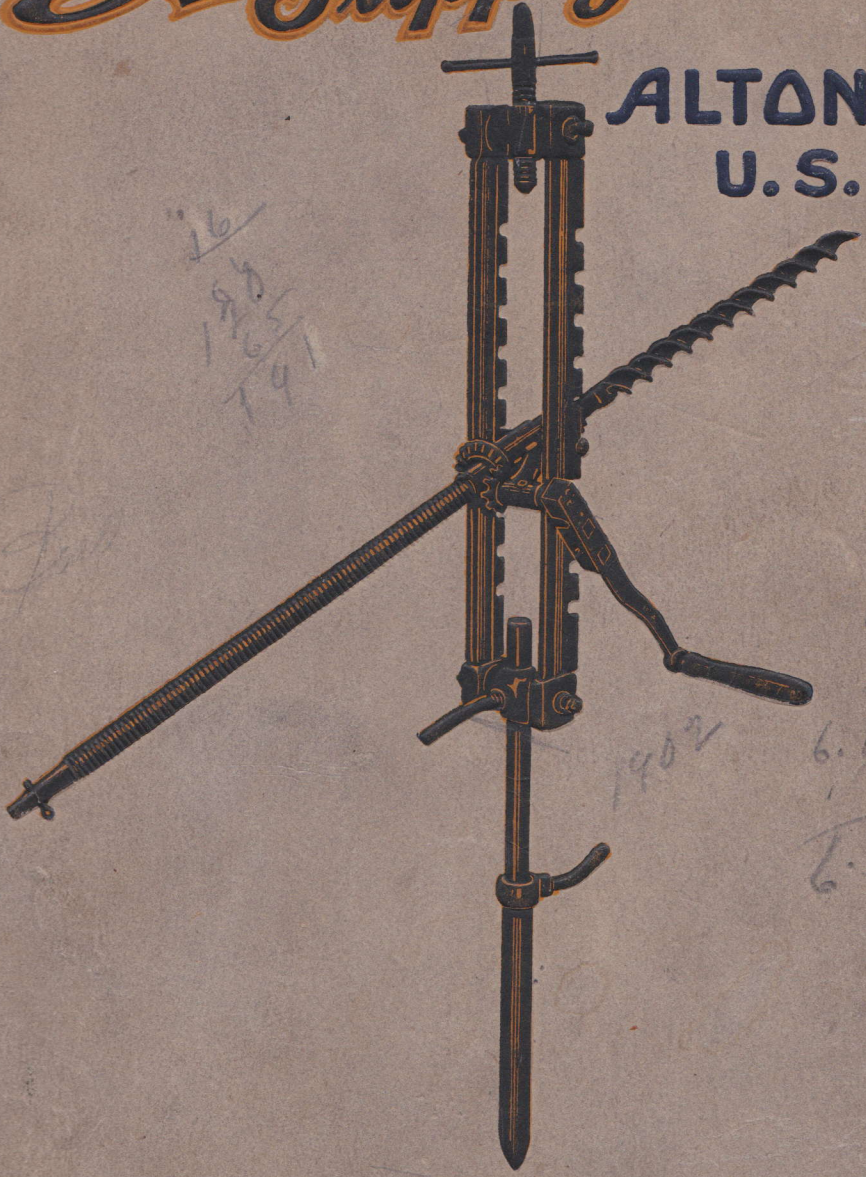


Beall Bros. Supply Co.

ALTON, ILL.
U. S. A.



16
98
186
14

1.25
3.20
90
125
20

1402

6.80

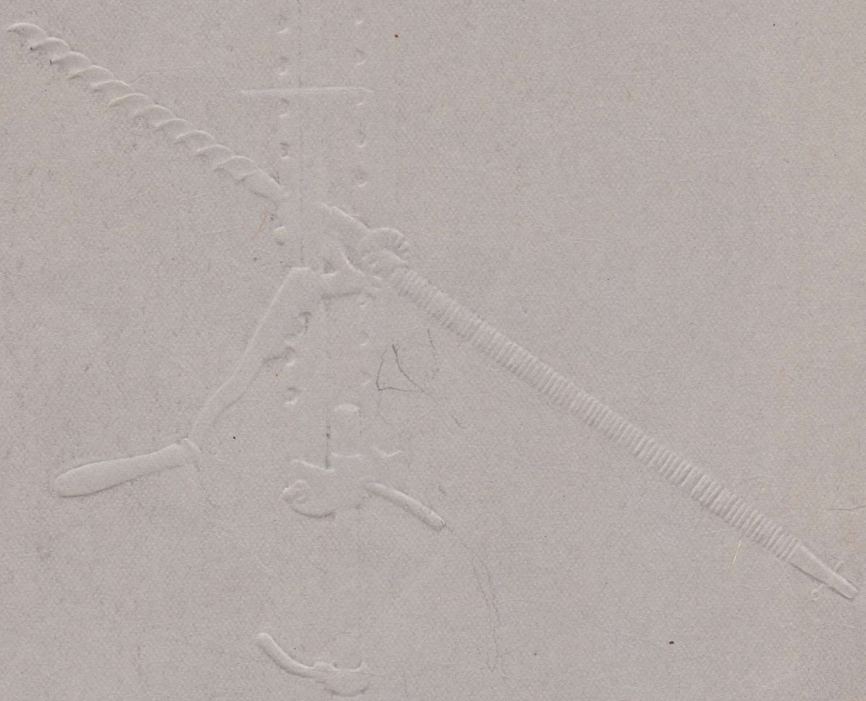
6.25

1815
500
31
1902

MINERS' TOOLS
.. AND ..
MINERS' SUPPLIES

Levell & Wadsworth
Levell & Wadsworth

W. A. T. A.
U. S. A.



MINERS' SUPPLIES
AND
MINERS' TOOLS

1920

FIFTIETH ANNUAL
CATALOG

**BEALL BROS.
SUPPLY CO.**

ALTON, ILL.

MANUFACTURERS OF
MINERS' TOOLS
and
MINERS' SUPPLIES

FACTORY—ALTON, ILLINOIS

DISTRIBUTING WAREHOUSES
Marion, Illinois Terre Haute, Indiana

TO THE TRADE.



As you turn the pages of our new catalogue, perhaps many of you who are old friends, and customers, will make comment on its growth. From the days when we first started in business and displayed our product through the medium of a small leaflet we have enjoyed the confidence of the trade to such an extent that we are now rated as the largest manufacturer of Miners' Tools and Supplies, in the United States.

Careful attention to the detail and selection of materials used in our plant enabled us to make everything better than our competitors, and for that reason we have had little complaint and much encouragement.

Our personal guarantee backs our entire product today just as it has through the sixty years of our manufacturing experience, and we look forward to a continuation of the pleasant business relations we have always had with our many customers who we have come to look upon as friends.

When in the vicinity of our plant we will be pleased to have you call and investigate fully our methods of production and the workings of our different departments, for it is often our good fortune to be able to show you how to get maximum efficiency from our tools.

Thanking you for the favors of the past and assuring you of the heartiest co-operation in the future, we are,

Yours very truly,

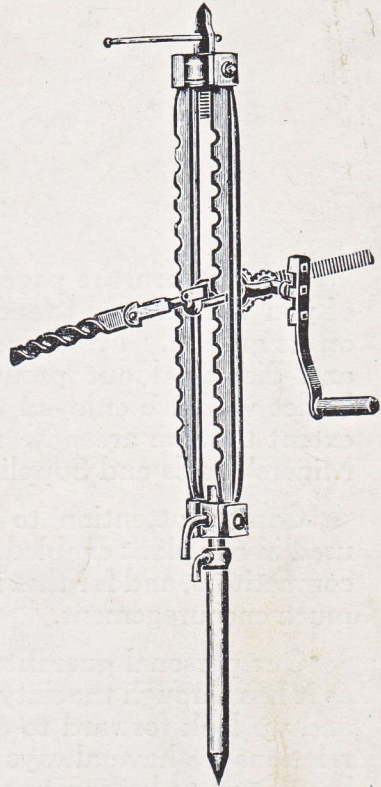
BEALL BROS. SUPPLY CO.

BEALL'S Q POST DRILLS

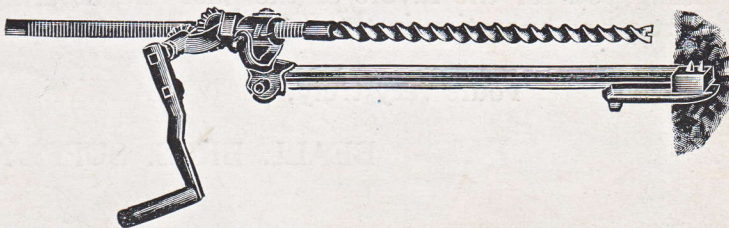
Unless otherwise specified we always furnish this machine with thread bar and boxing. Eight threads to the inch.

For hard drilling coal we can furnish thread bar and boxings with ten, twelve or fourteen threads to the inch.

For soft drilling coal we can furnish thread bar and boxing six square threads to the inch.

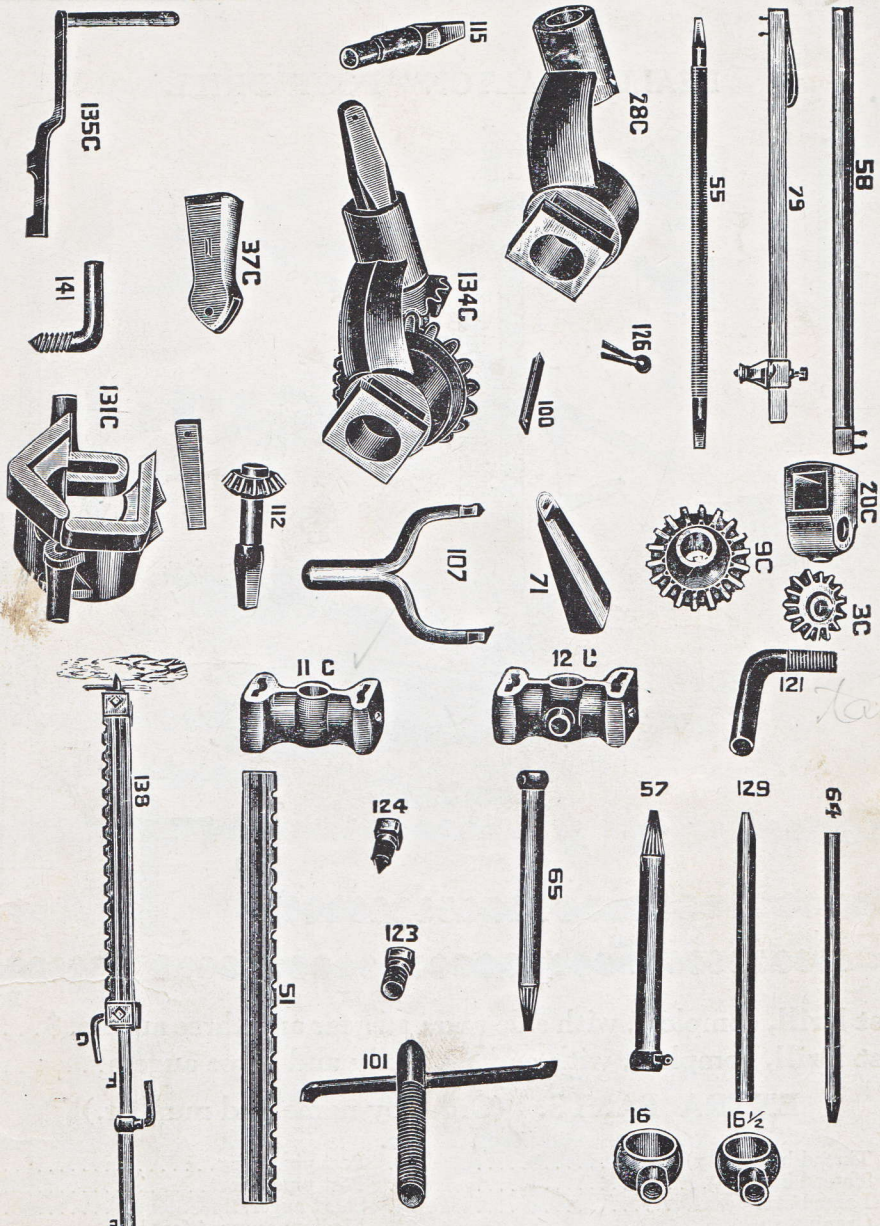


BEALL'S Q GRIP DRILLS



We can furnish this machine with thread bar and boxing same as the post drill.

PARTS OF BEALL'S Q DRILLS



EXTRA PARTS. (Order by name and number.)

Price of Post Drill, with gear.....\$.....
 Price of Post Drill, less gear.....
 Price of Grip Drill, with gear.....

- | | | |
|--------|--|---------|
| No. | | |
| 3-C. | or small cog wheel..... | \$..... |
| 9-C. | or large cog wheel..... | |
| 20-C. | Casting that fits on square grip bar (supports 107)..... | |
| 28-C. | Frame only, for gearing..... | |
| 37-C. | Square socket that goes on auger..... | |
| 55. | Thread bar..... | |
| 68. | Square steel grip bar only..... | |
| 71. | Plain wedge that fits on square grip bar..... | |
| 79. | Square grip complete, as shown in cut..... | |
| 100. | Pin for open or hinged boxing..... | |
| 107. | Complete chair, which supports boxing..... | |
| 112. | Small cog wheel, with journal..... | |
| 115. | Journal only, for small cog wheel..... | |
| 126. | Spring key..... | |
| 131-C. | Hinged or open boxing..... | |

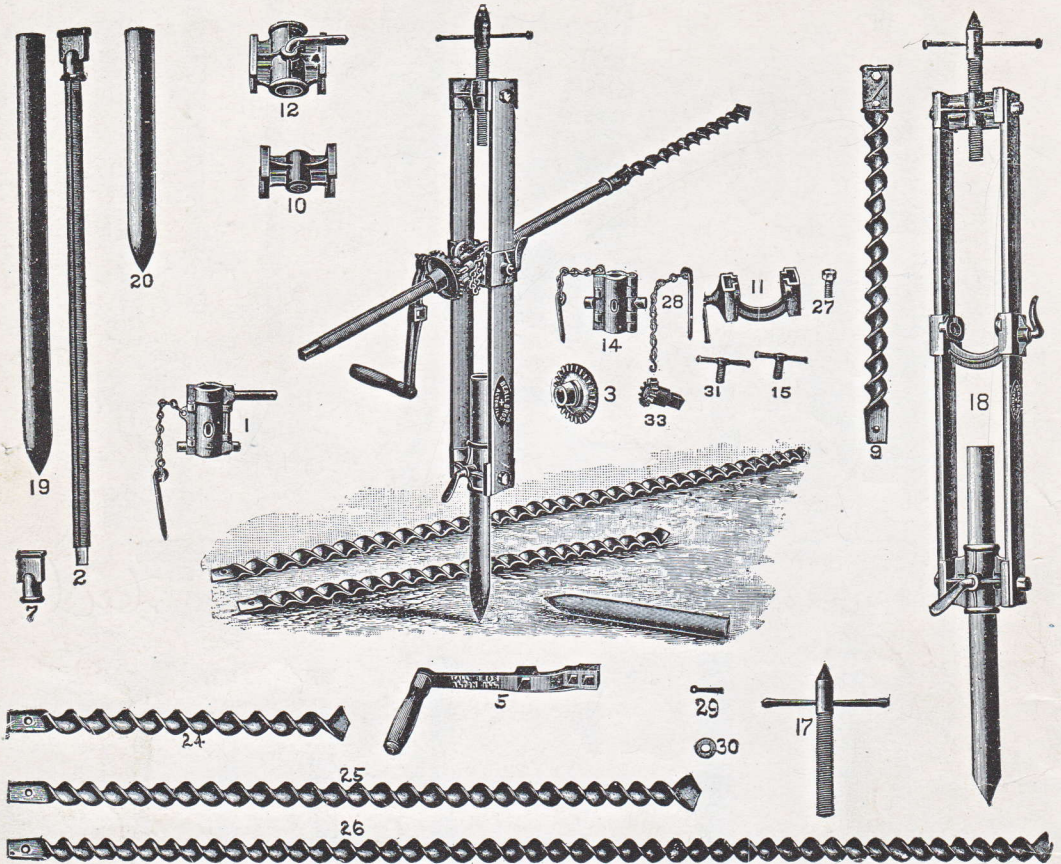
- | | | |
|--------------|---|---------|
| No. | | |
| 134-C. | Gearing only, for drill..... | \$..... |
| 135-C. | Crank only..... | |
| 141. | Tail screw (that secures casting 20-C to grip bar)..... | |
| 11-C. | or casting for post No. 101 jack screw..... | |
| 12-C. | or casting for post No. 129 stem..... | |
| 16. | Ring for 1 1/2 inch boot..... | |
| 16 1/2. | Ring for 1 1/4 inch boot..... | |
| 51. | Ribbed side bar for new style post (give number of post)..... | |
| 57. | Small boot (1 1/4 inches in diameter)..... | |
| 64. | Large stem (1 1/2 inches in diameter)..... | |
| 101. | Jack screw..... | |
| 121. | Tail set screw..... | |
| 123 and 124. | Bolts for post having ribbed side bars..... | |
| 129. | Small sized stem (that fits into 57)..... | |
| 138. | Post complete (as shown in cut)..... | |

When ordering drill always specify length of post.

231 & Boxing
 234 Side Gear

X 131 & Boxing with Patent Lock
 Y 134 & Side Gear

BEALL'S "ALTON" POST DRILL



Post Drill, complete, with side and end gear and three augers, \$.....
 Post Drill, complete, with end gear only and three augers.

EXTRA PARTS. (Order by name and number.)

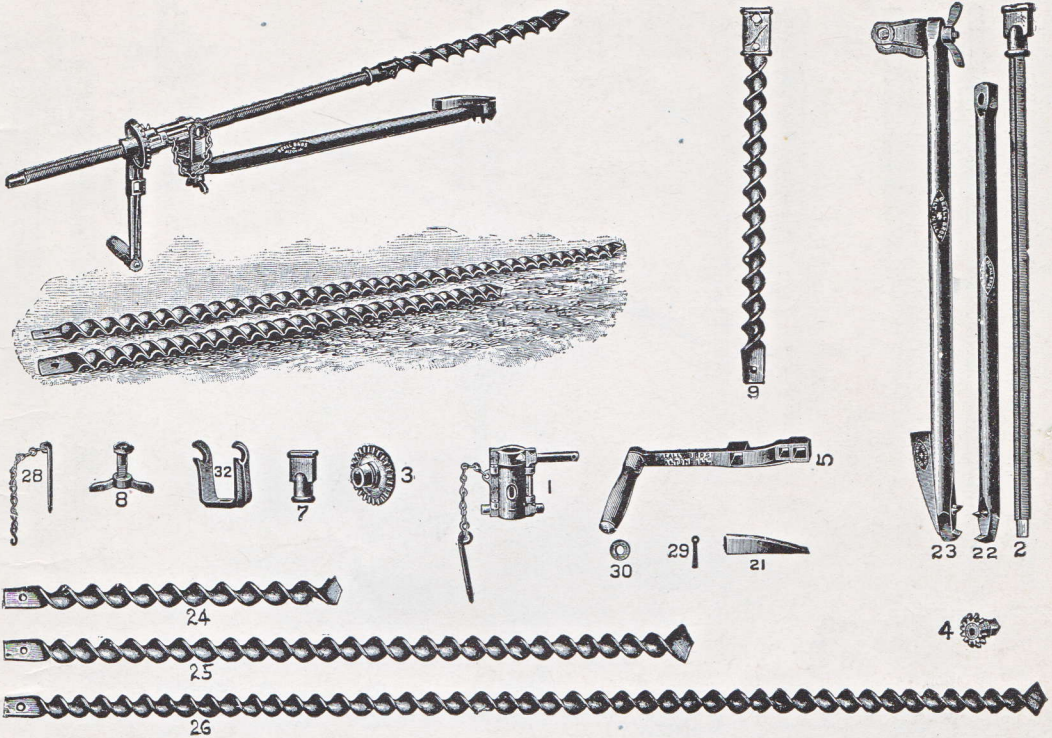
No.	Each	No.	Each
1.	Thread box (alloy).....\$.....	19.	Post pipe, long.....\$.....
2.	Thread bar.....	20.	Post pipe, short.....
3.	Large bevel wheel.....	24.	Short auger, 2 feet long.....
4.	Crank.....	25.	Medium auger, 4 feet long.....
5.	Small jack screw.....	26.	Long auger, 6 feet long.....
6.	Post jack screw.....	27.	Set screw for Nos. 10 and 12.....
7.	Auger socket.....	28.	Steel pin and chain for thread box.....
8.	Auger extension.....	29.	Spring key for crank.....
9.	Short auger.....	30.	Steel washer for crank pinion.....
10.	Medium auger.....	31.	Tail screw for No. 12.....
11.	Long auger.....	33.	Small bevel wheel, long hub.....
12.	Steel pin and chain for thread box.....		
13.	Spring key for crank.....		
14.	Steel washer for crank pinion.....		
15.	Tail screw for No. 12.....		
16.	Small bevel wheel, long hub.....		
17.	Post pipe, long.....		
18.	Post pipe, short.....		

Average weight of drills, complete, 85 lbs.
 When ordering drill always specify length of post.

Rock Machines

We manufacture the above machine for drilling hard substances, such as slate, etc. The Thread Bar is 12 threads to the inch, which is a slow feed, and smaller Augers, made of **The Best Tool Steel**. Price of same, \$1.50 above price of regular Coal Drill.

BEALL'S "ALTON" GRIP DRILL



Grip Drill, complete, with side and end gear and three Each
augers.....\$.....

EXTRA PARTS. (Order by name and number.)

No.	Each	No.	Each
1.	Thread box (alloy).....\$.....	23.	Grip bar, complete.....\$.....
2.	Thread bar.....	24.	Short auger, 2 feet long.....
3.	Large bevel wheel.....	25.	Medium auger, 4 feet long.....
4.	Small bevel wheel (short hub).....	26.	Long auger, 6 feet long.....
5.	Crank.....	28.	Steel pin and chain for thread
7.	Auger socket.....	box.....	
8.	Bolt, complete for chair.....	29.	Spring key for crank.....
9.	Auger extension.....	30.	Steel washer for crank pinion.....
21.	Steel wedge for grip.....	32.	Open chair for grip drill.....
22.	Grip bar.....		

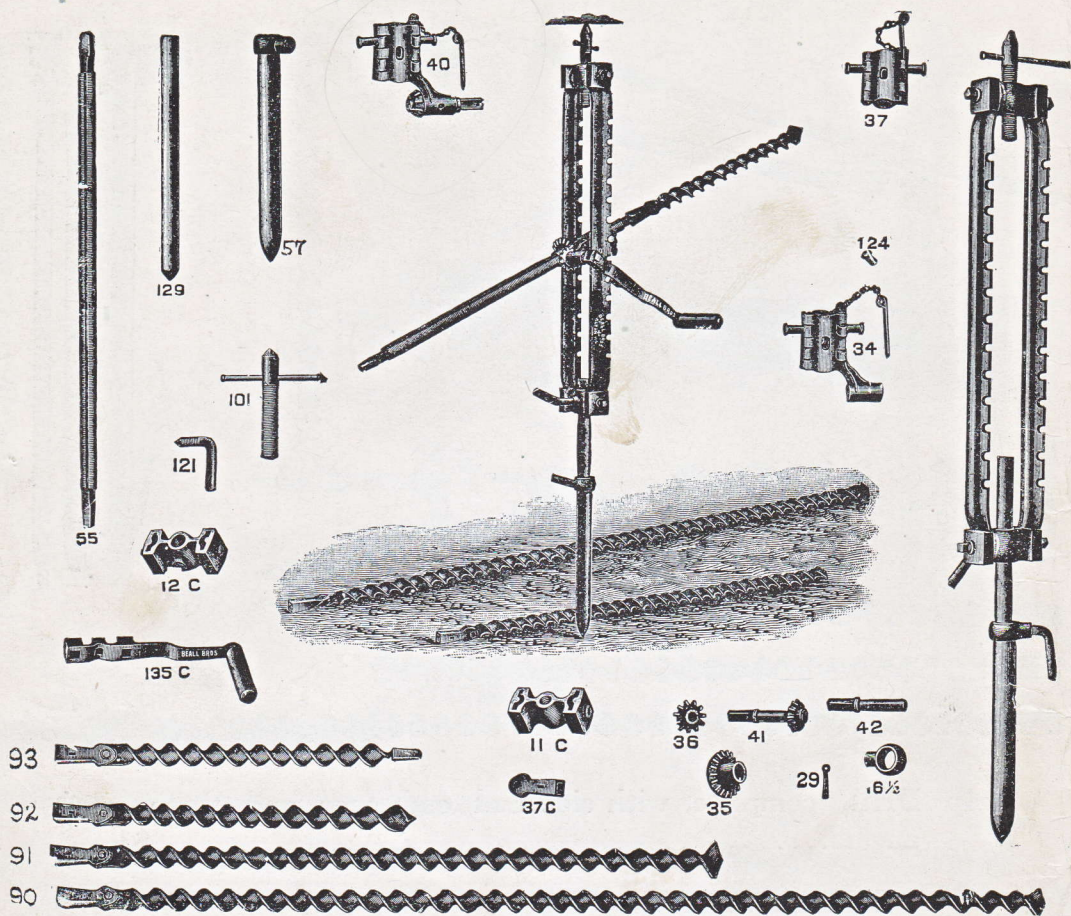
Average weight of drills, complete, 62 lbs.

**Square or Sliding Grip Bar Parts to Fit any
 Grip Machine Made.**

No.	Each	No.	Each
79.	Square or sliding grip, complete.\$.....	20-C.	Casting that fits on square
68.	Square steel grip bar only.....	grip bar.....\$.....	
71.	Plain wedge that fits on square	141.	Tail screw (that secures cast-
	bar.....	ings 20-C to grip bars).....	

107. Complete chair which supports boxing, cents.

BEALL'S "QY" NOTCHED POST DRILL



Post Drill, complete, with side and end gear and three augers, \$
 Post Drill, complete, with end gear only, and three augers.

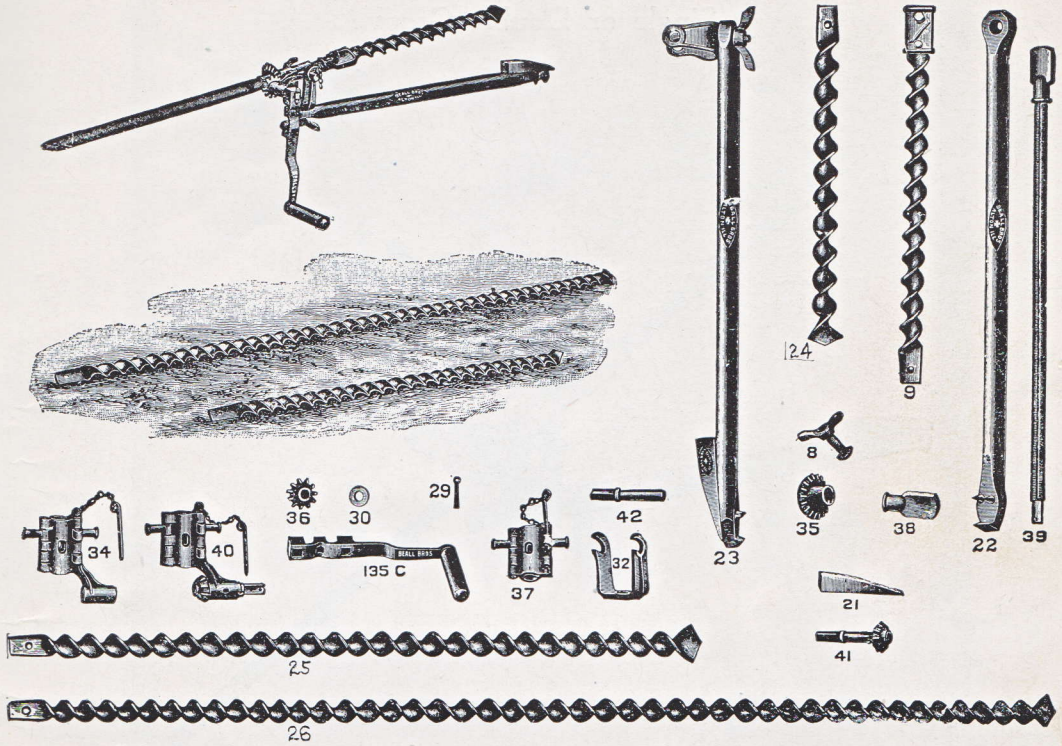
EXTRA PARTS. (Order by name and number.)

No.	Each	No.	Each
11-C.	Casting for post (jack screw No. 101 fits in) \$	42.	Thread box shaft \$
12-C.	Casting for post (No. 129 fits in)	55.	Thread bar
16 1/2.	Ring for 1 1/4 in. boot	57.	Small boot, 1 1/4 in. in diameter
29.	Small spring key or shaft	90.	Long or 6 foot auger
34.	Thread box (alloy metal)	92.	Short or 2 foot auger
35.	Large gear wheel	93.	Auger extension, 2 feet long
36.	Small gear wheel	101.	Jack screw
37.	End gear thread box	121.	Tail set screw
37-C.	Square socket for augers	124.	Set screw for No. 11-C and No. 12-C
40.	Thread box, complete with No. 42 shaft and No. 36 small pinion	129.	Small size stem that fits in No. 57
41.	Thread box shaft, with No. 36 small pinion, complete	135-C.	Crank
		138.	Post, complete, as shown in cut

We can furnish equipped with No. 131-C box and No. 134-C gear if desired.
 When ordering drills always specify length of post.
 Average weight of drills, 70 lbs.

125
85
250
100
25

BEALL'S "QY" GRIP DRILL



Each

Grip Drill, complete, with side and end gear, and three augers, \$

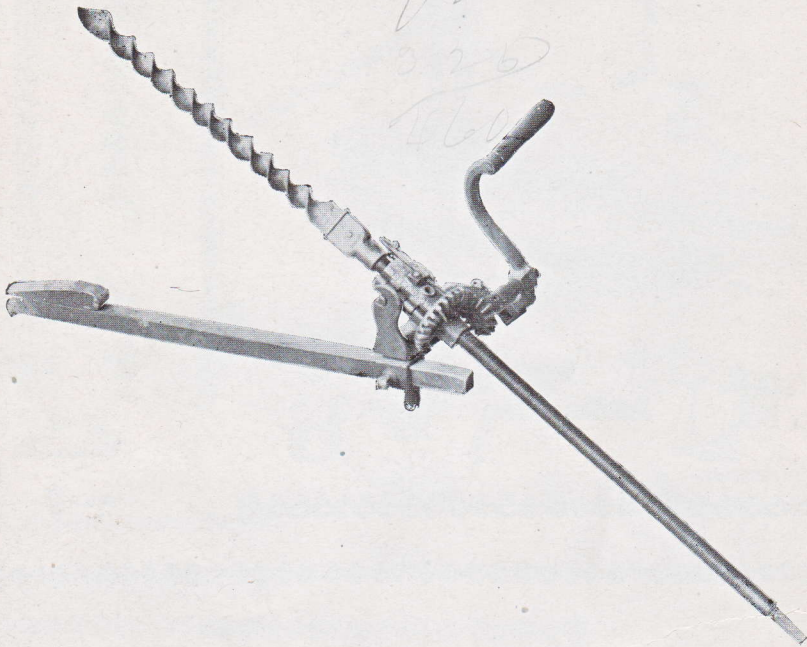
EXTRA PARTS. (Order by name and number.)

No.	Each	No.	Each
8.	Bolt and thumb nut for chair. \$	35.	Large gear wheel. \$
9.	Auger extension, 2 feet long.	36.	Small gear wheel.
21.	Steel wedge for grip.	37.	End gear thread box (alloy metal).
22.	Grip bar.	38.	Auger socket.
23.	Grip bar, complete.	39.	Thread bar.
24.	Short auger, 2 feet long.	40.	Boxing complete (alloy metal) with No. 42 shaft and No. 36 small pinion.
25.	Medium auger, 4 feet long.	41.	Thread box shaft with No. 36 pinion complete.
26.	Long auger, 6 feet long.	42.	Thread box shaft.
29.	Spring key for crank.	135-C.	Crank.
30.	Steel washer for crank shaft.		
32.	Open chair for grip.		
34.	Thread box (alloy metal).		

Average weight of drills, complete, 60 lbs.

BEALL'S PEORIA GRIP DRILL

Single or Double Groove

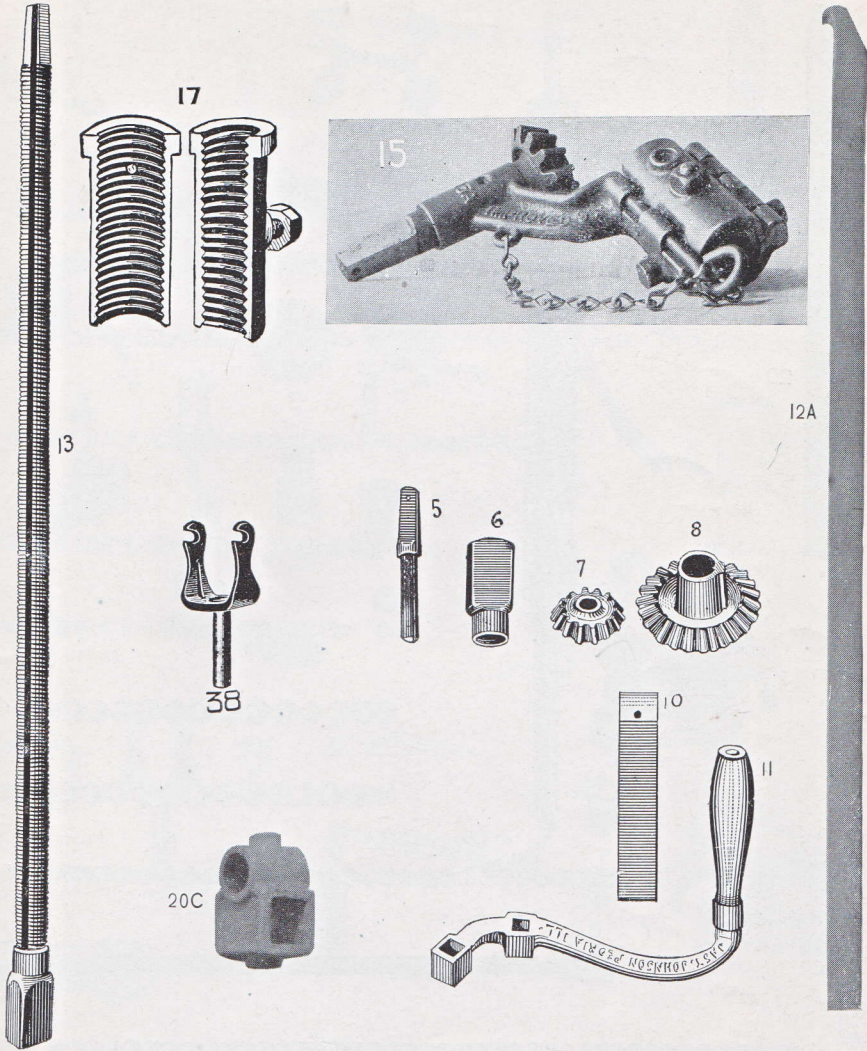


On the above machine we use the same gearing and boxing as we use on our Regular Large Gear Round Grip Drill—the No. 15 Boxing and the No. 7 and No. 8 wheels.

We can furnish this drill with round grip bar, if so desired.

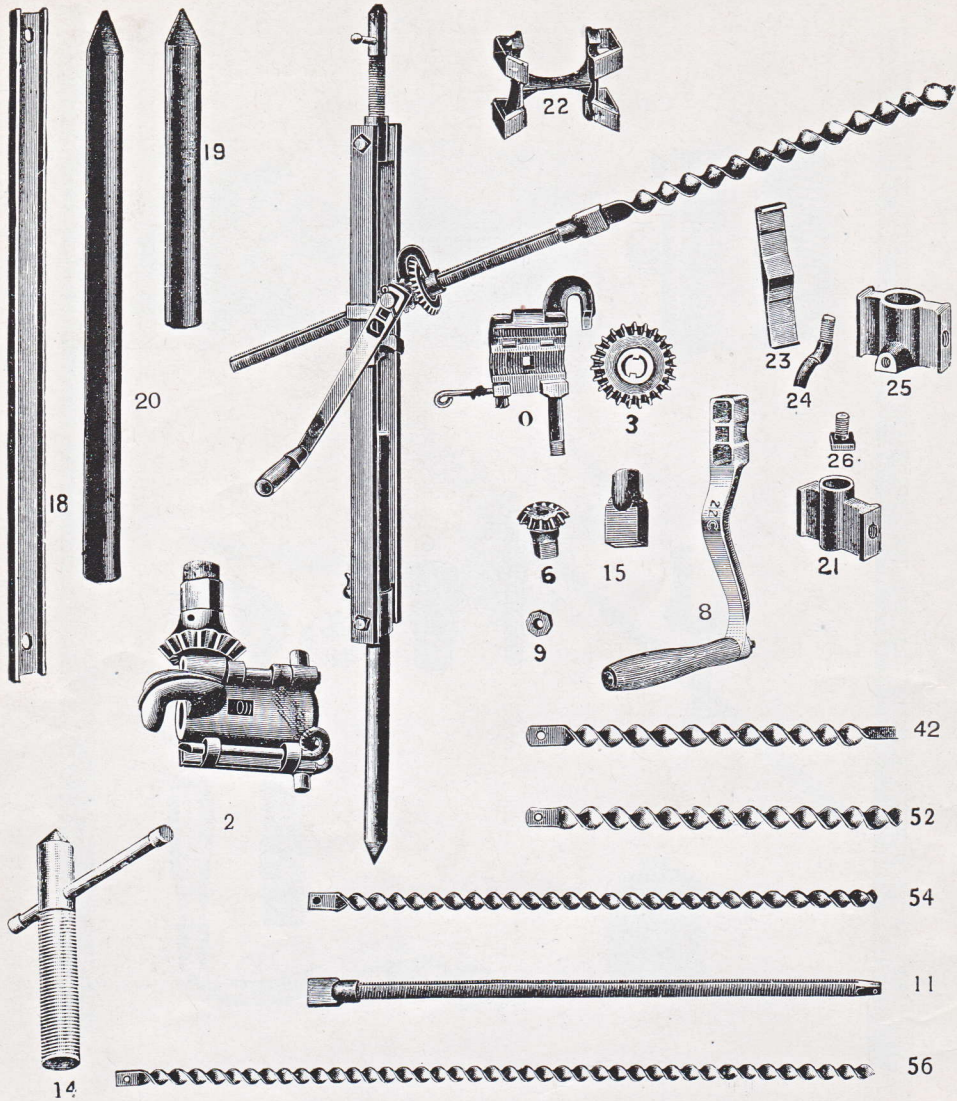
The Boxing on Beall's Peoria Grip Drill is so arranged that when the thread bar gets too small you can put enough paper under the linings to draw them tightly together by filing a little off the edges. And when the thread is worn in the linings, all that is needed is a new pair—not a whole new Boxing—which comes very cheap. This is something that has long been needed. That is what makes the repair bills less for the miner. The linings are also an inch longer, and have an inch more thread than the old style boxing. These linings are very light, and can be sent by mail very cheaply.

REPAIRS FOR BEALL'S PEORIA GRIP DRILL



	Each
Grip Drill, complete, for 6-ft. hole	\$.
5. Journal for small cog
6. Socket for thread bar
7. Small cog, large size
8. Large cog, large size
10. Wedge for grip bar
11. Crank
12a. Square grip bar
13. Thread bar
15. Improved boxing, complete with linings to fit large cog drill
17. Linings for boxing, malleable iron, per pair
20. C slide casting for square grip bar
38. Chair for gear support

BEALL'S JOPLIN POST DRILL AND PARTS
 Sometimes called "Little Giant"



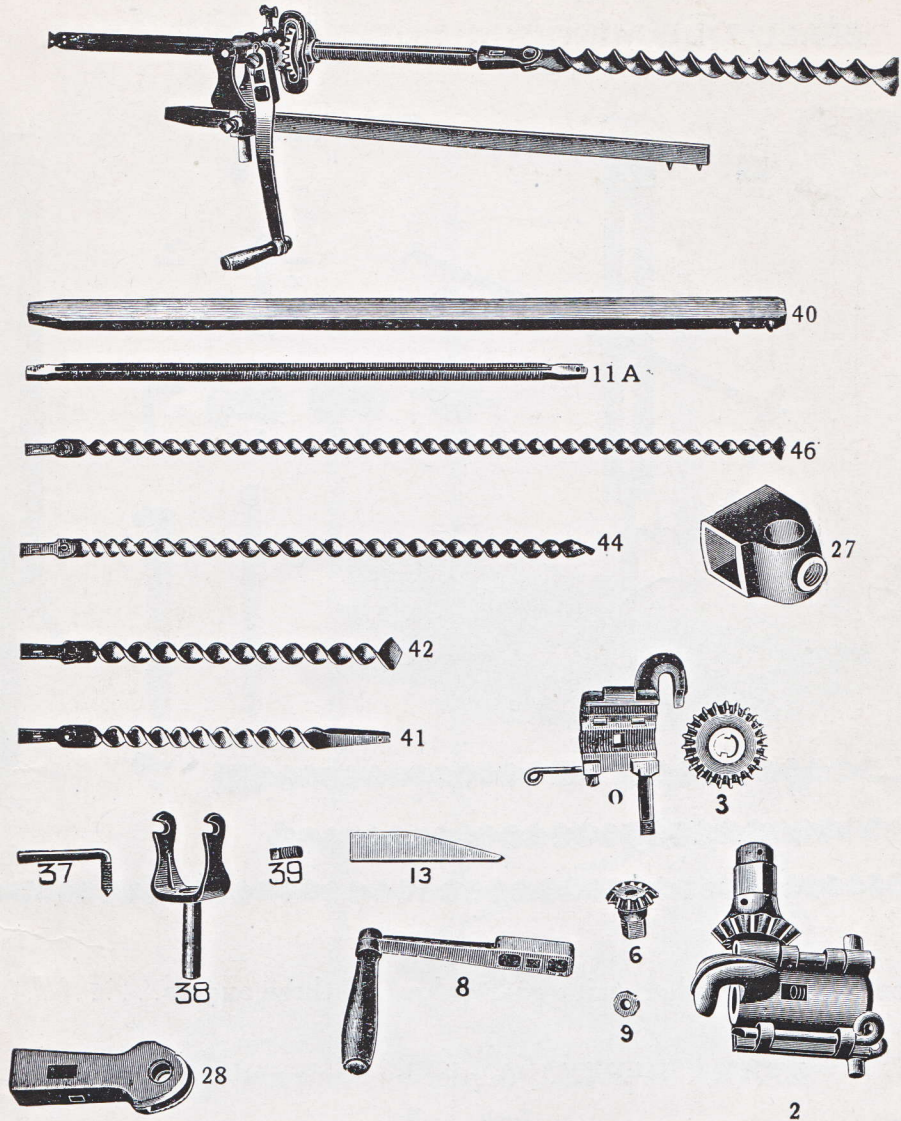
Price List

Joplin Post Drill, complete. \$

No.	Each	No.	Each
0.	Boxing, less cog. \$	20.	Long pipe extension. \$
2.	Boxing, complete.	21.	Post casting for jack screw.
3.	Large cog.	22.	Slide chair for post.
6.	Small cog.	23.	Slide chair key.
8.	Crank.	24.	Tail screw for casting No. 25.
9.	Journal nut.	25.	Post extension casting.
11.	Thread bar.	26.	Post bolt for side bar.
14.	Jack screw for post.	42.	Flat shank, 2 foot extension.
15.	Thread bar socket.	52.	Flat shank, 2 foot augers.
18.	Post side bar.	54.	Flat shank, 4 foot augers.
19.	Short pipe extension.	56.	Flat shank, 6 foot augers.

In ordering always give number or length of post desired.

BEALL'S JOPLIN GRIP DRILL AND PARTS
 Square End Thread Bar; Square Grip Bar.

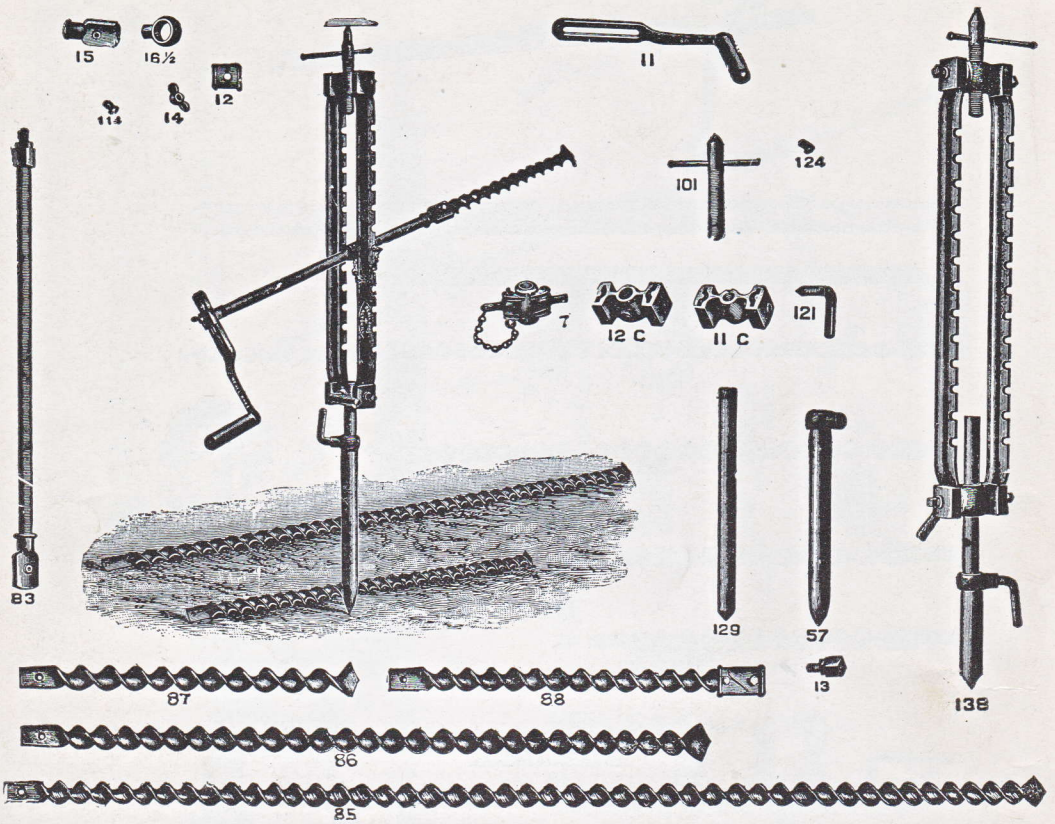


Price List

Joplin Grip Drill, complete \$.....

No.		Each
0.	Boxing, less cog	\$.....
2.	Boxing, complete	\$.....
3.	Large cog	\$.....
6.	Small cog	\$.....
8.	Crank	\$.....
9.	Journal nut	\$.....
11-A.	Thread bar, with end squared for square socket augers	\$.....
13.	Grip wedge	\$.....
27.	Slide casting for square grip bar	\$.....
28.	Square socket for augers	\$.....
37.	Tail screw for slide casting No. 27	\$.....
38.	Slide chair for square grip bar	\$.....
39.	Set screw for casting No. 27	\$.....
40.	Square grip bar only	\$.....
41.	Square socket, 2 foot, extension	\$.....
42.	Square socket, 2 foot auger	\$.....
44.	Square socket, 4 foot auger	\$.....
46.	Square socket, 6 foot auger	\$.....

BEALL'S BIRMINGHAM NOTCHED POST DRILL



Each

Post Drill, complete, with gear only, and three augers. . . . \$

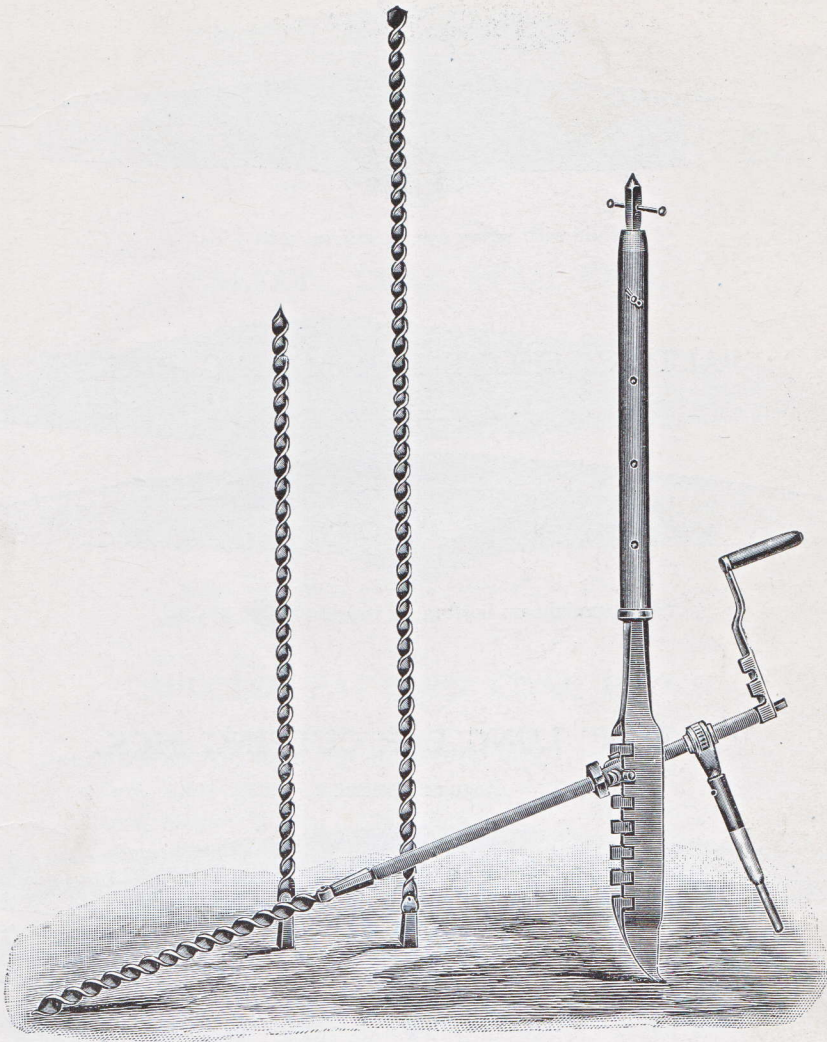
EXTRA PARTS. (Order by name and number.)

No.	Each	No.	Each
7.	Thread box (alloy metal) \$	83.	Thread bar \$
11.	Crank	85.	Long auger, 6 feet long
11-C.	Casting for post that jack screw No. 101 fits in	86.	Medium auger, 4 feet long
12.	Clamp	87.	Short auger, 2 feet long
12-C.	Casting for post that No. 129 fits in	88.	Two-foot auger extension
13.	Square thread bar socket	101.	Jack screw
14.	Thumb nut	114.	Set screw for auger socket
15.	Auger socket	121.	Tail set screw
16 1/2.	Ring for 1 1/4-inch boot	124.	Set screw for No. 11-C and 12-C
57.	Small boot 1 1/4 inches in diam- eter	129.	Small size stem that fits in No. 57
		138.	Post complete as shown in cut.

When ordering drills specify length of post desired.

Average weight of drills, complete, 65 lbs.

BEALL'S "ALTON" RATCHET ROCK DRILL



This machine is made extra heavy and specially designed for the use of coal companies and contractors for drilling in limestone, slate, rock and other hard substances.

The augers are made of a high grade crucible steel, and thread bar and box is made with 10 or 12 threads to the inch, thus allowing a slow feed.

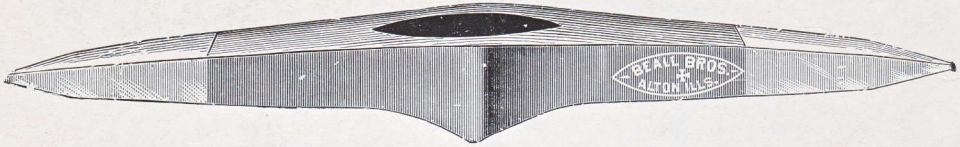
In ordering machines, state particularly the height of post wanted, and order parts by name and number.

Price List

		Each
Machine, complete, with augers.		\$.
No.		Each
55.	Thread bar.	\$
131-C.	Box. ....	.....
90.	Six foot auger. ....	.....
91.	Four foot auger. ....	.....
92.	Two foot auger. ....	.....
101.	Jack screw. ....	.....
135-C.	Crank. ....	.....
254.	Ratchet crank. ....	.....
	Post, complete. ....	.....

“ALTON” SHORT EAR CUTTING PICK

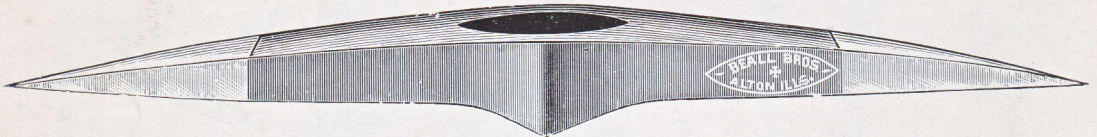
Regular Pattern.



Made with heavy eye, in weights 2 to 5 lbs.

“ALTON” SHORT EAR MINING PICK

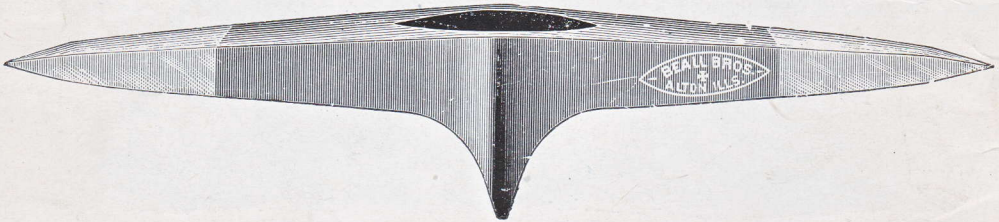
Regular Pattern.



Made straight on bottom, in weights 1¼ to 3½ lbs.

“ALTON” LONG EAR CUTTING PICK.

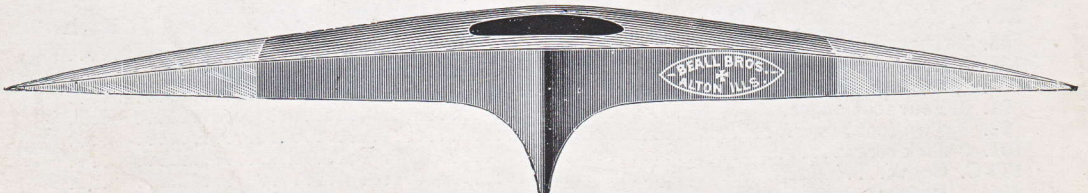
Regular Pattern.



Made with heavy eye, in weights 2 to 5 lbs.

“ALTON” LONG EAR MINING PICK.

Regular Pattern.



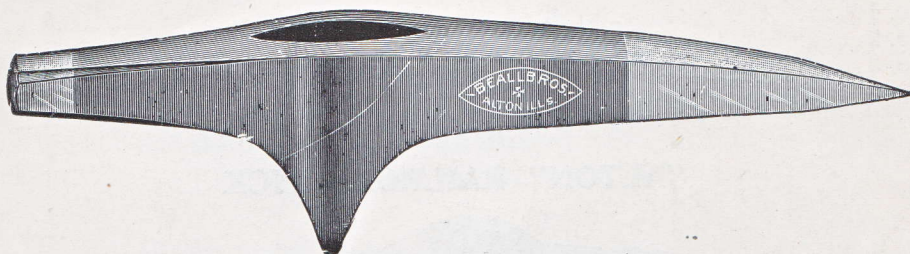
Made straight on bottom, in weights 1½ to 3½ lbs.

"ALTON" ADZE EYE CUTTING PICK



Made in weights $2\frac{1}{2}$ to 5 lbs.

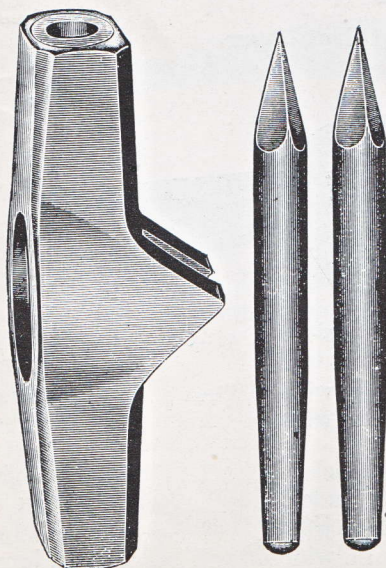
"ALTON" COAL POLL PICK



Made with heavy eye in weights $2\frac{1}{2}$ to 5 lbs.

SPECIAL PATTERN COAL PICKS

	Weights
No. 10 pattern, shorter than regular cutting pick	$2\frac{1}{2}$ to 4 lbs.
No. 19 pattern, long drawn cutting pick	$2\frac{1}{2}$ to 4 lbs.
No. 17 pattern, slender drawn cutting pick	$1\frac{3}{4}$ to $2\frac{3}{4}$ lbs.
Ladd pattern, short drawn mining pick	$1\frac{3}{4}$ to $3\frac{1}{2}$ lbs.
Braidwood pattern, long slender drawn mining pick	2 to 3 lbs.

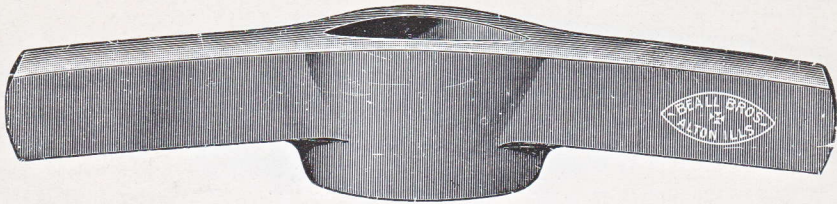


DUTCH PICK HEAD AND POINTS FOR SAME

Heads or eyes are made with taper holes drilled in ends in which the points made of a high grade steel are fitted. This tool is very popular, as it allows the miner to carry the points in his pocket to be resharpened.

Heads made in weight,
 $1\frac{3}{4}$, 2, $2\frac{1}{4}$, $2\frac{1}{2}$, $2\frac{3}{4}$ and 3 lbs.

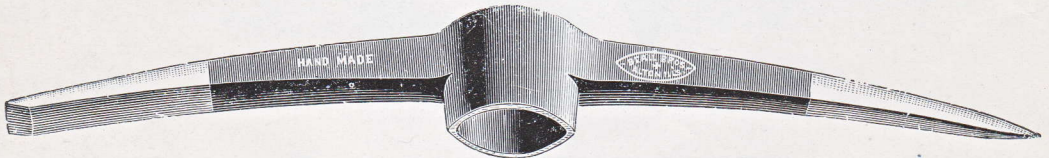
DRIFTING PICK EYES



List Prices

	Per Dozen		Per Dozen
No. 1	\$	No. 4	\$
No. 2		No. 5	
No. 3			

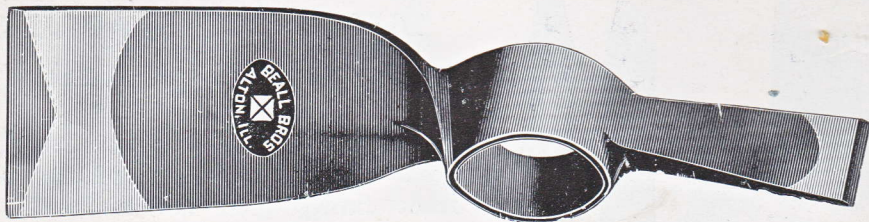
“ALTON” RAILROAD PICK



	Per Dozen		Per Dozen
4 lbs.	\$	8 lbs.	\$
5 lbs.		9 lbs.	
6 lbs.		10 lbs.	
7 lbs.		12 lbs.	

MATTOCKS

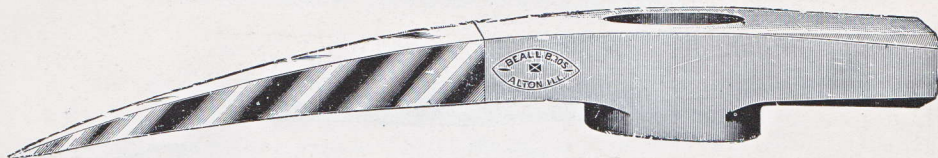
Solid Steel. Long Cutter and Short Cutter.



Style	Weight	Dimensions of Blade	Dimensions of Cutter
Cutter Mattocks	5 lbs.	3½ in. wide	4¾ in. long
Cutter Mattocks	6 lbs.	4 in. wide	5¼ in. long

Style	Weight	Dimensions of Blade	Dimensions of Pick
Pick Mattocks	5 lbs.	3½ in. wide	7½ in. long
Pick Mattocks	6 lbs.	4 in. wide	8½ in. long

“ALTON” LEAD AND ZINC MINING PICKS



Finished in oil.

We invite comparison in quality and prices.

These picks are warranted in every particular. We are supplying nearly all the lead and zinc trade in Southwest Missouri. Can furnish them with handles all fitted in, ready for use, or without handles, in weights 5 to 6 lbs.

We call your special attention to our Superior Pick for lead and zinc mining. This tool is made of the best material, and is fully warranted.

“ALTON” GOLD AND SILVER MINING PICKS



Made in weights 3½ to 6 lbs.

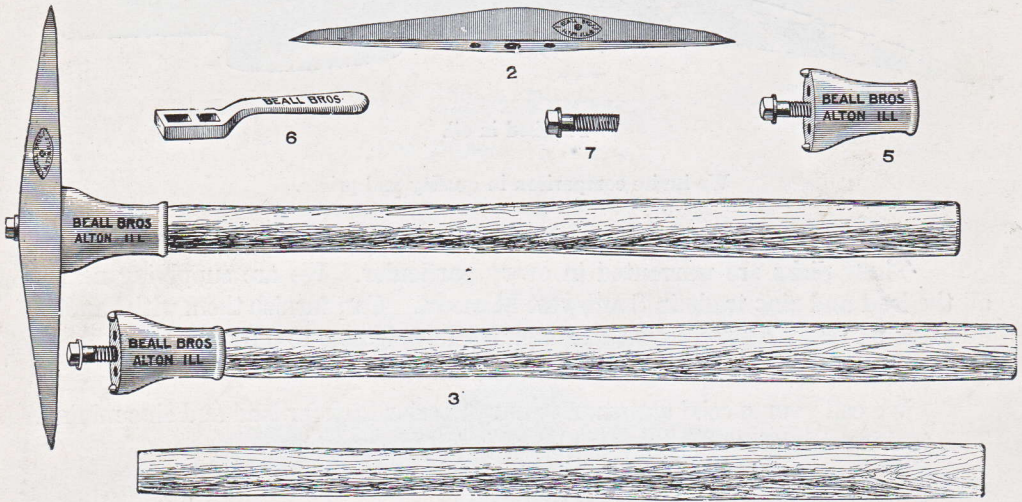
These picks are used extensively in Arizona, Colorado, California, and in fact in all the gold and silver mines in the West, and we refer you to any and all, in regard to their durability and the quality and quantity of steel used in them.

We call your special attention to our Superior Hand-Made Drifting Pick. This tool is made of the best extra cast tool steel, and warranted in every particular.

All our tools are warranted in every respect, carefully tempered and thoroughly tested. We guarantee them to be unequalled. All are well balanced, and made any size or weight.

If you have any demand for a patent pick, try the

“BLACK DIAMOND”



Best Patent Pick Made

Prices

	Per Dozen
No. 1. Picks, handles and wrenches, complete.....	\$.....
No. 2. Picks, no handle.....
No. 3. Pick handles, with ferrules.....
No. 4. Handles only.....
No. 5. Ferrules for handles.....
No. 6. Wrenches.....
No. 7. Bolts and washers.....

We make this in the same pattern as our old style picks, but you should order them five to eight ounces lighter than the old style, as the casting on handle makes up the extra weight.

Weight.....1¾ to 3½ lbs.

We also have in stock Scott Patent Picks, in the cutting and mining patterns.

Weight.....1¾ to 3 lbs.

PUNCHER PICKS



Superior Quality

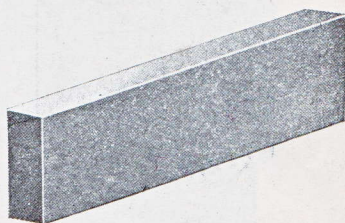
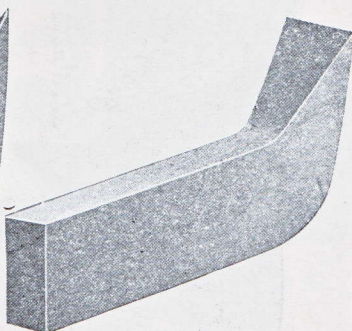
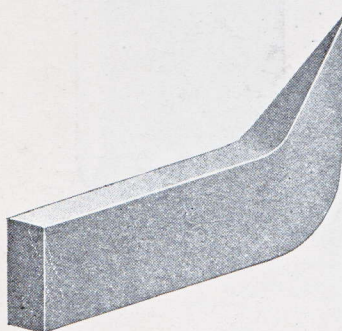
Our Puncher Picks are made in two grades, No. 1 and No. 2. No. 1 is made of a high carbon, machinery steel, crucible analysis. No. 2 of crucible tool steel, oil treated.

In manufacturing these picks we use the square stock which we hammer to the octagon shape. This working of the entire stock in each pick, naturally improves the material and has a tendency to draw out any strains or defects. While this extra operation advances our cost a little over that of our competitors, we have the satisfaction of knowing that it almost entirely eliminates the de-horning trouble.

Our picks are full 18 inches long, weigh 10¼ lbs., and fit any punching machine made.

MINING MACHINE BITS

BIT STEEL



Pick Point Ups, Downs or Centers

Chisel Point

Our bits are made from high carbon machinery steel, crucible analysis, uniform in quality and rolled true to size and shape. We furnish these bits in all sizes and styles of points in standard length to fit any machine.

We furnish bit steel in any size, either in bars, mill lengths, or cut in short lengths as desired.

When ordering finished bits be sure and specify style of points, and where no length is given we will furnish the standard.

TRACK SPIKES

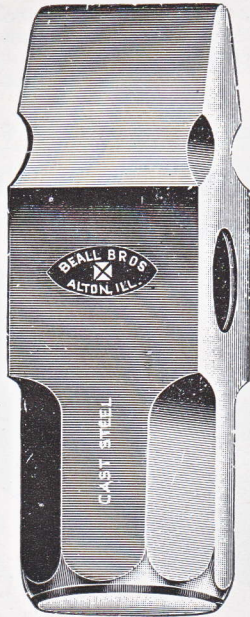


Rail Used	Size of Spikes	Number in Keg
8 to 10.....	2½x ⁵ / ₁₆	2200 in keg, 200 lbs.
8 to 12.....	2½x ³ / ₈	1550 in keg, 200 lbs.
12 to 16.....	3 x ³ / ₈	1350 in keg, 200 lbs.

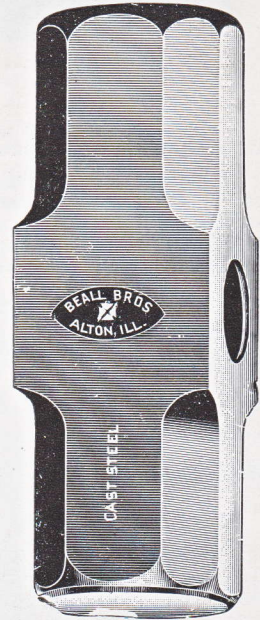
For mining rails calculate one-half keg spikes for each ton of rails



Cross Pene. No. 193



Straight Pene. No. 192



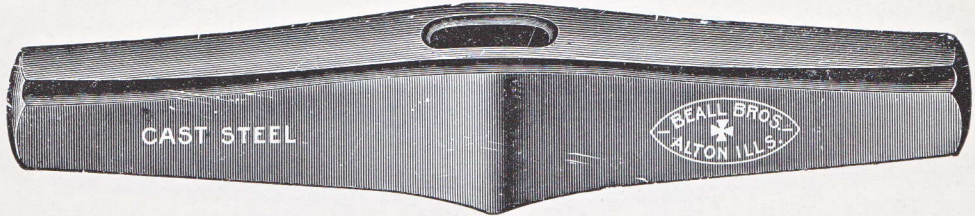
Double Face. No. 191

BLACKSMITHS' SLEDGES

Under 3 lbs.....	\$.....
3 to 5 lbs.....	.....
5 lbs. and over.....	.....

LONG PATTERN COAL SLEDGES

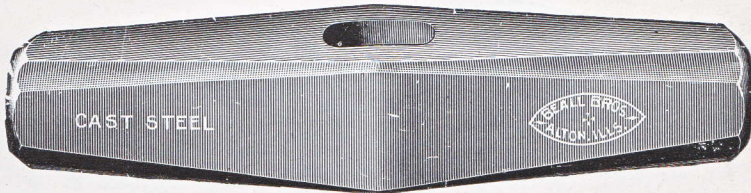
Solid cast tool steel.



Made in weights 5 to 7 lbs.

SHORT PATTERN COAL SLEDGES

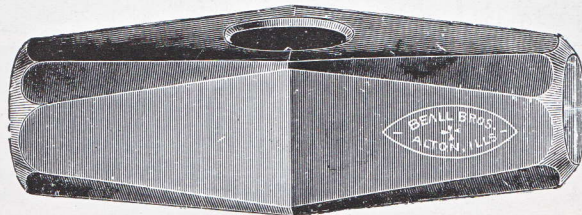
Solid cast tool steel.



Made in weights $4\frac{1}{2}$ to 8 lbs.

NEVADA PATTERN DOUBLE FACED STRIKING HAMMERS

Solid cast tool steel



Made in weights $4\frac{1}{2}$ to 9 lbs.

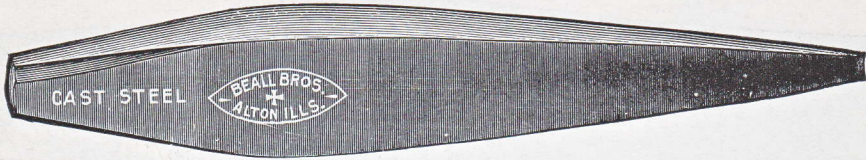
SPECIAL PATTERNS

Centerville Pattern—A long slim sledge, with a small face.

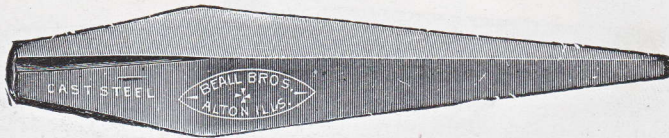
Made in weights 5 to 7 lbs.

COAL MINERS' WEDGES

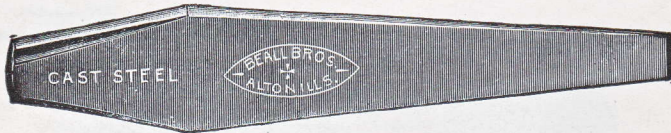
Regular Pattern.

Made of cast tool steel, in weights $1\frac{1}{2}$ to 5 lbs.**COAL MINERS' WEDGES**

Indiana Pattern.

Made of $1\frac{1}{4}$ in. square cast tool steel, in weights $1\frac{1}{4}$ to 2 lbs.**COAL MINERS' WEDGES**

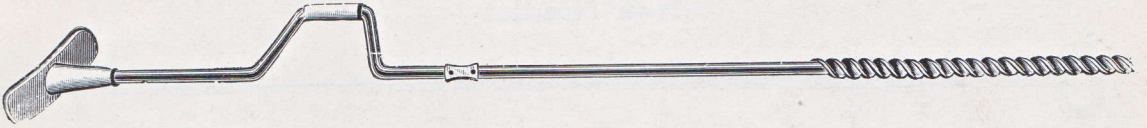
Kansas Pattern.

Made of $1\frac{3}{4} \times \frac{3}{4}$ in. cast tool steel, in weights $1\frac{1}{2}$ to 2 lbs.**COAL MINERS' WEDGES**

Missouri Pattern.

Made of $1\frac{1}{4} \times \frac{7}{8}$ in. cast tool steel, in weights $1\frac{1}{2}$ to 2 lbs.

BREAST DRILLS



The above illustrates one of the simplest styles of breast augers, one that is adapted for soft coal. We can furnish these drills with any desired length or shape of auger. Single or double crank, with or without detachable auger.

DOUBLE CRANK BREAST AUGER

When ordering state length of twist, length of rod, also whether single or double crank.

“ALTON” SCRAPERS

Made of $\frac{3}{8}$ in. and $\frac{7}{16}$ in. round. Length 5 to 8 ft.

Single or double end. Iron or copper button. Scrapers with copper button made in compliance with Illinois laws. We can furnish funnel scrapers with copper button if desired.

Single end



Double end



BLASTING BARRELS

We wish to call special attention to our blasting barrels, which are made specially for that purpose. They are made of spring steel, and are not liable to bend or break.

5 to 8 feet long.

We can furnish the above in two styles, $\frac{1}{4}$ or $\frac{1}{8}$ in. hole, but we recommend the $\frac{1}{8}$ in. opening, as the smaller the hole the better the shot. Copper wire needles for above furnished on application.

IRON BLASTING TOOLS

Iron Needles



Made of $\frac{1}{2}$ in. round. Lengths 5 to 8 feet.

Single Bit Drills



Made of 1 in. round, with $8\frac{1}{2}$ in. of tool steel in bit end, with $2\frac{1}{2}$ in. bit.

Iron tamp on other end.

Lengths, 5 to 9 feet.

Double Bit Drills



Made of 1 in. round, with $8\frac{1}{2}$ in. tool steel in each end, with $2\frac{1}{2}$ in. bit.

Lengths, 5 to 9 feet.

Iron Spoon Scraper



Made of $\frac{3}{8}$ and $\frac{7}{16}$ in. round iron, with scraper on one end and spoon on the other, in lengths 5 to 8 feet.

Iron Funnel Scraper



Made of $\frac{3}{8}$ and $\frac{7}{16}$ in. round iron, with scraper on one end and funnel on the other, in lengths 5 to 8 feet.

Combination Iron Tamp and Scraper

This tool is made with a tamp on one end and a scraper on the other.

Lengths, 5 to 7 feet.

COPPER BLASTING TOOLS

Copper Needles



Made of $\frac{1}{2}$ in. copper, tapered and highly polished.

Lengths, 5 to 7 feet.

Copper Tamp Drills



Made of 1 in. round iron, or $\frac{3}{4}$ in. hollow pipe with $8\frac{1}{2}$ in. of tool steel in bit end; $2\frac{1}{2}$ in. bit; copper tamp on other end.

Lengths, 5 to 7 feet.

Copper Tipped Tamping Bar



Made of 1 in. round iron, or $\frac{3}{4}$ in. hollow pipe with copper tamp on end.

Lengths, 5 to 7 feet.

Combination Copper Tamp and Scraper



This tool is made with a copper tamp on the end and a scraper on the other.

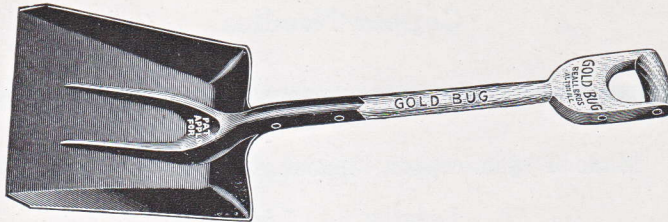
Lengths, 5 to 7 feet.

Regular Copper Tamp End



All the above copper tools are made to comply with the State laws in which they are to be used.

FORKED SOCKET SHOVEL

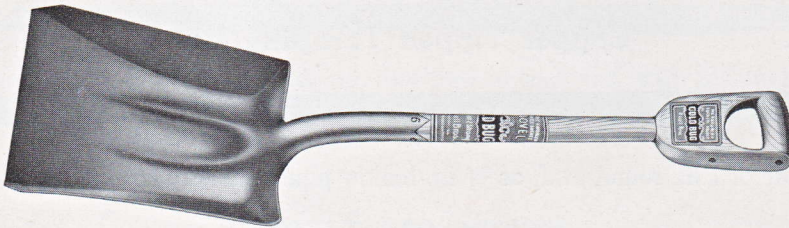


**Gold Bug Brand
Patented
Extra Quality Steel and High Grade Handle**

GOLD BUG COAL SHOVELS

Size	No. 1	No. 2	No. 3	No. 4	No. 5
Dimensions.....	13½x14	14¼x14½	14¾x15	15x16¼	15x17¼

Black polish or velvet polish.



GOLD BUG ORE SHOVELS

Size	No. 3	No. 4	No. 5	No. 6	No. 7
Dimensions.....	10x12½	10¾x13⅛	10¾x13½	11¼x13½	12⅛x14⅜

Black polish or velvet polish

Four Forcible Facts

No. 1. Forked Socket.

- (a) Because of double trussed socket gives double strength to both socket and blade, and prevents all breaks at end of socket.
- (b) Insures even distribution and quick, easy release of load.

No. 2. Extra Strong.

- (a) Because of the continuous forked socket radiating without a break throughout the blade, thereby trussing and strengthening the entire shovel direct from the socket.

No. 3. Light Weight.

- (a) Because of forked socket giving additional strength, lighter blade material is used without sacrificing durability.

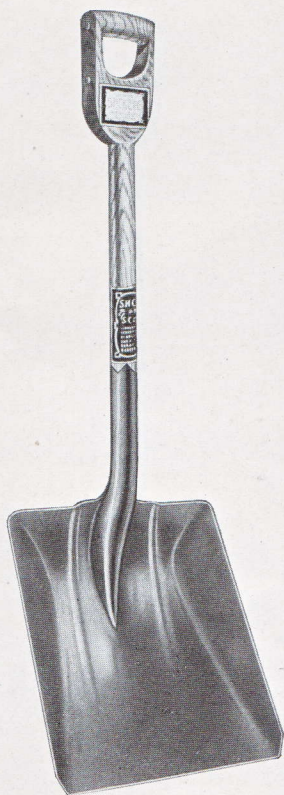
No. 4. Flat Bottom.

- (a) Giving excellent hand balance to shovel.
- (b) Giving uniform friction wear on flat bottom of blade.

HOLLOW BACK COAL SHOVELS

“D” or Long Handle

America's Best



Made of 16 gauge steel with corrugated blade and high grade handle. Sizes one, two and three, Polished or Black finish. This shovel has given universal satisfaction on account of its light weight and durability.

Ore Shovels in this same grade in sizes four, five and six.

HOLLOW BACK ORE SHOVELS

“D” or Long Handle.



This shovel bears the same labels as our other shovels, and are made from 16 gauge steel, which makes them very light. We make them with a low lift for the low coal veins of Illinois, Iowa and Kansas, and unless you order otherwise they will be sent in the 16 gauge with low lift, but we can make them in heavy steel to handle ore or heavy materials. We also make them with short handles for use in thin veins of coal. In ordering state clearly the length and lift of handle wanted.

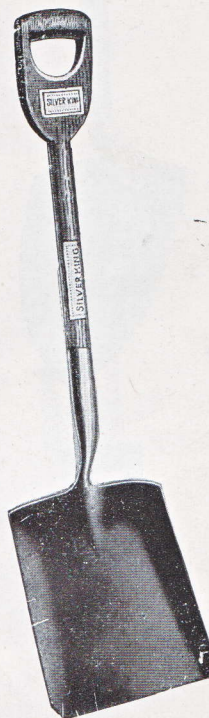
Sizes 4, 5 and 6.

**PLAIN BACK MINING
MACHINE SHOVEL**

Long handle, with malleable "D."

Black.

Made in sizes 2, 3 and 4



SILVER KING, SOLID SOCKET

Square point, "D" or long handle, polished.

Round point, "D" or long handle, polished.

Spades, "D" or long handle, polished.

Moulder's "D" or long handle, polished.

Irrigating, "D" or long handle, polished.



**HOLLOW BACK
SHOVELS
AND
SPADES**

“D” or long handle.

Write us for prices.

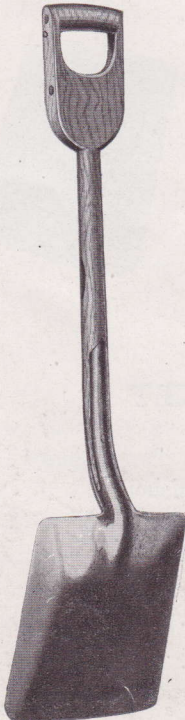


**PLAIN BACK SHOVELS
AND SPADES**

“D” or long handle.

This style shovel is generally used for handling macadam, etc., where a high grade shovel is necessary.

All our high grade shovels are made of best cast tool steel.





SOLID CAST STEEL SCOOPS

Eastern pattern or locomotive scoops,
narrow mouth.

"D" or long handle.

Made in sizes 2 to 8.

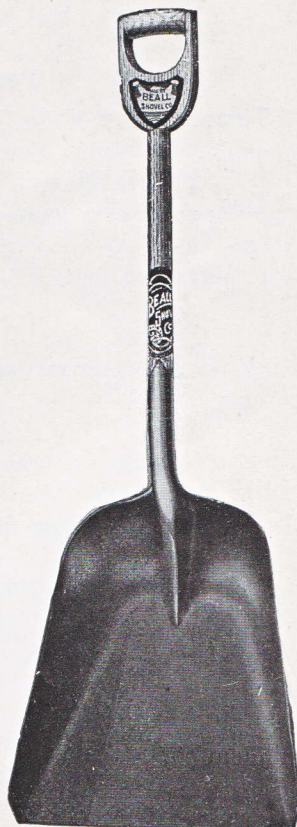
Warranted.

WESTERN PATTERN GRAIN SCOOPS

Wide mouth.

Made in sizes 4 to 12.

Warranted.



“ALTON” COAL AND COKE FORKS



We use the best crucible steel in the manufacture of forks, and they can be relied upon to endure the most severe service required of them. Each fork is tested before shipment, and no pains spared to make them the best in the market.

Per Dozen		Per Dozen	
8 Tine	\$.	14 Tine	\$.
10 Tine . . . . .	. . . . .	16 Tine . . . . .	. . . . .
12 Tine . . . . .	. . . . .	18 Tine . . . . .	. . . . .

MINE HAMES

We carry in stock a complete line of the Beagle brand low top mine hames in all sizes.

SOLDERING COPPERS

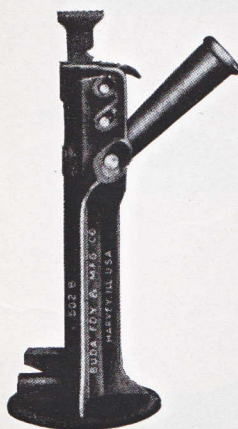


We manufacture a complete line of soldering coppers, including bottoming, roofing, diamond pointed and hatchet coppers.

Manufactured in weights 1 lb. per pair to 20 lbs. per pair.

- 3 lbs. per pair and heavier, base.
- 2½ lbs. per pair, 1c per lb. extra.
- 2 lbs. per pair, 2c per lb. extra.
- 1½ lbs. per pair, 3c per lb. extra.
- 1 lb. per pair, 6c per lb. extra.

MINE TRACK JACKS



A two-ton single acting jack.

No. 502B Ratchet Jack. Particularly adapted for mine use, being of ample capacity for the work for which it is intended, and is very convenient for use in cramped locations. It is single acting, operating on the downward stroke of the lever. Very simple and nothing to get out of order, and no springs to become rusted out by mineral waters.

It is useful also on narrow gauge roads, and for use in connection with wagons.

The 502B is more substantial than the usual jack of this type. It is well constructed throughout and particularly high grade for a small capacity jack.

Capacity, Tons	Height Bar Down, Inches	Rise of Bar, Inches	Height Bar, Raised, Inches	Weight, Pounds	Code Word	List Price
2	18½	10	28½	28	Digger	. . . . .

CARTRIDGE PINS



Packed one dozen in case.

Any length and diameter desired.

AXE HANDLES



Packed two dozen in case.

We also furnish the short axe handles for miners' axes.

PATENT PICK HANDLES



Packed two dozen in case.

We can also furnish hatchet and hammer handles in any grade and length.

BENT HANDLES

For plain back shovels and spades



BENT OR STRAIGHT HANDLES

Chucked. For hollow back shovels, spades and scoops.



“ALTON” COAL PICK HANDLES



All our Coal Pick Handles are made with either large or medium sized eye, and are packed 2 dozen to each crate. We make them in several grades.

Gilt Edge Grade, Superior Grade,
Red Star Grade, Monarch Grade,
Rival Grade.

SLEDGE HANDLES



Packed 2 dozen in case.

Lengths, 32, 34 and 36 inches.

DRIFTING PICK HANDLES

For gold and silver mining.



Packed 2 dozen in case.

POLL PICK HANDLES

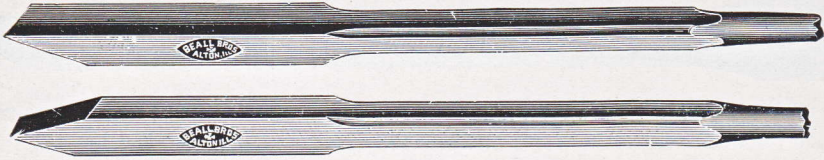


Packed 2 dozen in case.

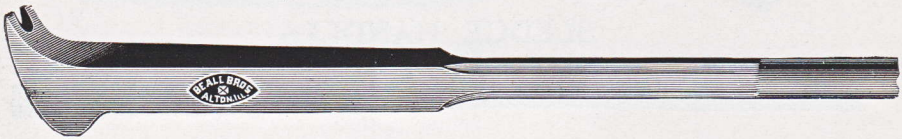
SURFACE AND RAILROAD PICK HANDLES



Packed 2 dozen in case

CROW BARS

Wedge or pinch point. Solid steel.
Any weight.

MINE CLAW BAR

With or without heel.
Any weight. Solid steel.

JACKSON CLAW BAR

The Jackson Claw Bar is especially adapted for pulling spikes close to rib.
Can be furnished with heel and single or double claw as desired.

WRECKING OR CARPENTER BARS

Crucible tool steel.

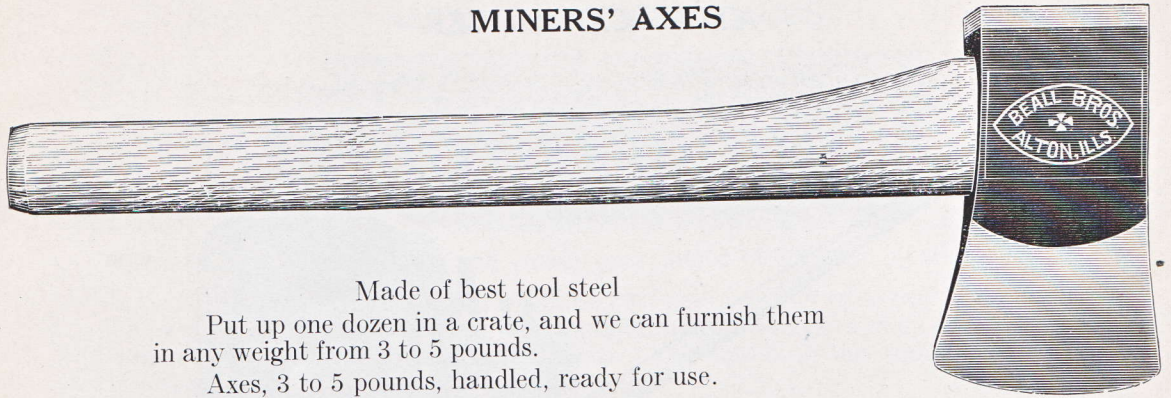
Size of steel, $\frac{1}{2}$ inch, length 11 inches.

$\frac{5}{8}$ inch, length 18 inches.

$\frac{3}{4}$ inch, length 24, 30 and 36 inches.

Made with claw on one end and with round or chisel point on other end.

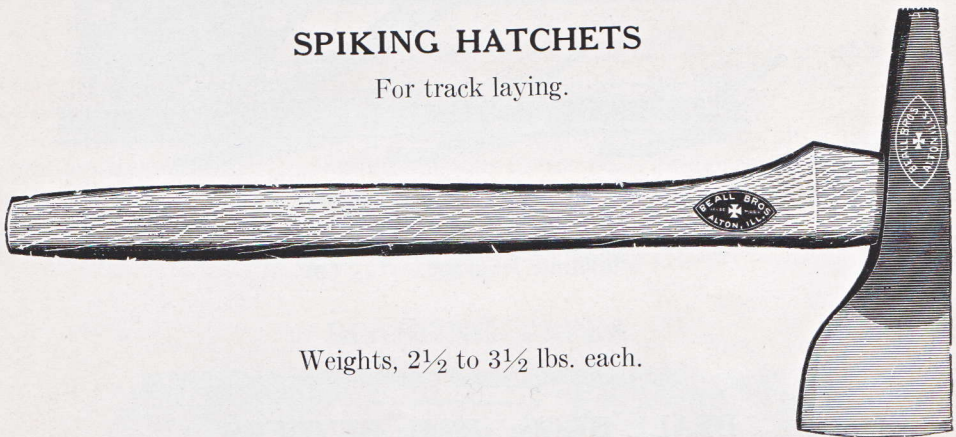
MINERS' AXES



Made of best tool steel
Put up one dozen in a crate, and we can furnish them
in any weight from 3 to 5 pounds.
Axes, 3 to 5 pounds, handled, ready for use.

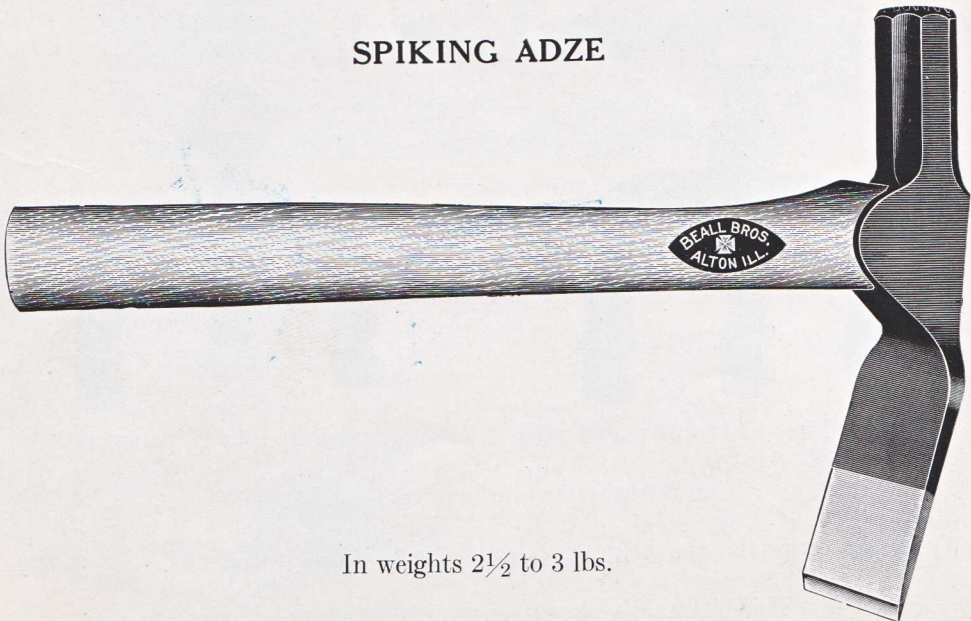
SPIKING HATCHETS

For track laying.



Weights, 2½ to 3½ lbs. each.

SPIKING ADZE

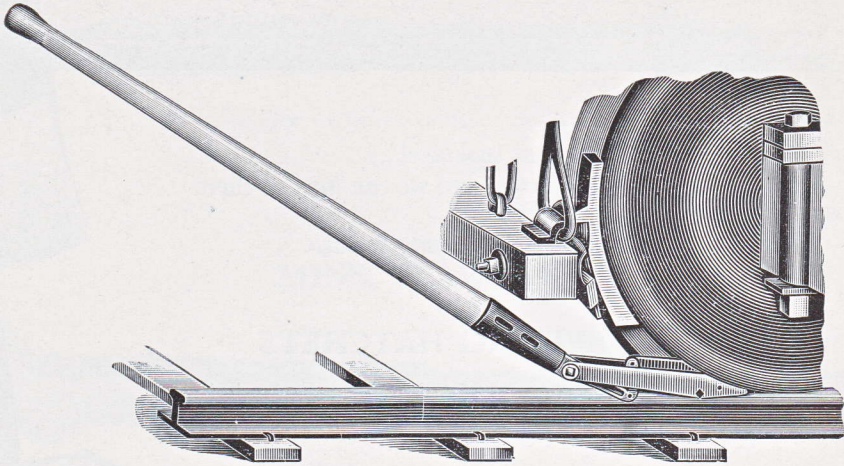


In weights 2½ to 3 lbs.

ATLAS CAR MOVER

Our own pattern.

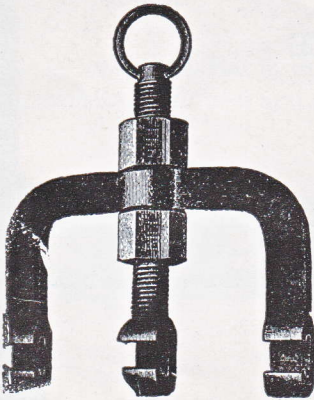
One-piece bar.



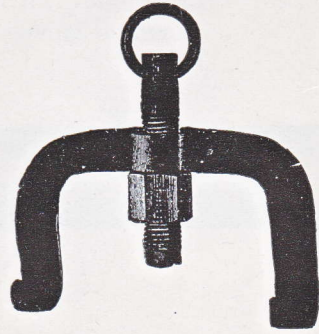
Before using.

Compound leverage. Try one.

BEALL BROS.' RAIL BENDERS



Will bend from 16 to 24 pound rails.



Will bend from 8 to 16 pound rails.

Can furnish above to bend any weight rail.

We manufacture the above for 16 to 24 lb. rails, either single or double acting.

This illustration shows the double acting rail bender.

“ALTON” MINERS’ SQUIBS

A test of this squib will satisfy any miner of its good qualities.

The new “Alton” Miners’ Improved Squib consists of a tube having an inner match coated or saturated with rapid burning substance, and an outer match secured to the tube over the inner match. The match on this squib cannot be blown off.



You do not have to pinch or bite off the end of this squib as with many other makes. It is a matter of fact, and has been proven, that pinching or biting off the end often makes them shoot back.

We guarantee one-third more powder and of better quality than any other squib on the market. One hundred squibs to one box, 100 boxes to one case.

We also keep on sale American, Dadow & Beadle, and Powell’s Squibs, which we can furnish at lowest prices.

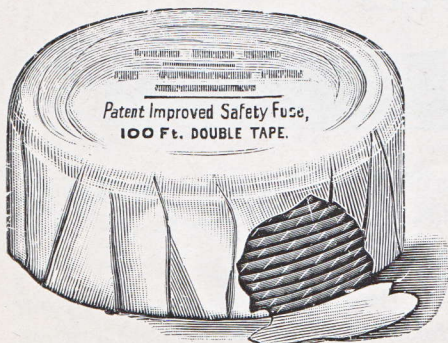
Gas squibs of any of the above brands in stock.

BLASTING PAPER

We carry in stock this paper in 9 and 12 in. widths, in 2½ to 6 lb. rolls.

Five rolls to each bundle, securely tied.

Each roll bears our own label.

**BLASTING FUSE**

Best made.

Single tape; double tape; cotton.

Put up 100 feet to each roll. Packed in two size cases, 1,000 and 6,000 feet.

MINERS' HAND SAWS

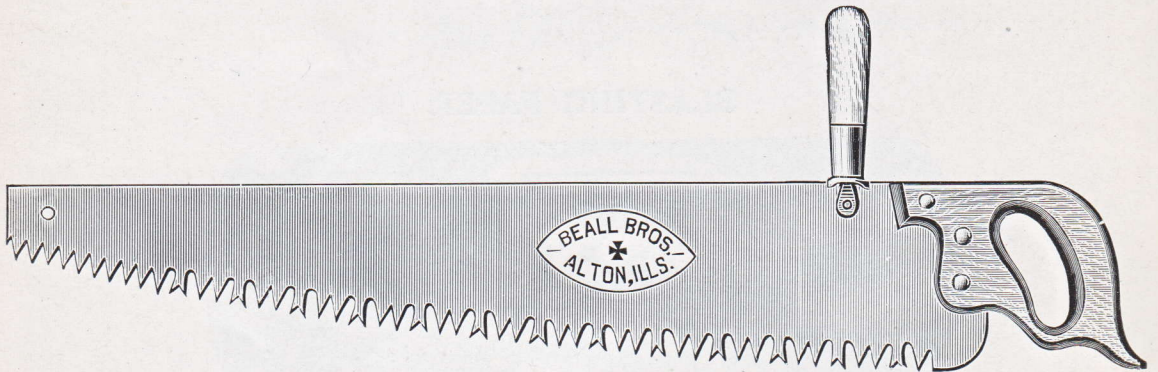
Beech handles, polished edges, brass screws.

A very desirable tool for miners.



We have them from 5 to 9 points to the inch. In ordering, give number of teeth to the inch wanted.

ONE-MAN SAWS



We carry a complete stock of the above in lengths from 2½ to 3 feet.

MINERS' FILES

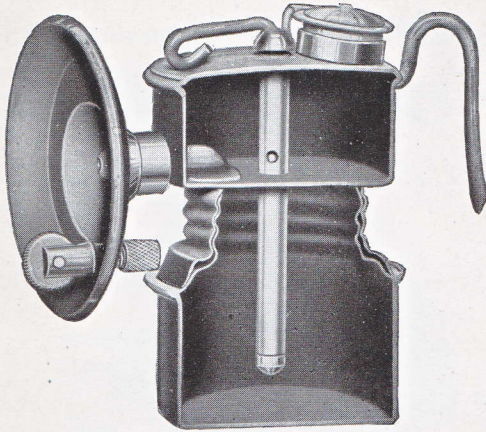


We carry a full stock of the leading brands of files for the special use of miners for sharpening drills, etc.,

8, 10, 12 and 14 in. flat mill saw files.

Also keep in stock all sizes and makes, but the above are mostly used by our customers in mining districts. A discount furnished on other sizes on application.

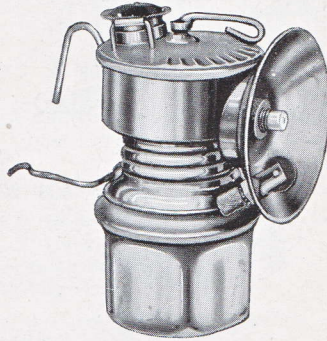
GUY'S DROPPER



No. 5 Lamp. Self-lighter lamp. This lamp has a 2 1/8-inch brass reflector, self-lighter attached to reflector. Brass lamp, in gun metal or bright finish, no extra bottom.

Specify kind of bottom wanted, hexagon or round.

GUY'S DROPPER



No. 28 Lamp. Has a 2 1/2 inch deep brass polished reflector intended for miners working in wet places or where the roof is low. This reflector is deep enough to protect the burner tip from water. Brass lamp in gun metal or bright finish, no extra bottom.

No. 22 S. L. Lamps with 2 3/4 inch polished brass reflector fastened to lamp with lock nut screw on burner tube. Reflector strongly reinforced on back to protect from accidents. Intended for use in rooms or entries with high roof. Brass lamp in gun metal or bright finish.



GUY'S SUPPLY KIT

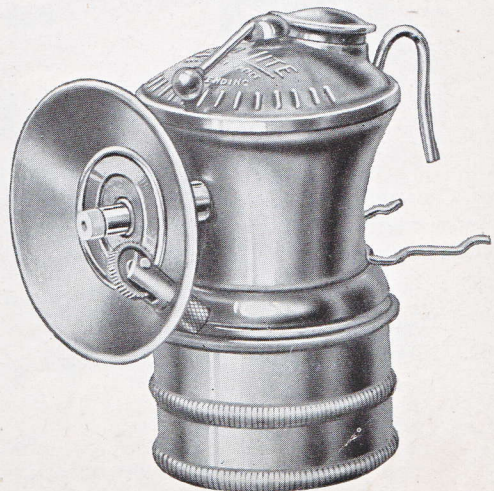
An assortment of lamp supplies most frequently called for by the miner. Also repair, most liable to become lost or worn out, which requires replacement. Conveniently arranged in a strong, durable cardboard box with hinge cover.

No. 1..... No. 2.....

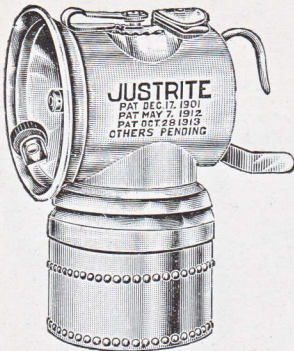
Auto-Lite

Polished brass. Nickel reflector, with cap spreader. Burns 3 1/2 to 4 hours with one charge. Weighs 5 ounces.

No.	Price
101. With extra bottom.....	\$.
101X. Without extra bottom.....



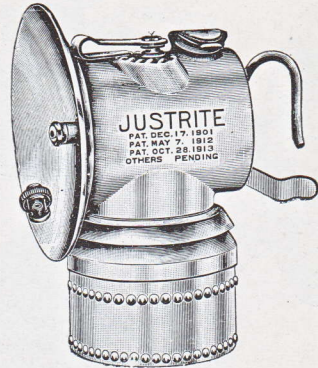
CARBIDE LAMPS



JUSTRITE

Concave reflector 2 1/4 in. diameter; lever feed; round hook.

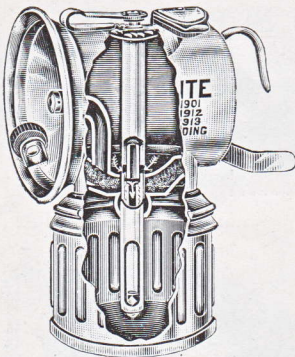
No.	Price
407. Polished brass, lamp only.....	\$.....
85. Polished brass, with No. 77 carbide can.....
57. Polished brass, with No. 68 ex. bottom.....



JUSTRITE

Saucer shape reflector 3 in. diameter; lever feed; round hook.

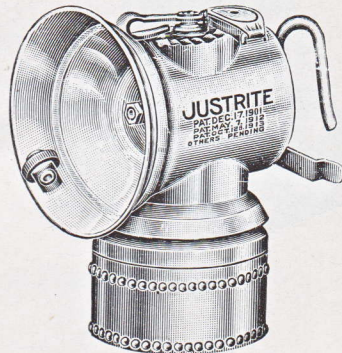
No.	Price
467. Polished brass, lamp only.....	\$.....
469. Nickel plated, lamp only.....



JUSTRITE

Concave reflector 2 1/4 in. diameter; liberty valve feed; reinforced bottom and rubber water door; round hook.

No.	Price
907. Polished brass, lamp only.....	\$.....
909. Nickel plated, lamp only.....



JUSTRITE

Drivers' cap lamp; deep concave reflector; 2 5/8 in. diameter; lever feed; round hook; polished brass.

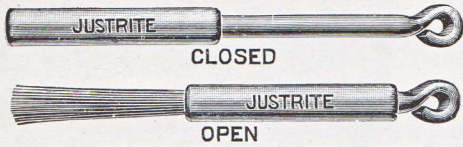
No.	Price
687. Lamp only.....	\$.....

Also suitable for wet mines.

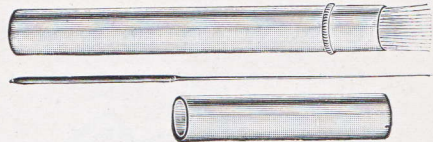
The extra deep reflector protects the flame from wind and water.

These lamps are also made with flat hooks.

ACCESSORIES AND REPAIRS FOR CARBIDE LAMPS



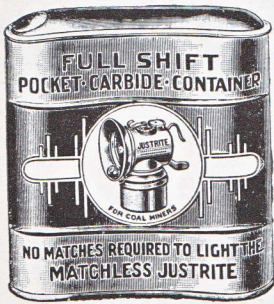
JUSTRITE WIRE TIP CLEANER
 Fifty hard rustproof steel wires—sliding cover, protects wires when not in use.
 No. 37. \$



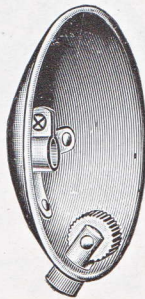
TIP REAMERS

No.	Each
145. Reamers	\$
150. Metal tubes . . . . .	. . . . .

POCKET CARBIDE CAN



Concaved to fit boot or hip pocket, sliding cover, rustproof.
Each
 No. 77—10 oz. capacity.



THE MATCHLESS REFLECTOR
 Lights the gas with a rub of the hand.
 Size 2½ inches, has lighter attached, is adjustable to fit around tip holder by means of tightening screw in collar.

No. Each

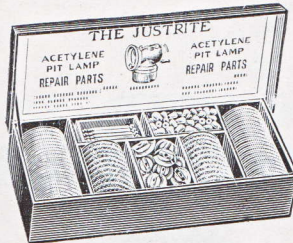
26. Brass . . . . .	. . . . .
27. Nickel plated . . . . .	. . . . .
172. Extra flints . . . . .	. . . . .

No matches needed.

Patented

No. 2—JUSTRITE REPAIR OUTFIT
Contents

- 3 doz. No. 60 gaskets.
- 3 doz. No. 62 felts.
- ½ doz. No. 64 felt holders.
- 2 doz. No. 66 lava tips.
- 2 doz. No. 28 metal tips.
- 2 doz. No. 172 flints.
- 1 doz. No. 173 springs.
- 1 doz. No. 174 screw caps.
- 1 doz. No. 182 hexagon nuts.
- ¼ doz. No. 177 lighters, complete.
- 1 doz. No. 37 tip cleaners.



CARBIDE FLASKS

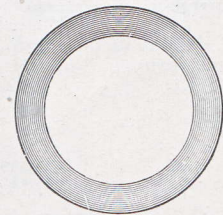


Heavy tin, oval shape, size 6¾x2x3; 1 pound capacity.
Each
 No. 23. Screw cap. . . \$

LAVA TIPS

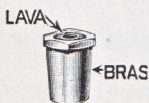


No. 66 with air holes.



No. 60

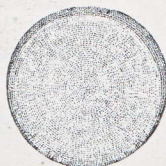
JEWEL METAL TIP



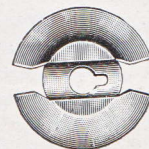
No. 28

A perfect metal tip shell made of brass with an imported Lava burner insert, combining the best qualities of the metal and lava tip. Cannot break or crack—easy to put in and take out.

FELT PACKING

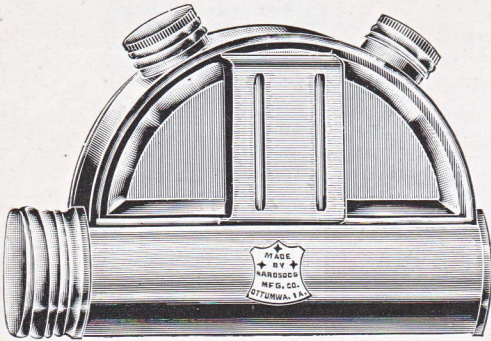


No. 62

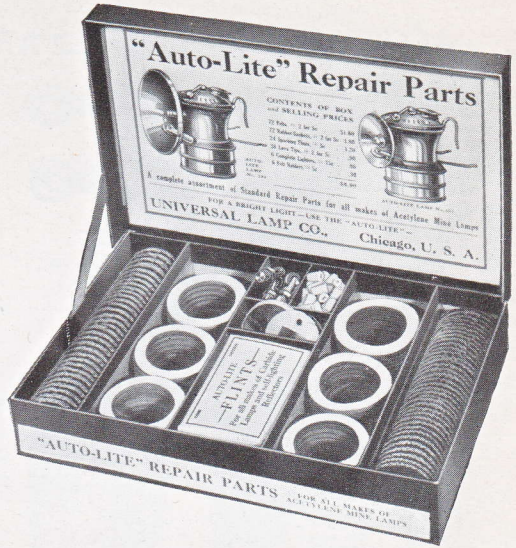


No. 64

**W. M. C.
CARBIDE CANTEEN**



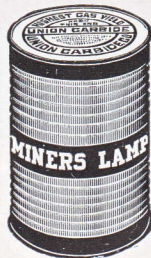
No. 21
Three compartments
Water, 1/2 pt; carbide, 1/2 lb.; matches, 24.
Carried on the belt.



Contents of Box
72 Felts. 36 Lava tips.
72 Rubber gaskets. 6 Complete lighters.
24 Sparking flints. 6 Felt holders.



UNION CARBIDE
Packed in blue and gray drums, capacity 100 lbs.



UNION CARBIDE
Packed in blue and gray drums, capacity 25 lbs.

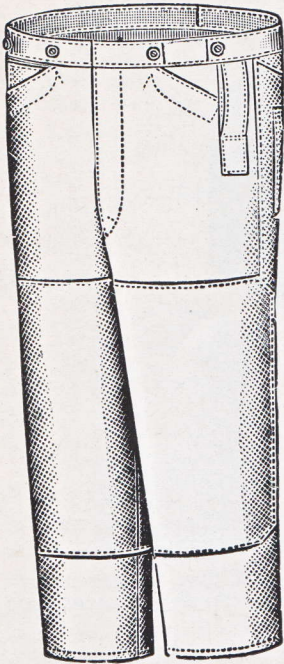


UNION CARBIDE
Packed in blue and gray cans, capacity 2 lbs.

REPAIRS FOR CARBIDE LAMPS

- | | |
|---|---|
| No. 66. Lava burners, for all lamps. | No. 177. Lighter, complete, for all lamps. |
| No. 28. Metal tips, for all lamps. | No. 145. Reamers. |
| No. 60. Flat gaskets, for all lamps. | No. 146. Reamer tubes. |
| No. 13. Round gaskets, for all lamps. | No. 201. N. P. reflector with lighter, 2 in. for auto-lite lamp. |
| No. 62. Felts, for all lamps. | No. 5. Brass reflector with lighter, 2 1/2 in. for Guy's dropper lamps. |
| No. 37. Wire brush cleaner. | Extra bottoms for Guy's dropper lamps. |
| No. 77. Carbide pocket can. | Extra bottoms for auto-lite lamps. |
| No. 172. Flints for lighter, for all lamps. | Extra bottoms for Justrite lamps. |
| No. 173. Springs for lighter, for all lamps. | |
| No. 174. Screw caps for lighter, for all lamps. | |

Some of parts listed are not illustrated.



MINERS' OVERALLS

Beall's Best.

Made in all sizes out of eight ounce white duck with patent buttons and belt straps.

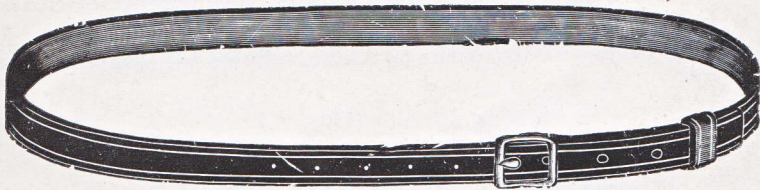
No. 1 grade have padded knees and are double seated.

No. 2 grade all made the same as the No. 1 grade excepting the knee and seat patches are smaller.

MINERS' WHITE DUCK BELTS

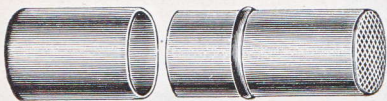
This belt is made of eight ounce white duck, with leather ends; any size.

MINERS' LEATHER BELTS



Made of best leather, with extra strong buckle in 1 and 1¼ in. widths; any size.

MATCH BOXES



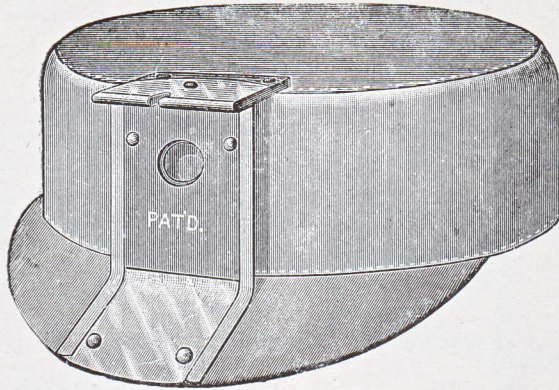
Round match box.

We carry in stock round match boxes for miners' use, as illustrated.

SQUIB BOX



COAL MINERS' CAPS



No. 9—White

Made of our heavy "Special Shrunk" White Duck, flannel lined. The Viser is made of heavy material covered with white duck, and will not be affected by water or dampness.

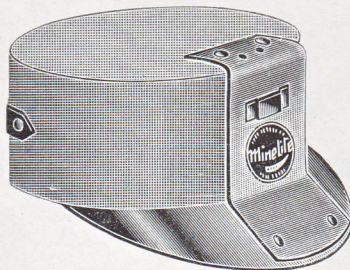
The lamp-holder is constructed of 2X Tin, interlined with vulcanized fibre, making it very durable. This lamp-holder is the one that has been adapted for the carrying of **Acetylene Lamps** by all the Acetylene Lamp manufacturers.

No. 9—Brown

Made exactly the same as the No. 9 White, the only difference being that it is made of the "Special Shrunk" **brown** duck, and the Viser is made of heavy material, covered with Black Glazed Oilcloth.

We can furnish either the No. 9 White or the No. 9 Brown with leather visor or long oil visor if so desired.

No. L74. MINERS' CAP



Specially made for carrying electric lamps in mines that are electrically equipped; it is adapted for carrying any electric lamp. Made of "Special Shrunk" duck, flannel lined. The visor is made of sole leather, is non-breakable. Has a leather fastener on the back of the cap for carrying the electric wire from the lamp to the battery.

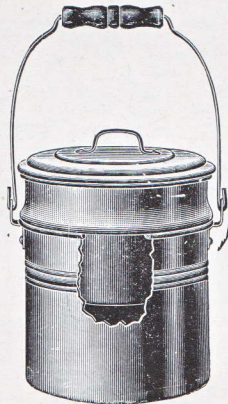
The lamp-holder is made of specially treated "Hard Fibre." It is electric, heat and water-proof. Made of either **white or brown** duck.

One dozen in each box

MINERS' DINNER BUCKETS



Granite



Aluminum



Tin

	4 Quart	5 Quart	6 Quart
IC Tin.....
IX Tin.....
Retinned.....
Enameled (cream city).....
Aluminum.....
Enameled (Spartan).....

Packed one dozen to case

MINERS' POWDER CANS



Airtight.

Tin.....one gallon.

Tin.....half gallon.

Galvanized.....one gallon.

Special galvanized holds half keg powder.

We furnish them with either bails or handles, or with both, if so desired.

FLEXOID TUBING—A FLEXIBLE AIR DUCT

WHAT IT IS—

It is a flexible air duct made from strong canvas, chemically impregnated to render waterproof and airtight. Furnished in 25, 50 and 100 ft. lengths, with metal couplings at each end.

WHAT IT DOES—

It conducts a fresh supply of air from a fan or blower to any point desired.

It ventilates blind headings, such as tunnels, air and water courses.

It facilitates the sinking of shafts, and permits the driving of parallel entries without crosscuts.

It eliminates lost time after blasting by instantly replacing the smoke and gas-laden atmosphere with fresh air.

HOW INSTALLED—

Flexoid Tubing is hung from an overhead wire by means of metal hooks supplied with the tubing. It can be suspended from any ordinary wire not less than 1/4 in. diameter, attached to the roof timbering, or to wooden pegs driven in the roof at about 15 ft. intervals.

In order to couple together any two lengths of **Flexoid Tubing**, compress one coupling and insert into the other. The compressed coupling, when released, will expand and made a tight joint. No tools are required to set up the tubing, other than a hammer and a pair of pliers.

BLOWER OUTFIT—

Flexoid Tubing must be used with a pressure blower, and we recommend a direct connected motor-blower outfit similar to that shown in the illustration. We can furnish this outfit with starting switch, base and leads and a motor suitable for the electrical current in your mine. Prices and details gladly furnished upon request.

ACCESSORIES—

We supply metal T's, Y's and L's for turning or dividing the air current, also special collars to suspend the tubing vertically in shafts.

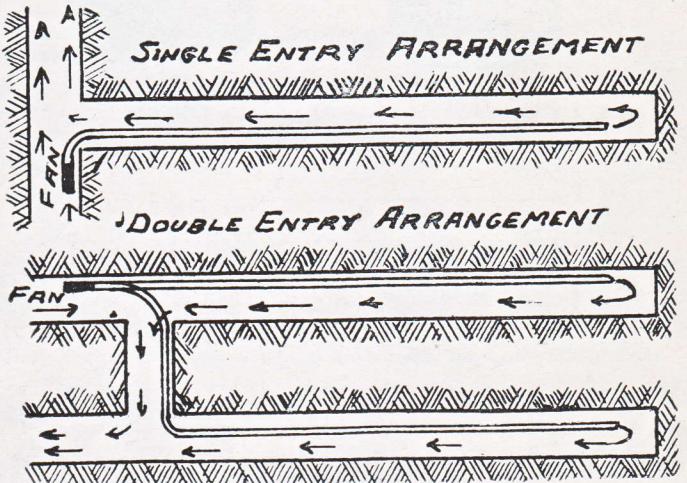
Write at once for full particulars, which will be furnished promptly.

VOLUME OF AIR DELIVERED BY MODEL B THROUGH A SINGLE LINE OF TUBING.

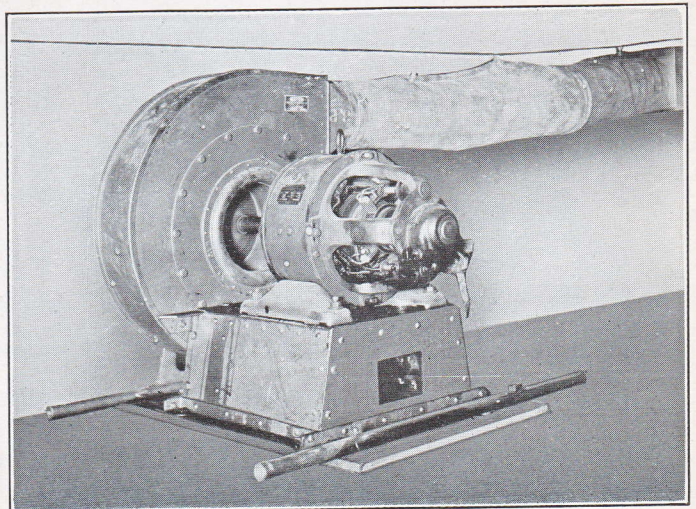
Feet	8 inch Tubing	10 inch Tubing	12 inch Tubing
100	1300 cu. ft.	1700 cu. ft.	1900 cu. ft.
200	1000 cu. ft.	1450 cu. ft.	1770 cu. ft.
300	830 cu. ft.	1290 cu. ft.	1660 cu. ft.
400	730 cu. ft.	1180 cu. ft.	1560 cu. ft.
500	660 cu. ft.	1090 cu. ft.	1470 cu. ft.
600	.....	1010 cu. ft.	1400 cu. ft.
700	.....	950 cu. ft.	1340 cu. ft.
800	.....	.....	1290 cu. ft.
900	.....	.....	1240 cu. ft.
1000	.....	.....	1200 cu. ft.



A 500-foot Line of 8-Inch Flexoid Tubing suspended from the roof.

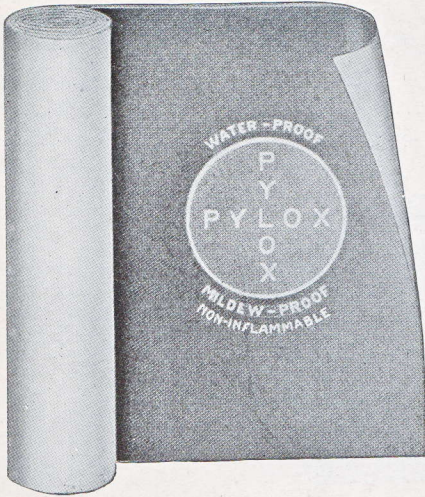


Position of Fan and Tubing for Double and Single Entries.



Showing compactness of Model B Blowing Outfit Mounted on a Light Platform.

PYLOX



Air-Tight; Mildew Proof; Rot
Proof; Waterproof
Non-Inflammable; Jute
Brattice Cloth

PYLOX

A high grade **guaranteed** Brattice of unusual merit recommended for service where conditions demand a wear resisting, rotproof and waterproof fabric. It is much superior to cotton duck.

Converted—black on one side and red color on other side.

Vermin-proof. Exceedingly meritorious.

JUTEX

(Trade Mark Registered)

Non-Inflammable; Jute
Brattice Cloth

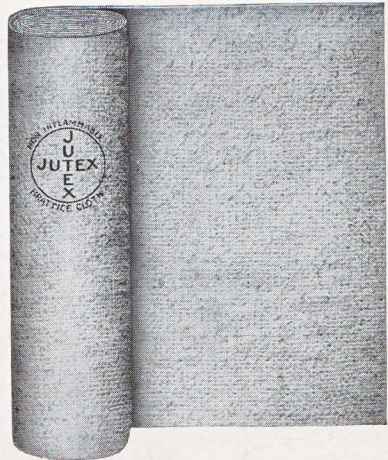
Jutex

A very closely woven, mangled cloth, manufactured from heavy jute yarns. Treated in our converting plant, where it is rendered non-inflammable, and its wearing qualities amplified.

Especially adaptable and desirable for gassy mines. Because of the density of weave and treatment in the converter, it will withstand hard wear, making it the most economical Brattice Cloth sold in America.

Rolls supplied in either 50 or 100 lineal yards, range of width being 36, 40, 48, 60, 72, 80 and 84 inches.

Reduce replacement costs by using **Jutex**—the highest grade non-inflammable Brattice produced.



VALVES AND FITTINGS

We carry at all times a complete line of Crane Co. Standard fittings in ells, tees, bushings, couplings and nipples, globe, angle, cheek and gate valves in all sizes from $\frac{1}{8}$ inch to 6 inches. Also steam cocks and foot valves.

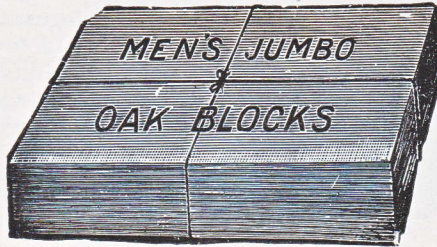
HEMLOCK SQUARE CUT HALF SOLES

Sole leather cut in this shape is popular with shoemakers and others that want to get more than two pair of half soles out of a square piece of leather, because after cutting two pair of taps there is left in the center a piece of leather large enough for a top lift.

Put up twelve pieces to the bundle, sizes $6\frac{1}{4}$ inches by $8\frac{1}{2}$ inches.

	PRICES	Per Dozen
Grade squares		\$.....

JUMBO OAK BLOCKS

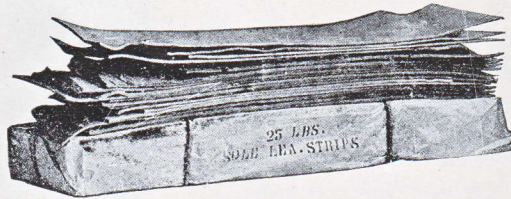


Size $8\frac{1}{2} \times 12\frac{1}{2}$ inches; weights: 7, 8, 9, 10, 11 and 12 lbs. to each dozen.

These large size blocks are made to give the repairer the required length for full soles, cut full length from toe to heel, covering the whole shoe. A jumbo or full block can be cut in two in middle, and it makes two dozen squares $6\frac{1}{4} \times 8\frac{1}{2}$ inches.

	PRICES	Per Dozen Blocks
Grade blocks		\$.....

STRIPS



Usually cut $8\frac{1}{2}$ inches wide, and runs in various lengths according to width of the sole leather that is cut in strips.

Strips are used so as to give cutters a chance to cut out any size sole, from one to thirteen. A careful cutter can get more soles and half soles out of a strip than out of blocks or half blocks.

	PRICES	Per Pound
Strips; grade; $8\frac{1}{2}$ inches wide.....		\$.....

TAP SOLES

Put up twelve pair to the dozen, assorted sizes: 6 to 11, 2 to 6, 2 to 7, 3 to 8, 3 to 9, 2 to 11.

To users of leather that want to save time this shape is very desirable. If the shoe take an 8 size they pick up a pair of size 8 taps and nail them right on to the shoes and they usually fit without much trimming—a time saver.

Put up twelve pairs to bundle, sizes 7 to 11.

	PRICES	Per Dozen Pairs
Grade taps		\$.....

MANUFACTURERS' STANDARD LIST OF WROUGHT OR STEEL PLATE WASHERS



Adopted October 10, 1895.

Diameter	Size of Hole	Thickness Wire Gauge No.	Size of Bolt	Price per Pound	Average Number in 100 Lbs.
$\frac{9}{16}$	$\frac{1}{4}$	18 ($\frac{3}{64}$)	$\frac{3}{16}$	.....	44,075
$\frac{3}{4}$	$\frac{5}{16}$	16 ($\frac{1}{6}$)	$\frac{1}{4}$	.....	13,845
$\frac{7}{8}$	$\frac{3}{8}$	16 ($\frac{1}{16}$)	$\frac{5}{16}$	.....	11,220
1	$\frac{7}{16}$	14 ($\frac{5}{64}$)	$\frac{3}{8}$	.....	6,573
$1\frac{1}{4}$	$\frac{1}{2}$	14 ($\frac{5}{64}$)	$\frac{7}{16}$	.....	4,261
$1\frac{3}{8}$	$\frac{9}{16}$	12 ($\frac{3}{32}$)	$\frac{1}{2}$	.....	2,683
$1\frac{1}{2}$	$\frac{5}{8}$	12 ($\frac{3}{32}$)	$\frac{9}{16}$	.....	2,249
$1\frac{3}{4}$	$\frac{11}{16}$	10 ($\frac{1}{8}$)	$\frac{5}{8}$	.....	1,315
2	$\frac{13}{16}$	10 ($\frac{1}{8}$)	$\frac{3}{4}$	.....	1,013
$2\frac{1}{4}$	$\frac{15}{16}$	9 ($\frac{5}{32}$)	$\frac{7}{8}$	.....	858
$2\frac{1}{2}$	$\frac{1}{16}$	9 ($\frac{5}{32}$)	1	.....	617
$2\frac{3}{4}$	$\frac{1}{4}$	9 ($\frac{5}{32}$)	$\frac{1}{8}$	.....	516
3	$\frac{3}{8}$	9 ($\frac{5}{32}$)	$\frac{1}{4}$	.....	403
$3\frac{1}{4}$	$\frac{1}{2}$	8 ($\frac{11}{64}$)	$\frac{3}{8}$	.....	280
$3\frac{1}{2}$	$\frac{5}{8}$	8 ($\frac{11}{64}$)	$\frac{1}{2}$	.....	240
$3\frac{3}{4}$	$\frac{3}{4}$	8 ($\frac{11}{64}$)	$\frac{5}{8}$	.....	245
4	$\frac{7}{8}$	8 ($\frac{11}{64}$)	$\frac{3}{4}$	.....	220
$4\frac{1}{4}$	2	8 ($\frac{11}{64}$)	$\frac{7}{8}$	.....	190
$4\frac{1}{2}$	$\frac{21}{8}$	8 ($\frac{11}{64}$)	2	.....	170
$4\frac{3}{4}$	$\frac{23}{8}$	6 ($\frac{3}{16}$)	$\frac{21}{4}$	100
5	$\frac{25}{8}$	5 ($\frac{7}{32}$)	$\frac{21}{2}$	90

When ordering, state number of pounds wanted.

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60
5
300