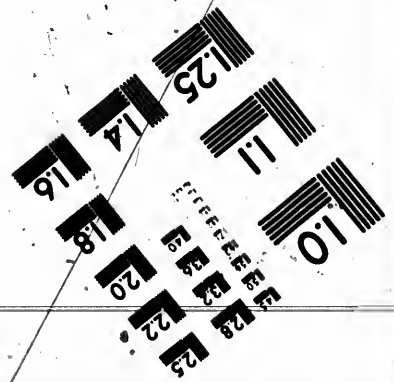
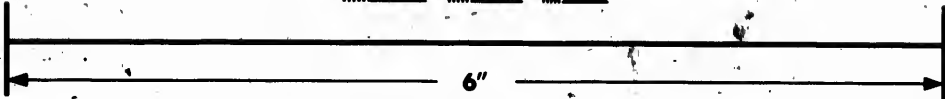
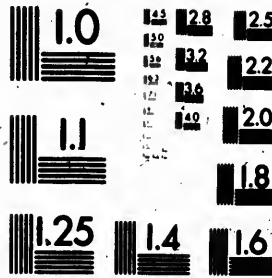


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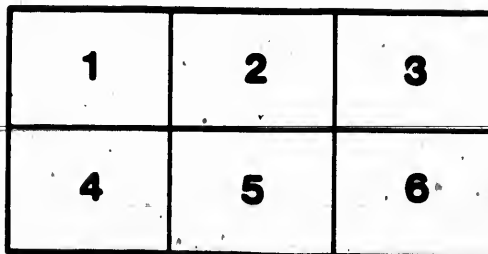
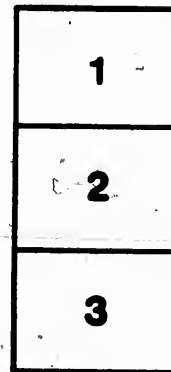
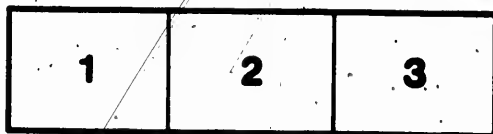
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PRICE LIST

AND

CATALOGUE.

1884.

Dominion Wire Rope Works.

44 FOUNDLING STREET,

MONTREAL.

COOPER, FAIRMAN & CO.



DOMINION WIRE ROPE WORKS

MANUFACTURERS OF

IRON AND STEEL

MACHINE MADE

WIRE ROPE

BRIDGE CABLES, SHIPS' RIGGING,

HOISTING ROPES,

WHEELS AND ROPES FOR TRANSMITTING POWER,

RAILWAY SWITCH ROPES, RAILWAY SEMAPHORE ROPES,

TILLER ROPES, BELL AND SASH CORDS,

CLOTHES LINES, &c., &c.

COOPER, FAIRMAN & CO.,

44 FOUNDLING STREET,

MONTREAL.

INGERSOLL ROCK DRILL CO.,
OF CANADA,

MANUFACTURERS OF

ROCK DRILLS, AIR COMPRESSORS,

↔ **HOISTS** ↔

AND GENERAL MACHINERY FOR

TUNNELLING, GRADING, MINING, &C.,

OFFICE, 44 FOUNDLING STREET, MONTREAL.



DOMINION BARB WIRE CO.



LYMAN BARB,

CALVANIZED or PAINTED.

TEN FIRST PRIZES awarded it for Excellence and Superiority over other kinds. In use on 21 Railway lines in Canada. Barbs can be supplied 4, 5, 6 and 7 inches apart, as may be desired. Wire with Barbs 7 inches apart measures 16½ feet per pound.

SEND FOR CIRCULARS, PRICES AND SAMPLES.

44 FOUNDLING STREET, MONTREAL.

— OR —

36 FRONT STREET EAST, TORONTO.

COOPER, FAIRMAN & CO.,

IRON AND STEEL RAILS,

RAILWAY AND CONTRACTORS' SUPPLIES, STEEL, &c.,

MANUFACTURERS OF

CORRUGATED STOVE-PIPE ELBOWS,

PATENT HAY-BALE TIES,

OFFICE: 44 FOUNDLING STREET, MONTREAL.

REMARKS

ON THE

MANUFACTURE OF WIRE ROPES.

During the process of making Wire Rope or Cable it is very important that the strain or tension on each wire should be the same. This is of more importance when using the better grades of wire whose tensile strength is greater. A wire bearing twenty, forty, or more pounds strain in excess of the other wires is that much weaker. A rope may appear perfect to the eye and yet have a disparity of strain on the wires composing it of hundreds of pounds.

With our machines and processes for making wire rope at one operation it is impossible to put more strain on one wire than on the others, therefore, in use, each wire bears its proportion of strain and no more.

A peculiarity of our machinery is that the spiral form of the wires as they lay in a strand is given them *before* they enter the strand, thus avoiding all tendency to kink, for one thing, but also making it possible to make wire rope *elastic in its length*,—a most desirable quality for "tow ropes" and "switch ropes."

Some of the advantages in making wire ropes in one operation by our patented machines and processes, are, 1st., The ability to make rope of any desired length in one continuous piece without splicing strands or rope; 2nd., To apply tension to the *individual wires* during the process of manufacture, which tension is *at all times the same*; thus producing ropes of the greatest possible

strength and durability ; 3rd., Absolute uniformity of tension in every wire, cord or strand in every rope we make ; 4th., The absence of torsion in the wires, thus retaining the maximum strength of the individual wires when combined, enabling the use of a greater working load for a given size of rope ; 5th., A more pliable, and, therefore, longer wearing rope for a given size and style ; 6th., The dispensing with drawing rolls for drawing off the completed rope, thus avoiding abrasions, jams or mutilations ; 7th., The tensions under which our ropes are made, and which is only possible by our processes, is a continuous test of quality while in process of manufacture.

The pliability of wire rope of a given size and number of wires depends on the quality of wire used and manner in which it is laid. The greater the number of wires used, the more flexible will be the rope. Beginning with the least flexible the order may be considered as follows :—1st., 2 and 3 wires—fencing strand ; 2nd., 4, 5, and 7 wires—semaphore rope, &c. ; 3rd., 12 wires—stays, &c. ; 4th., 18, 19, and 21 wires—stays, guys, &c. ; 5th., 36 and 42 wires—guy ropes, &c. ; 6th., 72 wires—transmission rope, &c. ; 7th., 108 and 114 wires—hoisting rope ; 8th., 216 and 252 wires—tiller rope. The last is more pliable than hemp-rope of the same strength and will work over the same sized sheaves or pulleys. Any other proper combinations can be made to order.

N.B.—Users of Wire Rope will observe that there is absolutely no tendency to kink in any of the ropes we make, thus saving much trouble, annoyance, and, oftentimes, much expense.

HOMOGENEOUS STEEL

Transmission and Standing Ropes,

With 6 strands of 7 wires each—Hemp Centre.

TELEGRAPH NAME.	Circumference in inches.	Diameter in inches.	Breaking strain in tons of 2,000 lbs.	Proper working load in tons of 2,000 lbs.	Average weight per foot.	Price per foot in cents.
Aaron	$\frac{5}{8}$	$\frac{9}{32}$	$1\frac{1}{4}$	$\frac{1}{3}$	0.12	3
Abacus	1	$\frac{5}{16}$	$1\frac{1}{2}$	$\frac{1}{4}$	0.15	3$\frac{1}{2}$
Acadia	$1\frac{1}{8}$	$\frac{3}{8}$	$2\frac{1}{2}$	$\frac{1}{3}$	0.22	4
Adam	$1\frac{1}{4}$	$\frac{1}{4}$	3	$\frac{1}{2}$	0.28	4$\frac{1}{2}$
Aegis	$1\frac{1}{2}$	$\frac{1}{2}$	4	$\frac{3}{4}$	0.39	6
Afton	$1\frac{3}{4}$	$\frac{9}{16}$	$4\frac{3}{4}$	1	0.52	7
Agatha	2	$\frac{5}{8}$	6	$1\frac{1}{2}$	0.63	9
Ajax	$2\frac{1}{8}$	$\frac{11}{16}$	$7\frac{1}{2}$	2	0.76	10
Akron	$2\frac{1}{4}$	$\frac{3}{4}$	9	$2\frac{3}{4}$	0.90	12
Alexandria	$2\frac{3}{4}$	$\frac{7}{8}$	$12\frac{1}{2}$	3	0.99	16
Ammon	3	1	16	4	1.38	20
Anon	$3\frac{3}{8}$	$1\frac{1}{8}$	20	5	1.86	23
Apex	$3\frac{3}{4}$	$1\frac{1}{4}$	25	$6\frac{1}{4}$	2.35	29
Astor	$4\frac{1}{4}$	$1\frac{3}{8}$	30	$7\frac{1}{2}$	2.89	33
Attar	$4\frac{1}{2}$	$1\frac{1}{2}$	36	9	3.65	41

N.B. —An advance of **10** per cent. will be charged for these Ropes if ordered with Wire Centres. These Ropes are principally used for Derricks, Ferries, Transmitting Power, etc., etc.

For information concerning Transmission of Power by Wire Rope, See page 14.

Iron Wire Rope same price as Homogeneous Steel.

HOMOGENEOUS STEEL

PLIABLE HOISTING ROPES,

With 6 strands of 19 wires each—Hemp Centre.

TELEGRAPH NAME.	Circumference in inches.	Diameter in inches.	Breaking strain in tons of 2,000 lbs.	Proper working load in tons of 2,000 lbs.	Average weight per foot in lbs.	Minimum size of Drums or Sheaves in feet.	Price per foot in cents.
Badly	1¼	7⁄8	2¾	¾	0.28	1¼	7
Basket	1½	1	3½	1	0.39	1½	8
Benton	1¾	1¼	4¼	¾	0.52	1¾	10
Biscay	2	1½	5¼	1¼	0.63	2	12
Bloodsøe	2¼	1¾	6¾	1¾	0.90	2½	14
Boylston	2¾	2	11½	2½	0.99	2¾	17
Brill	3	2¼	15	3	1.38	3	22
Bureau	3¾	2½	19	3½	1.86	3½	25
Baal	3¾	2½	25	5	2.35	4	32
Babel	4¼	3	30	6½	2.89	4½	37
Bacchus	4½	3½	36	7½	3.65	5	45
Baize	5	4	41	8½	4.10	5½	50
Baker	5¼	4¼	52	10½	5.25	6½	58
Balzac	6	5	62	12½	6.30	7	67
Bamrou	6¾	5¾	72	14½	8.00	8	90
Bannock	7½	6½	80	16	10.20	10	1.20

N. B.—An advance of 10 per cent. will be charged for these Ropes if ordered with Wire Centres.

Iron Wire Rope same price as Homogeneous Steel.

HOMOGENEOUS STEEL GALVANIZED WIRE ROPES,

— FOR —
SHIPS' RIGGING AND GUYS FOR DERRICKS.

With 6 strands of 7 wires each—Hemp Centre.

TELEGRAPH NAME.	Circumference in inches.	Diameter in inches.	Breaking strain in tons of 2,000 lbs.	Weight per fathom in lbs.	Price per pound in cents.
Cadi.....	1 1/2	1 1/8	35
Ceylon.....	5/8	3/4	30
Chatham.....	3/4	3/4	25
Cistern.....	5/8	3/4	1 1/4	1/2	22
Clearview.....	1	1 1/8	1 1/2	3/4	17
Conway.....	1 1/8	1 1/8	2 1/2	1 1/4	16 1/2
Croyden.....	1 1/4	1 1/8	3	1 1/2	16
Custer.....	1 1/2	1 1/2	4 1/4	2 1/4	15
Cabe.....	1 3/4	1 1/8	4 3/4	2 1/2	13
Cactus.....	2	1 5/8	6	3 1/2	12
Caddy.....	2 1/4	1 3/4	9	4 1/4	11
Cafir.....	2 1/2	1 7/8	9 1/2	5 1/2	10 1/2
Calix.....	2 3/4	1 7/8	12 1/2	6 3/4	10
Cambria.....	3	1	16	8	10
Cabala.....	3 1/4	1 1/8	18	9 1/2	10
Cabalist.....	3 3/8	1 1/8	20	10 3/4	9 1/2
Caballer.....	3 3/4	1 1/4	25	12	9 1/2
Cabin.....	4	1 1/8	28	14 3/4	9 1/2
Cabinet.....	4 1/4	1 3/8	30	16	9 1/2
Cabob.....	4 1/2	1 1/2	36	18	9 1/2
Cackle.....	4 3/4	1 3/8	38	20 1/2	9 1/2
Coftan.....	5	1 5/8	40	22	9 1/2
Cairn.....	5 1/4	1 3/4	45	24 1/2	9 1/2
Cajole.....	5 1/2	1 7/8	50	26 1/2	9 1/2
Calamity.....	6	2	55	28	9 1/2
Calcine.....	6 3/4	2 1/4	60	32	9 1/2

Galvanized Wire Rope should never be used for Running Rope.
These Ropes are suitable for Ships' Rigging, Stays, Standing Ropes, Guys, etc., etc.

An advance of 10 per cent. will be charged for these Ropes if ordered with Wire Centres.

Galvanized Iron same price as Steel Wire Ropes.



HOMOGENEOUS STEEL GALVANIZED WIRE ROPES,

— FOR —

* SHIPS' RIGGING AND GUYS FOR DERRICKS,

With 6 strands of 12 wires each—Hemp Centres.

TELEGRAPH NAME.	Circumference in inches.	Diameter in inches.	Breaking strain in tons of 2,000 pounds.	Weight per fathom in pounds.	Price per pound in cents.
Dabster	1¼	$\frac{7}{16}$	3	1½	17
Dedis	1½	$\frac{1}{2}$	3¾	2	16
Dido	1¾	$\frac{9}{16}$	4½	2½	15
Dobson	2	$\frac{5}{8}$	5½	3½	14
Dandy	2¼	$\frac{3}{4}$	9	4¼	13
Dane	2½	$\frac{11}{16}$	10	5½	12
Danger	2¾	$\frac{7}{8}$	11¾	6¾	11½
Dangle	3	1	16	8	11
Danish	3¼	$1\frac{1}{16}$	17½	9½	10½
Dap	3½	$1\frac{1}{8}$	19	10¾	10
Dapper	3¾	$1\frac{1}{4}$	26	12	9½
Daric	4	$1\frac{5}{16}$	29	14¾	9½
Daring	4¼	$1\frac{3}{8}$	32	16	9½
Dark	4½	$1\frac{1}{2}$	37	18	9½
Darn	4¾	$1\frac{9}{16}$	39½	20½	9½
Darnel	5	$1\frac{5}{8}$	42	22	9½
Darted	5¼	$1\frac{3}{4}$	53	24½	9½
Dashing	5½	$1\frac{7}{8}$	59	26½	9½
Daze	6	2	64	29	9½
Debar	6½	$2\frac{1}{4}$	73	32	9½

Galvanized Wire Rope should never be used for Running Rope.

An advance of **10** per cent. will be charged for these Ropes, if ordered with Wire Centres.

These Ropes are suitable for Ships' Rigging, Stays, Standing Ropes, Guys, &c., &c., &c.

Iron Wire Ropes same price as Steel.

CRUCIBLE CAST-STEEL

Transmission and Standing Ropes,

With 6 strands of 7 wires each—Hemp Centre.

TELEGRAPH NAME.	Circumference in inches.	Diameter in inches.	Breaking strain in tons of 2,000 lbs.	Proper working load in tons of 2,000 lbs.	Average weight per foot.	Price per foot in cents.
Easton	1	$\frac{5}{16}$	3½	$\frac{3}{4}$	0.15	5
Echo	1½	$\frac{3}{8}$	5	1	0.22	7
Eden	1½	$\frac{1}{2}$	8	1½	0.39	8
Eager	1¾	$\frac{9}{16}$	9	1¾	0.52	11
Eagle	2	$\frac{5}{8}$	14	2¼	0.63	14
Earl	2½	$\frac{11}{16}$	16	3	0.76	16
Earn	2¼	$\frac{3}{4}$	18	3½	0.90	19
Earnest	2¾	$\frac{7}{8}$	25	5	0.99	25
Earth	3	1	31	6¼	1.38	32
Ebbing	3¾	1½	36	7	1.86	40
Ebony	3¾	1¼	45	9	2.35	50
Edge	4¼	1¾	55	11	2.89	60
Edify	4½	1½	67	13½	3.65	70

N.B.—An advance of **10** per cent. will be charged for these Ropes if ordered with Wire Centres.

These Ropes are principally used for Derricks, Ferries, Transmitting Power, etc., etc.

Suitable for Hoisting by using large Drums or Sheaves.

CRUCIBLE CAST-STEEL

Transmission and Standing Ropes,

With 6 strands of 12 wires each—Hemp Centre.

TELEGRAPH NAME.	Circumference in inches.	Diameter in inches.	Breaking strain in tons of 2,000 lbs.	Proper working load in tons of 2,000 lbs.	Average weight per foot in lbs.	Price per foot in cents.
Fenton.....	1¼	7 ⁷ / ₈	6	1	0.28	11
Flora	1½	½	7½	1½	0.39	12
Folger	1¾	1 ¹ / ₈	8½	1¾	0.52	14
Fulsom	2	5 ⁵ / ₈	13	2½	0.63	16
Factor	2¼	¾	17	3½	0.90	18
Fadden	2½	1 ¹ / ₈	20	4	0.94	22
Faggot	2¾	7 ⁷ / ₈	24	4¾	0.99	26
Fair	3	1	30	6	1.38	33
Faker	3¼	1 ¹ / ₈	33	6½	1.65	37
Falmouth.....	3¾	1½	35	7	1.86	41
Famish	3¾	1¼	44	8½	2.35	50
Fawn	4	1 ⁵ / ₈	48	9¾	2.62	58
Fairish	4¼	1¾	54	10½	2.89	66
Fairness	4½	1½	65	13	3.65	71
Falcate	4¾	1 ⁹ / ₈	70	14	3.87	76
Fallacy	5	1¾	75	15	4.10	80
Fallow	5¼	1¾	80	16	5.25	1.00
Fallon	5½	1¾	95	19	5.78	1.10
Factive	6	2	110	22	6.30	1.20
Facing	6¾	2¼	140	28	8.00	1.50

N.B.—An advance of 10 per cent. will be charged for these Ropes when ordered with Wire Centres.

These Ropes are more pliable than those of 7 wire strands, and will, therefore, wear longer over Pulleys or Sheaves that are too small for stiffer ropes.

Suitable for Derricks, Guys, Ferries; also, for Hoisting, if large Drums or Sheaves are used.

CRUCIBLE CAST-STEEL

STANDARD HOISTING ROPES,

With 6 strands of 19 wires each—Hemp Centres.

TELEGRAPH NAME.	Circumference in inches.	Diameter in inches.	Breaking strain in Tons of 2,000 lbs.	Proper Working Load in tons of 2,000 lbs.	Average Weight per foot.	Minimum Size of Drums or Sheaves in feet.	Price per foot in cents.
Gabler	1¼	7/8	5	1	.28	2	14
Galding	1½	½	6	1¼	.39	2¼	15
Gally	1¾	9/8	8	1½	.52	2¾	17
Gisner	2	5/8	12	2¼	.63	3	18
Glade	2¼	¾	18	3½	.90	3½	21
Gambit	2¾	7/8	23	4¾	.99	3¾	27
Golconda	3	1	29	5¾	1.38	4	34
Grass	3¾	1½	34	6¾	1.86	4½	41
Gamble.	3¾	1¼	43	8¾	2.35	5	50
Gaff	4¼	1¾	52	10	2.89	5¼	60
Gage	4½	1½	62	12	3.86	5½	71
Gain	5	1¾	72	14	4.10	6	80
Gadder	5¼	1¾	78	15½	5.25	7½	1.00
Gainsboro	6	2	105	21	6.30	8½	1.20
Gainsay	6¾	2¼	135	27	8.00	9½	1.50

N.B.—An advance of 10 per cent. will be charged for these Ropes if ordered with Wire Centres.

The weight of Ropes with Wire Centres is 10 per cent. more than that of Ropes with Hemp Centres.

HOMOGENEOUS STEEL EXTRA PLIABLE TILLER ROPES.

With 6 strands of 42 wires each.
HEMP CENTRES, IN STRANDS AND ROPE.

TELEGRAPH NAME.	Diameter in inches.	Breaking strs. in tons of 2,000 lbs.	Proper working load in tons of 2,000 lbs.	Average weight of Rope per foot.	Minimum Size of Drums or Sheaves in feet.	Price per foot in cents.
Habitant.....	1/2	5 1/2	3/4	.35	1	
Hackel	5/8	9	2	.70	1 1/2	
Haddock	3/4	13	2 1/2	.90	2	
Haggis	7/8	20	3 1/2	1.20	2 1/2	
Halibut	1	24	5	1.60	2 3/4	
Hamstring	1 1/8	30	6	2.00	3	
Hannah	1 1/4	39	8	2.50	3 1/4	
Happy	1 3/8	45	9	3.00	3 1/2	
Harbor	1 1/2	55	11	3.65	3 3/4	

SEMAPHORE OR SIGNAL WIRE.

Made from the best Galvanized Steel Wire.

7 Wires, Nos	8	9	10	11	12	13	14
Weight per 1,000 feet....	535	430	320	268	215	183	138
Diameter	1/2	5/8	7/8	1	1 1/8	1 1/4	1 1/2

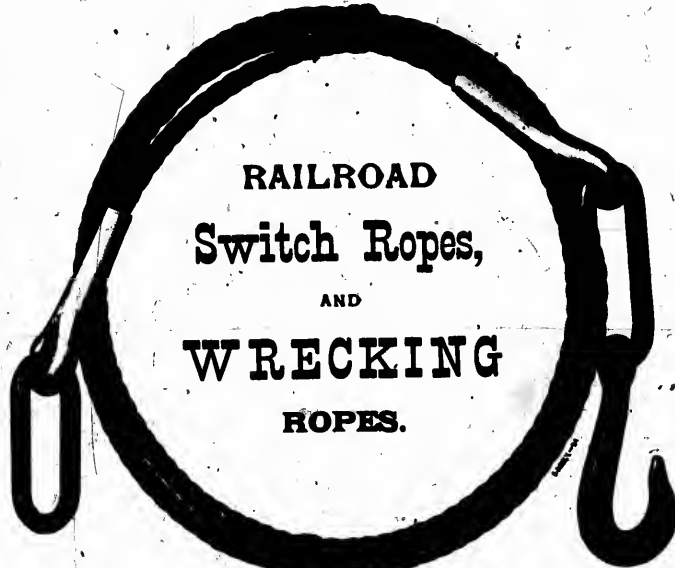
Price per lb.

GALVANIZED CLOTHES LINE.

No. 17, in 100 feet bundles	Per doz.
" 18, " " "	"
" 19, " " "	"
" 20, " " "	"

SASH CORD.

TELEGRAPH NAME.	Diameter.	Price per foot in cents. — Steel.
Imbibe	1/4	5
Imitate	3/8	4
Immense	1/2	3
Impact	5/8	2
Impede	3/4	1



**RAILROAD
Switch Ropes,
AND
WRECKING
ROPES.**

This cut illustrates a crucible cast steel wire Switch Rope, with Healey's Patent Metallic Splice at each end.

This splice utilizes the full strength of the rope, firmly secures all the strands in a neat smooth socket; entirely obviating all danger to the hands of employees, and is in every respect superior to the tucked splice.

They are in use on many railroads, to the exclusion of all other kinds.

PRICE LIST.

Diameter.	Circum.	Length.	Price.	Diameter.	Circum.	Length.	Price.
$\frac{7}{8}$ inch.	2 $\frac{3}{4}$ inch.	20 feet.	13.75	1 $\frac{1}{8}$ inch.	3 $\frac{1}{2}$ inch.	20 feet.	17.00
" "	" "	25 "	15.00	" "	" "	25 "	19.00
" "	" "	30 "	16.25	" "	" "	30 "	21.00
1 inch.	3 inch.	20 feet.	12.75	1 $\frac{1}{4}$ inch.	3 $\frac{3}{4}$ inch.	20 feet.	18.50
" "	" "	25 "	16.25	" "	" "	25 "	21.00
" "	" "	30 "	18.00	" "	" "	30 "	23.50

In ordering give either the diameter or circumference of Rope, also the length wanted.

TABLE OF
Transmission of Power by Wire Ropes

Diameter of wheel in feet.	Number of Revolutions.	Diameter of Rope.	Horse Power.	Diameter of wheel in feet.	Number of Revolutions.	Diameter of Rope.	Horse Power.
4	80	$\frac{3}{8}$	3.3	10	80	$\frac{5}{8}$ $\frac{1}{8}$	55. 58.4
4	100	$\frac{3}{8}$	4.1	10	100	$\frac{5}{8}$ $\frac{1}{8}$	68.7
4	120	$\frac{3}{8}$	5.	10	120	$\frac{5}{8}$ $\frac{1}{8}$	73. 82.5
4	140	$\frac{3}{8}$	5.8	10	140	$\frac{5}{8}$ $\frac{1}{8}$	87.6 96.2
5	80	$\frac{7}{16}$	6.9	10	140	$\frac{5}{8}$ $\frac{1}{8}$	102.2
5	100	$\frac{7}{16}$	8.6	11	80	$\frac{5}{8}$ $\frac{1}{8}$	64.9 75.5
5	120	$\frac{7}{16}$	10.3	11	100	$\frac{5}{8}$ $\frac{1}{8}$	81.1 94.4
5	140	$\frac{7}{16}$	12.1	11	120	$\frac{5}{8}$ $\frac{1}{8}$	97.3 113.3
6	80	$\frac{1}{2}$	10.7	11	140	$\frac{5}{8}$ $\frac{1}{8}$	113.6 132.1
6	100	$\frac{1}{2}$	13.4	12	80	$\frac{1}{2}$ $\frac{3}{4}$	93.4 99.3
6	120	$\frac{1}{2}$	16.1	12	100	$\frac{1}{2}$ $\frac{3}{4}$	116.7 124.1
6	140	$\frac{1}{2}$	18.7	12	120	$\frac{1}{2}$ $\frac{3}{4}$	140.1 148.9
7	80	$\frac{9}{16}$	16.9	12	140	$\frac{1}{2}$ $\frac{3}{4}$	163.5 173.7
7	100	$\frac{9}{16}$	21.1	12	140	$\frac{1}{2}$ $\frac{3}{4}$	112. 122.6
7	120	$\frac{9}{16}$	25.3	13	80	$\frac{1}{2}$ $\frac{3}{4}$	140. 153.2
7	140	$\frac{9}{16}$	29.6	13	100	$\frac{1}{2}$ $\frac{3}{4}$	168. 183.9
8	80	$\frac{5}{8}$	22.	13	120	$\frac{1}{2}$ $\frac{3}{4}$	148. 141.
8	100	$\frac{5}{8}$	27.5	14	80	$\frac{3}{4}$ $\frac{7}{8}$	185. 176.
8	120	$\frac{5}{8}$	33.	14	100	$\frac{3}{4}$ $\frac{7}{8}$	222. 211.2
8	140	$\frac{5}{8}$	38.5	14	120	$\frac{3}{4}$ $\frac{7}{8}$	217. 217.
9	80	$\frac{9}{16}$ $\frac{5}{8}$	40. 41.5	15	80	$\frac{3}{4}$ $\frac{7}{8}$	259. 259.
9	100	$\frac{9}{16}$ $\frac{5}{8}$	50. 51.9	15	100	$\frac{3}{4}$ $\frac{7}{8}$	300. 300.
9	120	$\frac{9}{16}$ $\frac{5}{8}$	60. 62.2	15	120	$\frac{3}{4}$ $\frac{7}{8}$	300. 300.
9	140	$\frac{9}{16}$ $\frac{5}{8}$	70. 72.6	15	120	$\frac{3}{4}$ $\frac{7}{8}$	

The above table gives power produced by Patent Rubber-lined Wheel at various speeds.

Healey' Patent Splice for Wire Rope,



— FOR —

Attaching or Uniting Wire Rope in all its varied uses for Ships, Bridges, Elevators, Quarries and Mines.

Attention is called to a new and superior method of Splicing or Fastening Wire Ropes, by which the end of the Wire Rope is inserted into a metallic socket, and there secured by pouring a strong fusible metal around it, completely filling all the spaces in and around the rope, and forming a perfectly solid and thoroughly united structure, which no strain can break, as has been amply proved by a great number of tests made at the United States Arsenal, Watertown, Mass, and several other places, and also by years of practical use on shipboard, and in granite quarries at Quincy, Mass.

UNITED STATES NAVY YARD, BOSTON,

EQUIPMENT OFFICE, March 3rd, 1880.

COMMODORE, — In obedience to the Bureau's order of the 4th ultimo, No. 28, I have thoroughly examined into the merits of Healey's Patent Fusible Metal Wire Rope Splice, and have tested it in comparison with the ordinary splice in use in the Navy, and respectfully submit the following report :—

The results of the test may be briefly summarized as follows,—

- 1st. *Strength.*—The Patent Splice is stronger than the common splice, and stronger than the rope itself.
- 2nd. *Durability.*—The Patent Splice is more durable than the common Splice, affording, as it does, a perfect protection to the rope, while in the common splice the rope is much opened and liable to admit water, even when carefully served.
- 3rd. *Economy.*—Without going into the relative cost of making the Patent and the Common Splice, for which I have no positive data, there is an economy in using the former, as there is no waste of rope.
- 4th. *Neatness.*—The Patent Splice can be made neater than the common splice.

Very respectfully.

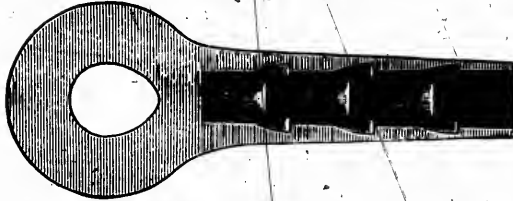
Your obedient servant,

A. O. BATCHELLER, *Comdr and Equip't Officer.*

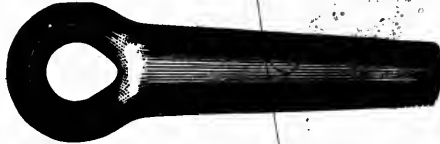
Among the numerous tests to which the Metallic Splice has been subjected, we insert the following, which were made under the supervision of a Board of Naval Officers, at the United States Arsenal, at Watertown, Mass:

SOCKETS.	CIRCUMFERENCE OF ROPE.	ULTIMATE STRENGTH.
Malleable Iron	2 inch, Steel Rope.	22,900 lbs.
" "	3 " "	62,000 "
" "	3 " "	62,900 "
" "	3½ " "	73,000 "
" "	3¾ " "	77,500 "

— The Ropes were broken in every case, and the Splices were uninjured.

ROUND EYE SOCKET.

The above cut shows a longitudinal section of a Round Eye Socket, showing the arrangement of the inside notches into which the filling metal sets, securing it so firmly that no force can draw it. Sockets without these notches have been tested, and the fact established, that they are sufficiently strong without them, but these are added so that nothing which might contribute to the strength and safety of the Splice may be omitted.



The above cut represents a Round Eye Socket. These are applicable to every use of a Wire Rope when it is desired to make a simple connection with it.

These Sockets are furnished for the various sizes of Wire Rope from $\frac{3}{4}$ inch to 5 inches in circumference. For all sizes of Wire Rope above these, Sockets will be made to order.

No.	Diameter. Size in inches.	Circumference. Size in inches.	Price.
1	$\frac{1}{2}$	$1\frac{1}{2}$	\$ 70
2	$\frac{5}{8}$	$1\frac{3}{4}$	85
3	$\frac{3}{4}$	2	1.05
4	$\frac{7}{8}$	$2\frac{1}{4}$	1.25
5	$1\frac{1}{8}$	$2\frac{1}{2}$	1.50
6	$1\frac{1}{4}$	$2\frac{3}{4}$	1.75
7	1	3	2.00
8	$1\frac{1}{8}$	$3\frac{1}{4}$	2.25
9	$1\frac{1}{4}$	$3\frac{1}{2}$	2.50
10	$1\frac{3}{8}$	$3\frac{3}{4}$	3.00
11	$1\frac{1}{2}$	4	3.50
12	$1\frac{3}{4}$	$4\frac{1}{2}$	4.50
13	$1\frac{7}{8}$	5	5.50

In ordering Sockets give measurement of diameter or circumference of Wire Rope in inches.



This cut shows the metallic Socket in cross sections. It illustrates clearly the solidity of the metallic combination. No-interstices, but the union of socket and wire rope is complete.



BARREL SOCKET.



This cut represents the Barrel Socket, designed for Elevators, but applicable to Ship, Quarry and general use. These sockets are made to fit the different sizes of Wire Rope, from 2 to 5 inches.

In ordering Sockets give measure of diameter or circumference of Wire Rope in inches.

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out these
strength

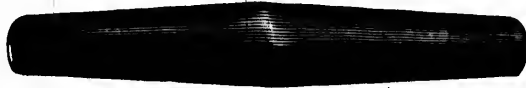
These are
to make a
Wire Rope
of Wire

Price.

- \$ 70
- 85
- 1.05
- 1.25
- 1.50
- 1.75
- 2.00
- 2.25
- 2.50
- 3.00
- 3.50
- 4.50
- 5.50

circumfer-

DOUBLE-END SOCKET.



The Double-End Socket represented above, consists of two Sockets joined at their bases, and is for the purpose of splicing the ends of two Wire Ropes together.

NOTE.—In applying these Sockets, after the first splice is made and cooled, keep an inch or two of that end where the rope enters cool by wetting, while heating for the other splice.

Diameter. Size in inches.	Circumference. Size in inches.	Price.
$\frac{1}{2}$	$1\frac{1}{2}$	\$1.20
$\frac{3}{8}$	2	1.50
$\frac{3}{4}$	$2\frac{1}{4}$	1.75
$1\frac{1}{8}$	$2\frac{1}{2}$	2.00
$\frac{7}{8}$	$2\frac{3}{4}$	2.25
1	3	2.50
$1\frac{1}{8}$	$3\frac{1}{2}$	3.00
$1\frac{1}{4}$	$3\frac{3}{4}$	3.50

JAW AND BOLT EYE SOCKET COUPLING.



The Jaw and Bolt Eye Socket Coupling as shown in above cut is useful for many purposes where a temporary or permanent coupling is needed for Wire Rope.

Diameter. Size in inches.	Circumference. Size in inches.	Price.
$\frac{1}{2}$	$1\frac{1}{2}$	\$.85
$\frac{3}{8}$	$1\frac{3}{4}$	1.05
$\frac{3}{8}$	2	1.20
$\frac{3}{4}$	$2\frac{1}{4}$	1.40
$1\frac{1}{8}$	$2\frac{1}{2}$	1.60
$\frac{7}{8}$	$2\frac{3}{4}$	1.80
1	3	2.00
$1\frac{1}{4}$	$3\frac{3}{4}$	2.75

Wire Rope Fastenings.

MADE FROM BEST SIEMENS STEEL.

HOOK AND SOCKET.



	Loose.	Fastened.
For 1 3/4 inch (diameter) Rope..... each	\$10.00	\$11.50
“ 1 5/8 “ “ “	8.00	9.25
“ 1 1/2 “ “ “	6.00	7.00
“ 1 1/4 “ “ “	5.00	6.00
“ 1 3/8 “ “ “	4.50	5.25
“ 1 “ “ “	3.75	4.25
“ 7/8 “ “ “	3.50	4.00
“ 3/4 “ “ “	3.25	3.75
“ 5/8 “ “ “	2.50	3.00
“ 1/2 “ “ “	2.50	3.00
“ 3/8 “ “ “	2.25	2.75

OVAL AND ROUND THIMBLES SPliced IN.

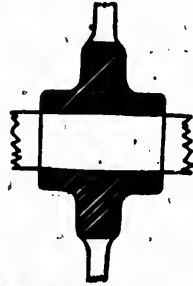
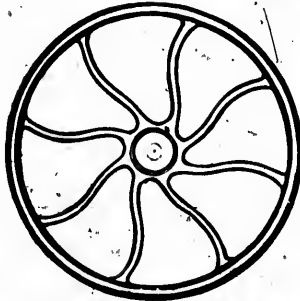


THIMBLE AND CLAMPS.



Prices according to Size.

Wheels for Transmission of Power by Wire Rope.

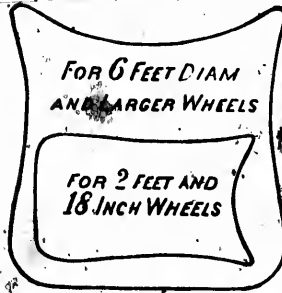


Wheels Bored to Fit Shaft and Lined with Patent Rubber.

1	½ ft. diameter.....	\$ 7 each.	7	ft. diameter.....	\$ 80 each.
2	"	8 "	8	"	110 "
3	"	20 "	9	"	180 "
4	"	28 "	10	"	210 "
5	"	40 "	11	"	
6	"	65 "	12	"	

Special Prices for Larger Wheels.

Patent Rubber Lining for Transmission Wheels.

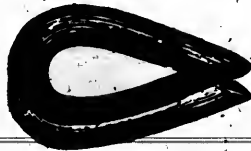


The above shows Full Size Cross Section for each Wheel.

Extra Heavy Oval Thimble,

GALVANIZED.

Prices according to size.



**MALLEABLE IRON
BLOCKS FOR WIRE ROPE.**



**Single Wire Rope Block,
WITH BECKET.**

**Double Wire Rope Block,
NO BECKET.**

Size of Block.	Size of Sheave.	Size of Rope.	Price.
14 inch.	10 × 1½	½ to ⅝	Single.....\$ 7.50
			Double 13.50
			Triple 19.50
15 "	11 × 1¾	⅝ to ¾	Single..... 10.50
			Double 19.00
			Triple 25.00
18 "	13 × 2	¾ to 1	Single..... 13.50
			Double 25.00
			Triple 35.00

MALLEABLE IRON

Patent Automatic Snatch Blocks.



OPEN.

Size of Block.	Size of Sheave.	Size of Rope.	Price.
8 inch.	4 X 1	1	\$ 6.50
10 "	5½ X 1¼	1¼	9.50
12 "	7 X 2	1½	11.50
14 "	8 X 2¼	1¾	14.25
16 "	9 X 2½	2	18.75
18 "	10 X 3	2½	22.75
20 "	11 X 3½	3	28.50

TELEGRAPH CODE.

Ship to-day without fail	Staid.
How soon can you ship?	Severe.
Ship to-day per express.....	Secret.
Make at once and ship immediately.....	Sarah.
When and by what route did you ship?	Sold.
Get ready for immediate shipment, directions by mail.	Silver.
Answer by telegraph at once.....	Salmon.
Can ship about	Susan.
Cannot ship before.....	Sister.
None in stock, can make and Ship	Summer.
Order booked for immediate shipment	Simple.

GALVANIZED CLOTHES LINE.

No. 17.	Plume.
" 18	Pullet.
" 19	Pancake.
" 20	Painter.

LENGTHS—FEET.

5.....	Wagner.
10.....	Walker.
15.....	Wallace.
20.....	Walsh.
25.....	Walter.
30.....	Warner.
35.....	Washburn.
40.....	Washington.
45.....	Weaver.
50.....	Webster.
100.....	Weller.
200.....	Wescott.
300.....	Wesley.
400.....	Weston.
500.....	Wheaton.

LENGTHS—FEET.

600.....	Wheeler.
700.....	Whipple.
800.....	White.
900.....	Whitney.
1000	Wilbur.
2000.....	Wilcox.
3000.....	Williams.
4000.....	Wilson.
5000.....	Winchester.
6000.....	Wyoming.
7000.....	Watson.
8000.....	Wanamaker.
9000.....	Ward.
10000.....	Worthington.

Two or more cypher-words may be used to express lengths for which there are no single cypher-words.

DIRECTIONS

— FOR —

MAKING THE PATENT SPLICE.

FIRST—Measure the depth of the Socket, and cut the *same* length from the *Hemp Heart* of the Rope.

SECOND—Melt a sufficient quantity of filling metal.

THIRD—Insert the end of Rope to be spliced into the Socket, and hold in a horizontal position over a strong heat, *until a piece of the filling metal will melt* when held on the *upper* side of Socket, and passed over its **ENTIRE LENGTH**.—(*This heat is required specially at the base or LARGEST PART OF THE SOCKET*)—and until the rope becomes too hot for the hand at a distance of three inches from the Socket. Have the filling metal *hot enough to ignite* a shaving or piece of paper when brought in contact with it.

FOURTH—Place the Splice with the rope inserted in an upright position, and pour the Socket *Full*, after which it may be cooled gradually with water, when it is ready for use.

In splicing crucible cast steel wire, care must be taken not to heat the socket containing the rope so highly as to draw the temper.

Abide Strictly by these Directions!

FILLING METAL USED FOR PATENT SPLICE,

Supplied by us at 25 cents per lb.

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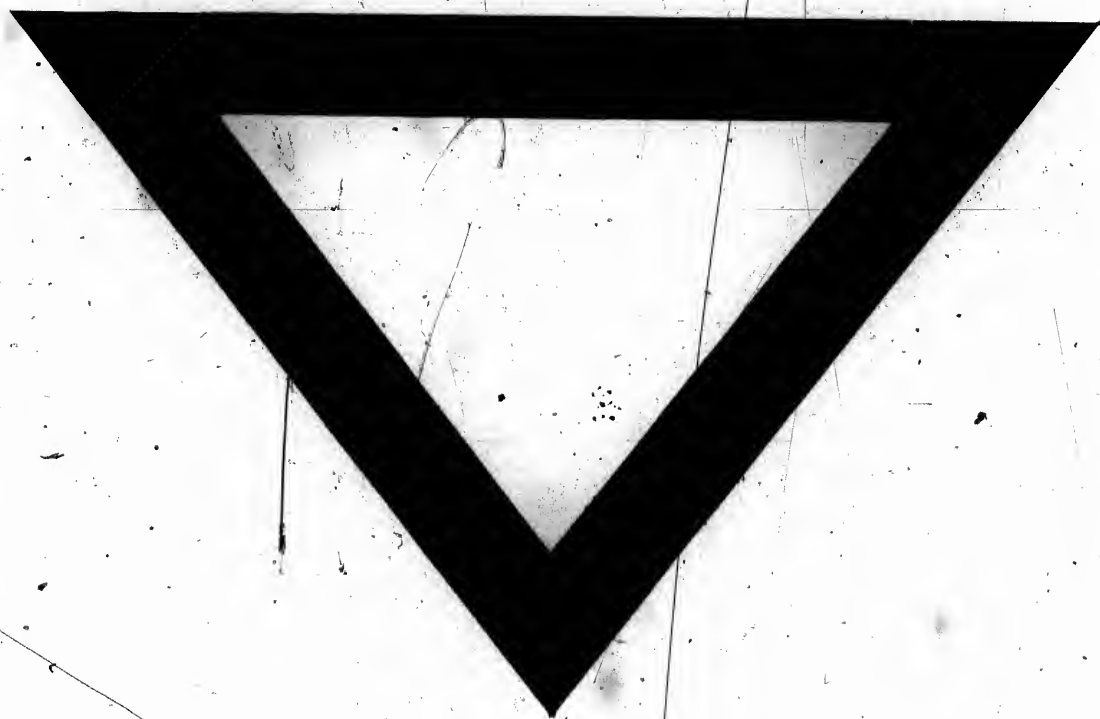
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