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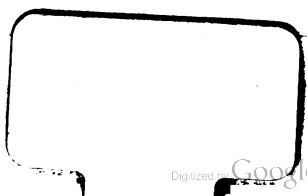
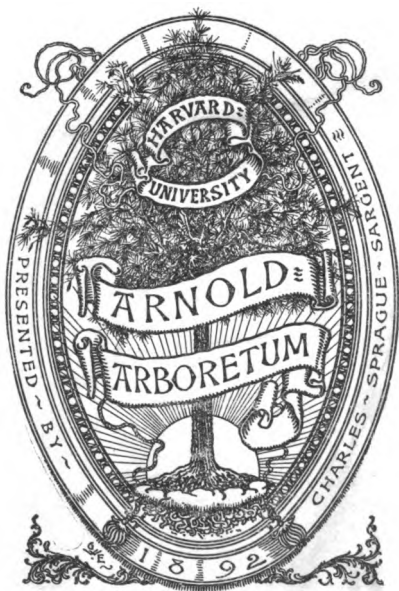






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*Charles Ballou*

THE

*175 Man  
Horse*

UNITED STATES

VULCANIZED

GUTTA PERCHA

Belting and Packing Co.

OFFICE AND WAREHOUSE,

**No. 66 Liberty St.**

Between **BROADWAY** and the **POST OFFICE**,

NEW YORK.



NEW YORK:

HOSFORD & CO., STATIONERS, 57 AND 59 WILLIAM STREET.

1857

# HIGHLY IMPORTANT

TO

MANUFACTURERS AND OTHERS.



The attention of those interested in the manufacturing business, is particularly directed to the contents of this Pamphlet, setting forth the superiority and advantages of the improved

## VULCANIZED

## GUTTA PERCHA GOODS,

made by this Company, whereby a better article is produced at about one half the expense of Leather, while in many instances they can be used where Leather cannot, especially in hot, cold, damp or oily exposures.



THE  
UNITED STATES

Vulcanized Gutta Percha

BELTING AND PACKING CO.

NEW YORK.

“GUTTA PERCHA:”

ITS

DISCOVERY, PROPERTIES, MANUFACTURES, &c., &c.,

UNDER

THE PATENTS OF RIDER & MURPHY,

AND ITS

SUPERIORITY OVER ALL OTHER MATERIALS

FOR

MACHINE BELTING AND STEAM PACKING.

NEW YORK:

HOSFORD & CO., STATIONERS, 57 AND 59 WILLIAM STREET.

1857



GUTTA PERCHA FOREST, WITH NATIVES GATHERING GUTTA PERCHA

## GUTTA PERCHA:

### Its Discovery, Properties, Manufacture, &c.

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Perhaps no material was ever discovered which was so soon extensively shipped as an article of commerce—taken up so eagerly, and manufactured at once so extensively, as has been the article of GUTTA PERCHA.

The first that was known of this wonderful production by Europeans, was in the year 1845, when Doct. Montgomerie, an English gentleman, residing at Singapore, observed in the hands of a Malayan wood-chopper, a strange material used for a handle to his axe. On learning from him that it was made from the sap of a tree, which soon solidified on being exposed to the air; also, that by the use of hot water it could not only be made plastic, but made to take (and when cool, retain) any desired form,—he immediately obtained samples of the material, which were forwarded to the London Society of Arts and Sciences, with the best description he could obtain regarding them.



**LEAF AND FRUIT OF THE GUTTA PERCHA TREE**

These samples arrived in England about the time the importance of the discovery for vulcanizing India Rubber was made known, and the vast monopolies created, by the issue of the Rubber patents. The London Society, equally impressed with the singular properties of these strange samples, lost no time in having them examined and reported upon, which report was of such a character as to create a great excitement, and to induce large orders for its importation, which continued so to increase, that in 1848 its importation amounted to 21,598 piculs, valued at \$275,190.

This article is produced from a juice or sap, taken from the Isonandra or Gutta tree, which is indigenous to all the islands of the Indian Archipelago, and especially to the Malayan Peninsula, Borneo, Ceylon, and their neighborhoods, in which are found immense forests of it,—all yielding this product in great abundance.

Its fruit contains a concrete edible oil, which is used by the natives with their food.

In its crude state, Gutta Percha has no resemblance whatever to India Rubber, nor are its chemical or mechanical properties the same, nor does the tree from which it is taken belong to the same family of trees, or grow in the same soil; yet, from the fact that it can be dissolved, and wrought into water-proof

wares, many, not informed on the subject, have inclined to the belief that the two materials are identically, or very nearly the same. But nothing could be more erroneous, as may be seen by the following comparisons :

### **Comparison of the Two Crude Materials.**

India Rubber, or Caoutchouc, is produced from a milk-white sap, taken chiefly from the *Sephonca Cahuca* tree, afterwards coagulated, and the whey pressed out or dried off by heat,—the residue is the India Rubber of commerce.

Gutta Percha is produced from the *Isonandra* or *Gutta* tree ; is of a brownish color, and when exposed to air, soon solidifies, and forms the Gutta Percha of commerce.

India Rubber of commerce, is of a soft, gummy nature, not very tenacious and astonishingly elastic.

Gutta Percha of commerce, is a fibrous material, much resembling the inner coating of white oak bark, is extremely tenacious, and without elasticity, or much flexibility.

India Rubber when once reduced to a liquid state by heat, appears like tar, and is unfit for further manufacture.

Gutta Percha may be melted and cooled any number of times, without injury for future manufacture.

India Rubber, by coming in contact with oil or other fatty substances, is soon decomposed and ruined for future use.

Gutta Percha is not injured by coming in contact with oil or other fatty substances,—in fact one good use of it is for oil cans.

India Rubber is soon ruined for future use, if brought in contact with sulphuric, muriatic, and other acids.

Gutta Percha resists the action of sulphuric, muriatic, and nearly all other acids,—in fact one great use of it is for acid vats, &c., and other vessels for holding acids.

India Rubber is a conductor of heat, cold and electricity.

Gutta Percha is a non-conductor of electricity, as well as of heat and cold.

India Rubber, in its crude state, when exposed to the action of boiling water, increases in bulk, does not lose its elastic properties, and cannot be moulded.

Gutta Percha, in its crude state, when exposed to the action of boiling water, contracts and becomes soft like dough or paste, and may

then be moulded to any shape,—which shape it will retain when cool.

India Rubber is not a perfect repellent of water, but is more or less absorbent, according to quality.

Gutta Percha has an exceedingly fine grain, and its oily property makes it a perfect repellent of liquids.

The foregoing comparative properties show conclusively that India Rubber and Gutta Percha are chemically and mechanically, as well as commercially, very different.

### **Crude Gutta Percha.**

Gutta Percha in its crude state, has been manufactured to some extent in this country, within the last five or six years, into such articles as machine belting, tubing, oil cans, picture frames, funnels, acid vats, covering of telegraph wires, shoe soles, &c.; all having the inherent characteristics of the crude material, viz: rigidity, non-elasticity, and great susceptibility to soften when opposed to heat, which have been so objectionable, that a trade at the outset promising to be very lucrative has so fallen off as to cause the manufacturers to suspend operations.



The process of Vulcanizing, as pursued by this Company, entirely overcomes this objection, rendering the Gutta Percha indestructible and unaffected by heat or cold.

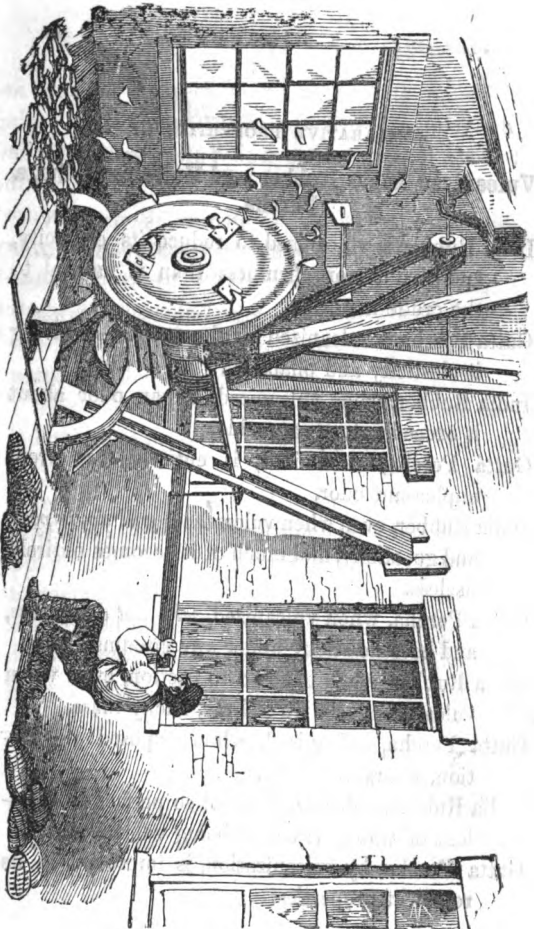
### Vulcanization.

The term "*vulcanized*" is applied to fabrics of Gutta Percha or India Rubber, which have been *cured* or *tanned*, by submitting them to a high degree of artificial heat; the object being to change the nature of the gum, so it will not afterwards be affected by heat and cold.

The discovery for vulcanizing India Rubber was simply a mode for improving a manufacture that had long been carried on of that material; but such is not the case in regard to the discovery for preparing and vulcanizing Gutta Percha, by Rider & Murphy. Fabrics are produced with characteristics almost entirely new in themselves: instead of being rigid in cold, with a susceptibility to melt down when exposed to a heat of 90° Fahrenheit, or over, they are pliable and elastic, like vulcanized Rubber, sweet and clean, very tenacious, will stand a much higher degree of heat than vulcanized Rubber, are more beautiful in finish, much lighter, and will not decompose and get sticky.

To say the discoveries of Rider & Murphy are the greatest discoveries of the age, may be saying too much for them; but that they are of vast importance, no one can doubt who will investigate the subject: nor can it be doubted, that vulcanized Gutta Percha, from its great superiority, in every respect, must soon supersede the uses of vulcanized, as well as all other kinds of Rubber manufactures.

THE CUTTING ROOM



## COMPARATIVE PROPERTIES OF

**Vulcanized India Rubber and Vulcanized Gutta Percha.**

India Rubber is vulcanized to reduce its elasticity, and give it more firmness than is natural to the crude material.

Gutta Percha is vulcanized for the purpose of giving it elasticity and pliability.

India Rubber, when vulcanized, has an odor about it exceedingly disagreeable.

Gutta Percha, vulcanized, is entirely free from unpleasant odor.

India Rubber, even when vulcanized, *will decompose*, and get sticky, and much of it becomes entirely useless.

Gutta Percha, when vulcanized, *will not decompose*, and become sticky under any circumstances.

India Rubber, when exposed to friction, even when vulcanized, rolls up a dirty, sticky mass.

Gutta Percha, vulcanized, when exposed to friction, wears away dry.

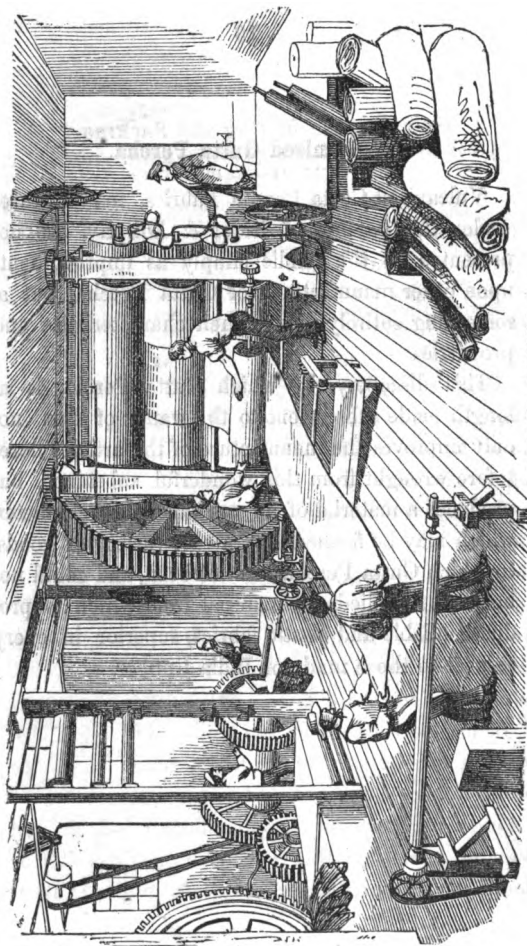
India Rubber, vulcanized, is not so perfect a repellent of water, as before being vulcanized.

Gutta Percha, by vulcanization, is improved in its repellent properties.

### **Vulcanized Gutta Percha.**

Vulcanized Gutta Percha Fabrics, manufactured under the patents of Rider & Murphy, are not presented to the public simply as improvements upon other manufactures of Gutta Percha, but as something entirely new in their characteristics and properties.

This discovery, by which Gutta Percha is at length made subservient to the wants of man, not only improves the manufacture of the articles heretofore wrought from this wonderful substance, but produces a material of an unchangeable character, which may be formed into a vast variety of goods, to which Gutta Percha has not been, and could not before, be applied,—a material from which is produced pliable and elastic fabrics, superior in every respect to those made of India Rubber.



THE GRINDING AND CALENDAR ROOM

### **Gutta Percha Belting and Packing.**

The exclusive right to manufacture Vulcanized Gutta Percha Belting and Packing, under Rider & Murphy's Patents, having been purchased of the North American Gutta Percha Company by the *United States Vulcanized Gutta Percha Belting and Packing Company*, with the design of introducing these goods throughout this country, they take this method of inviting the attention of all Machinists, Manufacturers and Millers, and, in fact, all who require Belting or Packing, to an examination of its superiority over every other material.

Among the advantages claimed for the Gutta Percha Belting and Packing are, its great repellent properties, its complete resistance to acids and oily substances, its proof against decomposition, and, in fine, its decided superiority to any and all other material where Belting and Packing is used—which facts the Company are prepared to guarantee.

It may be used either as Cross or Driving Belts, without the necessity of tightening after being once properly placed, except in extreme cases.

Gutta Percha being a non-conductor, heat or cold does not effect it. May be run in or out of wet or damp places, through oils or acids, unlike Leather

or Rubber, which rots and becomes worthless in such exposure.

The design of this Company is to keep on hand a stock, and orders, either by mail or otherwise, will be promptly executed, either in large or small quantities, of any length and width.

ALL BELTING AND PACKING made by this Company will bear the Company's Stamp; and as there is no India Rubber whatever used in the manufacture, we caution the public against all misrepresentations to the contrary.

### **Directions for Adjusting Vulcanized Gutta Percha Belting.**

Cut off the two ends to be united perfectly straight, then, with a small punch, make a row of holes about  $1\frac{1}{2}$  inches apart, and  $\frac{3}{4}$  of an inch from the end of the Belt; also, another row  $1\frac{1}{2}$  inches from the end, and on a line midway between those nearest the end, and apply the lacing alternately, first to one row and then to the other, (starting from the middle and lacing each way), so that there shall be an equal and uniform strain on all parts of the Belt.

Belts of 10 inches in width, or over, should be lapped; the thickness of the splice or lap of the 3



and 4 Ply to be reduced, by removing two plies of the Belt 3 inches at the ends, and one ply 3 inches beyond, and by removing the Gutta Percha 3 inches further; then unite the two ends thus reduced, apply the cement, and lace with leather, when the Belt is ready for use. The seam to be on the outside.

To get the correct length, deduct  $\frac{1}{8}$  of an inch per foot from the exact length around the Pullies.

Specimen samples of mode of Lacing sent with orders for goods.

### **Certificates in favor of Vulcanized Gutta Percha Belting.**

OFFICE OF THE NORWICH & WORCESTER R. R. Co.  
*Norwich, April 9, 1857.*

This may certify that this Company have used the Belting manufactured of the Vulcanized Gutta Percha, by the North American Gutta Percha Company, for several months, on the main driving shaft, and have found from actual use that the article has performed beyond the most sanguine expectations of its friends. It will evidently supersede every other material for belting, also for packing it is superior to any other material in use. JOEL WHITE, *President.*

To HENRY SMITH, Esq.,

*Pres't U. S. V. G. P. B. & P. Co.*

SOUTH BROOKLYN COLUMBIA SAW MILLS,  
*May 25, 1857.*

Messrs. HENRY SMITH & SON,

*Gent.*—In reply to your enquiry regarding the usefulness of the main driving Belt, furnished by you for our Mill, I can only say, that it has exceeded even our most sanguine expectations.

The wet weather of last week, which so seriously used to interfere with our leather Belt, has not given us the least trouble whatever, and we can recommend those Belts with perfect confidence.

Truly yours,

CHARLES BROWN.

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NEW YORK, *May 22, 1857.*

HENRY SMITH, Esq.,

*Pres't V. G. P. B. & P. Co.*

*Dear Sir*—For some time past I have used a quantity of your Company's Belting, where it has had some severe testing as cross belts. I take pleasure in saying that it operates thus far to my entire satisfaction.

Respectfully yours,

C. L. GODDARD.

I concur in the above statement.

I. BIDWELL, *Foreman.*

UNION STEAM WORKS,

*New York, May 27, 1857.*

I have used a quantity of your Vulcanized Gutta Percha Belting, which has given perfect satisfaction, therefore I cheerfully recommend it as being much cheaper than leather, answering the same purpose, therefore must be in demand.

JAS. HARRISON, JR.

EMPIRE WORKS,

*New York, May 22, 1857.*

This is to certify that we are using one of the Patent Vulcanized Gutta Percha Belts on one of our Grain Mills, and that it has thus far given us satisfaction.

SAMUEL LEGGETT,

*Superintendent.*

NEW YORK, *June 23, 1857.*

*Mr. Henry Smith,*

DEAR SIR—The Belting your agent left with me for trial has been in use for the last three months, running at a high speed over small pulleys, and up to the present time has given entire satisfaction, it

being the only kind I have used which will compare favorably with Leather Belting.

Yours truly,

W. W. MARSTON,

*Fire Arms Manufacturer, 22d St. and 2d Ave.*

### **Certificates in Favor of Gutta Percha Steam Packing.**

The great superiority of the Vulcanized Gutta Percha Steam Packing, and its powers of resisting extreme degrees of pressure and heat,—are universally acknowledged. Annexed are a few of the many recommendations received from Engineers and others :

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NEW YORK STEAM SUGAR REFINERY,

*June 28, 1856.*

This certifies that I have been using Rider's Patent Gutta Percha Steam Packing for nine months without repacking : it is under 600 degrees of heat, where India Rubber would not last two months. I recommend it on account of its not being affected by oil, and because it will not stick or melt.

THOMAS HEAD, *Chief Engineer.*

*To President of North American Gutta Percha Co.*

DEAR SIR—I have used the Gutta Percha Steam Packing during the past two years. It gives me pleasure to be able to express my entire satisfaction in it as a Packing for steam and water joints, especially where a *high temperature* is required. One peculiarity this Packing possesses is, that after it has been in use for a length of time, (between two flanges, for instance), the joint may be taken apart without spoiling the gasket. I have had a gasket taken off the man-hole plate of a steam-boiler several times during the year, and in the end found it apparently as good as new.

I can cheerfully recommend the Gutta Percha Steam Packing to my friends.

Yours truly, C. M. GUILD,  
*Steam and Gas Engineer.*  
July, 1856.

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BROOKLYN, June 19, 1856.

I recommend the Gutta Percha Steam Packing after two years' experience, on account of its not melting or sticking as India Rubber does, and also that it will last three weeks where the India Rubber lasts three days. I shall advise its use upon twenty engines building this summer at Hartford.

HENRY A. RICH,  
*Engineer N. Y. & Brooklyn Brass Rolling Mill.*

## Prices of Machine Belting.

### TWO PLY.

*For Agricultural Machines, and other light work.*

1 inch 2 Ply.....	5 cents per foot.
1½ " " .....	6 " "
2 " " .....	8 " "
2½ " " .....	10 " "
3 " " .....	12 " "
3½ " " .....	14 " "
4 " " .....	16 " "
5 " " .....	20 " "

### THREE PLY.

2 inches.....	10 cents per foot.
3 " .....	15 " "
4 " .....	20 " "
5 " .....	24 " "
6 " .....	29 " "
7 " .....	34 " "
8 " .....	38 " "
9 " .....	45 " "
10 " .....	54 " "
11 " .....	60 " "
12 " .....	66 " "

## THREE PLY CONTINUED.

18 inches.....	72	cents	per	foot.
14 " .....	81	"	"	
15 " .....	86	"	"	
16 " .....	92	"	"	
18 " .....	104	"	"	
20 " .....	115	"	"	

## FOUR PLY.

2 inches.....	13	cents	per	foot.
3 " .....	17	"	"	
4 " .....	24	"	"	
5 " .....	30	"	"	
6 " .....	36	"	"	
7 " .....	41	"	"	
8 " .....	47	"	"	
9 " .....	58	"	"	
10 " .....	69	"	"	
11 " .....	75	"	"	
12 " .....	83	"	"	
13 " .....	92	"	"	
14 " .....	100	"	"	
15 " .....	107	"	"	
16 " .....	115	"	"	
18 " .....	130	"	"	
20 " .....	144	"	"	

## FIVE PLY.

Wherever Double Leather Belts have been used, we recommend our 5 Ply Belts, and will warrant them to do more work at about *one-half* the cost.

5 inch 5 Ply Gutta Percha.....	40	per foot.
6 " " " .....	50	"
7 " " " .....	60	"
8 " " " .....	70	"
9 " " " .....	80	"
10 " " " .....	90	"
11 " " " .....	1 00	"
12 " " " .....	1 10	"
13 " " " .....	1 18	"
14 " " " .....	1 25	"
15 " " " .....	1 35	"
16 " " " .....	1 44	"
17 " " " .....	1 55	"
18 " " " .....	1 65	"
19 " " " .....	1 75	"
20 " " " .....	1 80	"

Belts heavier than *five* ply, made to order at proportionate prices.

### Wholesale Prices of Steam Packing.

Mixed or Fibrous Packings in sheets

of all thicknesses and lengths... 39 lb..40 cents.



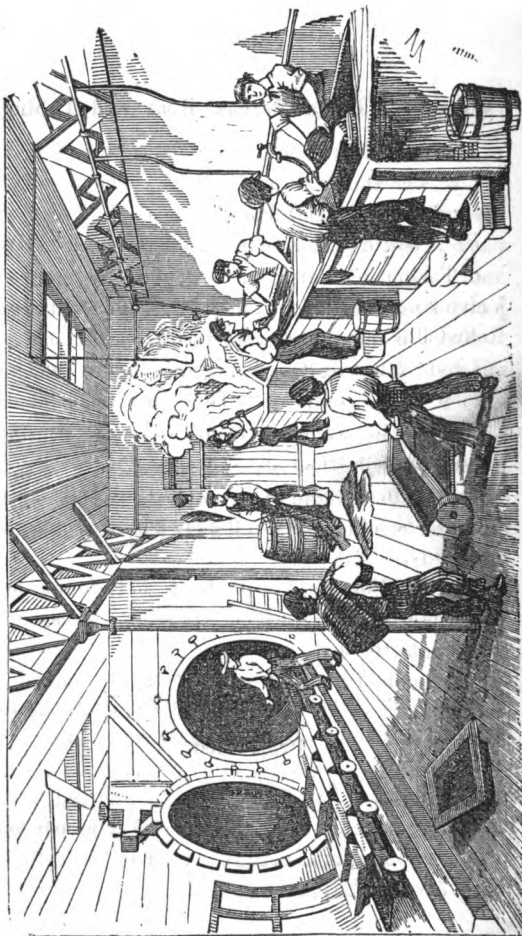
Gum Packing on Cloth.....	₹	lb..	50 cents.
Gaskets for Man-hole and Hand-hole Plates, Steam Chests and Cylinder Heads; Packing Rings for Stuffing Boxes, Pistons, Piston Rods, and all other Steam Joints of Fibrous Packing.....	“	60@75	“
Valve Balls.....	“	75	“
Round Packing for Stuffing Boxes, Piston Rods, &c.....	“	75	“

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By comparing our price list with those of leather Beltings, it will be seen that the difference is from 33 to 100 ₹ cent. in favor of Gutta Percha, while the latter can be used in many places where leather is soon destroyed.

### Steam Packing.

From actual trial with India Rubber Packing, under the same tests, this article has proved to be better in every particular; it will stand a much higher heat, will wear four times as long, and can be *re-packed*. Those desiring to prove this article can have, by application, a sample to test its qualities. Price, 50c. per lb.



THE PREPARATORY HEATER AND CLEANSING ROOM

## Vulcanized Gutta Percha Hose and Tubing.

The great results produced by the perfected system of Vulcanization used in the manufacture of the superior Belting and Packing made by this Company, is equally valuable in the manufacture of Hose and Tubing, rendering them entirely free from objections made to those composed of other materials.

No oil is required to preserve them, because not affected by wet or dampness, consequently will not mildew or decompose. They are repellents of heat and cold, are very strong, and will withstand greater pressure than any other.

For ordinary use, as a Conducting Hose, the 2 Ply may be used. When the pressure is *greater*, use the 3 Ply.

For Fire Engines, Locomotives, and similar purposes, use the 5 Ply, which will allow a pressure of 200 lbs. to the inch.

As a conductor of Steam, the 5 Ply should be used.

### Price List.

#### TWO PLY CONDUCTING HOSE.

Internal Diameter.

$\frac{1}{2}$ inch.....	17 cents per foot.
$\frac{3}{4}$ " .....	19 " "
1 " .....	22 " "

## TWO PLY CONDUCTING HOSE CONTINUED.

## Internal Diameter.

1 $\frac{1}{4}$	"	.....	25 cents per foot.
1 $\frac{1}{2}$	"	.....	28 " "
1 $\frac{3}{4}$	"	.....	33 " "
2	"	.....	37 " "
3	"	.....	53 " "
4	"	.....	70 " "
5	"	.....	85 " "
6	"	.....	100 " "
7	"	.....	117 " "
8	"	.....	133 " "
9	"	.....	150 " "
10	"	.....	165 " "

## THREE PLY HYDRANT HOSE.

## Internal Diameter.

$\frac{1}{2}$ inch	.....	20 cents per foot.
$\frac{3}{4}$	"	..... 22 " "
$\frac{7}{8}$	"	..... 23 " "
1	"	..... 27 " "
1 $\frac{1}{4}$	"	..... 30 " "
1 $\frac{1}{2}$	"	..... 33 " "
1 $\frac{3}{4}$	"	..... 40 " "
2	"	..... 45 " "
3	"	..... 65 " "

## FOUR PLY ENGINE HOSE.

Internal Diameter.

1 $\frac{3}{4}$ inch	.....	50 cents per foot.
2 "	.....	55 " "
2 $\frac{1}{4}$ "	.....	60 " "
2 $\frac{1}{2}$ "	.....	65 " "
2 $\frac{3}{4}$ "	.....	70 " "
3 "	.....	75 " "

## FIVE PLY STEAM HOSE.

Internal Diameter.

1 $\frac{3}{4}$ inch	.....	65 cents per foot.
2 "	.....	70 " "
2 $\frac{1}{4}$ "	.....	80 " "
2 $\frac{1}{2}$ "	.....	90 " "
2 $\frac{3}{4}$ "	.....	100 " "
3 "	.....	112 $\frac{1}{2}$ " "
3 $\frac{1}{2}$ "	.....	125 " "
4 "	.....	140 " "

In bringing to the notice of the public the superior VULCANIZED GUTTA PERCHA GOODS manufactured by this Company, including the articles of

BELTING,  
PACKING,  
HOSE AND TUBING,

the Company beg leave to say, that they have spared no pains or expense in perfecting the system of manufacture, whereby they are enabled to produce a quality of Gutta Percha Goods never before equalled; and are prepared to guarantee that the articles sold by them will fully sustain their high character, while the very low prices at which they are sold must commend them to the favor of all consumers and dealers.

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We beg leave to invite attention to the following letter, received from one of our numerous correspondents just at the time this pamphlet was being put to press:

(COPY).

NEWBURGH, N. Y.,

*July 13, 1857.*

U. S. GUTTA PERCHA CO., NEW YORK:

We have used your Belting enough to say, that we feel entirely satisfied that it will answer your recommendation. We could not use a Leather Belt where we are using it, in consequence of the heat to which it is exposed, and we think that it is preferable to the Rubber Belting, as the Rubber Belt we had would not stand the heat as well, but will melt under a great heat.

(Signed), C. R. COLDEN & Co.,  
*Newburgh Barrel Factory.*

## References.

Myron N. Stanley, New York Lumber Mills.  
W. W. Marston, Union Steam Works, New York.  
C. L. Goddard, Union Steam Works, New York.  
Jas. Harrison, Jr., Union Steam Works, New York.  
Decker, Wallace & Baylis, New York.  
Joel White, President of Norwich and Worcester Rail Road Co.  
Union Ferry Co., New York and Brooklyn.  
J. T. Waring & Co., Yonkers, N. Y.  
Fishkill Landing Machine Works.  
Mallery, Rains & Co., Newburgh.  
Stanton, Mallery & Co., Newburgh.  
C. R. Colden & Co., Newburgh.  
John W. Embler, Newburgh.  
Hannah & Storm, Poughkeepsie.  
Van Kleeck & Knickerbocker, Poughkeepsie.  
Gifford, Sherman & Innis, Poughkeepsie.  
John Wolverton, Poughkeepsie.  
Seamless Garment Manufacturing Co., Mattewan.  
Erastus Corning & Co., Albany.  
Thachers & Co., Albany.  
Mallery, Morrison & Co., Albany.  
Boardman, Gray & Co., Albany.  
J. N. Ring, Greenbush.  
Beach & Royce, Lee, Mass.  
Platner & Smith, Lee, Mass.  
May & Rogers, Lee, Mass.  
Whyte & Hulbert, Lee, Mass.  
Berkshire Woolen Co., Gt. Barrington.  
D. & H. Stearns, Pittsfield.  
Thomas Manufacturing Co., Plymouth, Conn.  
Seth Thomas Clock Co., Plymouth, Conn.  
Henry Terry, Plymouth, Conn.  
Rogers, Smith & Co., Hartford, Conn.  
Cook Axle Co., Winsted, Conn.  
Waterbury Knitting Co., Waterbury, Conn.  
The Collins Company, Collinsville, Conn.  
Waterbury Jewelry Co., Waterbury, Conn.  
Clifton Mills Co., Winsted, Conn.  
Beardsley & Alvord, Winsted, Conn.  
Peck & Walter Manufacturing Co., New Britain.  
Russel & Erwin Manufacturing Co., New Britain.  
W. & B. Douglas, Middletown, Conn.  
Birmingham Iron and Steel Works, Birmingham.  
Birmingham Iron Foundry, Birmingham.  
Atlantic Cotton Mills, Lawrence, Mass.  
Eaton, Gilbert & Co., Troy, N.Y.  
Fuller, Warren & Morrison, Troy, N.Y.  
Starbuck, Brothers, Troy, N.Y.  
World's Safe Co., Troy, N.Y.  
Troy Patent Cordage Co., Troy, N.Y.  
A. & W. Orr & Co., Troy, N.Y.  
Cyrus Kinney, Troy, N.Y.  
Swett, Quimby & Co., Troy, N.Y.



[Copy of Letter received from our Agent in Boston.]

BOSTON, *July 21, 1857.*

MESSRS. HENRY A. HALL & CO.

*Gent.*—In answer to your inquiry regarding the Vulcanized Gutta Percha Belting and Packing, which we have used for some months past, we take pleasure in saying that the Belt is in as perfect condition as when first put up, (about six months ago), though it has been severely tested as a cross-belt during the whole time, in a situation where it is exposed to the drippings of oil, and where rubber belt would not stand two weeks. It has not stretched; therefore we have not had the trouble of taking it up, and we consider it the best and cheapest article of belting in the market.

The Packing is also a superior article, and unlike India Rubber, does not stick, is free from unpleasant odor, and can be repacked several times.

Yours truly,

WILLIAM G. PIKE & CO.

*American Steam and Gas Pipe Works.*

*29 and 31 Haverhill Street.*

## ELEVATING BELTS AND BUCKETS.

To those engaged in the Milling business, including Flour, Grain and Paper Mills, Elevators, &c., special attention is requested to the superior "Vulcanized Gutta Percha Belting" made by this Company, with *Gutta Percha Buckets* attached; a valuable improvement, whereby a better article is produced, and at about one-half the cost of other materials.



All orders for Goods, sent by mail or otherwise, will receive prompt attention

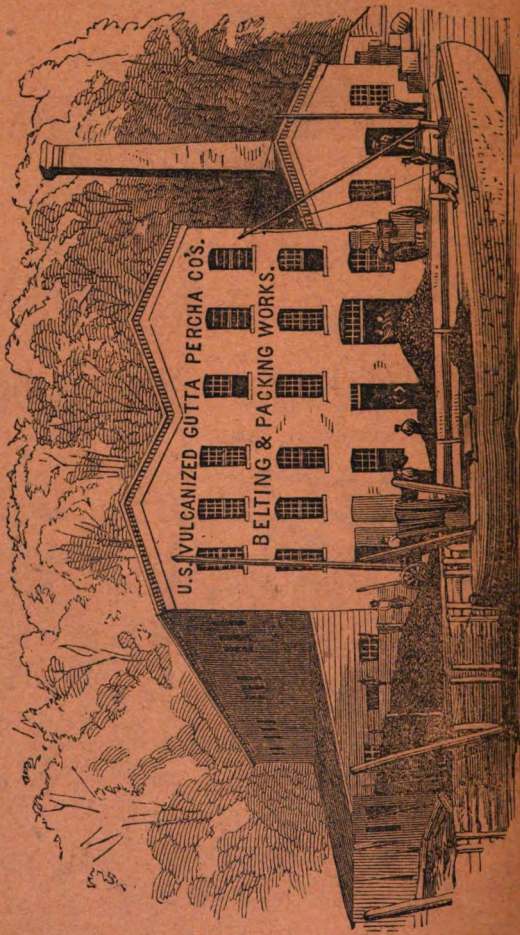
By addressing

**HENRY SMITH & SON, Agents,**

*No. 66 Liberty Street, N. Y.*

**THE GREAT FAVOR**  
WITH WHICH OUR SUPERIOR  
**VULCANIZED**  
**GUTTA PERCHA**  
**MACHINE BELTING**

has been received by manufacturers throughout the country, proves conclusively, that it is destined to produce a speedy and entire revolution in the Belting trade, both in consequence of the great saving of expense in the cost of the article, (being about one half the price of leather); and also, its decided superiority in other respects, the fact having been fully demonstrated, that these Belts will do more and better service than any others in use.



U.S. VULCANIZED GUTTA PERCHA CO'S.  
BELTING & PACKING WORKS.











