horse, must be made directly the body is raised into its place; in fact, it must be brought about as if the whole were one movement.

4. Repeat the same exercise, but with the run, and follow the instructions given in the second exercise, as regards the making of the spring.

5. Repeat the first exercise (either with or without the run), but instead of carrying the legs away as therein stated, merely carry the body off a little by the aid of the wrists, and alight on the ground close to the side of the horse, retaining your hold of the pommels, when a spring must be again made, and the exercise repeated without any rest between.

6. Proceed as before, and after the body is upright, carry the *right* leg up at the side of the horse into a horizontal position, but without either touching the horse with it after you have begun, or resting it upon it; then let it drop again, and carry up the *left* leg in like manner. The body in this and three following exercises may be turned a very little only, to ease the leg, and to facilitate the raising of it, to the right or left, as occasion may require.

7. Repeat the last exercise, carrying up each leg *three* times in succession, without either resting or touching the ground between.

8. Proceed as in the sixth exercise, but carry *both* legs up at once, as slow as possible, first to the *right*, then to

the left, keeping them straight the whole of the time. The body must not be moved nor carried too much to the opposite side to that to which the legs are carried; a very little cannot be helped by most gymnasts, for the more upright position the body retains the greater the benefit to be derived therefrom, and the more graceful will be its accomplishment.

9. Repeat the last exercise, carrying the legs up *three* times in succession each way, without either resting or touching the ground while doing it.

10. Repeat the first exercise with a run, and on the body rising carry it a little to the right, and giving it a slight turn to the left throw the right leg over the horse, thereby facing the pommels (fig. 110). As the pommels are not to be let go while doing this exercise, the body must be leaned a little more forward, but to dismount the body must be carried well forward, at the same time raising it and bringing the right leg over the horse again, when, by reversing the motion, alight on the ground, but doing so as far from the horse as possible, by using the wrists well.

11. Repeat the last exercise, also with the run, but turn the body to the *right*, and carry the left leg over the left side of the pommels, dismounting in the manner therein stated.

12. Repeat the tenth exercise without the run.

13. Achieve the eleventh exercise without the run.

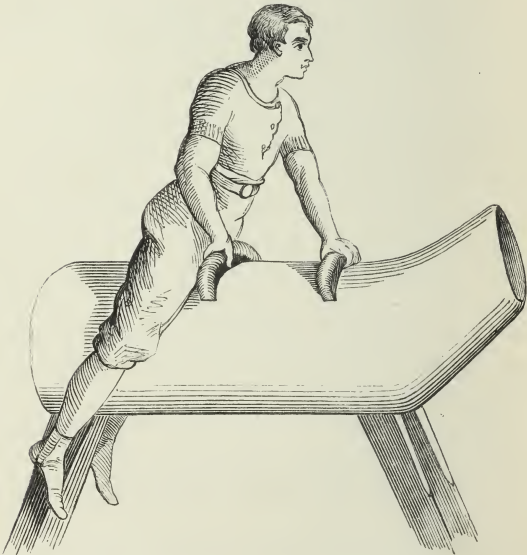
14. Go through the tenth exercise either with or without the run, and carry the *right* leg over as therein stated, then raise the body by leaning well forward, and alight on the ground, and springing up again on the instant, but this time carry the *left* leg over, as in the

eleventh exercise, when alight on the ground in like manner.

This exercise may be repeated four or five times in succession to advantage, making use of the *right* and *left* legs alternately.

15. Proceed as in the last, but instead of alighting on

FIG. 110.



the ground between, allow the body to assume the upright position as in the first exercise, when, without any spring whatever, otherwise than can be given to the body while in that position, to assist you, carry the *left* leg over; then again return to the side of the horse, stop, and

carry the *right* leg over again, repeating the exercise at least *three* times each way alternately without allowing the feet to touch the ground or the arms to be bent, and, if possible, the legs should likewise be kept perfectly straight, but not *stiff*. The body must in this exercise be leaned a little forward each time the leg is carried over the horse, which will make the exercise much more easy to achieve.

This is called the Swinging Exercise, or the Saddle Vaulting Movement.

16. Proceed as in the tenth exercise (fig. 110), but instead of resting between the change, lean the body forward to throw your whole weight upon the arms, then, while bringing the *right* leg back, give the body a kind of turn towards the opposite end of the horse, and throw the *left* leg over it, when your face will be towards the tail of the horse. Now, to reverse the motion, lean forward as before, and on the body turning round throw the *right* leg over again, the legs each time describing a semicircle. When able to accomplish this with ease, practise it with a quicker movement, which will give it the nature of a swing. (See Ex. 14, page 135.)

17. Repeat the foregoing exercise with the run, but carry the body a little higher, and opening the legs wide, carry them over their respective sides of the horse at once, but without touching it, and also without bending either the legs or arms.

In doing this exercise the hands must grasp the pommels very firmly, and the legs must not be jerked forward, but merely allowed to go over as far as the arms will permit, without causing them to bend on the legs coming in contact with them, or a fall forward will be the consequence, therefore the slower (as slow as the

nature of the exercise will allow) the better; and in practising it until able to do it with safety and surety, some one should be on the opposite side of the horse, ready to catch you, in the event of your not succeeding, and going further than you intended. (See page 10.)

On leaving the horse lean the body a little forward, raise it up behind sufficiently high to enable you to free the legs from the horse without bending them, and alight on the ground as before.

FIG. 111.



18. Spring up and carry the *right* knee over the saddle, between the pommels, jump down and springing up again directly carry the *left* between them; then jump down, and on springing up this time carry *both* knees over the saddle at once, and kneel upright upon the horse, letting go the pommels while doing so (fig. 111). Grasp the pommels firmly again, and alight

on the ground. Do not carry the knees too far over, or you may topple over and alight on the wrong side of the horse. Should such an event occur see Ex. 46.

19. Spring up as in the first exercise. Now raise the *right* leg slowly, by bending it at the knee and carry it

over the saddle, extending it as far as you can without allowing either leg to touch the horse (fig. 112). The body must be well leaned forward in doing this, the hands grasping the pommels firmly. On bringing the

FIG. 112.



right leg back alight on the ground, spring up again, and carry the left leg through in like manner.

20. Proceed as in the last exercise, and on bringing the *right* leg back carry the *left* over at the same time, and without letting either touch the saddle. This requires but a little practice, when it will become quite easy.

21. Proceed as in the last, but raise the legs and carry them over the saddle both at once,

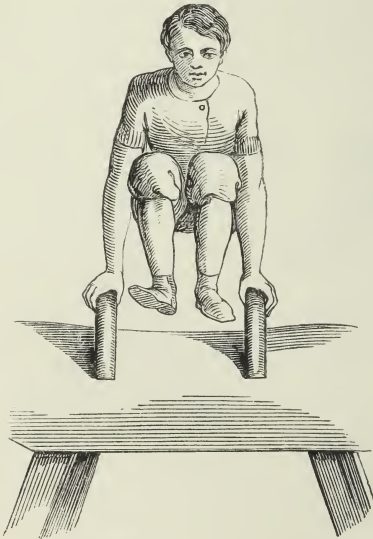
being careful not to touch the saddle with the feet. To dismount, lean the body forward, at the same time raising it up behind and carrying the legs out straight backwards, give a good spring and alight on the ground.

22. Proceed as in the last, and when the legs are perfectly horizontal give the body a turn to the *right*, carrying the legs in that direction, then turn round to the *left*, the slower the better, the legs being kept in the same

position the whole time. This is a very useful exercise to strengthen the muscles, and to make the grasp much firmer, owing to the twisting of the body; and it may be repeated *three* times each way alternately to advantage. It should be practised until it can be done without turning the body at all.

23. Proceed as in the nineteenth exercise, but carry the leg over just after the spring is made, and before the body

FIG. 113.



assumes its upright position. Practise this with each leg alternately, and do not touch the saddle with the feet while doing it; it will therefore be better to take a little higher spring than in the previous exercises.

24. Proceed as in the last exercise, but carry both of the legs over the saddle at once, without touching it with the feet (fig. 113), and raising them into a horizontal position

as soon as the body is upright. To dismount, follow the instructions given in the twenty-first exercise.

25. Repeat the last exercise, keeping the legs as straight as possible the whole of the time, and carry

them both over the saddle at once, without touching it or bending the arms. Dismount as in the last exercise, alighting at least four feet from the horse.

26. Proceed as before, but give the body a slight turn to the side and carry both legs over the *right*-hand side of the pommels, sitting on the horse as soon as the legs are over. To dismount, give the body a slight turn and lean over the pommels, similar to that in Ex. 16; then, when the weight of the body is on the arms, carry the legs back with a swing, and alight on the ground. Great assistance will be derived from giving the legs a kind of upward jerk prior to leaning the body over the pommels.

27. Proceed as in the last, but carry the legs over the left-hand side of the pommels instead, and follow the instructions therein given.

28. Repeat the last two exercises with the run, taking care to make the spring as given in page 223.

29. Go through the same exercise, but on alighting on the ground retain your hold of the pommels, and springing up again directly carry the legs over the other side of them, as therein stated. This exercise may be repeated three or four times each way alternately to advantage. There must be no resting while accomplishing this, or the effect of it will be entirely destroyed.

30. Repeat the twenty-sixth exercise, either with or without the run, then lean well forward over the pommels, raise the legs from off the horse, and carry them with a swing over towards your left hand, and seat yourself on the other side of the pommels, then, by reversing the motion, carry the legs back again, repeating the exercise at least three times each way.

There is to be no resting or pausing between, besides which the legs and body are, if possible, to be kept in a perfectly horizontal position while effectuating the change.

31. Grasp the pommels, one with each hand, and spring up, in doing which give the body a turn towards the *left*, and throwing the *right* leg over the horse, let go the *right* hand to allow the leg to pass over that pommel, and assume the sitting posture on the saddle, with one leg on either side and facing the neck-piece. To dismount:—

First.—Place one hand on either pommel, when, raising yourself up, bring the right leg back over the horse, and alight on the ground.

Second.—Place both hands on the front pommel, lean forward so as to throw the whole weight of the body upon the arms, then, bringing the right leg over the horse, carry yourself as far away from it as possible.

Third.—Place the right hand on the saddle with the wrist turned towards the *left*, and grasp the pommel with the *left* hand, then, throwing the body forward as before, alight on the ground.

32. Repeat the same exercise, but this time throw the left leg over the horse instead, making use of the *left* hand where the *right* is stated, and the *right* for the *left*, and dismount by either of the methods last described, though all three should be practised.

33. Grasp the pommels and spring up, then, giving the body a backward turn, throw the left leg over the *right* side of the pommel, and on the body dropping into its place, let go your hold of the pommels, when your back will be towards them.

To dismount, place your hands on the horse in front

of you, when, leaning forward and giving a slight spring, aided by the wrists, carry your body well over the end of it, and alight on the ground ; but in doing so bend the body backward a little, to prevent the chance of your coming in contact with the tail end of the horse, should you not have sprung far enough.

34. Repeat the above exercise, but by reversing the motion of the body, throw the *right* leg over the *left*-hand side of the pommels, when proceed as therein stated, though the neck-piece will cause you to take a higher spring to enable you to clear it.

35. Spring up as in the first exercise, then gradually raise the legs by bending them up sideways at the knees and hips, each towards its own side, then crossing the feet and pointing the toes as much upwards as possible, carry the legs through the arms over the saddle as in the former exercise, only in this the feet are to be passed through first. (See Ex. 81, page 79.)

Do it very slowly until sure of being able to achieve it to perfection, when you will be better able to judge the movement the legs require. The pommels are to be firmly grasped, and great care is to be taken not to overbalance yourself, or the consequences will be what you did not expect. At first some one should be on the opposite side of the horse, to render some slight assistance in the event of any mishap.

36. Repeat the above exercise with the run, and as quickly as possible, but in this there must be no hesitation, for, if so, look out for squalls among the sawdust. An assistant should be at hand for this exercise ; not that there is any danger—far from it, but ‘a preventative is better than a cure.’

37. Achieve Ex. 31. Place both hands on the left-hand pommel, lean well forward as before stated, then, with a strong spring, carry the body up behind, raising the legs well above the horse; then give the body a good turn, cross the legs well so as to let the right side be downwards, and alight on the saddle with the body the reverse way, and without letting go your hold of the pommels; now swing up again, when, by turning the body the opposite way, allow it to drop into its former position. (See Ex. 20, page 138.)

Greater impetus must be given to this latter motion, or a collision between your feet and shins will be the result.

38. Execute Ex. 32; then, placing both hands on the *right*-hand pommel, repeat the last exercise, thereby letting the *left* side be downwards; consequently the body must be turned, and the feet crossed accordingly.

39. Grasp the right-hand pommel with the *right* hand, letting the left hang loosely by the side, give a strong spring, and throw the *left* leg over between the pommels, turning the body a little in doing it.

To dismount, practise springing out of the saddle with the same hand only grasping the pommel; but until able to do so, place both hands on the front pommel, i.e. the one facing you, or place one hand on either pommel, viz. the *right* hand on the one facing you, and the *left*, by turning the body a little to the left, on the hinder one.

40. Repeat the last exercise, but throw the *right* leg over the saddle instead of the *left*, taking a step sideways prior to making the spring. Dismount by placing the *left* hand on the other pommel, and, raising the body up, draw the right leg through and alight on the ground.

41. Repeat the thirty-ninth exercise, grasping the pommel with the left hand, and throwing the right leg over instead; dismounting, as therein stated, but using the word *left* for *right*, and *right* for *left*.

42. Repeat the last exercise, but throw the *left* leg over instead of the right, and follow the directions given in the thirty-ninth exercise.

43. Achieve the tenth exercise, when you will face the pommels, then place both hands on the pommel nearest to you, lean well forward as before stated, raise the body well off the horse, and give a strong spring with the arms backward, sufficient to carry you over the end of the horse, and alight on the ground.

44. Achieve the eighteenth exercise, bringing up both knees at once, then kneel on the saddle, letting them be well over the horse (see fig. 111). Now let go the pommels, and bringing the hands upwards in front somewhat sharply, at the same time giving a strong spring forward, lift your feet from off the horse (see fig. 114), and alight on the ground on the other side of it.

Although, in endeavouring to effectuate this exercise, at first your legs seem to be fastened to the back of the horse, owing chiefly to your lack of courage to go through it for fear of a mishap, such you will easily prove is not the case, if you only give a sufficient spring at the same time that you carry your hands forward and raise the legs from the horse, although it may not then be neatly done; still, if needed, and it will only be for once, to give you greater confidence, a second party may be on the opposite side of the horse, to render you any slight assistance, and to catch you should you jump TOO FAR.

45. Take a short run, place both hands on the pommels, spring up, and in going over the horse carry the *right* leg outside the *right*-hand pommel, and the *left* between them, letting go with the hands, and alight on the ground.

46. Proceed as in the last, only carry the *left* leg out-

FIG. 114.



side the *left*-hand pommel, letting the *right* leg pass between them instead, and alight on the ground as before.

47. Proceed as in the last, but now bring up both legs at once and carry them over the saddle, shooting them well over the horse, when alight on the ground on the other side.

Take care that your knees do not come in contact with your chin on bringing them up; the head should therefore be kept well raised and the chin projected as far as possible. The quicker this exercise is done the better, and the neater it will look.

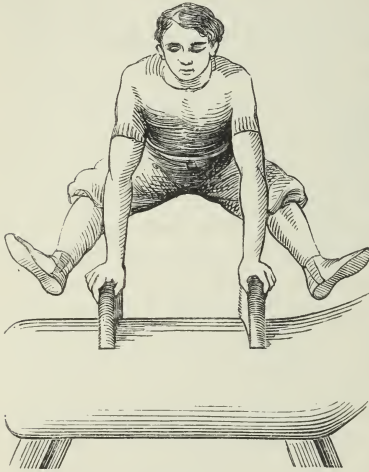
48. Proceed as in the twenty-fifth exercise, then, when the body has assumed its upright position, and the legs are perfectly horizontal, give a sudden spring forward with the wrists, at the same time carrying the body forward, and giving the legs an upward motion, the whole to be combined in as it were one movement, and the impetus thus given must be sufficiently strong to carry you well over the horse. To be done neatly, this exercise requires to be tried a few times, but the wrists derive the most benefit from its being done.

49. Proceed as in the last, shooting the legs out simultaneously with the body dropping into its proper position, and proceeding with the same movements as above given. The only difference between this exercise and the last consists in the pause given, this exercise being quicker than the last and slower than the forty-seventh, in which exercise the legs are not raised into the horizontal position.

50. Repeat the twenty-fourth exercise, but let there be no pause or hesitation in carrying the legs over the horse, and let them be well opened and the body well raised to enable the feet to clear the tops of the pommels (see fig. 115), which must be let go when the legs are about to be brought forward, giving a strong spring with the wrists in doing so, to carry you as far as possible from the horse. An assistant had better be on the opposite side, until you are sure of doing it properly.

51. Proceed as before, but bend the legs at the hips only, and on making the spring raise them up and carry them *only* over the *right*-hand pommel, keeping the body perfectly upright while going over the horse, as, were it also

FIG. 115.



to be raised, it would make the exercise too much of a vault, and in fact spoil what is intended to be accomplished. On leaving the horse a good spring must be given with the wrists.

52. Repeat the last exercise, but carry the legs *only* over the *left*-hand pommel, and follow the directions given therein.

53. With a short run spring up, placing the *right* hand on the *right* pommel, and going right over the horse without any rest between, or otherwise touching it.

54. Repeat the above by placing the *right* hand on the *left* pommel, when the legs must be raised somewhat higher, owing to the neck-piece.

55. Repeat the fifty-third exercise, but with the *left* hand on the *left* pommel, and proceed accordingly.

56. The forty-eighth exercise must be done as therein described, making use of the *left* hand on the *right* pommel.

57. Place both hands on the pommels, spring up with the fingers on the inside, pass both legs clean over the horse, and alight on the ground, but still retain your hold of the pommels. Now give a spring up again and bring the legs back over the horse the reverse way, and alight on the ground, when the exercise may be repeated three times to advantage.

58. Take a short run, place both hands on the pommels, at the same time taking a good spring, raise the body and legs to the right into a perfectly horizontal position, and carry, or turn the body round as it were on a pivot, and alight on the ground on the opposite side of the horse. In all vaulting exercises, the arms should be kept perfectly straight.

59. Repeat the last exercise, but carry the body to the left instead, and both ways must be persevered in until able to do it one way as well as the other.

60. Place the hands on the pommels, spring up, bring the knees between the arms, and place the feet on the saddle. Now grasp the pommels firmly and gradually raise the body up behind and practise it until able to stand on your hands, when the exercise may be varied by bending the arms and lowering the body, and again raising it. To dismount, let the body gradually sink again, by bending the legs first, when you may alight at some distance from the horse.

61. Repeat the last exercise, but with a short run, giving a higher spring on grasping the pommels, and practise it until able to carry the body well up above the horse into a standing position on the hands without resting between, or allowing any part of the body to touch the horse (otherwise than the hands) while accomplish-

ing it. Alight similar to the last, but if possible do so with a little more spring, and before the body is too low.

62. Proceed as in the last exercise, but, instead of resting as soon as the body and legs are up, let them continue to fall, grasping the pommels firmly until about two-thirds over, when give a kind of spring with the hands and wrists, which will cause you to alight on your feet.

This exercise being like that on the parallel bars, no difficulty will be experienced in achieving it on the horse, if able to accomplish it on them. This on the horse, as on the bars, forms a very showy finish to any exercise on this apparatus, but, until sure of being able to go through it by yourself, some assistance should be given you on the opposite side of the horse, on your body coming over, or after you have made the spring and are alighting on the ground.

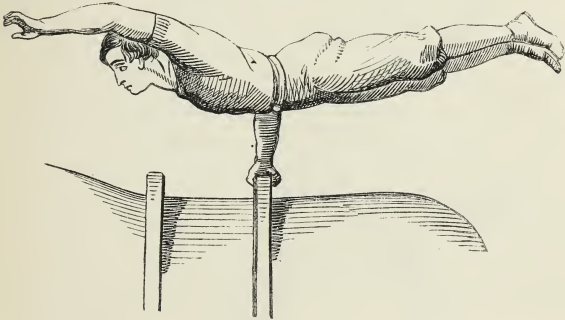
63. Take a short run, and, placing the hands on the pommels, spring up and carry the legs over on the *right*, as in Ex. 51, page 238, but on letting go with the hands give the body a half-turn, and alight on the feet, with the face towards the horse.

64. Repeat the above in every respect the same as regards the particulars, but in this carry the legs over on the *left* instead, not forgetting, owing to the neck-piece, to raise the legs a little higher.

65. The Swimming Movement. *Wrist practice.*—Mount as in the first exercise, then raise the legs up behind, and in leaning the body forward until in a horizontal position, carry it towards the *right*, bringing that elbow well under you, when, letting go with the *left*

hand and stretching it out in front, support yourself on the *right* fore-arm for a short time (see fig. 116); and when able, and while still in the same position, allow the body to revolve round slowly, first to the right, then to

FIG. 116.



the left, as by this movement the wrist is well brought into use. This, though a very pretty exercise, requires some little practice to be able to achieve it neatly; therefore, when well up in it with the *right* arm, it should be practised with the *left* as well.

66. The Roll over.—This is not so difficult an exercise as it will at first seem, it being very similar to No. 41, page 154, on the parallel bars (which see and practise a few times), the chief difference being in the position of the body in starting. The gymnast must stand with his back to the horse, and, lifting up his elbows behind, place his hands on the side of the pommels, with the fingers outward and the thumbs inward, so as to lean his elbows on the centre of the back of the horse. Now lift the feet up with a strong impetus, and carrying them

over the head, as in the exercise above referred to, at the same time bending the body backwards over the horse (see fig. 117), and letting the pommels go when



the body begins to drop, which must be when the feet are level, or nearly so, with the head, you will be able to alight in safety on the ground, unless you retain your hold of the pommels rather too long. Should such be the case, your posteriors will become the winners, and let you know whether the ground be hard or soft. (See remarks in page 154.)

67. The Long Fly.

—This consists in carrying the body over the whole length of the horse in one leap, as in the playground game of 'Fly the Garter,' because at the beginning the gymnast first springs at a short distance only from it, and gradually increases that distance until able to spring from the distance of his height from the horse. To practise this, at first pitch with the hands on the nearer end of the horse, and on bringing the legs forward lift the hands up and pitch on with the feet in their place, not upright, but in a crouching pos-

ture ; then pitch on to the further end, and, by opening the legs, alight on the ground.

This must be persevered in until the gymnast is able to do it properly; then he must begin to try to jump the whole length of the horse by resting the hands on it but *once*. For this, at first, a shorter horse is best, as, when able to go over that *as nothing*, he may go on and try the longer one. In all such exercises it is always better to have some one standing on the opposite end of the horse to catch you, should a stoppage or mishap occur. But having gone thus far, the gymnast must carry out the saying of '*What is worth doing at all is worth doing well,*' by persevering in and accomplishing it easily. Therefore, to do that, he must go '*the whole hog or none,*' and not pitch half-way, and then running along the other half on his hands, finish as if it had been achieved altogether properly.

68. The Somersault.—If the gymnast can achieve Ex. 55, page 162, he need not fear venturing to try this one. Proceed with the last exercise, but stand upright on the horse, with one leg in advance, and the arms well up over the head ; then carry the body quickly forward, place the hands upon the horse (either upon the furthest pommel, or else upon the neck-piece ; if upon the former, a greater spring from the toes will be required), and carry the body and legs well up backward, as in the exercise above referred to, and, if done fearlessly, you will alight safely on the ground.

VAULTING.

‘WHAT IS VAULTING?’ or, as many word it, ‘What constitutes a Vault?’ are questions that have of late been asked by many, more especially in relation to the recent Athletic Festivals, now annually held to promote Gymnastics.

The first question is plainly answered by Walker, in his ‘Manly Exercises,’ who, in describing the subject, says: ‘In vaulting, by a spring of the feet, the body is raised, and by leaning the hands upon a fixed object, it at the same time receives, in oblique vaulting, a swing which facilitates the action;’ but he adds, ‘as the inclination thus given to the body depends not merely on the feet, but on the hands, we have the power to guide the body in any direction.’ Therefore, knowing that leaping is a spring of the feet, vaulting must be a kind of leaping, be it with or without the run; but by leaning the hands upon any fixed object, as above stated, the body must necessarily receive that assistance which is requisite to help it forward or over that object.

As to the second question, ‘What constitutes a vault?’ To this I have seen but one answer, viz. GOING CLEAN OVER IN A SWING. This was my own definition of it, at various committee meetings in connection with the afore-said Festivals, some time before the publication of the work referred to above, and it is hoped that these re-

marks may be the means of causing the definition of a vault to be henceforth inserted in the Festival Rules, for the height vaulted in that of 1865 was 6 ft. 8 in.* against 5 ft. 10 in. in 1866.† Now the question arises, What caused this difference? Simply this: in the former year, in the vaulting contest, the rule went by was, *as long as the competitor went over the bar fairly it was deemed sufficient, and he was awarded according to the height* **THUS cleared.** In the latter year the rule was framed chiefly from remarks then made, viz. ‘That a vault should consist of a clear spring from the feet, and that the body should be carried over the bar‡ by that aid chiefly, and that no

* The particulars of the height vaulted at the Manchester Athletic Festival, 1865, are: A tie between the two best; the height (which was not measured) was supposed to be 6 ft. 8 or 9 in.; the lesser measurement is therefore taken.

† The vaulting in 1866 was, for the highest above his own height, as under:—

The height of the gymnast.	The height vaulted by him.
ft. in.	ft. in.
5 1 $\frac{1}{4}$	5 10
5 4 $\frac{1}{2}$	6 0

The former of which won, he being 3 $\frac{1}{4}$ in. shorter than the latter, but vaulting only 2 in. lower.

To make the comparison more distinct, it might be thus explained. The gymnast whose height was

5 ft. 1 $\frac{1}{4}$ in. vaulted 8 $\frac{3}{4}$ in. above his height = 5 ft. 10 in.
 5 „ 4 $\frac{1}{2}$ „ „ 7 $\frac{1}{2}$ „ „ „ „ = 6 „ 0 „
 which clearly shows that the former won by 1 $\frac{1}{4}$ in.

The heights of the gymnasts, between whom there was a dead heat in 1865 for 6 ft. 8 in., were 5 ft. 10 in. and 6 ft. 2 in., which shows the difference of 10 in. and 6 in. over their respective heights, but the heights of the gymnasts were not then taken into consideration.

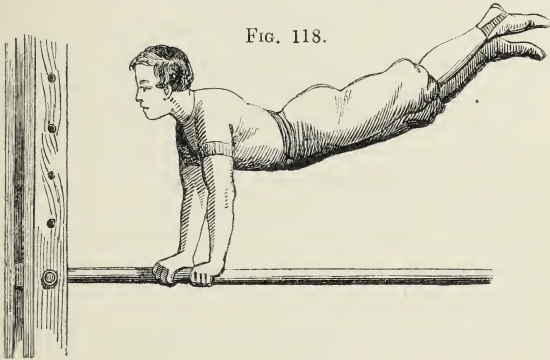
‡ These vaulting contests were over the horizontal bar.

movement approaching a gymnastic exercise be allowed; the difference in the heights of the gymnasts being taken into consideration.' (See Exercises 57 and 58, pages 65 and 66.) The author has seen many gymnasts, more especially at assaults at arms, have to spring up to reach the bar, when they have been vaulting, and then achieving the Slow Pull up movement, or some other exercise, go over the bar in the same manner, and perhaps better than they would have done, had they sprung from the bare floor.

Vaulting over the Horizontal Bar.—This now much-practised exercise in connection with gymnastics, requires but little explanation as to the method of achieving it; therefore the question previously asked recurs, 'What constitutes a vault?' &c. It is the placing of the hands on the bar, springing with the toes, raising the body up by the aid of the wrists and arms, and by carrying it on one side (sometimes to the right, sometimes to the left), impelling it forward over the bar. Therefore, if the body be raised to the right, the right hand must let go the bar to allow it to pass, and the same remark is equally applicable to the left hand. Now, in raising the body up over the bar it must be done properly or not at all, viz. to carry it in a horizontal position with the bar as far away from it as the arms will allow (*vide* fig. 118), by which it will be seen that the body must not be bent at the hips, nor carried over, as in Ex. 76, page 76, nor at all similarly, after you are once above the bar (see remarks on the last page).

It will be useless for a beginner to attempt to vault over *any* height ere he has practised upon different heights gradually; he should therefore begin by placing

the bar as low as the pit of his stomach, not raising it until able to clear it easily, and then not more than two inches, as the higher the bar is raised the more difficult does vaulting become; but should he be patient,



and not in a hurry to try the bar *a little higher*, the chances are that he will the sooner be able to vault over the bar as high as he can reach when standing on his flat feet.

EXERCISES IN VAULTING OVER THE PARALLEL BAR.

As preliminary exercises to vaulting, the pupil is referred to the following:—

No.	Page
10	131
13	134
14	135
15	136
16	137
17	137

When well up in these, he may proceed with those hereafter given, practising each until thoroughly master of it before proceeding to the next. (See Art. 3, page 121.)

1. Preliminary Exercises.—Face the bars on the outside, place both hands on the nearest, spring up and suspend the body with the lower part of the stomach against the nearer bar, then passing the right hand over to the opposite one, swing the legs forward and backward two or three times, when, with a strong impetus from the legs, aided by the wrists, carry yourself completely over both bars, and, letting go your hold, alight on the ground.

2. Repeat the above, passing the left hand over to the other bar, which will necessitate the carrying of the legs towards the left; but in other respects, follow the instructions therein given.

3. Stand on the outside of the bars, and place the right hand on the nearer, and the left on the other, then, making a spring from the toes, carry yourself* clean over both bars without touching them with either legs or body, then, letting go with your hands, alight on the ground.

4. Place the *left* hand on the nearer bar, and the *right* on the other, and repeat the exercise, observing the instructions contained in the note below in this and all future exercises.

* Whenever the *left* hand is on the opposite side or bar to that on which the gymnast stands, and the *right* nearer to him, the legs must be raised up and carried over on the *left*-hand side, when the *right* leg will be between his *left* and the bar; but if the *right* hand is the farther away and the *left* the nearer, then the motion is reversed, and the legs must be carried over on the *right*, when the *left* leg will be the lower and pass between the *right* and the bar. This is applicable to all vaulting exercises.

5. With the *right* hand on the nearer bar, and the left on the other, vault over the bars, but alight on the ground between them; then springing up again, carry yourself over the second as before.

6. Let the *left* hand be on the nearer bar, and the right on the opposite one, and repeat the last exercise.

7. Place both hands on the nearer bar, and springing up as in the third exercise, pass the *left* hand over to the opposite bar (after the spring has been made), and carry yourself over both bars as before.

8. Proceed as in the last exercise, but pass the right hand over to the other bar instead (see note in last page).

9. Place both hands on the nearer bar, springing up and carrying the legs to the right, vault over both bars without resting either hand on, or allowing the legs or body to touch the other bar, the hands to let go their hold on passing over the second one.

10. Repeat the last exercise, but carry the legs over on the left instead, and proceed as therein stated.

11. Repeat either the third or fourth exercise as often as convenient, without letting go either bar with the hands.

12. Repeat either the fifth or sixth exercise *ad libitum*, but in achieving this the hands must necessarily be both placed on the nearer bar each time before the spring is made, yet there should not be any longer pause between the vault than is absolutely necessary.

13. Stand on the outside of the bars and place both hands, at some distance apart, say about eighteen inches, on the nearest, then spring up, carrying the body rather high, pass both legs at once between the arms, and drop between the bars, letting go your hold and passing your

hands on to the other, when vault in like manner over that one.

14. Place both hands on the nearer bar, spring up and carry both legs over that bar on the right, alighting between them, on doing which pass the hands over to the other bar directly, or even before the feet touched the ground, and vault over it without resting. When well up in vaulting, and wishing to vary the finish, the gymnast would do well to finish with No. 16, but there must be no unnecessary pause between.

15. Repeat the foregoing, but carry the legs over to the left instead, finishing with the next, as therein stated.

16. Stand between the bars, facing one of them, and placing both hands on it, grasp it firmly; now spring well up, and carrying the elbows out well at the sides, cross the legs, and lifting the body up behind, carry them back over the other bar, when, aided with a good spring from the wrists, alight on the ground without having touched it.

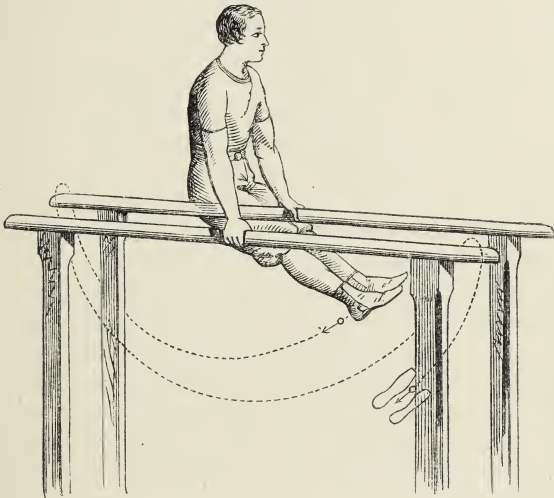
This is a very good finish to the two previous exercises.

17. Proceed as in No. 3, but, instead of carrying the legs over both bars at once, in the position therein stated, viz. behind you (see fig. 119), let the legs drop between the bars without bending the arms, when swing forward and carry them over the opposite bar in front of the hands, in the manner described in Ex. 14, page 135. The dotted line in the woodcut shows the direction taken by the feet.

18. Proceed as in the last, but carry the *right* hand over instead, when the legs will pass behind towards that hand, and follow the directions therein given.

19. Face the length of the bars, and placing the hands on the ends of them, with the fingers outwards, spring well up, and in so doing throw the *right* leg over the *right*-

FIG. 119.



hand bar, letting go that hand to allow it to pass, and immediately grasping the end of the bar again, then drop to the ground.

The foot must be raised well, which might be done by keeping the leg perfectly straight, otherwise it is likely to come in contact with the bar in passing.

20. Repeat the above exercise, but throw the *left* leg over the bar instead, and, with the exception of substituting *left* for *right*, follow the directions therein contained.

21. Proceed as last described, but on springing up lean the head well forward, and raise the body higher behind; then opening the legs wide, carry one over either bar quickly, letting go with the hands to allow them to pass over the bars freely, and, on the legs dropping between them, grasp them again as before, without having touched the ground with the feet. On no account are the arms to be bent, and the legs must be kept perfectly straight, or the feet will come in contact with the bars, which consequently makes it much more difficult to achieve, though, after a few trials, with a strong determination to succeed, the gymnast will soon find himself well rewarded for his patience (see page 10).

22. Stand opposite the ends of the bars, as in No. 19, and proceed as therein stated, but with this difference—that, instead of carrying the *right* leg over the *right*-hand bar, and allowing it to drop between them, it is, together with the left, assisted by a spring with the wrists, in this exercise carried straight over the *left*-hand bar as well, thereby carrying one leg over the one bar, and both legs over the other; then, by letting go your hold, alight on the ground.

23. This exercise is achieved in the same manner as the last, but in this the *left* leg is carried over the *left*-hand bar, letting go the *left* hand to allow it to pass, and both legs are carried over the *right*-hand bar. Both are to be well practised until able to do them without the least hesitation.

24. Proceed as before, but in springing up carry both legs over the *right*-hand bar with a sufficient impetus, assisted by a strong spring from the wrists, to carry them over the *left*-hand bar as well, letting go the right

hand to allow them to pass, when spring well with the *left* hand to assist the body over the second bar, if possible without touching it (which is the proper method of doing it).

This is a very good exercise for the wrists, and the gymnast, prior to placing his hands on the bars, must stand directly opposite the ends of them, and not more opposite the end of the bar over which he is going to carry his legs first, than the other.

25. Proceed as in the last, but in this carry the legs over the *left*-hand bar first, and, substituting *left* for *right*, and *right* for *left*, proceed according to the instructions given in it.

26. Stand outside the bars, and, placing the hands on the nearer, bring the legs up in front, placing the feet against the opposite bar; bend the knees, and let the body drop by straightening the arms, then, by giving a good spring with the feet, which will cause the body to rise up outside, bring the legs up also and carry them over the bars, either passing one hand over to the other bar or not, as preferred. The whole of this exercise should be carried into effect as quickly as possible, there being no pause required between the several movements. The exercise may be repeated after the manner of Ex. 78, page 78, if desired (see note, page 118).

CLIMBING.

Remarks.—This useful addition to the gymnastic art is being practised every day in our public gymnasiums more and more, and as there are many different methods of so doing, according to the different apparatus used, it seems desirable to mention those mostly in use. They are treated separately, for the benefit of those whose wish is to be able to achieve the whole of the varieties.

The different apparatus used in connection with climbing, and which are generally arranged in order along or around a stand, termed the *Climbing Stand*, are the following :—

- | | |
|--------------------------------|-------------------------------------|
| 1. The Plain Rope. | 8. The Horizontal Ladder. |
| 2. The Knotted Rope. | 9. The Hanging Ladder. |
| 3. The Sparred or Bar Rope. | 10. The Slanting or Oblique Ladder. |
| 4. The Plugged Rope. | 11. The Rope Ladder. |
| 5. The Pole, fixed or hanging. | 12. The Plank or Board. |
| 6. The Bar Pole. | 13. The Sparred Plank, &c. &c. |
| 7. The Upright Ladder. | |

Description of Apparatus.

1. THE PLAIN ROPE.

All ropes used for climbing should be about $1\frac{3}{8}$ inch in diameter, but where there is room for more than one

rope to be suspended, they may be of different sizes, to suit the different ages of the gymnasts,* say from $1\frac{1}{4}$ inch to $1\frac{1}{2}$ inch in diameter, and reach to within a few inches of the ground.

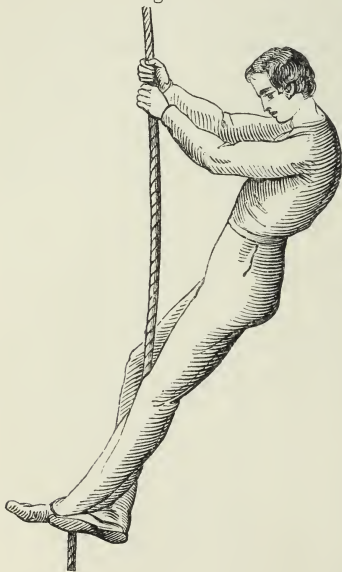
* As ropes of different strengths are always in requisition in a well-appointed gymnasium, it may be as well to give the rule for ascertaining the weight a well-made hemp rope of any certain size will carry, according to Robinson's calculation. **RULE.**—Multiply the circumference of the rope in inches by itself, and the fifth part of the product will express the number of tons the rope will carry. From the above rule the following table is compiled by the Author.

Circumference of rope in inches.	Calculated Weight.		
	tons.	cwt.	qrs.
1		4	0
$1\frac{1}{4}$		6	1
$1\frac{1}{2}$		9	0
$1\frac{3}{4}$		12	1
2		16	0
$2\frac{1}{4}$	1	0	1
$2\frac{1}{2}$	1	5	0
$2\frac{3}{4}$	1	10	1
3	1	16	0
$3\frac{1}{4}$	2	2	1
$3\frac{1}{2}$	2	9	0
$3\frac{3}{4}$	2	16	1
4	3	4	0
$4\frac{1}{4}$	3	12	1
$4\frac{1}{2}$	4	1	0
$4\frac{3}{4}$	4	10	1
5	5	0	0
$5\frac{1}{4}$	5	10	1
$5\frac{1}{2}$	6	1	0
$5\frac{3}{4}$	6	12	1
6	7	4	0

There are two methods of climbing this rope, viz. with the hands and feet, and with the hands only.

1. With the Hands and Feet.—Grasp the rope with

Fig. 120.



both hands as high up as you can reach, or if a jump be made to grasp it higher up the better, then move them alternately one above the other, supporting yourself while so doing by the feet (fig. 120), which are made use of by passing the heel of the left foot in front of the right, catching the rope between the legs, and pressing it between the feet, in the manner shown at *a*, fig. 121.

2. With the Hands only.—A glance at fig.

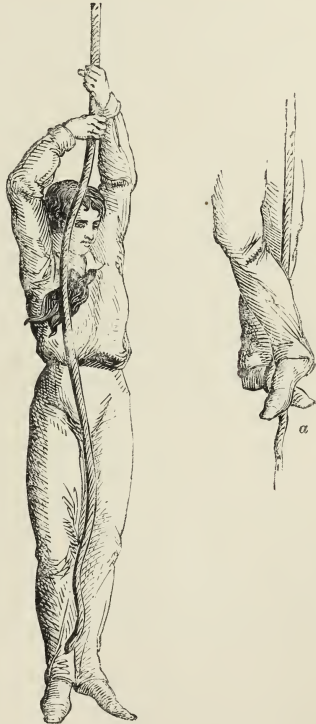
121 will clearly show the way this is achieved, it being but the former exercise without the use of the feet, and every time a hand is about to be raised, the pupil must raise up the body in the manner described in Ex. 9, page 35. Although the most difficult, it is by far the most graceful method of climbing the rope, and no gymnast should be considered as such unless he climb the rope with as great an ease as he does other feats ;

in fact, every person should be able to make himself proficient in this branch, as there is no telling how soon his climbing powers will be called into use. On descending the

rope the action of the hands, or hands and feet, must be reversed, and on no account is the rope to be allowed to slip through them, as the friction caused thereby will be sure to rub the skin off, and perhaps cut the flesh to the bone.

3.—Grasp the rope with the hands as high as possible, raise the body and pass the *right* hand upward, dropping the *left* loosely by the side, then bring up the left, and by raising the body grasp the rope just above the *right*, when let go with the *right* and let it hang loosely by the side, bringing it up again, and repeat the exercise. This practice is of great benefit to the hands, wrists, arms, muscles, &c., and makes

FIG. 121.



the grasp much firmer, but it will require great perseverance to overcome it, as the action of the arms is very different to the ordinary mode of climbing in the preceding exercise, inasmuch as the body is for a time suspended by one arm during the making of every change. It should be persevered in until the body can be raised with the one arm only, though at first that may be effected by using both arms; but the former, which the nature of the exercise requires, is the more difficult.

4.—A very difficult method of climbing the rope is thus described: grasp the rope with both hands, passing the hanging portion of the rope over one of the shoulders, then bring up the body, and by opening the legs pass one on either side of the arms outside, keeping them perfectly straight, and letting the feet be well over the head, and while in that position move the hands alternately upward, and ascend the rope as before.

2. THE KNOTTED ROPE.

This rope is of the same size as the last, but there are a series of knots tied or worked into the whole of its length, at about a foot apart, these knots being made use of to assist the climber in mounting or descending it. In neither way need the feet be crossed as before.

3. THE SPAR OR BAR ROPE.

This merely consists of a series of spars, about $\frac{5}{8}$ of an inch in diameter, being worked in in the making of the rope, so as to project about six inches on either side of it, and so constructed that the spars shall be in a straight

line and not twisted about, which, if such be the case, will spoil the use of it. Some prefer to have the spars inserted into their places after the rope is made, but that is a minor matter.

In using the sparred rope, the hands may grasp the rope alternately as before, or they may both grasp the same spar, one on either side, the feet being placed both on another spar below.

Exercises.

1.—Sit on a bar at any height from the ground preferred, having one leg on either side of the rope, and sitting as close to it as possible, grasping the *second* or *third* bar above in like manner, viz. one hand on either side. Now pull the body up, and by opening the legs wide sit on the next bar above, passing the hands higher up afterwards, and repeat the exercise to the top, or as high at first as convenient.

To descend, the pupil has but to reverse the order by opening the legs and lowering the body, then passing the hands down, and so on, till he reaches the bottom.

2.—Sit on a bar as in the last, but grasp the next bar above, when lean the body back and let it fall down to the full extent of the arms, letting the feet rise as high as possible in the air, and the legs wide apart, but still remaining on the bar; then bring the body upright, and by passing the hands to the next bar raise the body on to the bar last held by the hands, and repeat the exercise *ad libitum*. To descend, see the last exercise.

3.—Sit on a bar as before, and grasp the next above it, then, as in the last, throw the body well back, and open-

ing the legs wide, draw the body up, by bending the arms while in that position, and hitch the legs on the outside of the bar held by the hands, when raise the body up, and passing the hands on to the next bar, repeat the exercise as before. In descending let the body fall gradually back, lift the legs well up, and be sure they are free of the bar before lowering the body, so as to sit on the next bar below.

4. THE PLUGGED ROPE.

This rope partakes somewhat of the knotted rope, and is formed by a series of plugs, like a half of an egg in shape, being placed about a foot apart, the flat side being uppermost, which should measure about four inches in diameter. On these plugs the feet may be placed, as in the last, or they may be placed on either side alternately; but this will cause it to be much more difficult to ascend, owing to the one-sided pressure given by the feet, when the greater strain to support the body will fall upon the arms.

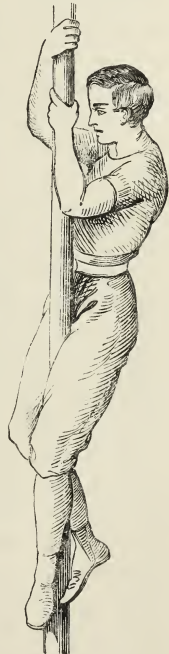
5. THE POLE.

This apparatus may be either fixed upright or slanting, or hung in the same manner as the ropes. They should be perfectly smooth and free from any chance of splinters being met with. The diameter of the upright poles should be from two inches and a half to three inches, that of the slanting from three to three and a half inches, according to the ages of the pupils, the latter one being a little larger from its position.

1.—The actual position of the hands and feet of the climber is precisely the same on the pole, whether on

the upright or slanting, as on the ropes (fig. 122), although, from its increased size, it is more difficult to grasp, besides which, the pole not being pliant, like the rope, it will not yield to the pressure of the feet. This will cause the body to assume a more upright position, yet, by right, the body should on no account be allowed to touch the pole, as the whole action should be made by the hands, knees, legs, and feet, and consists of grasping the pole with the hands, raising the body up by bending the arms as in Ex. 9, page 35, when it is held by the legs and feet, thereby supporting the body while the hands are again raised higher. This is continued until the top of the pole is reached, when to descend, which is not like that on the rope, the pupil has but to loosen his hold with his hands; or if preferred, he may remove them away altogether, and hold them out somewhat loosely, and lessen the pressure on it with his legs and feet, but not too much, when he will descend it with greater speed than he went up.

FIG. 122.



2.—The climbing up the slanting pole should be likewise practised, as, owing to its position, the weight of the body is thrown more upon the hands, which consequently makes it a little more difficult to effect, and it is strongly recommended that every one learn both to

climb up and slide down a slanting pole, as, in case of fire, great assistance might be timely rendered ere the arrival of the now much-used Fire Escapes.

3.—Two poles placed about 16 or 18 inches apart will afford a good opportunity for the gymnast further to exercise himself upon, though on them the hands only are to be used, one being placed on either, and then used both at once or alternately.

4.—Another method of climbing the two poles is to grasp each with a hand and to pass a leg round each, after the manner of climbing a single pole, and thus working the body upwards as before, by alternately using the hands and legs.

5. Climbing, or rather mounting the pole in the same manner as mounting the board, is to be likewise practised, but ere that can be done the pupil is referred to page 275, where the manner of achieving that exercise is fully described, and the instructions therein contained are to be fully carried out in practising it.

6. Where a pole is or can be fixed or hung close to a rope, a very good exercise may be practised by using the two at once, thus: Climbing the rope with the hands as before, but passing the legs round the pole and keeping the body as horizontal as possible, sustaining it in that position throughout, the legs being worked up the pole in the proper way every time the hands are passed up the rope, and the movements reversed to descend, or else the gymnast slides down the pole only. The above will be found to be not only excellent climbing practice, but good exercise for the spine.

6. THE BAR-POLE.

This is constructed similar to the bar-rope, and is a combination of that and the pole, it being a pole of the same size as the latter, with bars or spars placed through it at given distances, like the bar-rope. Some prefer a square pole, but that is of course left to the option of the gymnast.

The exercises to be achieved hereon are similar to those given in page 258, to which refer.

THE LADDER.

The variety of the exercises to be achieved upon this apparatus calls for a place to be given it in our gymnasiums. No further description is needed than to state that the sides must be perfectly smooth, and, like the poles, quite free from splinters. The upright ladders, and those placed at various angles, may or may not decrease a little in size at the top, but the horizontal one must be the same size throughout its whole length. The sides should be oval-shaped, though some prefer the horizontal one, grooved to meet the requirements of the hands and fingers better. The rundles should be about twelve inches apart.

The oblique ladders are placed at various angles, ranging from 30° to 60°. In doing exercises on the former the distance traversed by the hands in each movement is the same as on the latter, but the movement itself is more difficult on a ladder placed at the latter angle, as on that it is upward, while on the former it is more longitudinal, there being but little difference between it and the ladder placed quite horizontally.

7. *The Upright Ladder.*

The ladder in this position does not admit of a very great variety of movements, but the following will be found to be very beneficial.

1. As a preliminary exercise the pupil should mount and descend the ladder in the usual way, viz. the right foot on one rundle while the left is on another, the hands being placed at the sides and moved alternately as each leg is advanced to the next rundle, either above or below it. This, as a preliminary exercise to the ladder in all its positions, should be practised until confidence is gained whereby the gymnast may be better able to proceed with those requiring a greater amount of courage than need be bestowed on such an one as this.

2. Repeat the above, but move the hands both together up the sides, which must be done somewhat quicker.

3. Proceed as before, but grasping the rundles instead of the sides, moving the hands alternately.

4. Repeat the second exercise, but without jerking the body too much. This may be effected by giving the body a forward motion at the moment the hands are about to be passed to the next rundle. These exercises require but little practice.

5. Place the hands on the rundle opposite to your shoulders, then move the feet up until they are on the second one below the hands, keeping the legs and arms perfectly straight (fig. 123), and in this manner advance each leg and hand alternately upwards, descending in like manner. The position here required throughout

will cause a great strain upon the grasp, which must consequently be firm, as a mishap would not be pleasant, even if the gymnast be but two rundles from the ground. Therefore it would not be well to go too high at first; or perhaps, until more sure in it, it would be better to start from the lowest rundles, and advance *ad libitum*.

6. If two ladders be placed at an equal distance apart at both ends, say from two feet to two feet six, similar movements to the foregoing

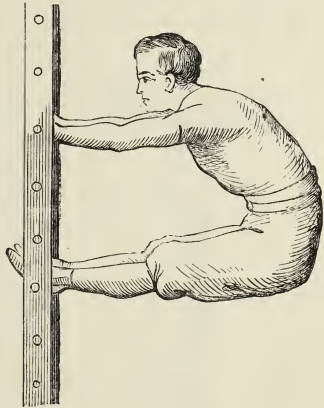
may be effected thereon, the principal difference being that the right hand and leg and the left hand and leg will always be on the same ladder.

7. Reaching and stepping up three or four rundles at a time with the ladders in this position will greatly improve the muscles of the arm in pulling the body up to make the next step.

8. *The Horizontal Ladder.*

The movements on the ladder in this position differ greatly from those already described. The following are the principal, and it is advisable for every beginner to practise all of them. It may be as well to remark

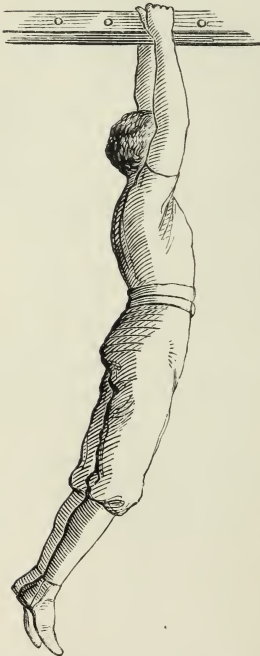
FIG. 123.



here, that to each horizontal ladder there should be a perpendicular one affixed at one end of it, by which the gymnasts are able to reach the other, unless they be tall enough to reach it by giving a slight spring.

1. Mount upon the ladder with the hands on the out-

FIG. 124.



side (fig. 124), and move them alternately along in a similar manner to walking on the parallel bars in Ex. 8, page 129, where the legs are kept perfectly straight, but not stiff, while making use of the hands, and when the opposite end is reached the motion of the hands must be reversed, thereby walking backwards.

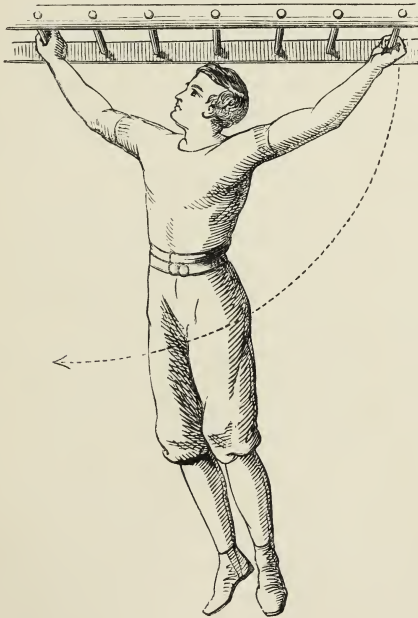
2. Hang on the ladder as before, but advance both hands at once, by taking a very short and sudden spring, which may be assisted by bringing up the legs a little and carrying them down again somewhat suddenly, but this privileged movement should be scarcely perceptible. This exercise must be gone through

both forwards and backwards (see Ex. 7, page 129).

3. Hang with both hands on the same rundle, and the face towards the length of the ladder, then with a forward spring, with a very slight swing at first, pass

both hands at once on to the next, and continue to the end. Although it is stated that it may be done with a swing, it is very improper, as the exercise must be done without it if it be done properly, and it is wished for

FIG. 125.



the arms and wrists to reap the required benefit from the practice.

4. Grasp the rundles of the bars with the hands four rundles apart, and, supposing the *right* hand to be in advance, it is required to pass the *left* in advance of the

right to the same distance, and so on to the end of the ladder. This is usually done by swinging the body to and fro sideways, thereby giving it a forward motion, when the hindermost hand releases its hold to advance it before the other, one swing of the legs backwards and forwards, letting go the hand on the forward swing, being deemed sufficient. After a little practice the pupil will be able to increase the number of rundles missed until he is able to stretch his arms out each time to their utmost (see fig. 125). This is one of the finest exercises for the muscles of the arms on this apparatus, and should therefore be well practised.

That the pupils may have a good range for this exercise, they should have an opportunity of going for at least thirty or more feet, according to the space at liberty, and the ladder should be suspended not farther distant than every ten feet for safety.

5. If the ladder be sufficiently low, say from fifteen to eighteen inches above the head, the following will be found to be a good exercise, whereby a quick and firm grasp may be secured.

Spring up, opening the hands with the knuckles uppermost, and spreading out the arms, not too wide at first, make a grasp at two of the rundles, say the *first* and *third*, and suspend yourself therefrom for a short time, then drop to the ground; after a while spring up again, hanging from the *first* and *fourth* this time, and so on, increasing the width gradually, but taking care that in springing up the head does not reach the ladder before your hands, or you will be likely to feel the effects of the collision.

9. The Hanging Ladder.

This ladder is hung by two crooks like the Hanging Pole, and reaches to within a few inches of the ground. The movements upon it are not varied, but the following may be practised, the swinging motion causing the pupil to grasp the sides or rundles firmer. In other respects it is similar to the exercises on the Upright Ladder.

1. Ascend and descend in the ordinary way, i.e. grasping the sides with the hands.

2. Ascend and descend, grasping the rundles instead of the sides.

3. Ascend on one side, and descend on the other.

10. The Slanting or Oblique Ladder.

The ladder placed in a slanting or oblique position affords a greater variety of exercises than all the others put together. There should be at least two ladders in a large gymnasium, fixed at different angles, say one at 45° the other at 60° , as the movements on ladders at different angles differ materially, though the method of achieving them is the same. The following are the principal:—

1. Ascend and descend in the ordinary way.

2. Ascend and descend, grasping the rundles.

3. Ascend and descend, making use of one hand only, first the right, then the left.

4. Ascend and descend with one hand only, but holding something, a dumb bell for instance, in the other, using each hand alternately.

5. Ascend in the regular way, but descend with the back turned towards the ladder, but not touching it, the hands grasping the sides. .

6. Ascend in the usual way, and descend on the other side of the ladder, grasping the rundles of the ladder each way.

7. Ascend and descend, without making any use of the hands. The ascent the pupil will soon be able to accomplish with ease. In making the descent his back must be turned towards the ladder, and in making the steps it must be done regularly. At first it would be better to have some one to hold his hand in front, until he has gained greater confidence to make the steps freely and without fear of falling. This is the chief drawback to its being done by beginners.

8. We now come to the *under side* of the ladder. Grasp the outsides of the ladder with both hands, and ascend by moving each alternately as in the Horizontal Ladder, descending in like manner, but the steps must be made regularly, and the legs kept steady.

9. Proceed as in the last, but advance both hands at once up the sides; this may be done by bringing up the legs and carrying them down again suddenly, thereby giving a kind of send to the body. It needs but a little practice to effect it properly.

10. Grasp one of the rundles as high as you can, place the feet on a lower one, and ascend and descend in the usual way, making use of the hands and feet alternately.

11. Ascend as in the last, but work the body round to the front, and descend on that side.

12. Grasp a rundle as before, then raise the body up as in Ex. 9, page 35. When high enough, let go with the *right* hand, and quickly grasp the next rundle above (see fig. 126); then, raising the body a little higher, pass the *left* hand on to the same rundle as the *right*, and

repeat the exercise as far up the ladder as convenient. If you ascend but four or five rungs you may let go both hands and drop to the ground, alighting on your toes, and bending the knees a little.

13. Proceed as in the last, but, instead of bringing up

FIG. 126.



the *left* hand on to the same rundle as the *right*, pass it on and grasp the rundle above ; then passing the *right* on to the rundle above the *left*, and so on, as high as convenient, without overtiring yourself. Descend in the same manner, by reversing the motion. Practice alone will give the pupil the best idea as to how high the body should

be raised, and when to pass each hand on in advance of the other. When able to do it, do it regularly; let there be no sudden jerks, as if unable to make a sure step. Let this exercise be practised until perfect in it, then the pupil may go on to the next.

14. Ascend and descend the ladder, making use of *both* hands at once both ways. A slight jerk with the legs will assist you, but if able to do it without the better, as the body should be raised sufficiently high to be able to grasp the next rundle without using them at all.

15. Ascend the ladder, on the upper side, by the method most preferable, then, turning the back towards it, stoop down and grasp it on the outside, when, holding on firmly, pass the legs up backward, and hitch the toes on a rundle as high as convenient, letting them be bent at the hips and knees a little, so as to enable you to support the weight of the body on the arms, and at some twelve or fifteen inches above the ladder. Now it is required of the gymnast to descend in that position, by alternately using his hands and feet, taking care to bend the toes well over the hands each time.

Practice only will enable him to descend in this manner freely, but, besides being rather a showy exercise, it tends to strengthen the wrists and the muscles of the arms and legs very much, and should therefore be well persevered in.

16. Let the above be carried into effect on the under side of the ladder, it being here an exercise more for the toes and feet than for the hands, they having to sustain the chief weight of the body while achieving it. The hands must grasp the rundles instead of the outside, as in the last.

17. Lean against the ladder with the face towards it and the hands close to the sides, grasp the nearest rundle above, and by the sole strength of the arms raise the body up, when, by passing one arm at a time on to the next, repeat the exercise as often as convenient. To descend, the movement must be reversed, and this will be found to be the easiest part of the exercise, though care must be taken not to make a false step. To facilitate the moving of the arms, the head may be turned to the right or left as required, but the body must be kept in the same position throughout.

18. Let the last exercise be repeated with the legs open, the lower parts pressing against the outsides of the ladder at each movement of the arms; consequently they must be both brought up at once while the body is thus suspended.

19. Repeat the last two exercises, with the back against the ladder. In achieving them in this position it will be found necessary to bend the arms outwards, unless the distance the rundles are apart will admit of its being done otherwise.

20. **Spine Practice.**—Ascend the ladder underneath, and when about ten or twelve feet from the ground bring the legs up, and passing them through the ladder between the second and third rundles from the hands, carry the body likewise through, then, bending the legs back again through the second or third opening below, force the body gradually on by the aid of the arms, and, on its dropping through underneath, bring up the legs again, and hitch them over the third round below until the body be completely free again underneath, when repeat the exercise to the bottom.

The gymnast should persevere in this well, until able to let but one space be between that which his body and legs go through, though at first there may be two. Some may, after a time, be able to achieve the exercise through every opening, but he who can do this must be very young; some others may be able to carry it into effect by freeing the body well each time underneath.

11. *The Rope Ladder.*

This apparatus, though constructed of rope, and in point of shape like those just mentioned, had better have three or four wooden rundles to keep the sides equidistant. In its construction the chief point, next to its safety, to be aimed at is, to make it so that it will always keep straight, and not twist round, as this alone renders a rope ladder useless, though every gymnasium, however small, should have one at least for the pupils to practise upon. Owing to its being much more difficult to mount than the ordinary one, the muscles are called more into action, as will be proved on an embryo gymnast attempting to mount one for the first time, and more especially if he be an adept on the ordinary ladder, where the feet either share or bear the weight of the body according to the exercise performed, while on this the greatest strain falls upon the hands, owing to the tendency of the rope ladder to incline backward. Therefore, to mount one easily the body must be kept as close to the ladder as possible, at the same time upright.

As there are no exercises in particular to be achieved on the Rope Ladder, it will suffice to add that the pupils should not neglect to make use of this apparatus, owing to the way in which the muscles of the hands and arms are brought into action, in addition to those of the legs.

12. THE PLANK OR BOARD.

This indispensable and requisite apparatus in a gymnasium, where space will admit of its being fixed, should be about 15 feet long, 12 inches wide, and $2\frac{1}{2}$ inches thick, or a little more if needed, as it should bend but very little with the movements of the gymnast. It can be fixed at any angle, say from 35° , and gradually raised as progress is made thereon until able to be exercised upon when perfectly upright.

The chief exercise upon the Plank, if at all steep to ascend, is to place the hands on the sides, grasping them firmly, then with both feet placed flat upon the board, ascend by alternately moving the hands and feet in short and even steps, the movement being very similar to ascending a ladder, though of course the body is here bent to the requirements of the apparatus. Care must be taken not to let the feet slide down the board while descending, as such an event may cause a fall, or some other mishap. (See Ex. 5, page 264.)

13. THE SPARRED PLANK.

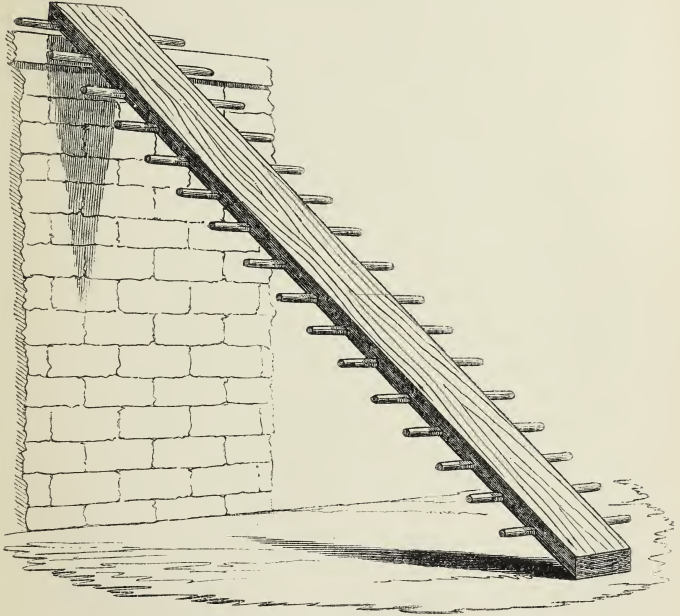
This apparatus, though a great addition to those already mentioned, is very seldom to be met with in any gymnasium, and is consequently very little known or practised upon; but as the parts chiefly brought into action, in using it, are the wrists, arms, spine, hips, legs, and the whole of the muscles, including the spine, &c., it must be evident that the whole of the body must derive great benefit from it, be it practised upon by the pupil or the more advanced gymnast. Therefore it is to be hoped that a spare corner will be found in every

gymnasium, whereon the members may exercise themselves and reap the full reward.

To construct the Sparr'd Plank is very simple, though it can be constructed in different ways, according to the means of the gymnast. It may consist of but a thick plank of wood about 12 inches wide, and of any length, generally from 15 to 20 feet, according to its position, with a series of spars fitted strongly on the back part: these spars must be made square, with the exception of the handles, which are round, and project about 8 inches on each side (see fig. 127). If, instead of the above, the plank be of a sufficient thickness to admit of it, the spars may be sunk into it, which will greatly tend to keep them in their place. Now, when such a construction is required, it would be much better to construct a hollow case of the requisite width (12 inches) and depth (about 6 inches), when the spars should be first let into the sides so as to be flush on the top with their edges; then the underneath part may be fixed on, whereby they may receive additional strength by being likewise fixed to it, the square parts being now completely hid from sight, except the ends. Should it be desirable to render this apparatus more tasteful, it may be constructed as if two ladders, the width of the length the spars are to project beyond the plank, were to be substituted for the spars, as above; but in this case they would have to be square in the middle, as before, as the plank of itself would not be strong enough to bear the wear and tear it would be subject to. The upper side of the plank should be very smooth and free from splinters, and, if preferred, it may be polished. It may be fixed at any angle, varying from 50 to 60 degrees or more, if preferred; but the more upright the more dif-

difficult are some of the exercises to achieve, and consequently the less the angle the less the difficulty, according

FIG. 127.



to the position of the body while practising.

Now these planks may be made of various forms, and placed in various positions; they may be made straight, as already described, or they may be made curved, first, *CONCAVE*, i.e. hollow, like the inside of a circle; secondly, *CONVEX*, i.e. round, like the outside of a circle. In either case, the difficulty of achieving the exercises on them is

reversed. Thus, supposing the Concave plank to be made sufficiently large, the gymnast would have to lie on his back to begin, and by the time he reached the top the position of his body would be upright, although as far from the ground as the height of the apparatus would admit; whilst, on the Convex plank, it would be necessary for the pupil to stand upright or lean a little back against it to begin, finishing thereby on his back. The top part of these curved planks are to be fixed against the wall in the same manner as the oblique one.

There is another method of fixing this apparatus, which, if room will admit of it, should be made use of in addition to the before mentioned, viz. to have two of each of the curved ones and place the tops of the Concave or Convex planks together, when the former would represent the barbed point of an arrow, the latter a pointed arch; or the top of a Convex may be placed on that of a Concave. Either or all of these positions would add greatly to the appearance of the gymnasium, the chief advantage of this arrangement being that two pupils can be exercising themselves upon each at the same time; but when complete, they must be securely fixed to the floor in the place where they are to remain, with strong iron brackets and cross stays underneath, to prevent them from shifting from their places, or from falling over.

The following are the principal

Exercises.

1. Lean against the plank with the face towards it, then, stretching the arms well up, grasp a spar on each side with the hands, bend the legs up sideways, place

the toes on a spar or two up, and force the body up by straightening them, when, grasping the spar as before, the exercise may be repeated *ad libitum*.

2. Proceed as in the last, but without using the feet, therefore the body must be raised solely by the arms, as in Ex. 9, page 35, when one hand must be released and passed onward ere the other one can be; but in both cases, the act of suspending or retaining the body in the same position falls on each arm alternately.

3. Repeat the first exercise, by making use of one leg at a time, thereby advancing upward as up a ladder, and let it be persevered in, as the actions of the legs are totally different to those in the Ladder exercises.

4. Proceed as in the second exercise, but use one hand only in raising the body, passing the other forward to be in readiness to grasp the nearest spar directly the body is as high as you are able to raise it, and repeat the exercises as often as convenient, taking care to descend in like manner, but by reversing the motion.

5. Turn the back towards the plank and lie upon it, then proceed as in the first exercise, with the exception of bending the knees more outward instead of sideways.

6. This exercise is achieved in the same manner as the second, and consists in raising the body solely by the aid of the arms, only it must be done on the back instead; but it will be found to be a little more difficult, owing to the difference in the position of the arms.

7. With the back on the plank as before, endeavour, as in the third exercise, to force the body upward by making use of but one leg at a time, and let it and the next be well practised until able to accomplish them with ease.

8. Strive, while on your back, to pull up the body by using each arm alternately, as in the fourth exercise, and do not yield, if unable to do it after a few times trying.

9. With the arms at the side lie on the plank, and by bending the elbows grasp the next spar, and by the sole strength of the arms force yourself up the plank, placing the feet on the spars while passing it on to the next.

10. With the face towards the plank, repeat the last exercise.

11. Let the sixth exercise be repeated, with the legs bent at the hips only, and kept perfectly at right angles with the body while raising the body with the arms only.

12. Repeat the fourth exercise, but with the arms down at the side, as in the ninth. This will be found extremely difficult, and will require great practice to be able to achieve it.

13. In like manner repeat the tenth exercise, with one arm only.

The following exercises *refer only* to the plank, when placed nearly level with the floor, or at an angle of 15° .

14. Lie upon the plank, and achieve any of the foregoing exercises.

15. With the face towards it, strive to accomplish any or all of the preceding exercises.

16. Sit upon the plank with the feet towards its length, and, grasping the spars opposite or near to the knees firmly, pull the body upwards, when, passing the hands to the next spar, repeat the exercise.

17. Sit upon the plank, with the back towards its length, and, grasping the spars nearest to you firmly, force yourself backwards up the plank.

THE GIANT'S STRIDE.

THE GIANT'S STRIDE, Flying Course, Flying Step, or by whatsoever name it is best known, is reckoned one of the best Gymnastic Apparatus that can possibly be fixed in any place, a garden or playground, even if there be nothing else to keep it company. It not only amuses children of all ages, from the sometimes awkward position they are put in if they do not balance themselves as they ought (that only comes by practice), but it strengthens them to such a degree, without their perceiving it, that the oftener it is brought into use by them the greater will be the benefit derived therefrom. Next to children, it is a good apparatus for embryo gymnasts to practise upon every day, or, if they like, three or four times a day will do them more good than harm; but, like many other things, it is soon put on one side, chiefly from the want of knowing how to make use of it properly and to their own advantage. It differs very much in the mode of its construction, and in its use, from all other apparatus; it differs very much in its effects upon those who make use of it. Scarcely any other apparatus possesses so many advantages as this one does. Take, for example, a bitterly cold frosty morning; what beneficial effects a few minutes' practice around it will have upon you! The benefits are innumerable; no matter

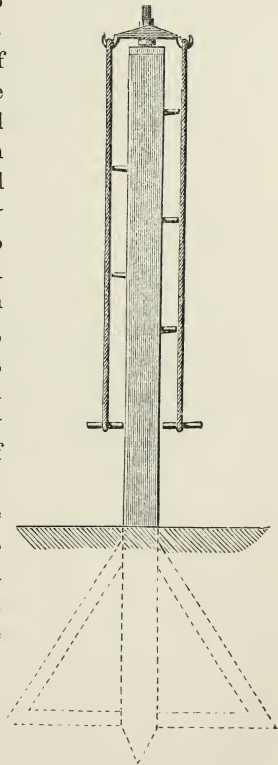
how often, or for what length of time you practise upon it. Each time you derive additional benefit from it; it all adds to the already accumulating stock; therefore practise upon it to your heart's content, for no evil can or will arise if used in a proper manner, i.e. if you keep the body straight and look the way you are going.

DESCRIPTION OF APPARATUS.—There are two methods of constructing the Giant's Stride; viz. 1. With a Pole. 2. Without a Pole.

1. **With a Pole.**—This, for the present, is taken for the proper way of erecting such an apparatus. Let us therefore get a long straight larch or fir pole, freed from all branches and bark; let it be smooth and well seasoned, and then painted with three or four coats of paint; and let the bottom part be charred, to preserve it the longer while in the ground, or else encase it in iron, as in Article 2, page 20. The pole should be about 14 or 16 feet high above the ground, the higher the better, and at least feet 6 feet should be allowed to sink into the ground, whereby to fix it securely. Of course the higher the pole the longer will the ropes be required; but then it must be remembered, that the longer the ropes the greater will be the distance to be travelled in going round, and the higher can a jump be made. The higher the pole above the ground the deeper must it be sunk into it, as a pole 30 feet above the ground should be at least 10 feet below it. An iron cap is the next thing, and this is fitted tight on the top of the pole, to prevent it from splitting, and likewise to make the bearing more solid for the pivot to work upon from which the ropes are suspended. Many prefer

a large conical cap, made of sheet iron, placed on the extreme top over the pivot to keep it dry, and so prevent the rain from getting down into the post through the hole made by the pin which fixes the pivot. According to the number of ropes to be suspended must the number of hooks in the pivot be: some have four, others have six, and some even eight to very high poles. The pivot, &c., should be fixed so as to rotate easily prior to raising the pole into its proper place, when it should be secured to keep it from shifting, as in fig. 128, and, by the aid of some stout pegs, a few inches long, fixed in alternate sides, the rope may be hooked on. At the ends of each rope a strong ash bar, about two feet long by one inch and a quarter thick, is fixed, or, if preferred, a round ring, similar to those used in the Rings, page 175, may be used instead.

FIG. 128.



2. Without a Pole.—The only difference between this and the former method is the pole, as the ropes revolve by means of the pivot, as before, but, instead

of its resting on the top of the post, it works upon the head of a large bolt fixed into a beam in the centre of a large building, such as the gymnasium at Liverpool; and if space will admit of it, this is greatly to be preferred.

[It must be borne in mind that, although no particular way is stated in the following exercises to go round, *every* exercise should be practised both ways until able to achieve them as well one way as the other.]

Exercises.

1. Grasp a bar or ring (whichever is fixed to the end of the ropes), and keep running round with rather long steps, which, as you get used to it, you will be able so to increase as to go once round in two steps; hence the name of Giant's Stride. During this practice the body should be at the same angle as the rope, and consequently in a line with it.

2. Proceed as before, with short steps, and, by touching the ground with the toes of one foot as opportunities occur, keep the body constantly turning round, but in such a manner that the face shall be in its proper position after each revolution.

3. Proceed as in the first exercise, making as long a stride as possible, and when going round high from the ground, bring the legs straight together, and, letting the arms be over the head, give the whole body a movement round quickly, thereby describing a large circle with the feet. After a little practice you will be able to repeat this movement three or four times during each stride, but the body must not be allowed to revolve as in the last, the face being towards the way you go throughout.

4. One at a time, and with a rope or strong cord held across, let each gymnast practise jumping over it, which, in high jumps, is accomplished by drawing the body completely up, sometimes almost above the ring, in order to escape the string. A very good way is to get two to hold the rope, then, as each fails to clear the height, let him resign his place to the next, and he, in his turn, hold the rope, so the one who clears it the oftenest of course practises the longest.

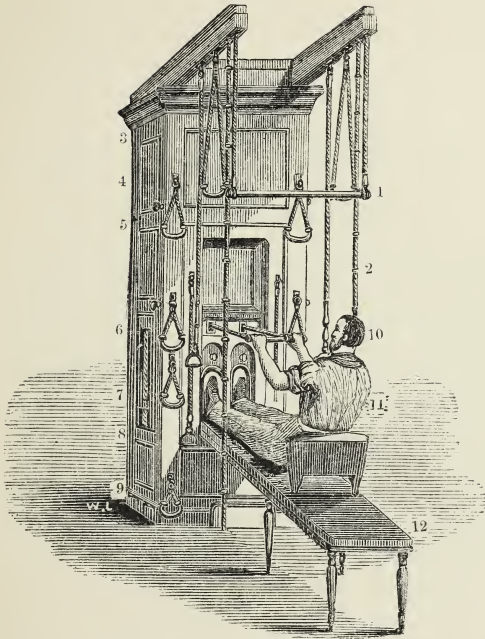
THE GYMNOMETER, POLYMACHINON OR COMPOUND CHEST MACHINE.

THIS GYMNASTIC APPARATUS is a very effective contrivance, containing upwards of 100 different exercises, all the movements acting upon one set of weights, so that the gymnast can gradually increase it as he becomes stronger, or decrease it at pleasure. It is so highly finished, and in itself so handsome a piece of mechanism, that it can be placed in a dressing-room, where it may be practised upon at leisure. The various exercises of hanging by the hands, arms, and legs, and pulling in various ways, either sitting or standing, backward or forward, upward or downward, all tend to bring the whole of the muscles into full play.

The price of such an apparatus varies, according to the number of movements it contains, and the style of finish, but it ranges from 5*l.* upwards (see page 7).

The following list will convey some idea of the several parts, the numbers round the illustration being placed as near as possible opposite the several parts (see fig. 129).

FIG. 129.



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| <ol style="list-style-type: none"> 1. Trapeze Bar. 2. Hanging Knotted Ropes. 3. Stirrup Exercises for the legs. 4. Overhead Exercises. 5. Bottom Sawyer. 6. Chest Expander. 7. Chest Expander. 8. Velocipede Exercise. 9. Top Sawyer. 10. Rowing Exercise. 11. Exercise for Legs and lower part of the Body. 12. Sofa which fits into the machine when not required. | } These four are suspended from the two projecting beams at the top. |
|--|--|

ROWING APPARATUS.

THIS BEING an addition to a public gymnasium that is very much wanted, though many possess a shell of a boat with the necessary appliances of oars, &c., without the needful mechanism whereby the art of rowing may be learnt as easily out of the water as in it, the Author having perfected such a contrivance on three different principles, hopes shortly to bring it before the public, when it can be made use of and patronised according as its merits deserve. It may be stated, that it has received the approbation of every one who has seen the models, and the method of working it.

GYMNASTIC SEE-SAW. SWINGING HAND LADDERS.

Remarks.—These contrivances are becoming more in use in Clubs and private families than formerly. We most of us recollect the old See-saw, of times gone by, how we passed up and down in the air on a plank nicely balanced in the middle; the gymnastic See-saw is a similar contrivance, and for a similar purpose, though, by being placed six or seven feet from the ground, it is practised upon by hanging by the hands, instead of in a sitting posture as of old. The exhilarating effects of five minutes' practice on a gymnastic See-saw will send a glow through the whole system, and invigorate those who practise upon it wonderfully. It is so simply made, that, where there is a family, the younger members of it should have one whereon to practise, and even grown-up persons of both sexes can practise upon it to advantage; but those who aspire to the more advanced exercises in gymnastics will be able to achieve the swing in the proper way, as is stated in the exercises below.

The Swinging Hand Ladder is made use of for a similar purpose as the above, though of a more simple construction.

DESCRIPTION OF APPARATUS.

1. **Gymnastic See-Saw.**—This apparatus can be constructed according to the means at hand. The most simple is made like a ladder, but with bars a few inches longer, say about 18 inches, the sides being about 7 feet long (the longer it is the higher it must be placed), and the same distance apart throughout; the two end bars may be a little larger, and of a suitable size to be grasped easily, such as the trapeze bar. On the under part of the ladder across the middle is fixed an iron rod, about seven-eighths of an inch in diameter, and projecting 2 inches on each side. These ends rest in deep iron sockets, fixed in the sides of two posts at a suitable height. These posts are to be raised similar to those required for a swing, though not so high, and, if preferred, the sides may be flat, which would look better; a cross piece must be fixed on the top of the posts, to keep them in their places, and at the true distance apart, and when the ladder is placed in the sockets it is ready for use.

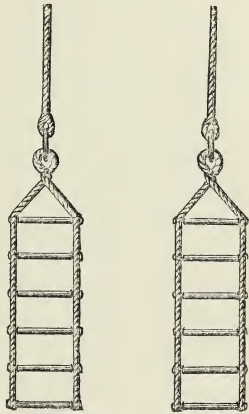
2. Another method of constructing this apparatus is to have it made entirely of iron, flat or otherwise, and in the form of a spindle, large in the middle, and tapering, top and bottom, gradually to the ends, so that the ends may seem flat, the end bars being then placed across them, and the axle on which it works placed through the centre. If preferred, two small handles may be made at each end, similar to a stirrup in shape, the gymnast then grasping one in either hand, which will amount to the same thing, but his hands are thereby

confined to one certain place. If made of a neat and light network pattern it has a very pretty appearance when fixed. The ends may or may not be turned down a little, but that is immaterial to the achieving of the exercises.

2. The Swinging Hand Ladder.—This, as is before stated, is a much more simple contrivance. Fig. 130 represents

FIG. 130.

two portions of a rope ladder with wooden bars: these ladders are suspended from a rope passing over two pulleys about 6 feet apart, one being at either end. The pulleys may be placed in any high beam, but the ladders, or at least one of them, should reach to about 4 feet of the ground, when the other would be considerably up towards the other pulley. This apparatus is used in a similar



manner to the See-saw, though the chief exercise is not so easy to achieve upon it.

Exercises.

1. Let two gymnasts or pupils grasp each a bar, one at either end (if it be the Swinging Hand Ladder, it must be grasped up as far as possible, the lower bars being for younger children), then, by a spring with the toes, first one then the other, they are raised alternately up in the air, according to the position of the opposite

bar, and this may be repeated for some minutes, as in so practising it exercises the legs as well as the arms, and it has an effect upon the body similar to that caused by practising upon the Giant's Stride.

2. This exercise is more for advanced gymnasts. Proceed as in the last, but every time the feet are raised from the ground, achieve Ex. 57, page 65, thereby carrying the body up above the bar; but it must be again lowered on dropping, repeating it every time a spring is made, and for some twelve or twenty times without stopping. This will be found to be excellent practice for the wrists.

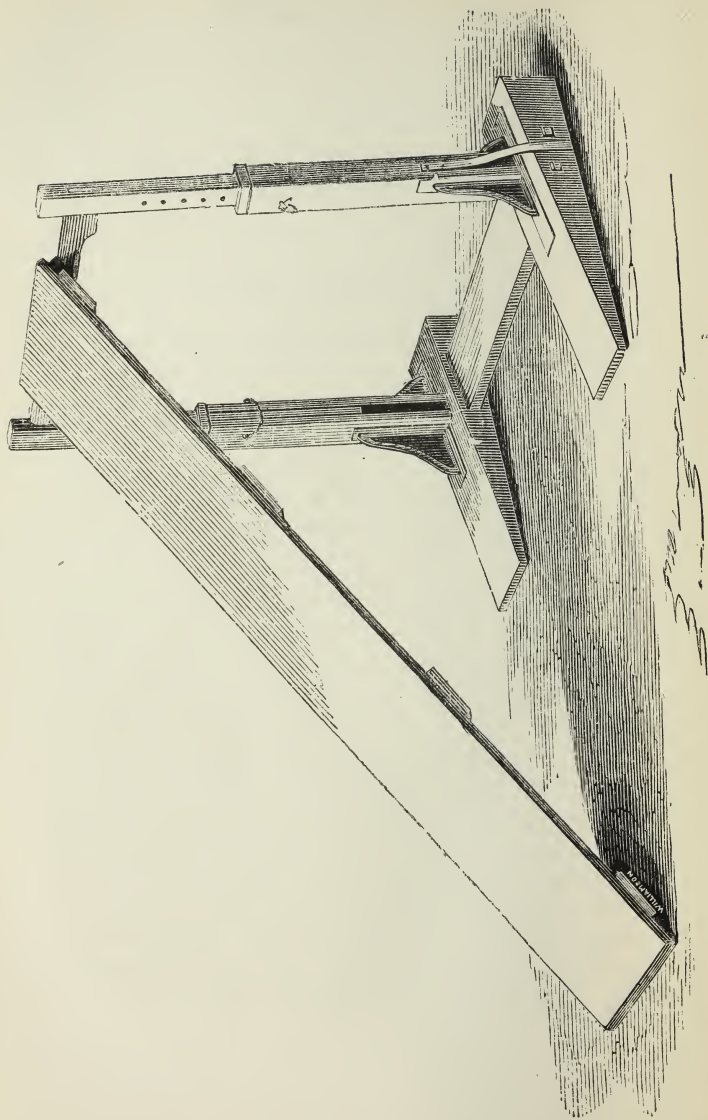
3. Achieve the above, and carry Ex. 57, page 65, into effect every time, without letting the feet touch the ground, which, if done at the right time, viz. the up movement given at the same time that the gymnast at the opposite end drops his body below, the effect will be much greater, and the swing may be continued *ad libitum*.

THE STORMING BOARD.

Remarks.—As jumping is the finest and most useful of all corporeal exercises, so various apparatus are designed, whereby a jump is obligatory. One such an apparatus is the Storming Board, and gymnasts, who wish to bring their jumping powers into full play, cannot err in making some little use of a contrivance as the accompanying illustration (fig. 131) represents.

DESCRIPTION OF APPARATUS.—1. A glance at the engraving given on the next page will clearly show the method of constructing it. It consists of two blocks of wood 3 feet long, and thinner at one end than at the other. On each of these blocks is fixed, by means of strong iron brackets, a 3-foot hollow pillar, in which another pillar works, similar to that described in page 122, only a little stouter made: both the blocks and pillars are kept at their proper distance apart, by means of cross pieces, and on the top piece rests the edge of the board, which is 9 feet long, and about 2 feet 6 inches wide. Holes, corresponding one with the other, are made through each pillar, to enable the board to be raised to any required height, viz. from 3 to 6 feet.

FIG. 131.



2. Another method of constructing the Storming Board is, to make the ascending part in the form of stairs to the required height, the sides being then solid. The only disadvantage in this mode of making it is, that it must always remain at the same height; otherwise it might be preferred, as it is chiefly for the height of the top step that it is used, but this would better suit lesser pupils.

Exercises.

1. Run up the board, and, by giving a slight spring forward on reaching the top, alight on the ground *on your toes*, which, by slightly bending the knees on touching the ground, greatly lessens the shock of the descent. This should be practised, gradually increasing the height, until able to jump from the board when at its highest.

2. Proceed as in the last, but on giving the spring do it with as much force forward as possible, so as to alight at some distance from the stand, and practise it until able to increase the distance in proportion to the height the stand is raised.

3. Proceed as in the last, but by fixing the Pole Leaping Stand in front, with a cord stretched across, practise and jump as high and as far as you can. This will be found excellent practice, especially if several join together and each tries, after a time, to outdo the others.

4. Proceed with the first exercise, and on reaching the top turn round and jump off backwards. Let this be done slowly at first, to learn the correct movement of the legs and the method of alighting, so as to fall neither forward nor backward. It requires but little practice.

JUMPING. LEAPING. POLE-LEAPING.

Remarks.—Jumping is here placed first, as it consists of the most simple kind of leaping on level ground, and is chiefly so called to distinguish it from jumping over a height, which is called Leaping, be it with or without a pole: if with a pole, it is styled Pole-Leaping. Jumping and leaping may be performed with or without a run, and Walker, in his 'Manly Exercises,' observes, that 'In all kinds of Leaping it is of great importance to draw in and retain the breath at the moment of the greatest effort, as it give the chest more solidity to support the rest of the members, impels the blood into the muscular parts, and increases their strength. The hands also should be shut, and the arms pendant. The extent of the leap, in height or horizontally, is proportioned to the power employed, and the practice acquired. As it is performed with facility only in proportion to the strength exerted, and the elasticity and suppleness of the articulations and muscles of the lower extremities, much exercise is necessary to attain that degree of perfection which lessens all obstacles, and supplies the means of clearing them without danger. Lightness and firmness are the qualities necessary for leaping; everything should be done to acquire these two qualifications, for, without them, leaping is neither graceful nor safe.'

As with gymnastics generally, so with jumping and leaping: the length and the height must be increased as the gymnast acquires expertness; he must not strive to do more than his known powers will allow, but gradually advance as his strength admits.

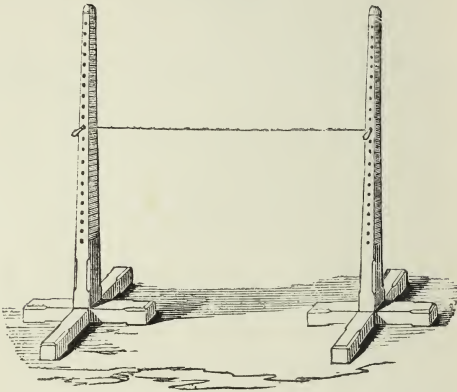
Jumping without a Run.—The gymnast must toe the line from which he is to start, and on alighting, although that should be done on the fore part of the feet, and with an inclination forward, an impress of the heel should, if possible, be made, as it is from the toe mark at starting to that made by the heel on alighting that the distance of the jump is reckoned.

Jumping with a Run.—In carrying this into effect a distance of ten or twelve paces will have to be passed over by the gymnast, the pace gradually increased to the starting-point, when, by again toeing the mark, he launches himself into the air about two feet six inches from the ground, and owing to the forward spring of the toes, from whichever foot the spring is made, he is carried so much the further forward as the increased momentum given to him by the run admits. The distance jumped is measured as before, and in competitions these two added together show the result of the contest, although one may have jumped farther without, and another farther with the run; therefore, to be what is termed a good jumper, he must be able to jump well in both ways.

Leaping without the Run.—This is usually performed over a cord suspended between two uprights, and kept tight by means of two small bags filled with sand, but it is now superseded by small round laths, of a sufficient thickness to ensure their keeping moderately straight, as in fig. 132, which will convey a pretty good idea of

the manner of constructing a strong stand. The lath is preferred to the cord, for the chief reason that if, on going

FIG. 132.



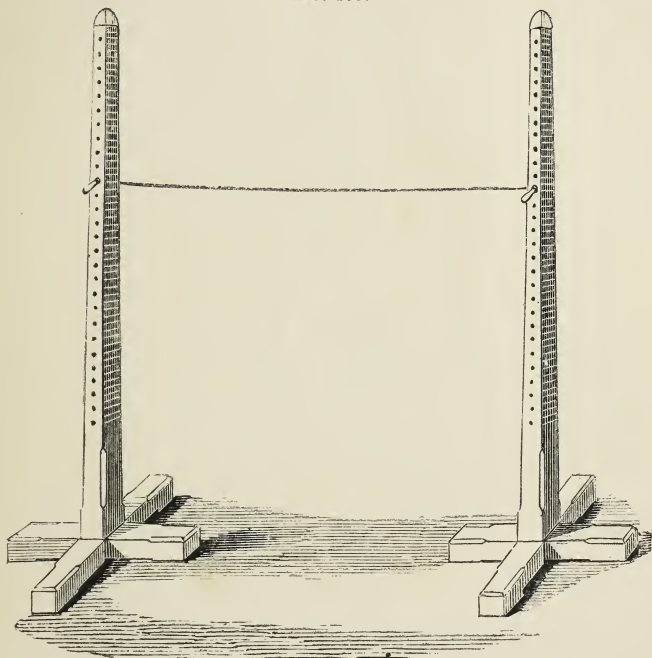
over it, it is touched at all by the leaper, it is sure to fall, whereas the cord requires a much stronger sign, which would not be sufficiently fair for contests.

Leaping with a Run.—The height started from is generally that last cleared without a run, and the height gradually increased as the gymnast progresses; the heights of the two, with and without the run, added together, deciding which has the best of the competition.

Pole-Leaping.—This is practised with but a few, and fewer practise it in leaping over a distance, height being their chief aim. For this purpose a high stand is required, as shown in fig. 133. It is constructed in precisely the same manner as the preceding, but of stouter material, and wider cross-pieces at the bottom. It should be at

least 12 feet high.* The pole should be made of straight-grained ash, 12 feet long, the bottom end being capped

FIG. 133.



with a stout ring of iron or brass, and toothed to make a firmer hold when placed upon the ground.

* These stands are supplied by Messrs. Snoxell and Spencer, at the following prices:—

	<i>£ s. d.</i>
Jumping Stand, from	1 10 0
Pole-Leaping Stand, from	2 10 0

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