

SOCIETY OF ARTS.

FRIDAY, APRIL 1st, 1853.

THE Institutes' Committee invite attention to the following important communication which has been made to them, on the circulation of newspapers in the United Kingdom, and the taxes thereon. The subject forms a portion of the general inquiry into the operation of the present fiscal restrictions on Paper, Advertisements, News, and Foreign Books, which, it will be remembered, the Committee is charged by the Council to investigate :

The returns of the number of stamps issued to newspapers in 1837, being the first year of the reduction of the Stamp-duty from 3½d. to 1d. each for the United Kingdom, shows that 48,165,562 penny stamps were issued to 444 newspapers, being an average of 108,481 stamps for each paper. Of these, 27,983,779, or an average of 325,392 were issued to 86 newspapers published in London, being more than half the whole number issued in the United Kingdom; 1,083,465, or an average of 180,577 stamps were issued to 6 Manchester newspapers; 823,865, or an average of 82,386, to 10 Liverpool papers; 699,000, or an average of 233,000 to 3 Leeds newspapers; and 518,507, or an average of 86,418 to 6 York newspapers, making together 31,108,616 penny stamps issued to 111 newspapers in those five places, being about two-thirds of the whole number of stamps issued to newspapers in the United Kingdom, leaving but 17,256,951 for all the other places.

The number of penny stamps issued to 188 English provincial newspapers in 1837, exclusive of those in Manchester, Liverpool, Leeds, and York, was 9,637,615, or an average of 51,264, being about 985 per week; the number issued in Scotland to 51 newspapers was 3,553,462, or an average of 69,676, or 1,339 per week; to 81 Irish newspapers, 3,463,314, or an average of 42,757, or 822 per week; and to 13 Welsh newspapers, 402,555, or an average of 30,695, or 590 per week: together, 17,256,951.

The returns for the year 1850 show that 79,760,177 penny stamps were issued to 776 newspapers and trade circulars in the United Kingdom, being at the rate of 101,495, or 132,000 for the newspapers. Of these, 48,019,455, or an average of 162,778, were issued to 295 newspapers and trade circulars in London, the average issue to the newspapers being 290,700 each; 2,048,227, or an average of 204,822 to 10 newspapers in Manchester; 1,613,640, or an average of 124,126, to 13 newspapers in Liverpool; 890,000, or an average of 296,666 to 3 newspapers in Leeds; and 530,200, or an average of 106,040, to 5 newspapers in York: together, 53,101,522, or two-thirds of the whole, leaving but 26,658,655 for all the other places in the United Kingdom. The number of stamps issued to the other 215 English provincial newspapers was 13,579,377, or an average of 63,625, or 1,262 per week; the number issued to 125 Scotch newspapers was 6,582,692, or an average of 52,661, or 1,010 per week; to

110 Irish newspapers, 5,855,354, or an average of 53,230, or 1,024 per week; and to 17 Welsh newspapers, 641,242, or an average of 37,720; together, 26,658,655: total, 79,760,177 penny stamps.

Of the 6,582,692 penny stamps issued to 125 Scotch papers, 2,763,305, or an average of 52,138, were issued to 53 newspapers, &c., in Edinburgh; 2,341,995, or an average of 101,826, to 23 papers in Glasgow; and 290,760, or an average of 58,152, to 5 papers in Aberdeen: together, 5,396,060, leaving 1,186,532, or an average of only 25,245, or 485 stamps per week for the 47 other papers in Scotland.

Of the 5,855,354 penny stamps issued to 110 Irish newspapers, 3,460,354, or an average of 93,523, were issued to 37 Dublin newspapers; 638,650, or an average of 106,441, to 6 Belfast papers; and 509,500, or an average of 169,833 stamps to 3 Cork papers: together, 4,608,504, leaving 1,246,850, or an average of 19,482, or 375 per week, for the other 64 Irish papers.

From this it appears that the greater number of 1d. stamps are issued to newspapers in the metropolitan cities; for instance, the number of newspaper stamps issued in England and Wales appears from the returns to have been in 1850, 67,322,141; out of which 48,019,455 were issued to London newspapers, including 17,481,390 stamps to six daily papers, of which the *Times* had 11,900,000, and 3,779,450, or an average of 629,908 to six evening papers, leaving 19,302,686 for all the other cities and towns in England. The number of stamps issued to newspapers in Scotland in 1850, was 6,582,692; of which 2,763,305 were issued to newspapers in Edinburgh, leaving 3,819,387 for the other places in Scotland, of which Glasgow absorbed 2,341,995, being together with those for Edinburgh, 7-ninths of the whole. The number of stamps issued to Irish newspapers was 5,855,354; of which 3,460,354 were issued to newspapers in Dublin, being about three-fifths of the whole.

It would appear from the gradual increase in the number of stamps issued, that the reduction from 3½d. to 1d. per stamp, had a very beneficial effect in increasing the number of stamps, and consequently the circulation of stamped newspapers. For in the first year after the reduction in the duty, the number of stamps increased about 15,000,000, or above 40 per cent. over those issued the preceding year; and in the course of nine years afterwards they increased 30,000,000, or above 60 per cent. over the first year the penny stamp came into operation. Taking the produce of the 3½d. stamp duty in the last year of its existence, it will be found to amount to 501,000*l.*; while in 1846, the penny stamp, including supplements, produced a revenue of about 345,300*l.*; and in 1850, of 356,000*l.*; so that although the aggregate amount of duty was reduced, say, 306,000*l.*, or more than 60 per cent., the effect of the reduction in the first year on the revenue was only 276,400*l.*, or to the extent of 55 per cent. This measure produced an effect so far in favour of the revenue, that during the following nine years the reduction in the revenue, as compared with the year prior to the reduction, amounted only to 145,000, or 31 per cent., instead of 306,000*l.*, or 60 per cent. in 1836.

It is fair to presume, from the progressive increase in the number of stamps issued during several years prior to the reduction of stamps on

newspapers, that even if the 3½d. duty were retained, that the number of newspaper stamps issued would have increased in proportion to the increase of wealth and population, but only to a certain limited extent, depriving a large number of intelligent and industrious persons in the kingdom of useful information, while the great mass of the people would be much more excluded than at present from anything in the shape of news, or accounts of passing events.

It may be well to mention that the increase in the number of stamps issued during the first year the penny stamp came into operation was 50 per cent. more than the increase that had taken place in the number of stamps issued at 3½d. during twenty years previous to the alteration. In five years after the stamp duty was reduced to 1d. the increase was 27,500,000, being 7,000,000 more than the total increase for thirty-five years previous to the reduction; and in nine years after the alteration, the issue of stamps to newspapers nearly doubled that of 1836. The increase in the number of stamps was not so much in a regular series, year after year, as by starts every two or three years, on occasions of public excitement, each rise maintaining its ground in spite of the restrictive operation of the taxes, and owing probably to the increasing prosperity of the country. The increase in the number of 1d. stamps issued to papers in the United Kingdom from 1837 to 1850 inclusive, appears to have been 25,682,197, exclusive of the ¾d. stamps, or 48 per cent.; but including them 30,594,615; namely, 24,573,355 in England; 3,029,230 in Scotland; and 2,392,040 in Ireland. The increase, from 1837 to 1850, in the number of London newspapers was seventy-four, and in the penny stamps 20,035,455; in the number of Liverpool papers three, and in the stamps 789,785; in the number of Manchester papers four, and in the stamps 964,762; in the number of Leeds papers 0, and in the stamps 191,000; in the number of York papers a decrease of one paper, and an increase of 11,693 in the penny stamps; making the total increase of penny stamps in these places 21,992,595, and leaving 2,580,760 as the increase for the other places in England and Wales, of which the latter showed an increase of 238,693 stamps and four newspapers.

The increase, from 1837 to 1850, in the number of Edinburgh newspapers, was 43, including 21 trade-circulars, and in the number of penny stamps 1,413,922; in the number of Glasgow papers 13, including 5 trade-circulars, and in the number of penny stamps 1,372,675; in the number of Aberdeen papers 2, and in the number of penny stamps 35,135,—making together an increase of 2,821,732 penny stamps, and leaving but 207,498 as the increase for all the other places in Scotland.

The increase during the above period, in the number of Dublin newspapers, was 14, including 3 trade-circulars, and in the number of stamps 1,828,250; in the number of papers in Belfast 1, and in the number of stamps 372,932; but in Cork the number of newspapers showed a diminution of 3, and an increase in the number of stamps of 65,666,—making the total increase in these places of 2,266,848 penny stamps, leaving but 225,192 as the increase of penny stamps for all other places in Ireland.

It must be evident, from the limited circulation of the majority of the newspapers in the United

Kingdom, and the heavy amount paid in taxes on paper, stamps, and advertisements, that they cannot yield a remunerative return to those employed on them. The taxes together amounted to about 585,000*l.* in 1850, making on the 593 newspapers published in the United Kingdom an average tax of 98*l.* a year on each newspaper establishment; of course varying in amount from a few hundreds a year to several thousands, according to the circulation of the paper, and the number of advertisements inserted therein. The amount levied in this way on the *Times* newspaper probably amounted to not less than 75,000*l.*, including about 15,000*l.* for paper duty.

Estimating the number of persons employed in the editorial and reporting departments of all the papers in the United Kingdom at ten each, which is certainly above the average, the present taxation amounts to nearly 100*l.* a year per man. This is a matter for the public to consider, whether it is a judicious tax, and calculated to raise the character or reward the efforts of the 5,930 men employed in the production of the greater part of the news and information contained in the newspapers of the United Kingdom, to say nothing of the limited circulation caused thereby, and comparatively high price of the newspapers, placing them beyond the reach of millions.

Although 5,930 has been mentioned as the number of men, it is by no means probable that half the number are employed on the papers adverted to, as it is no unusual thing for men to work for two or three newspapers, and write something for other papers and magazines besides, in order to get sufficient funds to make "two ends meet." This would make the 100*l.* a year tax amount, on the average, for each man, to about 200*l.* a year, and probably on the *Times* to 1,000*l.* a year.

One result of the heavy taxation is, that deserving men are in many cases overworked and underpaid, while there can be no doubt the public is, at the same time, with a few exceptions, badly served. It may not be generally known that a great number of newspapers in the country do not pay their working expenses, but are kept in existence entirely for party purposes, and of course having little or no sympathy with the public interests. These papers occupy the place, in various towns and districts, which more independent and useful journals could supply, if the present taxation were removed. Had newspapers been generally established for commercial purposes, to pay in return for a faithful devotion to the public interests, as many people suppose, the enormous taxation on newspapers and advertisements could not have been tolerated for so many years in this free and commercial country. There are, unfortunately for the public interests, but very few proprietors of newspapers in favour of the removal of the present taxation, as several of those gentlemen imagine the result would not be advantageous to them; although few persons seem to doubt that the advantages to the public, on the removal of the whole of the taxes on knowledge, would be considerable, in an educational and commercial point of view.

There is another matter connected with the Taxes on Newspapers which seriously affects the interests of the public; it is the Duty on Advertisements. It would be impossible to estimate

accurately the extent of injury that has been inflicted on trade and industry by the restrictions, by taxation, on Advertisements in Newspapers; and were it not for other modes of advertising, by which the duty has been evaded, the injury would probably have been much greater. To give an idea of the effect of the duty in preventing the increase of advertisements, it is necessary, in the first place, to mention that the duty on each advertisement, before the reduction, in 1833, was 3s. 6d. in Great Britain, and 2s. 6d. in Ireland. With regard to the number of advertisements, official returns show that 648,840 advertisements were inserted in the year 1810 in newspapers in England and Wales; 85,949 in Scotland; and about 96,000 in Ireland, together 831,789 advertisements, producing a revenue of 140,541*l.* The number of advertisements inserted twenty years afterwards, in the year 1832, was, for England and Wales, 783,557; for Scotland, 104,447; and for Ireland, 121,991; total, 1,009,995 advertisements, producing a revenue of 170,649*l.* The result shows how effectually the taxation had prevented the increase of advertisements in the United Kingdom; for during a period of twenty years the increase in the number of advertisements was only 178,206, being about 21 per cent., or 1 per cent. per annum. In the year 1833, the duty was reduced from 3s. 6d. to 1s. 6d. on advertisements published in newspapers in Great Britain, and from 2s. 6d. to 1s. each for those inserted in Irish newspapers. The beneficial result of this reduction was shown in the first year after the reduction in the duty was made. The number of advertisements inserted in the year 1834, in newspapers in England and Wales was 977,441; in Scotland, 134,864; and in Ireland, 162,614; together, 1,274,919; showing an increase of 265,000 advertisements over 1832,—the last year of the high duty being 86,794 advertisements, or 50 per cent. more than the total increase in the number of advertisements during the twenty years previous to the reduction of the duty. It may be remarked, that during the ten years previous to the reduction, the aggregate increase in the annual number of advertisements was very small, not being above 8,000; but during the ten years after the reduction the increase was 700,000.

The increase in the number of advertisements during fourteen years, prior to the alteration, was 103,895; but in fourteen years after the reduction in the duty, the increase was 1,170,000, or more than eleven times that number. The revenue, from the duty in the year before the alteration, amounted to 170,649*l.*, and in 1850 to 163,038*l.*, being only a difference of 7,611*l.*; and showing that the reduction in the duty had brought into existence a large number of advertisements that could not have appeared under the former restrictions. During the five years previous to 1850 the increase in the number of advertisements has not been above 100,000, showing that the 1s. 6d. advertisement duty has been nearly fully developed; and, therefore, judging from former returns, it is not capable of much further increase. The total number of advertisements inserted in newspapers in the United Kingdom in 1850 was 2,252,550, or 1,252,550 more than in 1832. From the result of the foregoing, it may be fairly anticipated, that by removing the duty altogether, in the course of ten or twelve years that the number of adver-

tisements would gradually increase to ten times their present amount, and thus confer a great benefit on the trade and commerce of the country.

DUTIES ON PAPER, NEWS, &c.

QUERIES PROPOSED BY SOCIETY OF ARTS,
March 8, 1853.

The following is an Abstract of the Replies received to the Circulars issued on this subject, from which it appears that

From Institutions in Union..135 have been returned.
" " not in Union..109 " "

Total..... 244

Query 1. Has your Institution a News-room; and how does it answer?

Of these 244 Institutions it appears that the following have

NEWS-ROOMS.		
Institutions in Union....	118	
" not in Union	85	203
NO NEWS-ROOMS.		
Institutions in Union....	17	
" not in Union	24	41
Total		244

To the query, "How does it answer?" by far the greater number of replies state—Very well—well attended—aids its prosperity very much—most popular feature—one of the chief attractions—much frequented—assists in supporting Institution—as well as can be expected, with limited supply of newspapers—since introduction of newspapers have added one member per week, and increased in number from 30 to 220—admirably, without it could not keep Institution afloat—means of placing Institution in a healthy and prosperous condition—established last November, large accession of members in consequence—indispensable for maintenance of Institution—means of bringing great number of members—much frequented by all classes, and would be more so, if the price of admission were reduced, which is impracticable at present, because of the cost of newspapers—self-supporting since commencement—capable of much improvement by reduction of paper duties—one-third support of Institution—leading feature—place of general resort for all classes—great number of subscribers with an eye to newspapers only—remarkably well; without it, would be unable to keep up Institution—great attraction to business men—well appreciated, and every effort made to extend it. In a few instances, the replies state that it is tolerably attended, but does not fully pay its expenses; and in two instances, that a News-room has failed to attract. . . Others say, that a News-room has been in contemplation, but the price of papers has prevented intention being carried out.

Query 2. What number of London Daily Papers, London Weekly Papers, Provincial Papers, Serials, and Quarterlies, do you take in; and how far does the cost in each class affect the supply?

The number of papers and periodicals taken in by the 203 Institutions which have News-rooms, is—

	Total.	Average.
London Daily Papers.....	534	2½
London Weekly Papers....	540	2½
Provincial Papers	737	3½
Serials	1,588	7½
Quarterlies	211	1

The replies state—That the cost materially limits the supply in all cases—were the price much less, one-fourth, one-third, and even double the present number would be taken in—only able to take what they do by letting them during the day when the news-room is not opened till the evening; and also by selling the papers at about half-price the day after publication—by these means the whole cost has been paid—would be glad to file London papers, if they were not obliged to sell them—the cost of London papers frequently prevents provincial papers being taken in, and quarterlies are quite excluded—cost prevents as many as necessary to give satisfaction—compels them to be content with a supply insufficient for the number of members—in some cases, large proportion of income necessarily expended on newspapers.

Query 3. Which class is most sought after by readers; and do any difficulties arise in consequence of the demand for that particular class?

The general answer is, Newspapers, and especially the London daily papers. In a few cases serials seem to be preferred, arising, as it would appear, from that particular Institution being looked upon more as a reading than a news-room. In others, the demand is said to be pretty equal, owing to the papers and periodicals being voted in each quarter, and being thereby regulated and proportioned to the demand for each class and paper. The second part of the question is not generally strictly and literally answered; but the replies almost invariably state, Yes, from inadequate supply—much inconvenience arises from restricted supply; having only one copy of each paper, causes loss of time, and often disappointment—sometimes bespoke two, three, four, and five deep, and members have to go away without “getting a read”—occasions dissatisfaction, and loss of subscribers—scarcity drives readers away. . . . A few say that they are not aware of any difficulties, as their arrangements prevent it.

Query 4. Is Local News sufficiently attended to in the local papers; and if not, to what cause is the neglect attributable?

About two-thirds say, Yes; very fairly; tolerably well; quite sufficiently; no cause to complain. The other third say, No; generally meagre; the limited circulation of the provincial papers causes the rate of remuneration offered to be insufficient to command adequate talent—the want of a sufficient number of agents, in consequence, the local intelligence that does appear is generally an *ex parte* statement, and sometimes, when sent to editor is rejected. Another reason assigned is the high price of papers, and London papers in particular, which forces the provincial press to introduce a little from all quarters, making it thereby not local, but to serve the double purpose of both a local and general paper.

CANADIAN POSTAGE REFORM.

The Report of the Postmaster-General of Canada and British North America, for the year ending April 5, 1852, gives the result of the first year's experience of a greatly reduced rate of postage. Previous to April, 1851, the postage on letters to and from all places within Canada and British North America was, on an average, about 9*d.* per half ounce. At that date, the rate was reduced to 3*d.* on the half-ounce letter; the local postage was also reduced from a penny to a halfpenny; and the postage on newspapers was repealed, with respect to a large proportion of those passing through the post. It was estimated that the number of letters would be

doubled, and thus the revenue reduced one-third; but the result of the first year's experiment has surpassed that expectation, for the letters have increased in the proportion of 80,051 to 41,000 a week, and consequently the loss of revenue is less than was anticipated.

The Postmaster-General concludes his Report thus: “It is with much satisfaction that I express the opinion that the financial condition and prospects of the department, at the close of another year, will be such as to induce your Excellency at the next Session of the Legislature to recommend the adoption of a Penny Rate: with a full assurance that the improvement may be sanctioned without requiring, as I have already stated, more than a moderate aid from the General Revenue to sustain the operations of the department, until the Post Office receipts shall recover from the immediate effects of the reduction.”

The Report includes the following paragraph upon the subject of Ocean Postage:—

“Public attention, both in Great Britain and in the Colonies and United States, has of late been greatly attracted to the expediency of reducing the present comparatively high rates of postage charged for the packet conveyance of letters between England and America, and it is to be hoped that the measure will, ere long, be favourably entertained by the Imperial Government; for no doubt the existing scale of charge operates severely to check correspondence, and bears with peculiar force in this country upon the poorer classes of emigrants in the first year after their arrival in the provinces, and whilst naturally most desirous to maintain an intercourse with their relations and connections left behind. If such a consideration were deemed to be of importance, it may be stated with perfect confidence that, as regards Canada, the present amount of packet postage collection might be maintained at a much lower rate of postage charge.”

ESSAYS ON CHINA AND THE EASTERN ARCHIPELAGO.

THE object of Mr. Hammond, in offering these premiums, is to promote the interests of religion and commerce in the China Seas and Eastern Archipelago, in connection with the design of the Great Exhibition. It is proposed that a selection of the manuscripts be made, and the copyright of them be disposed of, and published with the name of each essayist attached, and the nett proceeds rateably allotted to the writers, or, with their consent, disposed of as may be considered by the judges most likely to promote the objects treated on; and it is particularly requested that such consent to the publication, and option as to the disposal of the proceeds, be forwarded by each party; but in the absence thereof, assent will be understood and acted upon.

In selecting from the contributions those MSS. which it is proposed to publish, it is intended to include all those containing valuable information, though not sufficiently complete or copious to entitle them to a prospect of the premiums; hence, any member of the mercantile community, willing to convey his practical opinions, and the result of his experience, in connection with the subjects to be discussed, will be offered a convenient opportunity of laying before the public such details. The contribution also, on the part of persons in official positions, of statistical tables, and other similar information they may be in a position to afford, will materially aid in rendering the proposed volumes more complete.

In selecting the gentlemen named as judges, it has been thought desirable not to include parties directly engaged in the commerce of the China Seas, with the view of ensuring the fullest confidence in the strict im-

partiality of the awards, and the avoidance of any possible bias in considering the merits of any question discussed, upon which difference of opinion may exist—the main object being to collect a body of evidence bearing on the present state of religion and commerce in the important countries encircling the China Seas, furnished chiefly by parties possessing practical experience on the subject—difference of opinion, of course in a sound direction, being freely permitted; and the *pro* and *con* of each question being thus fairly brought together.

The importance of the subjects embraced will be apparent from the following facts:—The population of the countries alluded to may be estimated at more than four hundred millions—any suggestions, therefore, which may tend to promote Christianity, and extend civilization and commerce amongst nations now immersed in barbarism and idolatry, and numbering nearly one-half of the whole human family, cannot but be valuable:—The important subject of the Tea Duties, and their effect on Anglo-Chinese commerce, may be expected to elicit numerous useful facts and suggestions:—The Opium Trade, especially in connection with the expiration of the East India Company's Charter in 1854, and its effect on the trade, currency, and morals of China:—The collection of information on the sealed empire of Japan, and the causes of the singular fact that British relations therein were more developed two hundred years ago than at present:—The serious subject of piracy in the China Seas, and also in the Eastern Archipelago:—The inland restrictions placed on the transit and distribution of British manufactures in China, and other impediments to the development of trade, and the employment of shipping in the China Seas:—Observations on the present state of British Commerce in Java and the Philippines, and suggestions for the removal of any existing restrictions thereon:—The state of Christian Missions in China and the Eastern Archipelago, and the probability of practical suggestions for their improvement and extension.

RAILWAY ACCIDENTS.

COMMUNICATION BETWEEN GUARD AND DRIVER.

THE Board of Delegates of the Railway Clearing House have just made their Report on this subject. After alluding to the various contrivances that have been proposed for accomplishing this object, and describing some of the plans in use on foreign railways, the Committee state that they are "satisfied that no signals depending on sight, on distant sound, or on complex contrivances of any kind, can be so adapted to the varying circumstances of a railway train as to make the communication at all times certain, and that the only feasible means of accomplishing the object in view is by machinery, enabling the guard, when in his van at the rear of the train, to strike a bell fixed to the tender. The Committee, keeping in view that the mode selected must have the qualities of simplicity of construction, facility of adjustment, and certainty in action, is of opinion that the following plan will be found best suited to fulfil those conditions:—It is proposed that every tender should have a loud-sounding bell attached to it, at a point as close as possible to the place where the engine-driver usually stands; that the apparatus to be used for striking the bell be fitted with a contrivance for easily attaching a rope or line to it; that each guard's van be fitted with a drum having two divisions, the one smaller than the other; that the larger division be of sufficient capacity to hold, wound round the drum, a coil of line equal in

length to the maximum length of the trains; that in the smaller division a cord be fixed to and wound round the drum, having a balance weight always in action suspended from the end of it, for the purpose of keeping the signal line in a state of tension; and that the lever of the bell be fixed down by a spring of sufficient strength to resist this counterpoising weight as well as the strain on the line at starting, and at other times, so that the bell may never ring except by the act of the guard; and, finally, that the signal line, when used, be carried along the carriages in the way in which experience may show to be the best, supported by spring receivers of a simple construction, and be attached to the lever of the bell. The guard, when desiring to make a signal to the engine-driver, will simply have to turn the handle of the reel and sound the bell, and when his journey is ended it will be his duty to detach the line from the bell and wind it round his reel."

HOME CORRESPONDENCE.

RAILWAY ACCIDENTS.

COMMUNICATION BETWEEN GUARD AND DRIVER.

SIR,—A more apparently crude and ill-considered scheme of mechanical operation than that publicly approved by the Committee of Delegated Railway Managers on the question of "establishing a communication between guards and engine-drivers," has seldom been set forth as the result of grave and impartial deliberation.

It is no doubt possible that the Committee may have had before them experimental facts and data upon which they came to a decision so apparently in opposition to the conditions laid down by themselves; but if so, they were certainly bound either to give the public the benefit of the same data, or they should not have attempted a description of the *modus operandi* at all, but simply have expressed a determination to recommend a particular plan, whatever their actuating motives might be—whether those of *economy*, or of *esprit de corps*—in upholding a scheme that had emanated from one of themselves.

The first glaring discrepancy which strikes the reader of "the Report," is the insufficiency of the adopted plan to fulfil the conditions of the 26th and 27th paragraphs.

In the last of these it is stated that, "It is, in fact, indispensable, in consequence of these frequently recurring changes, and the rapidity with which they are made, that the means selected should be of easy application; and further, that it should be simple."

Well, then, supposing one of these frequently recurring changes to require the removal from the train of a carriage near the guard's van—in what way, according to the approved plan, is the operation to be effected?

First. The attachment to the bell must be detached.

Secondly. The guard must *reel up* the entire extent of the line—some half thousand feet or so—and, during this operation, a person must accompany the end of the line, as it is gradually wound up, in order to free it from its spring receivers and prevent tangling or jamming.

Thirdly. The carriage is removed.

Fourthly. The same person must walk back again, with the tow-rope over his shoulder, on which there will be a pretty smartish drag before he gets it back to the engine.

This is the operation that the Committee would have the public to believe may be performed with *rapidity* and *ease*—if, indeed, the Committee have not overlooked its necessity altogether; as, in the 34th paragraph of the

Report, they allude to the reeling operation as only to be performed by the guard "when his journey is ended."

But what is to become, all this time, of the "balance weight" on the smaller drum? Is it to be detached from the nonce, or is it expected to have sufficient fall, *within the limits of the guard's van*, to take up "a coil of line equal in length to the maximum length of the trains?" In paragraph 33 this balance weight is stated to be "always in action." What practical fall can be given to it? What is the amount of its estimated maximum weight? is it to be half a pound, or half a ton? What is the maximum friction of the line in its bearings? What amount of *resistance* must be given to *the spring* which is to "fix down the lever of the bell," in order to resist sudden extensions of the train? Will the gutta percha line be capable of resisting, when under a strain, the influence of a hot sun?

Answers to these questions would constitute some of the data which must be supposed to have been taken into consideration by the Committee, and which they certainly ought to have extended to the public at large in justification of the decision they have arrived at.

Yours, &c.,

INQUIRER.

LOWERING BOATS.

Blue Town, Sheerness, March 23rd, 1853.

SIR,—With reference to your journal of March 4th, I beg to submit the accompanying contribution towards improving the means of lowering boats at sea.

The boat is to be suspended as usual on the davits, the upper sheaves of the tackle being fixed in the head of the davit, and having such obliquity to an athwartship line as shall direct the falls to other sheaves, having the same obliquity, fixed in the head of a stanchion, which is fitted on the inside of the bulwarks between the davits: by this means the falls are directed together to a barrel let into the ship's side, round which a sufficient number of turns is taken to prevent slipping. The barrel is, of course, either grooved or hollowed laterally, so that the two parts of the ropes rendered from it may remain vertical in the process of lowering; the slack of the fall is belayed round a cleat, by the friction on which the velocity of descent must be regulated. I cannot but think this preferable to the employment of a friction break, with the use of which seamen generally are unacquainted. The boat may be raised by a winch; or, should the cost of fitting it be too great, the barrel may be turned by short bars inserted in holes at its extremities; in either case there will be one man to take in and belay the slack.

Another and most important desideratum remains in the means of unhooking the tackles; and here I may be permitted to say that I believe it absolutely necessary that the persons in the boat should have the means of effecting this, instantly and without risk of failure: if they do not possess this means, but the tackles are necessarily loosed when the weight is taken off them, and therefore before the oars can be manned, the chances are the boat will be drawn under the counter and swamped. I think it cannot but appear desirable that one tackle should be kept fast until the boat be under command: I propose, therefore, to suspend it by two hooks, in the same way as some of Her Majesty's ships are now fitted, that is, to have a long bar hooking to a ring bolt in the keelson, and passing through a slot in the thwart, with another hook at its upper extremity to receive one on the davit block; but in this last I would suggest an alteration.

Let the hook be forged separate from the shank, and have the shape of the letter U curved outwards at its

extremities; and let the lower part of the shank be flattened so as to pass between the two sides of half the hook. Then put a pin through all at a little distance from the shank side of the middle of the hook, to act as a pivot about which the hook may turn when the ring which unites its sides with the shank is slipped up. With one side thus united we have an open hook; with the other, the hook is close. For raising the boat in rough weather, it will be found necessary to hook on with the former, and, having hooked, to slip up the ring and transform to the latter. Instead of the hook on the suspending bar, we may have a closed eye of sufficient length to allow the hook to fly out on letting go the boat.

The foregoing method is yet liable to the objection—the value of which can only be determined by experiment—that one of the ropes may foul in the blocks (an accident over which the barrel has no control); it can only be answered, that since like quantities of fall are rendered at both ends, and they are subject to a great strain, the accident is very improbable: this improbability is increased as we decrease the mechanical advantage on the pulley, and so avoid complexity. In Her Majesty's ships, therefore, and others where there is no lack of manual power, I should advise the following adaptation of the above plan:—Let the boat be raised by the two blocks on the davits, as is usual, the men manning the falls and running the boat up, securing it temporarily; then, retaining the barrel and stanchion before suggested, and one of the sheaves on the davit head, let two ropes pass over them and shackle to the suspending bars, taking care to make them as much larger than the tackle fall as is indicated by the mechanical advantage of the pulley. When these are secured, the pulleys may be taken down from the davits and stowed in a dry place; the lowering will be effected as before, with less risk of failure.

It will be seen that, had a communication been made between the davits on the inside of the ship by ropes or bars, without the use of the stanchion, these ropes or bars would have interfered with the working of the guns, and have been themselves liable to injury.

Yours,

NATHANIEL BARNABY, Jun.

PHOTOGRAPHY.

SIR,—I am anxious to call the attention of the readers of the Journal, and particularly those who practise photography, to the importance of carefully fixing the positive pictures. Indeed, too little care is taken on this head generally. I am induced to make the above remarks in consequence of having a few days since examined the photographs lately exhibited at the Society's rooms, which have been lent or given to the Society for Exhibition at the Institutions in Union. Half of them, at least, are changing colour, becoming stained and spotted, and are unfitted for show, though so short a time has elapsed since they were made. All this arises from carelessness in fixing, and may be avoided. For instance, I have some by me which have been taken upwards of four years, and though exposed to the light during all that period, exhibit no symptom of change. Photographers are too apt to exert all their energy in producing good negatives, and neglect their positives.

F.

DUTY ON PAPER.

SIR,—Resuming the subject of the operation of the Paper-duty, the next class, a numerous and important

one, upon which it acts very prejudicially, is composed of those through whose hands a large quantity of paper passes, undergoing various operations previous to being issued to the public. These middlemen comprise newspaper-proprietors, publishers, paperhanging manufacturers, card, and box-makers, &c., &c. And first, with reference to newspapers. I may premise that in the following remarks I express no opinion on the politics or religion of the papers. I refer to them simply as media of information, which I desire to see conducted with high literary talent, and on moral principles. It will not be contended that any newspaper could be supplied merely in consequence of the repeal of the duty at a cheaper rate than at present, and very little argument is necessary to prove this fact. If we take the case of the *Times*, or any other leading Journal, the duty does not amount to one farthing per number. The *Times*, therefore, could not be sold for fourpence three-farthings, or the proprietors would lose by the change. I have taken the most favourable instance; in the far larger number of cases where the paper employed is lighter in weight, the saving of the duty would be much less per number than our lowest coin, and therefore no reduction in the price of the paper could be made to the purchasers of single numbers; periodical subscribers might certainly be benefited in a direct manner by a slightly lower charge.

Having repeatedly heard what to my own mind appeared erroneous views expressed on this question of reduction of price, I have dwelt the longer on the point, because I believe a good cause is not advantaged by an unsound argument. It is not in the price of newspapers, but in their quality that I hope to see a great good result from the repeal of the duty.

The *Times** circulation in 1850 was nearly twelve millions (11,900,000). The duty on the paper amounted to upwards of 12,000*l.* Assuming the weight of each ream of 500 sheets to be 78lbs., the duty per ream would be rather more than 10*s.*, and the number of reams about 24,000. But the case of the *Times* is entirely exceptional, its enormous circulation enabling it to employ the first talent, and its talent increasing the circulation. Its well written articles, even when the arguments excite a smile, are admired for the style of their composition.

Of ten other daily papers, the total issue was 8,920,140, equivalent to an average of 1,784 reams each, the duty upon which would amount to about 900*l.*

Of 48 weekly newspapers, not including those issuing less than 2,000 numbers weekly, the circulation in 1850 was 23,021,274, giving an average of 479,610 issued, and 960 reams of paper consumed by each; and assuming the weight per ream to be 50lbs. only, a saving to each newspaper by a repeal of the duty would be effected to the amount of 350*l.* per annum.

With these sums what a phalanx of literary talent could be engaged, introducing into the discussion of political and other subjects an amount of acumen, taste, scientific and general information, hitherto unknown in journalism. In London alone the amount immediately saved to the proprietors would be sufficient to engage 100 men of talent, at salaries equal to many of the professorships in our public institutions. The value of literary eminence to journals is evidenced by the high standing which certain French papers have taken from their connection with the names of Guizot, Thiers, Girardin, &c.

* This is the number of stamps obtained, and includes Supplements, which are now issued almost daily. The circulation should probably be represented at about 7,000,000.

Newspapers, like other branches of business, can only continue to be worked as long as profitable to the proprietors; and the necessary expenses for paper, reporters, and foreign intelligence, being so heavy, it is a public duty, I conceive, to relieve them as much as possible from every incubus which prevents the best intellects from entering the lists in those discussions which must continually arise amongst a free people, thereby healthily influencing the public mind through the medium of the newspaper press; and I hope I have shown satisfactorily that by repealing the duty this can be done without loss to the proprietors, and at no increase of expense to the public. That we could engage the same persons at an enhanced cost to a newspaper is admitted; but the disastrous effects of an increased price on the circulation is sufficiently shown in the case of the *Daily News*, the circulation of which declined to a large extent on the price being raised from 2½*d.* and 3*d.* to 5*d.*

Publishers feel the pressure of the duty in several ways. On an average, the duty may be reckoned as one-fourth the value of the paper; thus the outlay for any given work is increased for paper only, by the operation of the duty, from 30*l.* to 40*l.*, 300*l.* to 400*l.*, 3000*l.* to 4000*l.* It is difficult to classify articles of such extensive range as books; it will be sufficient, however, for my purpose, to divide them into dear and cheap literature. In reference to the more expensive class of books, the sale of which is comparatively limited, every element of cost is a repressive element of publication; and in extensive works, the additional sum required to be advanced on account of the duty is very considerable.

The duty is eventually recovered when the books have all been sold, but it must be borne in mind that the duty is paid, not on each volume as sold, but is advanced by the publisher in a lump sum on the whole work, and that he receives it back piecemeal; he must therefore calculate upon receiving interest for this additional amount, thereby raising the price of books. It is stated, and I believe upon good grounds, that only one book in four of those published is profitable as a speculation; this circumstance compels publishers to be very cautious as to the works which they issue. It happens, therefore, that a great many books are published, valuable only in the author's esteem, but being issued at his expense and risk are not objectionable to the publisher, whilst a very large number of works, the result of long research and great ability, remain unpublished, although the very works most desirable to have printed, because publishers, as men of business, perceive that they will not be profitable, and the author may be too poor to incur the risk. In many such cases, the 25 per cent. in the price of the paper materially influences the decision of publication or non-publication. Publishers being the medium of communication between authors and the public, if the book will not pay as a matter of business to them, the public lose many opportunities of receiving much valuable information.

By removing the duty, we should, as far as the case will admit, persuade—if I may so term it—the mind of the business censors in favour of the class of authors. With regard to cheap literature, the repeal of the duty is still more important. The profit on each pamphlet, or number, must necessarily be the merest fraction, but on the whole impression may be sufficient to induce publishing capitalists to get up valuable books at a great cost, and issue them at a low rate.

A large sale depends upon low price. If the price were increased, the sale would be too small to induce the venture. Thus, supposing a useful serial to require an outlay of 5,000*l.*,—and if, after paying for writers, artists,

paper, printing, binding, trade allowances, a profit of only 300% should remain,—the publisher would not be disposed to enter upon the speculation; but if the amount of duty could be added to this sum, he would not only be induced to engage in the publication, but be enabled to employ greater skill in the illustrations, use better paper, supply more original matter, by having the means to pay authors, and issue the work on a much higher basis.

A case in point has occurred; and the argument obtains more force from the circumstance, that the larger the probable circulation, the more duty would be saved, and the publisher correspondingly influenced.

Not less important than the healthy action which such an improved tone in some of the journals and periodicals would have upon the minds of their readers, is the further effect which I anticipate, viz., the driving out of the field the vile trash which is now circulated to so large an extent amongst our youth.

Knowing that some of these have a circulation of 80,000, 100,000, and I understand in one case 200,000 weekly, no utterance of mine can sufficiently present to and press upon the intelligent mind of our country the necessity of doing everything possible to counteract this nauseous stuff poured forth from our presses.

The decent journals and serials cannot compete at present, the proprietors considering it *infra dig.* to visit the Insolvent Court; besides, the literary offer is supplied almost gratuitously. We burden the decent press, and then complain that the unburdened licentious press is supplanting it. Let us have a free press, and by the employment of such aid as I have mentioned, an able article for the adult, and an interesting column for the youth, the moral family journal and general literature will displace the privately read periodical—it will become offensive, and be rejected, from the result of better mental food.

Yours, &c.,

WAIMA.

DUTIES ON PAPER, NEWS, ETC.

Newark, March 18th, 1853.

SIR,—Under the direction of the Committee of the Newark Mechanics' Institute, I have replied to the queries you sent relative to the duties on paper, &c., as affecting our Institution. I am very glad that the Society of Arts has commenced an inquiry on the subject, and have no doubt, if continued in, it will result in the repeal of those unjust and impolitic duties.

I conceive it to be the primary duty of a Government to advance in every possible way the education of the people: and whatever tax is imposed on articles directly or indirectly used for that purpose, becomes a bar to progress—a check to the advancement of education and science. Were the paper and stamp duty repealed, editors would be enabled to spend that sum on the enlargement and improvement of their publications. Superior talent might be engaged, and periodicals, instead of containing that trashy nonsense which we are obliged to purchase for our readers, would contain a higher order of intelligence, interest, and amusement.

With regard to books, I may mention that the low rate of subscription we are obliged to make to bring our Institution within the reach of the mechanics and artisans, precludes the possibility of our being able to purchase first-class works at original prices. We are obliged, therefore, to wait, and watch our opportunity of purchasing them second-hand; and then we frequently find so many applicants for the same works, that the trial to obtain them ends in disappointment. But if the fiscal

restrictions were withdrawn from the production of these works, I fully believe that they would be published at a price within our means to obtain them.

The local news in our provincial papers seldom exceeds more than simple notices, accidents, and police reports. If a scientific lecture is given, or any other subject discussed worthy of publishing, the editor is obliged to send a gentleman specially for the purpose of reporting it, if a report be given at all. Consequently many things that would be really instructive, and of interest and benefit to readers, never appear; therefore are entirely lost, and give space for trashy and uninteresting matter. The reason of this is obvious. The unrighteous imposts on his newspaper before he can circulate it prevent the editor from affording to engage competent persons to collect local information and send reports, or write articles or paragraphs of a truly instructive character: and so men of business or young clerks are employed for a mere trifle, who have not the time or ability to serve the purpose suitably.

With regard to the advertisement duty, the charge this duty compels the proprietors to make for the insertion of advertisements prevents us from making known our lectures, entertainments, and other things connected with the Institution, through the best of means—the local papers. We have tried it, and always find that the cost is greater than the advantage.

Heartily wishing your Society success in their good work,

I remain, faithfully yours,

JAMES BUZZARD.

MEASUREMENT OF TONNAGE.

Millwall, March 28th, 1853.

SIR,—I had no idea that the short note I addressed to you, and which appeared in No. 9 of the JOURNAL OF THE SOCIETY OF ARTS, would have given rise to the discussion that has since taken place, my only object being to correct the errors that appeared in a former number; neither should I again trespass upon your valuable space, but for the letter of your correspondent, H. M., No. XVI., page 190, wherein he says I made a statement in that letter about the new method of advancement, as laid down by the new law, which was "not quite correct either." Now this, Sir, is certainly not quite correct; for it was in my second letter (No. XI., page 126), I stated, that although the new law was not perfect, yet by taking the breadth and depth at different parts of the hold, it is an approximation to the truth; and I must confess, that as my only object was that nothing but the truth should appear in the Journal, I should have been much better pleased if your correspondent had stated in what particular part I was not correct. To illustrate the difference between the old and new law, I will mention the last new clipper that left London, the *Cairngorm*. This ship was built by Hall and Co., of Aberdeen, upon speculation, to beat everything afloat. Her tonnage, old measurement, is 1,250; and by the new, 938, or a quarter less: and her actual tonnage, about 1,000. Now I think, Sir, if the old law had been in existence, Mr. Hall might have kept his ship until she was only fit for fire-wood; but the new law allowed her to be sailed with less hands, and pay less dues, and consequently she was immediately bought, and I might almost say, fitted regardless of expense; for she was fitted with nearly every improvement, including, perhaps, the most ingenious application of the screw (not the propeller) to steering purposes ever seen; also Rigmalden's lanyard plates,

by means of which a man and boy can set up the whole of the lower rigging in about a couple of hours; Lenox's portable winches and patent blocks, which, to use the words of her spirited commander, Captain Robertson, you must have, if you wish to compete with the Americans; and last, though not least, Trotman's anchors, which, although placed No. 1 on the list of the Anchor Committee, unfortunately failed to sustain their character on the passage from Aberdeen to London. I trust, Sir, these remarks will not be considered out of place, one of the objects of the Society of Arts being to give publicity to new and useful inventions. I quite agree with Mr. Reveley, that the actual should be the register tonnage; also, that we must go to the ship-builder to get it. No arbitrary rule can give the true result; but I cannot agree that no rule or formula will suit the crack yacht and the heavy merchantman, for I think the builder's rule will, and that rule is actual measurement. The ship-builder measures his ship internally for capacity to carry admeasurement goods, and externally for displacement, and could tell, before the keel was laid on the blocks, how many tons of admeasurement goods, forty feet to the ton, she would carry, or how many tons of dead weight it would take to bring her down to a certain line. But I think, Sir, there would be some very serious objections to taking the displacement for the tonnage; one would be where to fix the load water line, for this must be arbitrary; another, the difference between a wood and an iron ship; whereas, if you take the internal capacity, which can be got at any time, ashore or afloat, you would know at once what the ship would carry. Besides, all cargoes are not taken by weight; and I should hardly think Mr. Reveley would seriously think of going back to the primitive plan of weighting our ships before we registered them. There is one other thing Mr. Reveley speaks of, namely, vessels that will not carry any tonnage at all. Now, Sir, I must candidly confess, that having been engaged among shipping about twenty years, I have never been so fortunate as to see the curiosity mentioned; and I do believe, if the saloons of some of our fleetest yachts were cleared out, and filled with oranges or figs, we should find they had a rather valuable cargo; in fact some of our clipper-schooners are built on the same lines as yachts.

Perhaps I may as well mention that the hook described by Mr. Clough, in No. XVII., page 202, was invented, and I think patented, by Mr. J. Shores, of Blackwall, about eleven years ago, and fitted to several of the West India Mail boats, the Trinity yacht Vestal, and many other ships, but have, somehow or the other, gone out of use lately.

I am, Sir,
Your obedient Servant,
WILLIAM ROBERTS.

SUGAR-CANE REFUSE.

SIR,—In reply to your inquiry on the subject of manufacturing paper from sugar-cane fibre, I beg to make the following remarks:—I have ascertained that two paper-makers have tried the article, and at the end of this note are copies of their replies to my questions. It will be observed that the opinions expressed are not very favourable; but as the experiments were of a comparatively limited extent, the reports must be judged accordingly. In estimating the probability of an article answering commercially as an available material to be made into paper, it is not only necessary to ascertain that it is capable of being pulped and will make paper, but also most important to become acquainted with:

1. The cost or value of the article in its native place.
2. Its abundance or scarcity.
3. The cost of carriage.
4. The loss it sustains in being converted into pulp.
5. The expense of chemicals and machinery necessary to effect this object.
6. The quality of the resulting paper, as compared with paper made from rags.

The influence of most of these points will be obvious to every one. It may not, however, be generally known that in the case of straw, the pulp produced is certainly not more than half the weight of the straw consumed; analogy infers that the same would be the case with sugar-cane fibre, hence the carriage would have to be paid on two tons of fibre for one ton of paper produced. Further, the cost of chemicals,—alkalies, chlorine, &c., is a very important feature in the manufacture of paper from straw, being vastly higher in amount than in the preparation of the same weight of rags, on account of the large quantity required,—the chemicals being, in fact, the preponderating elements in the cost of straw paper; and I have little hesitation in stating my opinion, that the same circumstances would attend the manufacture of paper from sugar-cane fibre.

An error is prevalent in reference to the use of substitutes for rags in the manufacture of paper. Fully admitting the desirableness of keeping the price of paper low, and to this end extending the supply of material for the manufacture; it must be borne in mind that herbaceous fibre, of whatever kind, in its native state, will always have to compete with an article in a half-prepared state, and which derives its whole value from the existence of the paper manufacture. Rags have undergone the operations necessary to convert them from fibre into fabric, thereby being half made into paper; and such preliminary operations have been paid for, if I may so speak, by the use to which the fabrics have been applied prior to their arrival into the possession of the paper-maker. Therefore it may be allowed me to suggest, that the field for new material should be searched in the direction of obtaining further supplies from substances which, having served one manufacture or purpose, are at present considered of no further use, and which having partly at least paid for their recovery from the fibrous state, would thus be available for a second manufacture, rather than in the direction of unmanufactured fibre, entailing upon the paper into which it is made the whole cost of reduction from fibre to paper. Jute appears to partake of this character, and has not received the attention it deserves. Any further information I can obtain, I shall be happy to communicate.

Yours very truly,
WILLIAM STONES.

(COPY.)

“Bois Hill, Chesham, 12 March, 1853.

“Sir,—I have never succeeded to any extent in bleaching the sugar-cane fibre, and was obliged entirely to give it up, consequently cannot satisfy your inquiries respecting it.

“Yours, &c.,
(Signed) “JOHN ELLIOT.

“Mr. Stones.”

(COPY.)

“Tovil Mills, Maidstone, 25th March, 1853.

“Dear Sir,—My father has repeated to me the conversation he had with you, about producing pulp from sugar-cane.

"A good while ago, having a piece of the cane in my possession, I put it through a process similar to our Straw-process for paper, and found that it would pulp sufficient to make paper, but that the expenses of bleaching, &c., would be so enormous that unless the pulp was of a very superior nature, it would be commercially useless. This it was impossible to decide, from the small quantity operated upon

"I have a small quantity of 'Maga' left, and will bleach and pulp it for you, if you wish; and at any time shall be happy to assist you in any experiment.

Yours truly,

(Signed) "C. F. Hook.

"Mr. W. Stones."

PROCEEDINGS OF INSTITUTIONS.

BICESTER.—On Monday evening, the 21st ult., Mr. John Hamilton, of Aylesbury, delivered a Lecture to the members and friends of the Literary Institution, on the "Downfall of Jerusalem." The large Assembly-room was crowded, and for two hours the lecturer was listened to with the deepest attention. A vote of thanks to the lecturer was passed unanimously.

CARLISLE.—On Tuesday week, Mr. John Sewell, delivered a Lecture at the Mechanics' Institution; the subject being, "Recollections of the Great Exhibition." The Mayor occupied the chair. Mr. Sewell commenced with an allusion to the character of the Exhibition; and having spoken of the impossibility of treating so vast a subject in a single lecture, went on at considerable length to trace the origin, history, and progress of that department of art with which he was connected in business—painting and decoration; showing in what manner it was likely to be affected by the Great Exhibition. He brought forward a great variety of highly interesting statements and illustrations in regard to the state of the decorative art at various periods of the history of the world, and in a number of different countries. Towards the conclusion of his lecture he remarked, that France occupied a much higher position in the matter of paper-staining than this country. This he attributed not to the want of talent, enterprise, or capital on the part of our countrymen, but to the training and education of the French, and the pecuniary encouragement they gave to the productions of first-rate designs, and to the liberal expenditure which they make in bringing out a perfect article. He urged the importance of thoroughly training our youth in the Department of Practical Art—a department hitherto very much neglected among us. He hoped that ere long the doors of our schools of design would be thrown open to receive all without let or hindrance, and that by means of a good system of training we might soon leave all our deficiencies behind us.

CIRENCESTER.—The concluding lecture of the season at the Literary, Scientific and Mechanics' Institution, was given on Thursday evening, the 17th ult., by Mr. Joseph Simpson, Librarian of the Islington Literary and Scientific Society, "on the Life, Times, and Character of Henry VIII." The lecturer reviewed and delineated the circumstances connected with Henry's early life—the various events which resulted in the establishment of the Reformation, and portrayed the incidents attending his several marriages, the executions of his Queens, and the literary and learned men of his reign,—and concluded by giving a truthful summary of Henry's character. The manner in which the subject was treated, and the fact that the attention of the audience was sustained for nearly two hours, show that

Mr. Simpson is not only thoroughly conversant with the matter, but has the power of conveying information in a pleasing form.

DUNMOW.—On the 21st ult., the Rev. C. L. Smith, President of this Institution, lectured on "the Polar Regions." After describing the successive aspects of summer and winter there, he showed that, notwithstanding the rigour of the climate, animal life was most abundantly developed. He briefly sketched the principal marine animals, from the whale down to those microscopic tribes of medusæ, which form the basis of animal life in Polar seas. He reviewed also the marine birds and the land mammalia. He next gave the reasons whence the existence of a North Polar ocean is concluded; and explained the formation of field-ice in that ocean, and the birth of ice-bergs along the glacier-coast of Greenland, mentioning the fact of the gradual sinking of the coast of West Greenland, as proved by the position of ancient Esquimaux huts. Pointing out next the course of the Polar current and of the Gulf stream, he showed how they encountered each other at the great bank of Newfoundland,—which was formed by their opposing action. Then alluding to the discoveries previous to Sir John Franklin's expedition, he mentioned the instructions given to that navigator, and detailed the various expeditions sent in search of him, with the results of their labours, and the grounds of future hope; dwelling at some length on the traces found at Beechey Island. His description of the graves of the scamen of the "Erebus" and "Terror", with their simple epitaphs, was well received. In conclusion, he called on his audience to be grateful for the numerous domestic comforts and luxuries which they derived from the great storehouse of the north; and urged them, while enjoying the blessings of their own temperate clime, not to forget Him to whom the patriarch Job so sublimely ascribed all the grand operations of nature, "Who saith to the snow, be thou on the earth; and likewise to the small rain, and the rain of His great strength." The lecture was illustrated by drawings executed by the president himself; and at the close of it, the young men requested him to leave these behind him, in order that they might study the subject further.

SOUTHAMPTON.—The Rev. F. Bugby, of Winchester, delivered a lecture on "Christopher Columbus," on Wednesday evening, to the members and friends of the Polytechnic Institution. The leading incidents in the eventful life of the great navigator—his unwavering faith in the realisation of his object—the difficulties and hardships, persecutions and sufferings, through which he passed, in the steady pursuit of the one great idea of his life, viz., the discovery of a western continent—and the calm resignation with which he submitted to the ingratitude of the Spanish monarch, whose kingdom he had enriched by his discoveries—were depicted by the reverend Lecturer in the most graphic style of descriptive narrative. The vast and important consequences to the whole civilized world, resulting from the discovery of America, whether looked at in a commercial aspect, or as opening up an immense western continent, whereon the refugee from political despotism or ecclesiastical tyranny could find a place of shelter, were pointed out; and the departure of the *Speedwell* and the *Mayflower*, from the port of Southampton, with the Pilgrim Fathers, within a century of Columbus's discoveries, was referred to as one of the earliest and most interesting fruits of his arduous labours. The lecture closed with some remarks on the prominent and guiding principles in the life and character of Columbus, and the lessons deducible therefrom.

TO CORRESPONDENTS.

Notice.—Members, and others, who can furnish or obtain original information or suggestions on the subjects included in the Society's Premium-list, or other topics connected with the Society's various departments of operation, are invited to communicate the same to the Secretary, in as condensed a form as possible for the purpose of being either read and discussed at the evening meetings, or inserted in the Society's weekly Journal. Anonymous letters cannot be attended to. All communications, whether the author's name is to appear or not, must be accompanied by the writer's name and address.

Members of the Society who do not receive the JOURNAL regularly, are requested to give immediate notice to the Secretary; and, in order to prevent mistakes, they are particularly requested to signify any change which they desire to have made in their address, with as little delay as possible.

ANSWERS TO CORRESPONDENTS.

Press for the Blind.—In answer to correspondent (No. 50) two communications have been received. The one gives the address of Mr. W. Hughes, at the Blind Asylum, Stretford-road, Manchester; the other says a letter addressed to Mr. G. (not Mr. W.) Hughes, Ramsgate, will no doubt find him.

Writing Ink.—In reply to your correspondent (No. 51) who asks what are the objections to the use of essential oils in the production of black writing inks, I would say; first, the cost of the oil; secondly, the difficulty of combining them without the aid of spirits; and, thirdly, that in large quantities the evaporation would be very great, and the oil being the lighter matter would be the first to be given off. Acids and salts have also been used for similar purposes, but, owing to their action on the colouring matter are not found to answer.

MISCELLANEA.

COMMERCIAL LAW.—Mr. Leone Levi has just received from the Emperor of Austria, the Gold Medal for Literary and Scientific merit, for his work on the "Commercial Law of All Nations," a copy of which he recently presented to the Emperor, and which His Majesty has been graciously pleased to accept.

INJUNCTION UNDER COPYRIGHT OF DESIGNS ACT.—In the case of Hubert v. Paynter, which was tried before Vice-Chancellor Sir W. P. Wood, the Plaintiff (of the firm of John Woollams and Co., of London) sought to restrain Thomas Paynter, a paper-hanger and stainer, of Cheltenham, from printing imitations of a certain paper-hanging, the pattern or design of which was the registered property or copyright of plaintiff; and also that an account might be ordered to be taken of all the Defendant had fraudulently made of the said pattern. The Injunction was granted, with costs; and the blocks and stock were ordered to be given up to be destroyed.

PATENT LAW AMENDMENT ACT, 1852.

APPLICATIONS FOR PATENTS AND PROTECTION ALLOWED.

From Gazette, 25th March, 1853.

- Dated 25th Feb.
- 482. J. G. Taylor—Ornamental fastenings for dress.
- Dated 1st March.
- 510. W. E. Newton—Improvements in capstans.
- Dated 3rd March.
- 532. R. Barclay—Rotary engines and transmitting aeriform bodies and fluids.
- Dated 9th March.
- 595. S. Blackwell—Improvements in saddlery and harness.
- 596. F. Valtat and F. M. Rouillé—Construction of combs for looms.
- 597. J. Shuttleworth—Appendages to portable machines for thrashing, &c., corn.
- 599. G. Chambers—Means of gathering cinders and depositing ashes under fire-grates.
- 601. G. Collier—Manufacture of carpets, &c.
- 603. H. Ransford—Manufacture of starch.
- 605. G. Collier—Spinning, roving, &c.
- 606. F. W. Campin—Measuring steege-way of vessels, &c.; applicable to ventilating ships and carriages. (A communication.)

Dated 10th March.

- 607. J. Walmsley—Machinery for block-printing.
- 608. J. Powis and J. S. James—Machinery for slotting, morticing, &c.
- 609. E. T. Bellhouse—Improvements in iron structures.
- 610. T. B. Dodgson—Improvements in roads, &c.
- 611. G. Collier—Machinery &c., for weaving.
- 612. Hon. W. E. Cochrane—Improvements in girths, &c., for saddles.
- 613. F. F. Dumarchey—Improvements in making roads, &c.
- 614. J. Stevens—Communication between guard and driver.
- 615. E. Myers—Preventing carriages running off the line.

Dated 11th March.

- 616. F. Preston—Manufacture of bobbins and spools.
- 615. J. Summers—Improvements in sails.
- 619. M. Poole—Apparatus for serving oysters, and other shell-fish. (A communication.)

Dated 12th March.

- 620. J. Gilby—Improvements in fire-arms.
- 621. W. Muir—Grinding edge-tools, &c.
- 622. P. A. Le C. de Fontainemoreau—Filtering liquids. (A communication.)
- 623. J. F. Heather—An equitable gas-weighing meter.
- 624. A. E. L. Bellford—Reaping machine. (A communication.)
- 626. T. Evans—Construction of steam-boilers.
- 627. G. Michiels—Obtaining oxygen.
- 628. T. Hunt—Construction of sights for fire-arms.
- 629. T. Rhodes—Manufacture of manure.
- 630. R. C. Witty—Manufacture of gas.
- 631. J. Murdoch—Portable voltaic batteries. (A communication.)

Dated 14th March.

- 632. W. B. and J. Quinton—Improvements in manufacture of measuring-rules.
- 634. W. E. Staité—Improvements in producing and applying currents of electricity, &c.
- 636. B. A. and H. M. Burton—Manufacture of casks, &c., and machinery for sauce.
- 638. J. H. Johnson—Improvements in dyeing. (A communication.)
- 640. W. Stevenson—Treatment, &c., of textile materials.

Dated 15th March.

- 642. W. Morgan—Portable double-action folding chair.
- 644. P. S. L'Hernault and J. Richards—Means of unhooking horses and stopping vehicles.
- 646. J. Maudslay—Screw-propeller.
- 648. E. Sabel—Looking-glasses.

Dated 16th March.

- 652. W. Malins—Atmospheric propulsion on railways.
- 654. S. Colt—Heating and annealing metals.

Dated 17th March.

- 658. J. T. Ashenhurst—Pianofortes.
 - 660. G. Johnson, M.D.—Looms.
- APPLICATION WITH COMPLETE SPECIFICATION FILED.
- 650. J. V. Hielaker—Improved eccentric-engine, applicable to the purposes of general navigation.—16th March, 1853.

WEEKLY LIST OF PATENTS SEALED.

Sealed 28th March, 1853.

- 38. The Hon. William Erskine Cochrane, of Albany-street, Regent's-park—Improvements in unloading coals from ships or vessels.
- 71. John Ambrose Coffey, of Providence-row, Finsbury—Improvements in apparatus for performing various chemical and pharmaceutical operations, hereby denominated, "Coffey's Improved Patent Esculapian Apparatus," parts whereof are applicable to steam boilers, steam and liquid gauges, stills, and syphons.
- 175. Michael Cavanagh, of Notting-hill—Improvements in mortice-lock spindles.
- 177. William Simpson and John Shelton Isaac, of Maidstone—Invention of an improved composition to be used principally as a substitute for wood and other materials, where strength and lightness are required in the manufacture of various articles.
- 217. Michael Angelo Garvey, of 10, Jeffreys-terrace, Kentish-town—Invention for more effectually dissipating the shock of collision in railway trains, reducing the surfaces exposed to atmospheric resistance, and diminishing oscillation by making portions of the whole of each carriage elastic in every direction, and increasing the power of the carriage to resist severe pressure by means of metallic tubes in its longitudinal angles.
- 236. Robert Brown, of Salford, Lancashire—Invention of an improved taking-up motion applicable to looms and other similar purposes.
- 257. Alexis Delemer, of Radcliffe, Lancashire—Improvements in machinery or apparatus for manufacturing piled fabrics.
- 298. Edward Joseph Hughes, of Manchester—Invention of an improved method of purifying and concentrating the colouring matter of madder, munjeet, and spent madder.
- 311. Auguste Edouard Bellford, of 16, Castle-street, Holborn—Improvements in apparatus for manufacturing soda-water and other aerated liquids.

562. Arnold James Cooley, of Parliament-street, Westminster—Improvements in treating woven and felted fabrics, to render the same repellent to water and damp.
919. James Barlow, of King William-street—Improvements in stands or supports for casks, barrels, and other like vessels.
1170. George Ferguson Wilson, of Belmont, Vauxhall—Improvements in treating certain fatty bodies.
22. Gustave Eugene Michel Gerard, of 12, Rue Hauteville, Paris, and 4, South-street, Finsbury—Improvements in manufacturing and treating caoutchouc.
77. John M'Dowall, of Walkinshaw Foundry, Johnstone, N.B.—Improvements in cutting or reducing wood and other substances.
154. William Edward Newton, of 66, Chancery-lane—Improvements applicable to clocks, and other time-keepers, for the purpose of indicating not only the time of the day, but the day of the week, the month, and the year, which invention he intends to denominate, "Hawes's Calendar Clock, or Timepiece." (A communication.)
195. Isaac Davis, of 119, High Holborn—Improvements in optical and mathematical instruments.
242. George Twigg and Arthur Lucas Silvester, of Birmingham—Improvements in apparatus for cutting and affixing stamps and labels. (Partly a communication.)
250. John Wilkinson, jun., of West Bromwich—Improvements in machinery for cutting or shearing iron and other metals.
254. Thomas Lightfoot, of Accrington—Improvements in glazes for pottery and other similar materials.
276. Alfred Vincent Newton, of 66, Chancery-lane—Improvements in block-printing machinery. (A communication.)
- Sealed 30th March.*
7. John Henry Gardner, of Poppin's-court—Improvements in tables.
42. Oswald Dodd Hedley, of Newcastle-upon-Tyne—Improvements in getting coal and other minerals.
44. James Hodgson, of Liverpool—Improvements in machinery for draining land.
52. Walter M'Lellan, of Glasgow—Improvements in the manufacture of rivets, and in working in metal.
63. John Fordham Stamford, of Stangate-street, Dover—Improvements in machinery or apparatus for manufacturing bricks, tiles, and similar building materials, which is hereby denominated "The Complete Brick-maker."
66. George Holmes, of 31, Great Queen-street, Lincoln's-inn-fields—Improvements in the manufacture and construction of coats, capes, and other upper garments of personal attire.
68. George Ellins, of Droitwich, Worcestershire—Invention of an improved method or apparatus for preparing flax straw for dressing and cleaning.
69. William Moore and William Harris, of Birmingham—Improvements in repeating pistols and rifles.
72. Edward Wilkins, of 60, Queen's-row, Walworth—Improvements in the distribution and application of water and other liquid manure to promote vegetation.
91. William Walker, of Liverpool—Improvements in wheels for railway-carriages, and in the mode or modes of manufacturing the same.
92. Thomas Lawes, of 32, City-road—Improvements in the manufacture of agricultural implements, or an improved agricultural implement.
93. Thomas Lawes, of 32, City-road—Invention of an improved quilt or coverlid.
94. Thomas Lawes, of 32, City-road—Improvements in generating steam.
104. Martyn John Roberts, of Gerrard's-cross, Bucks—Improvements in the manufacture of oxides of zinc and tin.
110. John Wright and Edwin Sturge, of Cornwall-road, Lambeth—Improvements in machinery for the manufacture of envelopes.
111. John Remington, of Sloane-street, Chelsea, and Zephaniah Deacon Berry, of Victoria-road, Pimlico—Improvements in gas-meters, or apparatus for measuring gas or other elastic fluids.
139. William Lewis, of Piccadilly—Improvements in compounding medicines in the form of pills.
142. Henry Bernoulli Barlow, of Manchester—Improvements in the manufacture of cylinders for carding cotton and other fibrous substances.
143. John Laurence Gardner, of Whitecross-street—Improvements in bottles and other vessels for holding liquids.
144. William Seaton, of Coleshill-street, Pimlico—Improvements in the construction of iron vessels, and in sheathing or covering the same.
147. Edwin Whele, of Shiffnal, Salop—Improvements in apparatus for burning candles, and in horological apparatus, attached thereto.
148. Edward William Kemble Turner, of Præd-street, Paddington—Improvements in machinery for sweeping or cleaning chimneys, also for more effectually extinguishing them when on fire.
156. Joseph Brown, of Leadenhall-street—Improvements in beds, sofas, chairs, and other articles of furniture, to render them more suitable for travelling and other purposes.
165. Moses Poole, of Serle-street—Improvements in constructing bridges, viaducts, and such like structures.
170. Edward Allport, of Aldermanbury—Improvements in the manufacture of buttons by making them with elastic shanks.
171. William James Lewis, of London—Invention of a slide-less, stadia sight, applicable to rifles and other fire-arms.
173. Theophilus Kedwood, of Montague-street, Russell-square—Improvements in the manufacture of gelatine.
176. Peter Hyde Astley, of Stratford, Essex, and John Figgins Stephens, of De Beauvoir-square, Kingsland—Invention of an improved construction for floating vessels, having for its object the rendering them safe means of transit.
180. John Slack, of Manchester—Improvements in the manufacture of textile fabrics.
222. Aristide Balthazard Berard, of Paris—Improvements in the construction of jetties, breakwaters, and docks, and other hydraulic constructions.
225. Joseph Apsey, of Blackfriars—Improvements in ship-building and in machinery for propelling.
242. William Mackenzie George Blair, of Glasgow—Improvements in the arrangement and construction of graduated scales for measuring instruments.
282. John Blair, of Ducie-bridge Mill, Manchester—Improvements in the manufacture of waddings and in machinery for making the same.
292. Samuel Rainbird, of Norwich—Improvements in grappling and raising sunken vessels and other submerged bodies, and in apparatus for that purpose.
326. Charles William Siemens, of Adelphi-terrace—Improvements in engines to be worked by steam and other fluids.
371. William M'Farlane, of Glasgow—Improvements in water-closets.
383. Donald Grant, of Luton-place, Greenwich—Improvements in the means of applying the heat derived from the combustion of gas.
408. William James Matthias and Thomas Bailey, of Clerkenwell—Improvements in clocks and watches.
459. Charles Wightman Harrison and Joseph John Harrison, of Richmond, Surrey—Improvements in protecting insulated telegraphic wires.
472. Joseph Rose, of Aldersgate-street—Improvements in locks
490. Stanislaus Hoga, of Nassau-street—Improvements in separating gold from the ore.
545. Charles Benjamin Normand, of Havre, France—Improvements in machinery for sawing wood.
1064. Jean Francois Isidore Caplin, of Strawberry-hill, near Manchester—Improvements in apparatus for preventing or curing a stooping of the head or body.
1153. John Hinks and George Wells, of Birmingham—Invention of a new or improved pen-holder.
51. Hezekiah Marshall, of Canterbury—Improvements in the transmission and emission of air and sound.
79. John Hick, of Bolton-le-Moors—Improvements in the method of lubricating revolving shafts and their bearings or pedestals.
152. George Thornton, of Grange, Gargrave, Yorkshire—Improvements in propelling vessels.
156. Matthew Andrew, of Hyde, Chester—Improvements in fastenings for windows.
273. John Cockerell and Thomas Barnett, of Kingston-upon-Hull—Improvements in the construction and use of coffee-roasters.
275. James Carter, of Oldham—Invention of an improved rotary-engine.
299. Alfred Tylor, of Warwick-lane, Newgate-street, and Henry George Frasi, of 84, Herbert-street, New North-road—Improvements in water-closets.
304. Frederick John Jones, of Adle-street—Improvements in fastenings for bands, belts, straps, and other similar articles. (A communication.)

WEEKLY LIST OF DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

Date of Registration.	No. in the Register.	Title.	Proprietor's Name.	Address.
March 24	3435	Compound Carriage-step	John Josias Catterson	9, Cloudesley-ter., Islington.
" 30	3436	Extending Table	De Jean Louis Benoit Vandenbosch	Montague-aux-Herbes Potagères a Bruxelles.
" "	3437	Duck & Wilson's Improved High-pressure Cocks	W. Duck & W. Wilson	49 & 83, London-road, Southwark, London.