FILE

June 11, 1913.

Llewellyn Iron Works,

Main & Redondo.

Los Angeles, Cal.

Gentlemen:-

I would be pleased to have quotation on the following list of material to be shipped immediately upon of order for same to either Oceanside or San Diego, Cal., please quote price to both places.

1 end-dump car - about 16 cu ft capacity 24" Gage.
1000 ft. 20# rails.
100 fish plates) for
1 keg spikes) above
1 keg bolts) rails.
1 sheet iron shooting plate 6' x 8' x 3/8" thick.
4 - 4 ft. spooners.
4 bars 7/8" octagon drill steel.

Also if you can, please give us some information on motors either gas or electric for drawing these cars, such as, price, weight, power, capacity and size for 24" Gage track.

Yours truly,

Engineer.
Volcan Land & Water Co.

WK

Llewellyn Iron Works

LOS ANGELES, June 21, 1913.

Mr. Wm. S. Post,

#514 Am. National Bank Bldg.,

San Diego,

Calf.

Dear Sir:-

On June 13th we had the pleasure of quoting you on the following:-

"1-End Dump Car 16 cu. ft. Capacity-24"gauge,
FIFTY ($50.00) DOLLARS

1000 feet 20# Rails, TWO AND THREE QUARTER CENTS (.02¾¢) per pound.

Fish Plates and Bolts for the 20# rail will be THIRTY FIVE CENTS (.35¢) per set.

Spikes for the above rails, at THREE AND ONE QUARTER CENTS (.03¼¢) per pound

1 - Steel Plate, 6' x 8' x 3/ 8" thick, THIRTY DOLLARS ($30.00)
4 - 4foot Spooners, TWO DOLLARS ($2.00)

4 - Bars 7/8" Octagon Drill Steel, TEN CENTS PER LB. (.10¢)

All of these prices f. o. b. cars Los Angeles."

Not hearing from you, we would like to know what disposition you have made of same and if we may expect to be favored with your order.

Respectfully yours,

LLEWELLYN IRON WORKS.

By D. E. Llewellyn
Secretary.

Dict. DEL/MT.

Llewellyn Iron Works

LOS ANGELES, November 4, 19

Mr. Wm. S. Post.
514 American National Bank Bldg.,
San Diego, Calif.

Dear Sir:-

Your recent favor relative to Ore Car and steel rails duly received. We are pleased to send you under separate cover our catalogue descriptive of the ore cars we manufacture, which we hope will be interest to you.

ALL QUOTATIONS ARE FOR IMMEDIATE ACCEPTANCE SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.
ALL AGREEMENTS ARE CONTINGENT ON STRIKES, ACCIDENTS AND OTHER DELAYS UNAVOIDABLE OR BEYOND OUR CONTROL.

Relative to 1300 ft. of 20# Tee Rail, with fish plates, bolts, nuts and spikes, we are pleased to advise that we will furnish you with all this material delivered F. O. B. cars, our Works, for the sum of TWO HUNDRED AND SEVENTY FIVE ($275.00) DOLLARS.

Hoping to be favored with your order, we are,

Respectfully yours,

LLEWELLYN IRON WORKS.

By A W Rammetz

Dict. AWR/MT.

ORE CARS
AND
HOISTING APPLIANCES
LLEWELLYN IRON WORKS
LOS ANGELES, CAL.

KINGSLEY, MOLES & COLLINS CO.

ORE CARS

On the opposite page we illustrate two styles of Steel Ore Cars we build for mining purposes.

These cars are of the side and end dump pattern. They are built of heavy steel plates, and in a thorough and workmanlike manner. The bottom is reinforced with wood having a steel-plate bottom on top of same. The wheels have chilled rims, and they are provided with dust-caps to protect the bearings. The axles are cold rolled steel, and are large for the work they have to perform.

We build a variety of sizes of both types of these cars and usually have a number of the various sizes in stock with capacities of from 10 to 20 cubic feet.

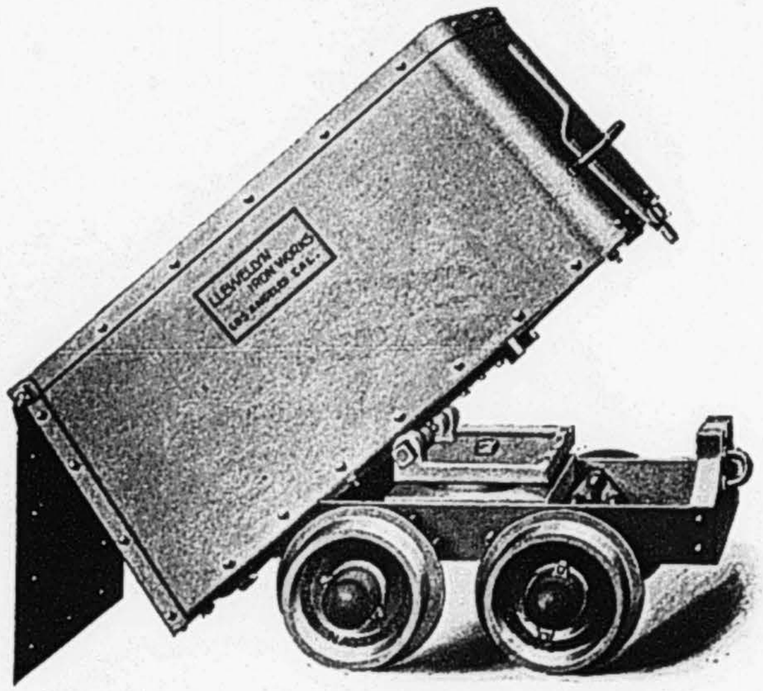


FIG. 1

FIG. 2

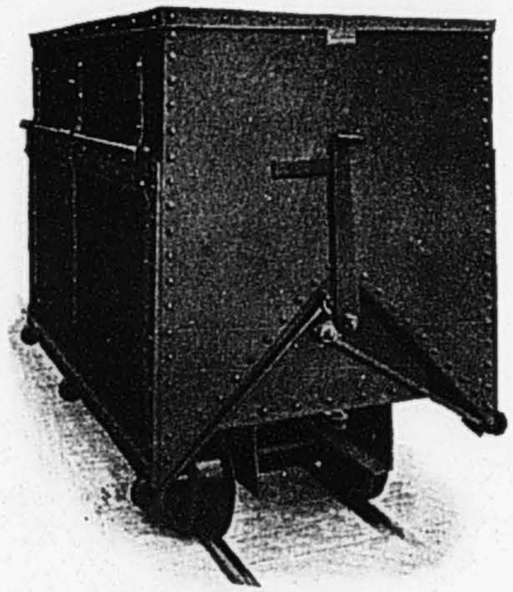
GABLE BOTTOM AND SLANTING BOTTOM SIDE DUMP ORE CARS

The cuts on the opposite page illustrate large cars convenient for hauling ore in large quantities. They are built of heavy steel plate throughout, and have large wheels with chilled rims and dust proof roller bearings.

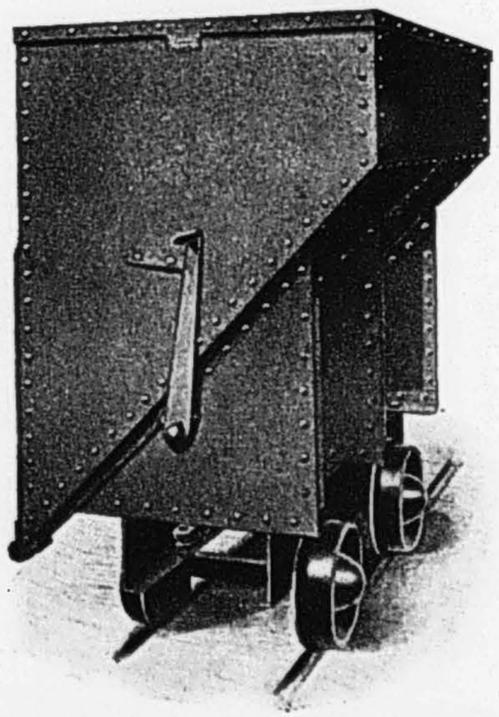
We build these cars in sizes holding 20, 25, 30, 40 and 50 cubic feet.

Breaks may be applied to any of these cars at a slightly additional cost.

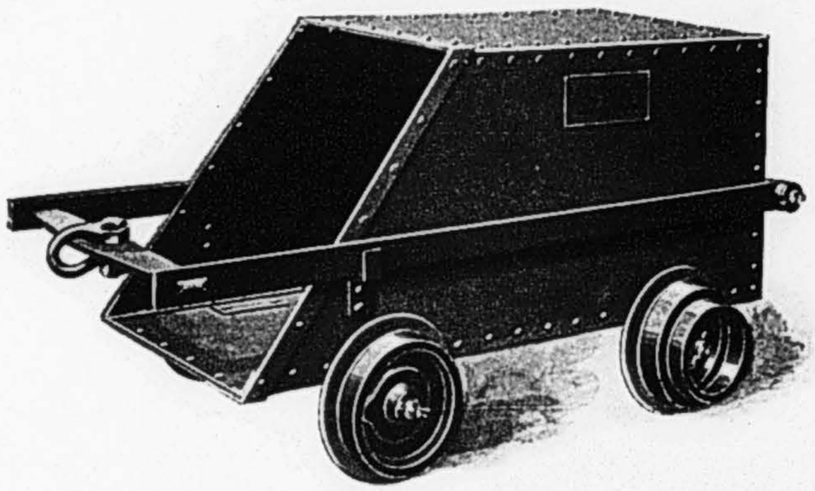
These cars are particularly convenient for loading and unloading cyanide tanks.



GABLE BOTTOM CAR



SLANTING BOTTOM SIDE DUMP CAR



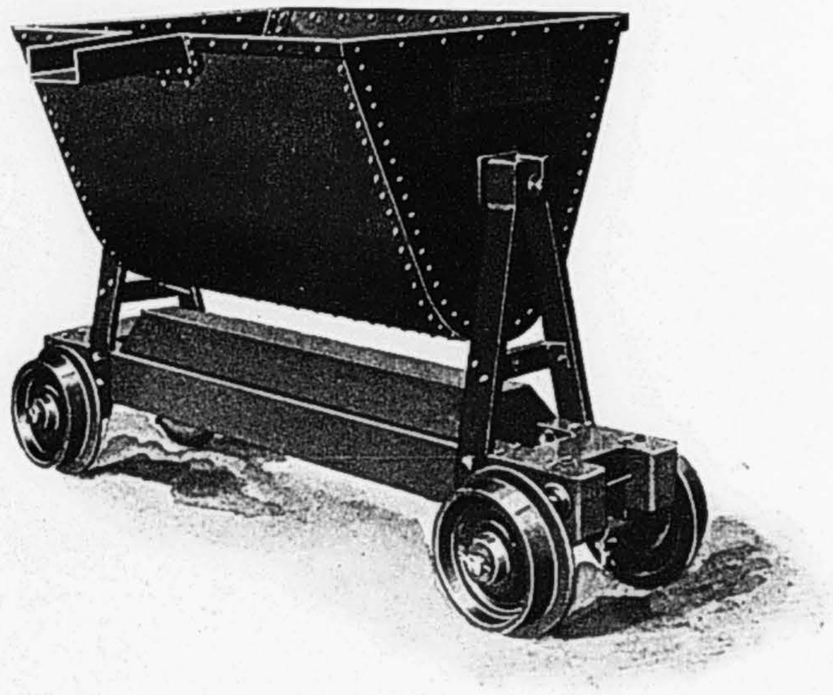
ORE SKIP

The above illustration shows an Ore Skip for hoisting on rails from an incline shaft.

The Skip is made from heavy plates riveted together at the edges with heavy angle bars. The bottom and end are of heavier plates than the sides and top. The axles are large for the work they are called upon to perform, and the wheels have chilled treads.

If it is desired, a valve can be placed in the end to facilitate hoisting water.

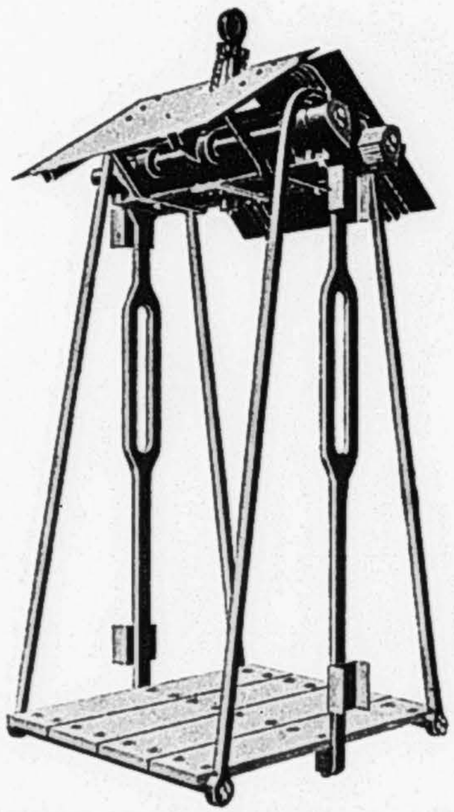
We build these skips of any size and for any angle of shaft. They are perfectly balanced and well built in every particular.



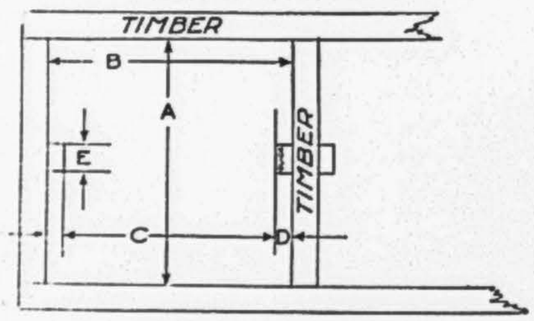
TAILINGS CAR

The above illustration shows a car specially designed for receiving mill tailings so they may be conveniently carried out to the dump.

The tailings are run into the car, and the water overflows from the spout into a settling box, where the slimes are settled out of the water. The coarse sands remain in the car. This car is particularly useful when it is necessary to save the water used for milling. It will hold about one ton of sand, but will be built in any size desired.



HOISTING CAGE—FOR VERTICAL SHAFT



FLOOR PLAN

HOISTING CAGE

For Vertical Shaft

The illustration on page 8 shows our standard Hoisting Cage. The cage is equipped with safety catch attached to the draw head, and arranged so that upon the accidental breaking of the rope, the powerful springs will throw the dogs in to engage the shaft guides.

The roof is hinged to permit the lowering of long timbers, etc. The bars on the floor will be made for any gauge car, or rails will be put on instead, if desired.

The floor is made of hard oak and strongly bolted to the cross bars. If it is desired, the oak floor may be covered with steel plate, or steel bars may be used to make the floor in the form of a grating.

The side bars and corner bars are made of mild steel of a high tensile strength, and the cross pieces of the draw-head are heavy channel bars. The cage is designed with a high factor of safety, and is well built in every respect.

In asking for quotations or ordering, kindly send a sketch giving dimensions as shown in the small plate.

LANDING DOGS

We can furnish on short notice Landing Dogs made of steel forgings throughout. In asking for quotations or when sending orders for same, kindly send sketch giving dimensions as if for hoisting cage.

FIG. 1

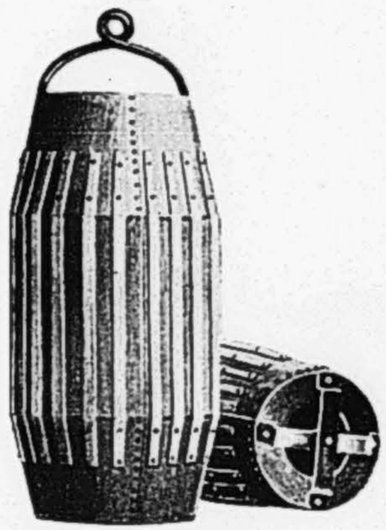


FIG. 2

FIG. 2

ORE AND WATER BUCKETS

We illustrate above a popular form of bucket used for hoisting ore or water. For hoisting ore the bottom of the bucket is made plain, and for hoisting water, a valve with leather face is placed in the bottom as shown in Figure 2.

These buckets are well built, and of heavy material, and if desired the reinforcing straps may be put on as shown in Figure 2.

This type of bucket is frequently used for hoisting from an incline shaft as well as from a vertical shaft.

They are built in any size desired, and we usually have a variety of sizes in stock.

FIG. 1

FIG. 2

ORE BUCKETS

Figure 1 in the above illustration shows a prospector's Bucket for hoisting a light load by a hand windless. It is made of steel-plate and usually has a capacity of from 1 to 3 cubic feet.

Figure 2 illustrates a popular style of Ore Bucket that is used for capacities up to 1500 pounds. It is frequently used for hoisting on a slight incline and for such use may be reinforced on the side with wearing strips. If desired a valve may be placed in the bottom to facilitate hoisting water.

We usually have a variety of sizes of these buckets in stock.

FIG. 1

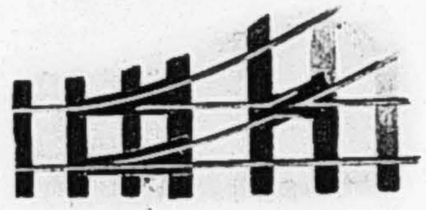
FIG. 2

FIG. 3

ROPE FITTINGS

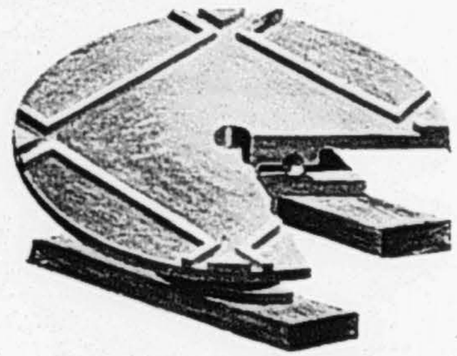
Figures 1 and 2 in the above illustration show rope end fittings for attaching the car, skip, bucket or cage to the rope. Figure 3 shows a chain safety hook which is used between the car and the rope end fittings.

These parts are made of solid steel forgings, and for any size rope desired.



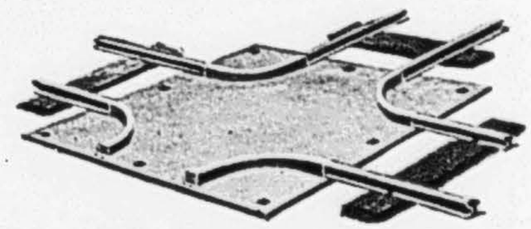
SWITCH

The above illustrates a cast-iron switch for ordinary mine use. The parts furnished are the Switch, Switch Mate and Frog. They are made for any size rail and gauge of track. Suitable holes are cored in the castings to allow fastening them to the ties.



TURN TABLE

The above illustrates a Ball Bearing Turn-table for general mine use. These turn-tables are of cast-iron throughout, and we build them for any gauge of track and with plain or checkered top.



TURNING PLATE

When the use of a turn table is not demanded, the Turning Plate illustrated may be used. It is built of a heavy steel plate with bent rails riveted on, and suitable holes in plate for fastening the turn plate down.

HOW TO ORDER WIRE ROPES

In ordering wire ropes be sure to specify if dimensions given are diameter or circumference.

Be very particular to state style of rope wanted, also the kind of material, either iron or steel. If uncertain which will best answer your purpose, please indicate the use to which the rope is to be put, and we will supply the style and quality best adapted to the needs stated.

If for elevators, state whether hoisting rope or hand rope is wanted, and if the former, specify whether iron or steel.

If rope is required to run over sheaves or pulleys, state how many, and the size of each.

POINTS TO REMEMBER

Wire Ropes are as flexible as new hemp ropes of equal strength, and much more efficient as standing ropes, being uninfluenced by weather, and more durable in hoisting.

It is always advisable to use the largest practicable drums, sheaves or pulleys, and to avoid high velocities, as ropes so used will last much longer.

A strain of one seventh of the breaking strain may be taken as a safe working load, though for standing ropes this may be exceeded.

The use of Steel Wire Rope is becoming general, because of its greater strength. Its durability is from 30 to 50 per cent. greater than that of ropes made of Iron Wire.

To preserve Wire Rope from wear or exposure, cover it thickly with linseed oil, or with paint formed of equal parts linseed oil and Spanish brown or lampblack.

If used under water or under ground, the best preservative is made by adding to one barrel of Swedish or Stockholm tar, one bushel of fresh slacked lime; boil well, and while hot saturate the rope. Sawdust or oatmeal is sometimes added with good effect.

Wire rope must not be coiled or uncoiled like hemp rope. It should be unwound as from a reel, to prevent kinking. It is always advisable to Line the grooves of the cast-iron pulleys in which the rope runs, with Wood (set on end), Leather or Rubber. In the use of wire rope for transmitting power, this is imperative, because of the great velocity with which the ropes run.

Avoid, if possible, overlapping of Wire Rope on drums.

For shafts and elevators, the load lifted should not be more than one-tenth of the strength of the rope.

Do not subject Wire Rope to sudden strain.

For Wire Rope to be exposed to intense heat, wire core may be substituted for the ordinary hemp center.

The grooves on drums and sheaves should be a trifle larger than the rope, perfectly smooth and uniform to the surface of the rope.

Wire Ropes should run around all sheaves without chafing the sides of the grooves.

IRON HOISTING ROPE

SIX STRANDS—NINETEEN WIRES EACH—HEMP CORE

Trade Number	Price per Foot in Cents.	Diameter in Inches.	Approximate Circumference in Inches.	Weight per Foot in Lbs.	Approximate Brk'g Strain in Tons of 2000 Lbs.	Allowable Work'g Strain in Tons of 2000 Lbs.	Minimum Diam. Drum or Sheave in Feet.	Circumference in In. of New Manila Rope of Equal Strength.
3	$ 80	1¼	5½	4.90	54.	9.	7.5	
4	63	1⅛	5	4.22	46.	8.	6.	
5	57	1½	4¾	3.60	40.	7.	5.5	10.
5½	48	1⅜	4¼	3.02	33.	5.5	5.25	9.
6	40	1¼	4	2.50	28.	4.5	5.	8.
7	33	1⅛	3½	2.02	22.	4.	4.5	7.5
8	26	1	3	1.60	19.	3.2	4.	6.25
9	20	⅞	2¾	1.21	14.	2.3	3.75	5.5
10	16	¾	2¼	.89	10.5	1.7	3.5	4.3
10¼	12	⅝	2	.62	7.4	1.2	3.	4.
10½	10	9/16	1¾	.49	5.8	.9	2.75	3.5
10¾	08	½	1½	.39	4.7	.8	2.	3.
10a	07½	7/16	1¼	.30	3.6	.6	1.75	2.75
10b	07	⅜	1⅛	.22	2.6	.4	1.5	2.25

The wires in these Ropes, being made of the best quality of Swedish iron, are softer and more pliable than Steel.

PLOW STEEL HOISTING ROPES

SIX STRANDS—NINETEEN WIRES EACH—HEMP CORE

Trade Number	Price per Foot in Cents.	Diameter in Inches.	Approximate Circumference in Inches.	Weight per Foot in Lbs.	Approximate Brk'g Strain in Tons of 2000 Lbs.	Allowable Work'g Strain in Tons of 2000 Lbs.	Minimum Diam. Drum or Sheave in Feet.	Circumference in In. of New Manila Rope of Equal Strength.
3	$1 35	1¼	5½	4.90	134.	22.	9.	
4	1 08	1⅛	5	4.22	115.	19.	8.	
5	93	1½	4¾	3.60	100.	17.	7.	
5½	77	1⅜	4¼	3.02	85.	14.	6.	
6	63	1¼	4	2.50	72.	12.	5.5	
7	52	1⅛	3½	2.02	60.	10.	5.	
8	43	1	3	1.60	48.	8.	4.5	
9	34	⅞	2¾	1.21	36.	6.	4.	
10	26	¾	2¼	.89	27.	4.5	3.5	
10¼	19	⅝	2	.62	19.	3.	3.25	
10½	16	9/16	1¾	.49	15.	2.5	2.75	
10¾	14	½	1½	.39	12.	2.	2.5	
10a	13	7/16	1¼	.30	9.2	1.5	2.25	
10b	12½	⅜	1⅛	.22	6.8	1.1	2.	

The material of which Plow Steel Ropes are made has a tensile strength of approximately 30 Per cent. greater than cast steel. The sheaves and drums should be larger than for cast steel ropes.

EXTRA STRONG CRUCIBLE CAST STEEL HOISTING ROPE

SIX STRANDS—NINETEEN WIRES EACH—HEMP CORE

Trade Number	Price per Foot in Cents.	Diameter in Inches.	Approximate Circumference in Inches.	Weight per Foot in Lbs.	Approximate Brk'g Strain in Tons of 2000 Lbs.	Proper Working Load, Tons of 2000 Lbs.	Minimum Diam. Drum or Sheave in Feet.	Circumference in In. of New Manila Rope of Equal Strength.
3	$1 15	1¾	5½	4.90	118.	20.	9.	
4	91	1⅝	5	4.22	102.	18.	8.	
5	80	1½	4¾	3.60	88.	15.5	7.	
5½	67	1⅜	4¼	3.02	75.	13.	6.	
6	55	1¼	4	2.50	63.	11.	5.5	
7	45	1⅛	3½	2.02	52.	9.	5.	
8	36	1	3	1.60	42.	7.5	4.5	10.5
9	28	⅞	2¾	1.21	31.	5.5	4.	9.
10	22	¾	2¼	.89	23.	4.5	3.75	8.
10¼	16½	⅝	2	.62	16.7	3.	3.5	6.75
10½	14	9/16	1¾	.49	13.2	2.4	3.	6.
10¾	12½	½	1½	.39	10.5	2.	2.75	5.25
10a	11½	7/16	1¼	.30	8.1	1.5	2.25	4.5
10b	11	⅜	1⅛	.22	6.	1.	2.25	4.

The value of this Rope as compared with Standard Crucible Cast Steel Ropes is in the greater tensile strength.

CRUCIBLE CAST STEEL HOISTING ROPE

SIX STRANDS—NINETEEN WIRES EACH—HEMP CORE

Trade Number	Price per Foot in Cents.	Diameter in Inches.	Approximate Circumference in Inches.	Weight per Foot in Lbs.	Approximate Brk'g Strain in Tons of 2000 Lbs.	Allowable Work'g Strain in Tons of 2000 Lbs	Minimum Diam. Drum or Sheave in Feet.	Circumference in In. of New Manila Rope of Equal Strength.
3	$ 93	1¾	5½	4.90	102.	17.	7.5	
4	74	1⅝	5	4.22	85.	14.	6.	
5	66	1½	4¾	3.60	77.	13.	5.5	
5½	56	1⅜	4¼	3.02	65.	11.	5.25	
6	46	1¼	4	2.50	55.	9.	5.	
7	38	1⅛	3½	2.02	45.	7.5	4.5	
8	30	1	3	1.60	36.	6.	4.	10.
9	23	⅞	2¾	1.21	27.	4.5	3.75	8.
10	18	¾	2¼	.89	20.	3.4	3.5	6.
10¼	14	⅝	2	.62	14.5	2.4	3.	5.5
10½	12	9/16	1¾	.49	11.5	2.	2.75	5.
10¾	11	½	1½	.39	9.	1.5	2.	4.5
10a	10	7/16	1¼	.30	7.2	1.2	1.75	4.
10b	09½	⅜	1⅛	.22	5.3	.9	1.5	3.75

This style of Rope is adapted to any kind of haulage or hoisting.

It is made of the best quality Crucible Cast Steel, and has double the strength of Ropes of equal diameter made of iron wires.

Ed Fletcher Papers

1870-1955

MSS.81

Box: 16 Folder: 20

General Correspondence - Llewellyn Iron Works