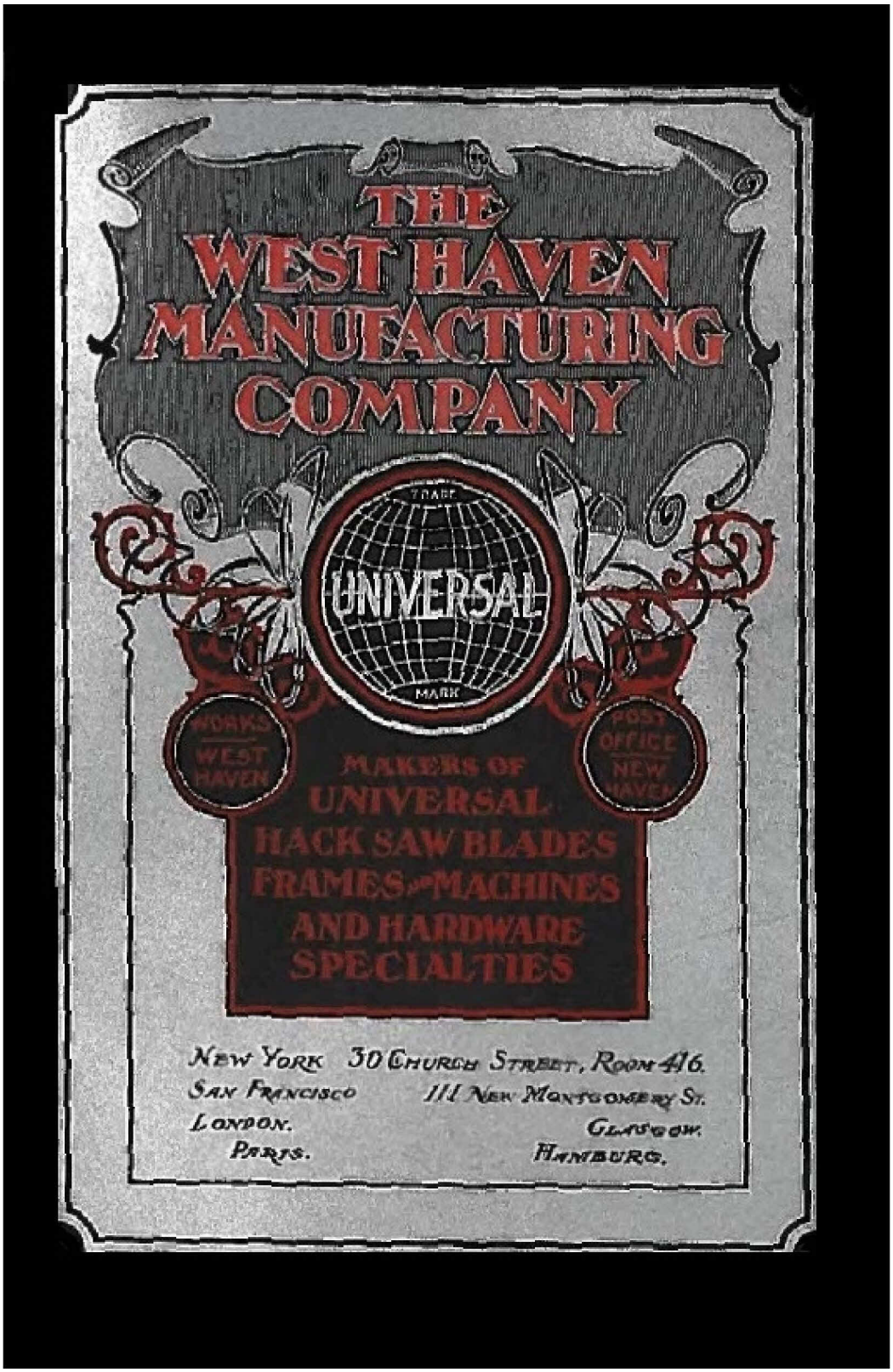
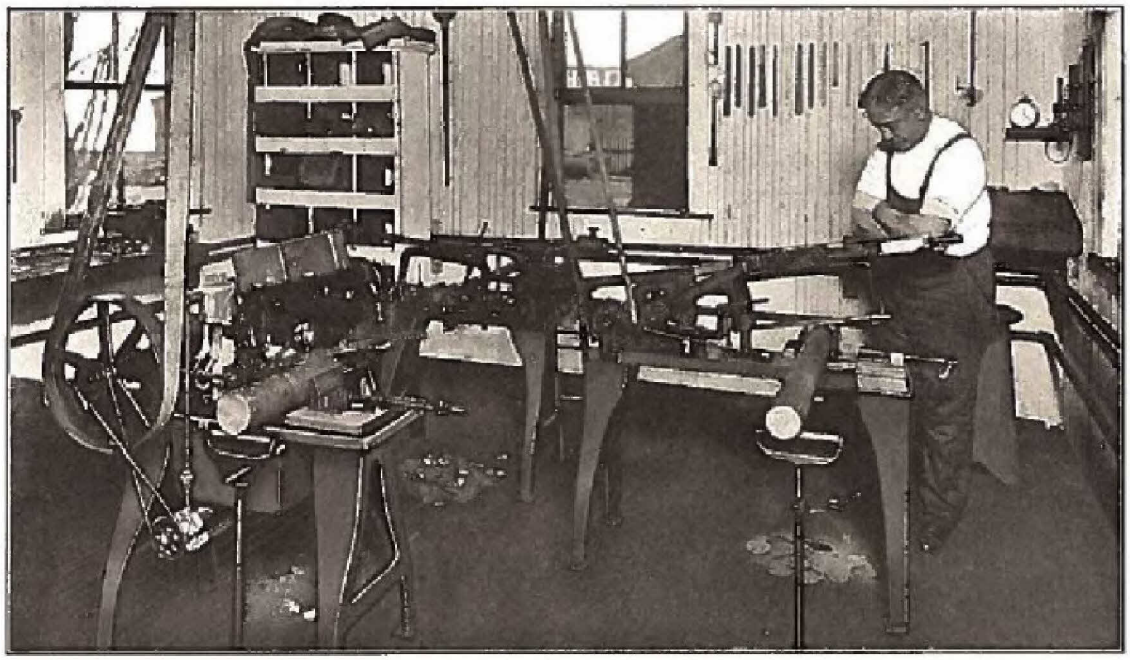

THE
WEST HAVEN
MANUFACTURING
COMPANY
TRADE
UNIVERSAL
MARK
WORKS
WEST
HAVEN
POST
OFFICE
NEW
HAVEN
MAKERS OF
UNIVERSAL
HACK SAW BLADES
FRAMES and MACHINES
AND HARDWARE
SPECIALTIES
NEW YORK 30 CHURCH STREET, ROOM 416.
SAN FRANCISCO 111 NEW MONTGOMERY ST.
LONDON.
GLASGOW.
PARIS.
HAMBURG.



Section Testing Department, showing how the testing of UNIVERSAL HACK SAWS is continually carried on to insure the maintenance of the high standard quality long established.

Section Inspecting Department, showing how every UNIVERSAL HACK SAW is inspected before packing, to prevent shipment of imperfect blades.

"ACME"
POWER HACK SAW
MACHINES

WICKSTEED PATENT

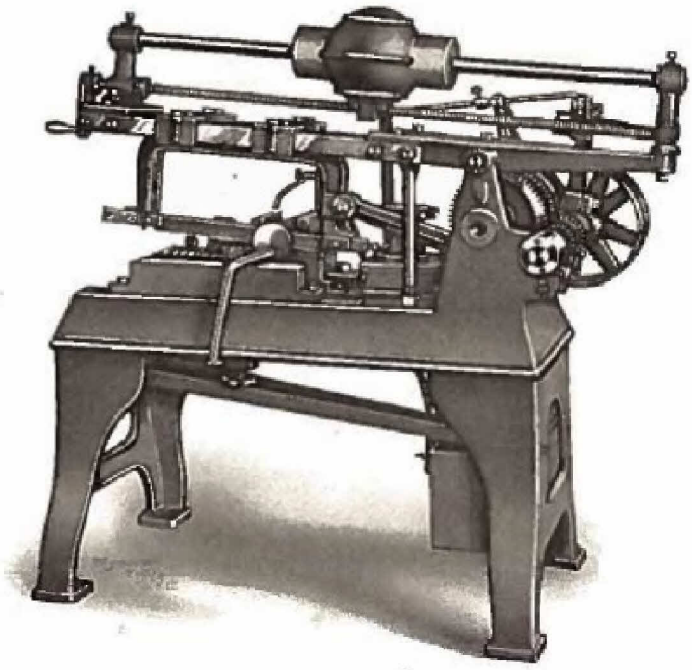
Manufactured and sold exclusively in the United States of America by

THE WEST HAVEN MFG. CO.

NEW HAVEN, CONN.

"ACME"

PATENT HACK SAW MACHINE



Weight is adjusted by means of a course pitch screw, machine is equipped with tight and loose pulleys, and belt is shifted automatically when cut is finished. Suds pump and belt are outside and accessible. Tank is of ample size with three divisions to prevent chips, etc., clogging pump.

No priming is necessary, as pump is below level of suds.

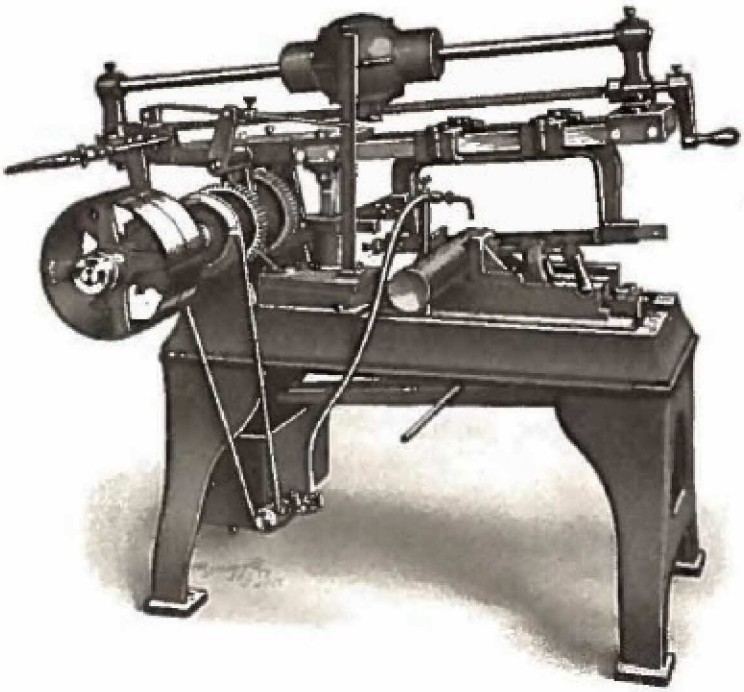
Conservatively stated, this machine will cut about one superficial circular inch per minute of machinery steel. Cast steel requires about double the time.

Rapid Adjustable Vise which may also be removed from bed altogether.

Suitable Saw Blades: 12 x 1–18 Ga., 13 x 1–18 Ga., 13½ x 1–18 Ga., 13½ x 1¼–18 Ga., 14 x 1¼–18 Ga.

"ACME"

PATENT HACK SAW MACHINE



6-INCH MODEL

Capacity	6 inch solids	Floor Space	50 × 29 inches
Size of Pulleys	10 × 2½ inches	Height Work Vise	25 inches
Speed of Pulley	250 r. p. m.	Height over all	45 inches
Length Saw Blades,	12-13-13½-14 in.	Measurements	50 × 29 × 45 inches
Stroke	5½ inches	Net Weight	725 pounds
Speeds of Machine,	80 and 120 r. p. m.	Gross Weight	825 pounds

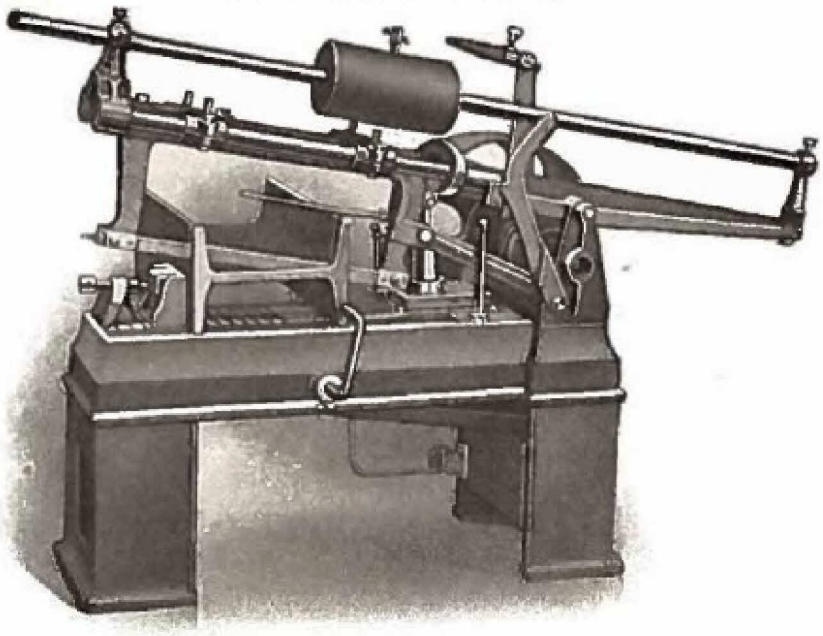
A massive and rigidly constructed machine of the very best workmanship. "Draw Cut" pattern.

SPECIAL FEATURE

Return Stroke Relief—This is accomplished by means of a Four Function Hydraulic Oil Ram, by the operation of which the saw frame is raised to its highest position; lifts off work on return stroke; remains at any height, or gradually drops, this latter function performing whether the machine be idle or working.

"ACME"
PATENT HACK SAW MACHINE

STANDARD LIGHT PATTERN



12x8-INCH GIRDER MACHINE

Capacity	12 × 8 inches	Speed of Machine	70 to 120 r. p. m.
Tight and Loose Pulleys	16 × 2½ in.	Floor Space	68 × 26 inches
Length Saw Blades	14-16-18-20 inches	Measurements	66 × 37 × 30 inches
Stroke	5½ inches	Net Weight	900 pounds
		Gross Weight	1025 pounds

This pattern is especially designed for and adapted to cutting rails, girders, or other rectangular or round stock of large dimensions. Above illustration shows type of work it is capable of.

Draw Cut Machine. Equipped with hydraulic oil ram, which gives a positive lift on return stroke.

Two-speed countershaft with cone for machine can be furnished, and should run at 90 r. p. m. Automatic stop may be had for machines with no countershaft.

Will cut a 12 x 8 girder in about 20 minutes.

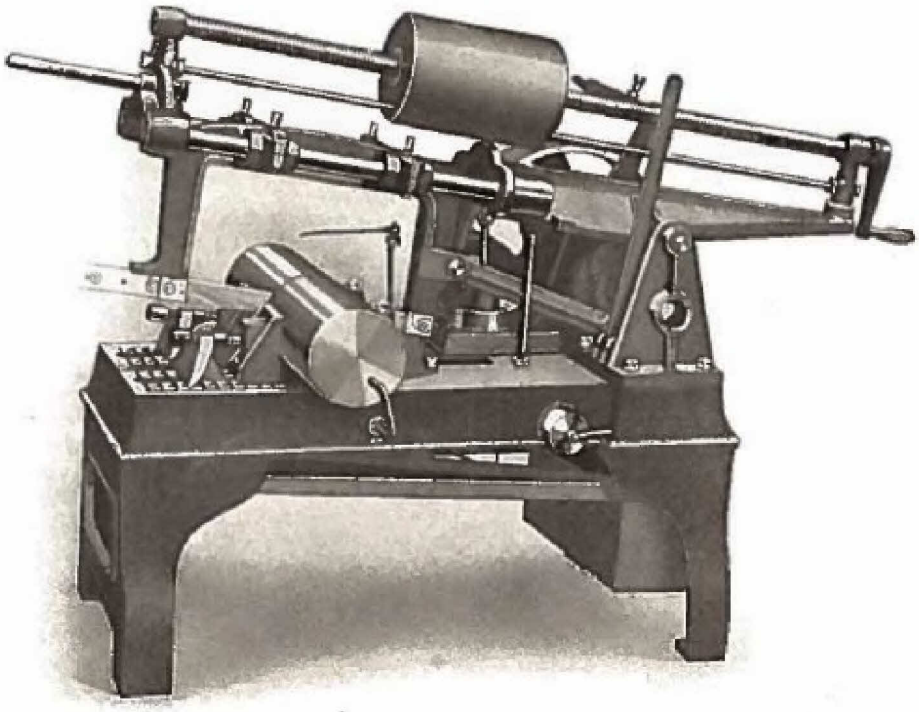
Suitable Saw Blades: 14 x 1¼–18 Ga., 16 x 1¼–17 Ga., 18 x 1¼–17 Ga., 20 x 1¼–17 Ga.

NOTE

This style also furnished with 20 x 8, 12 x 12 and 20 x 12 inch capacity.

"ACME"
PATENT HACK SAW MACHINE

MASSIVE PATTERN



9-INCH MODEL

Capacity .....9 inch solids	Speed of Machine ..60 to 110 r. p. m.
Tight and Loose Pulleys..20 × 3 in.	Floor Space .....66 × 31 inches
Length Saw Blades...14-16-18 inches	Measurements ..69 × 31 × 36 inches
Stroke .....6 inches	Net Weight .....1200 pounds
Gross Weight .....1500 pounds	

A heavier pattern than the 6" Model, also of a "Draw Cut" pattern. All special features are retained, viz: hydraulic oil ram, weight adjustment, etc.

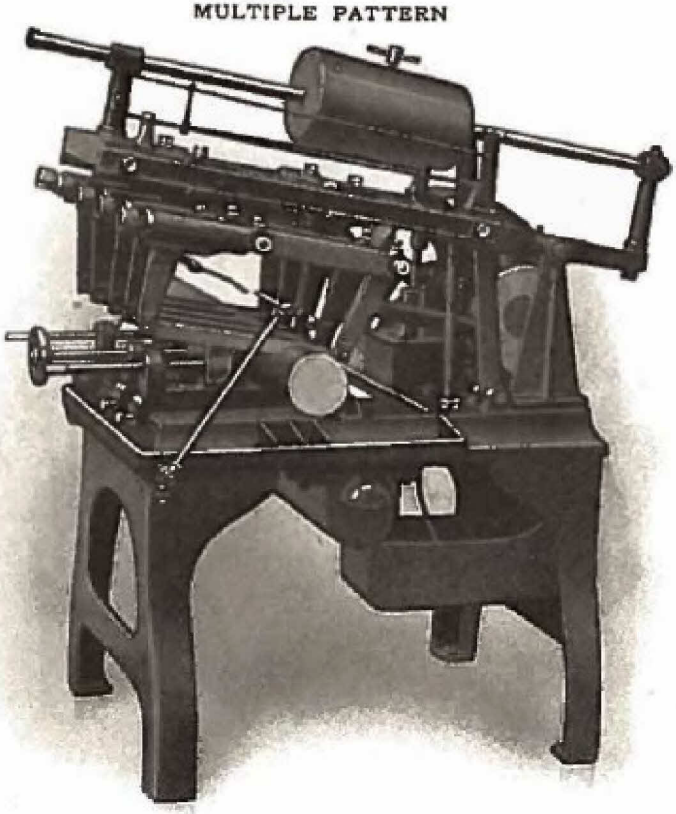
Two-Speed Countershaft with cone for machine can be furnished and should run at 80 r. p. m.

Automatic Stop may be had for machines with no countershaft.

Suitable Saw Blades: 14 x 1¼–18 Ga., 16 x 1½–17 Ga., 18 x 1½–17 Ga.

"ACME"
PATENT HACK SAW MACHINE

MULTIPLE PATTERN



6-INCH MODEL

Capacity .....6 inch solids	Speed of Machine...60 to 100 r. p. m.
Tight and Loose Pulleys...10 × 3 in.	Floor Space .....71 × 33 inches
Length Saw Blades..12 and 13 inches	Measurements ..70 × 46 × 36 inches
Stroke .....6 inches	Net Weight, 3 Frames, etc., 1175 lbs.
Gross Weight .....1450 pounds	

Equipped with hydraulic oil ram, same as on other models.
Will cut from one to five pieces at a time.
With two frames will cut 2 pieces from ¾" to 15" long.
" three " " " 3 " " ¾" " 7½" "
" five " " " 5 " " ¾" " 3¾" "

Attachment may be purchased allowing cuts down to ⅛" to be made, and a two-speed countershaft with cone for machine can be furnished, which should run at 220 r. p. m.

Automatic stop may be had for machines with no countershaft.

Suitable Saw Blades: 12 and 13" x 1–18 Ga.

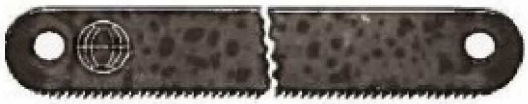
Made also with 7" capacity.

"UNIVERSAL" HACK SAWS

REGULAR CUT—14 or 16 Pts. per inch

This blade is especially adapted to cutting soft steel or iron solids, and **Rails.** Not recommended for Brass, Pipe, Tubing, etc.

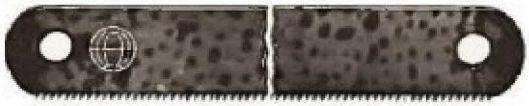
MEDIUM CUT—20 Pts. per inch



We recommend twenty point blades used in a hand frame, as the best for general purposes. Especially adapted to cutting Brass Castings, Iron Pipe and Heavy Tubing.

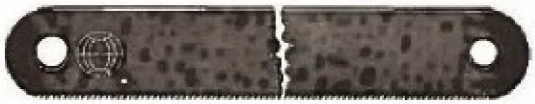
This cut of tooth will be furnished on all orders where full specifications are not given.

FINE CUT—24 Pts. per inch



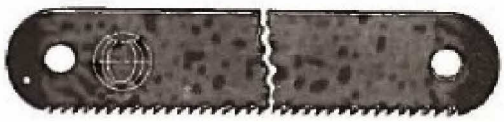
The 24 point or fine cut of tooth is most satisfactory for cutting light work, i. e., Brass Rod, Drill Rod, Brass Pipe or Medium Tubing.

TUBING CUT—32 Pts. per inch



For Thin Tubing, Thin Sheet Metal, etc.

"UNIVERSAL" HACK SAWS



HAND OR LIGHT POWER BLADES

LENGTH	WIDTH	GAUGE	TEETH PER INCH			PER DOZ.	PER GRO.	NO. IN BOX
8 inches	⅝ inch	22 = .028	14	20	32	$ .75	$ 9.00	½ Gross
9 "	⅝ "	22 = .028	14	20	32	.80	9.60	½ "
10 "	⅝ "	22 = .028	14	20	32	.85	10.20	½ "
12 "	¾ "	22 = .028	14	20	32	1.05	12.60	½ "
12 "	⅝ "	22 = .028	14	20	32	1.05	12.60	½ "
14 "	⅞ "	22 = .028	14	20	32	1.25	15.00	½ "

The blades listed above, while suitable for hand frame use, will be found economical for use in light weight power machines, for cutting various and irregular shapes of special metals of small dimensions; especially the 20 and 32 point blades, for cutting material demanding a fine tooth saw. 14" blades are 13½" to centers.

We cannot emphasize this point too strongly, as in many instances a heavier gauge with a coarser tooth is used in a power machine, for cutting material to which it is not well adapted, and therefore not only more expensive, but not nearly as satisfactory.

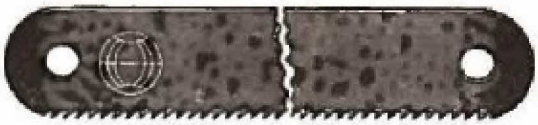
See next page for more detailed information.

Heavier gauge power machine blades are listed on following pages.

Table of Weights, Page 40.

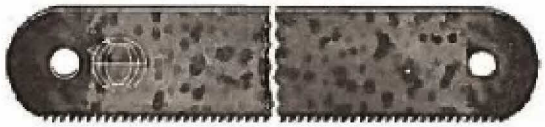
"UNIVERSAL" HACK SAWS

REGULAR CUT—14 Pts. per inch



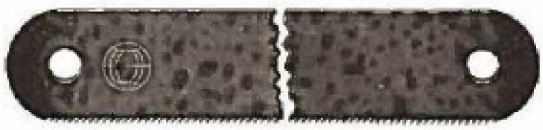
Above blade in 22 gauge in **light weight power machine** is especially adapted to cutting solids not more than 1½ inches. Also will be found best adapted to many uses in hand frames.

MEDIUM CUT—20 Pts. per inch



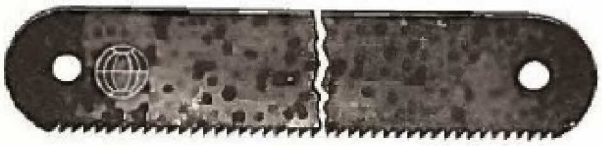
This blade in 22 gauge is especially for use in **light weight** machines or hand frames, for cutting Brass Castings, Iron Pipe, Heavy Tubing, etc.

TUBING CUT—32 Pts. per inch



For **light weight machines only**, cutting Thin Tubing or other shapes requiring a very fine tooth saw.

"UNIVERSAL" HACK SAWS



POWER MACHINE BLADES

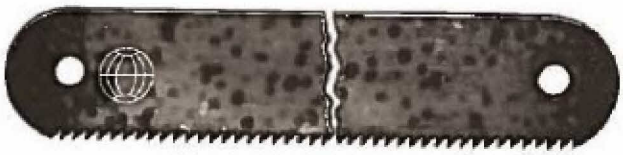
LENGTH	WIDTH	GAUGE	TEETH PER INCH			PER DOZ.	PER GRO.	NO. IN BOX
10 inches	¾ inch	21 = .032	14			$1.05	$12.60	½ Gross
12 "	⅞ "	21 = .032	14	20		1.15	13.80	½ "
12 "	⅝ "	21 = .032	14	20		1.15	13.80	½ "
12 "	¾ "	21 = .032	14	20	24	1.25	15.00	½ "
14 "	⅝ "	21 = .032	14			1.35	16.20	½ "
14 "	¾ "	21 = .032	14	20	24	1.50	18.00	½ "
16 "	1 "	21 = .032	14			2.20	26.40	⅓ "
17 "	¾ "	21 = .032	14			1.85	22.20	⅓ "
17 "	1 "	21 = .032	14			2.30	27.60	⅓ "
18 "	1 "	21 = .032	14			2.40	28.80	⅓ "

Our 14 and 17" power machine blades are ½" less to centers than length given. Lighter gauge power blades are listed on preceding page and heavier gauge on following pages.

Table of Weights, Page 40.

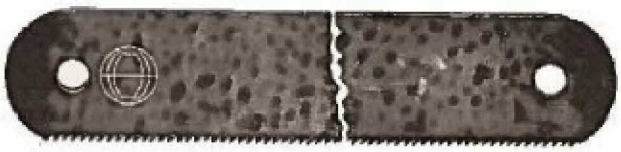
"UNIVERSAL" HACK SAWS

REGULAR CUT—14 Pts. per inch



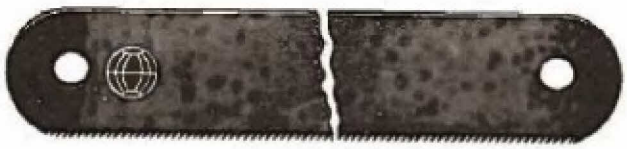
Above blades are designed for use in ordinary power machines for cutting solids in iron or steel and general power machine work.

MEDIUM CUT—20 Pts. per inch



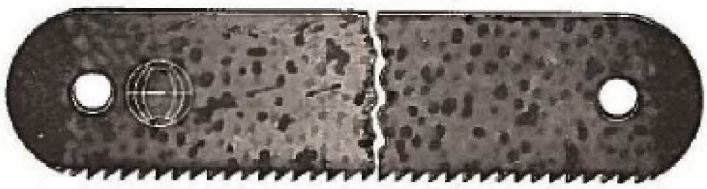
The 20 point blade in 21 gauge is especially adapted to special work in the ordinary power machine, such as Brass Castings, Iron Pipe, Heavy Tubing, etc.

FINE CUT—24 Pts. per inch



The 24 point blade in 21 gauge is especially adapted to special work in the ordinary power machine, when it appears a fine tooth is necessary. There are instances where this blade would be best adapted to cutting cast iron.

"UNIVERSAL" HACK SAWS



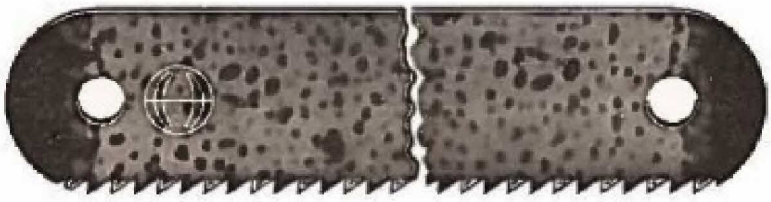
HEAVY POWER MACHINE BLADES

LENGTH	WIDTH	GAUGE	TEETH PER INCH		PER DOZ.	PER GRO.	NO. IN BOX
10 inches	¾ inch	18 = .049	10		$1.25	$15.00	⅓ Gross
12 "	¾ "	18 = .049	10	14	1.50	18.00	⅓ "
12 "	1 "	18 = .049	10	14	2.40	28.80	¼ "
14 "	¾ "	18 = .049	10	14	1.80	21.60	¼ "
14 "	1 "	18 = .049	10	14	2.60	31.20	¼ "
16 "	1 "	18 = .049	10	14	2.80	33.60	¼ "
17 "	¾ "	18 = .049	10	14	2.30	27.60	¼ "
17 "	1 "	18 = .049	10	14	3.00	36.00	¼ "
18 "	1 "	18 = .049	10		3.15	37.80	¼ "
19 "	1 "	18 = .049	10		3.30	39.60	¼ "
20 "	1 "	18 = .049	10		3.50	42.00	¼ "
21 "	1 "	18 = .049	10		3.69	44.28	¼ "
23 "	1 "	18 = .049	10		4.00	48.00	⅓ "
24 "	1 "	18 = .049	10	14	4.20	50.40	¼ "

14 and 17" power blades are ½" less to centers than length given. All other power blades will be shipped true to length given. Lighter gauge power blades are listed on preceding pages, and still heavier gauges on following page.

Table of Weights, Page 40.

"UNIVERSAL" HACK SAWS



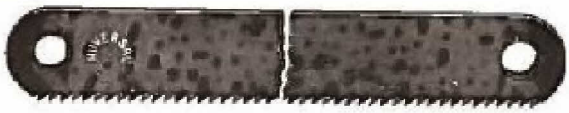
EXTRA HEAVY POWER MACHINE BLADES

LENGTH	WIDTH	GAUGE	TEETH PER INCH	PER DOZ.	PER GRO.	NO. IN BOX
14 inches	1 inch	16 = .065	8	$2.80	$33.60	¼ Gross
16 "	1 "	16 = .065	8	3.10	37.20	¼ "
17 "	1 "	16 = .065	8 10	3.25	39.00	¼ "
18 "	1 "	16 = .065	8	3.40	40.80	¼ "
19 "	1 "	16 = .065	8	3.55	42.60	¼ "
20 "	1 "	16 = .065	8	3.77	45.20	¼ "
20 "	1 "	14 = .083	8	4.10	49.20	⅛ "
21 "	1 "	16 = .065	8	3.90	46.80	¼ "
23 "	1 "	16 = .065	8	4.25	51.00	¼ "
24 "	1 "	16 = .065	8 10	4.50	54.00	¼ "
24 "	1 "	14 = .083	8	4.90	58.80	⅛ "

14 and 17" power blades are ½" less to centers than length given. All other power blades will be shipped true to length given. Lighter gauge power blades are listed on preceding pages.

Table of Weights, Page 40.

"NUVERSAL" HACK SAWS



HAND BLADES ONLY

LENGTH	WIDTH	GAUGE	TEETH PER INCH			PER DOZ.	PER GRO.	NO. IN BOX
8 inches	$\frac{7}{16}$ inch	24 = .022	16	20	24	$ .67	$ 8.00	½ Gross
9 "	$\frac{7}{16}$ "	24 = .022	16	20	24	.75	9.00	½ "
10 "	½ "	24 = .022	16	20	24	.84	10.00	½ "
12 "	½ "	24 = .022	14	20	24	1.00	12.00	½ "

Above are made with three cuts of teeth each size.

"Regular" in 6" to 11" inclusive, 16 teeth per inch.
"Regular" in 12", 14 teeth per inch.
"Medium" all sizes, 20 teeth per inch.
"Fine" all sizes, 24 teeth per inch.

For cutting soft steel use "Regular"

For cutting unannealed tool steel, cast iron or for general work use "Medium"

For cutting brass solids, black pipe, drill rod, etc., use "Fine"

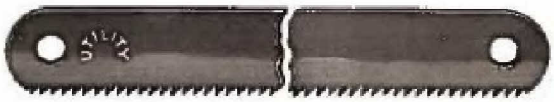
8 The UNIVERSAL HACK SAW 8
Regular. 16 Pts.
ONE-HALF GROSS

HAND HACK SAW.
23 Ga. 20 Pts. 8
ONE-HALF GROSS.

The UNIVERSAL HACK SAW 8
1-2 Gross. Fine Teeth.

The UNIVERSAL HACK SAW 8
1-2 Gross TUBING

"UTILITY" HACK SAWS



HAND BLADES

LENGTH	WIDTH	GAUGE	TEETH PER INCH				PER DOZ.	PER GRO.	NO. IN BOX
6 inches	½ inch	23 = .025	16	20	24	32	$ .55	$ 6.60	½ Gross
7 "	½ "	23 = .025	16	20	24	32	.60	7.20	½ "
8 "	½ "	23 = .025	16	20	24	32	.65	7.80	½ "
9 "	½ "	23 = .025	16	20	24	32	.70	8.40	½ "
10 "	½ "	23 = .025	16	20	24	32	.75	9.00	½ "
11 "	½ "	23 = .025	16	20	24	32	.85	10.20	½ "
12 "	½ "	23 = .025	16	20	24	32	.90	10.80	½ "
13 "	½ "	23 = .025	16	20	24	32	.95	11.40	½ "
14 "	½ "	23 = .025	16	20	24	32	1.00	12.00	½ "
15 "	½ "	23 = .025	16	20	24	32	1.05	12.60	½ "
16 "	½ "	23 = .025	16	20	24	32	1.10	13.20	½ "

The "Utility" Hack Saws, Hand Frame sizes in 23 gauge = .025 listed above, are as with the Universal made in four different cuts of teeth, each cut especially adapted to some particular class of material.

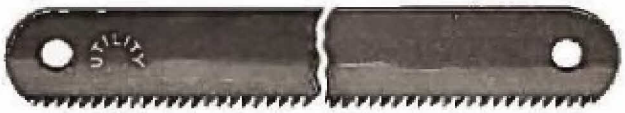
Information in detail concerning the "proper" blade to use will be found on the following page. Blades with **20 teeth per inch** will be supplied where full specifications are not given.

All cuts of teeth same price.

Table of Weights, Page 40.

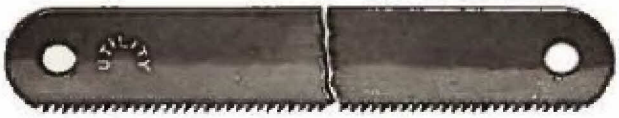
"UTILITY" HACK SAWS

REGULAR CUT—16 Pts. per inch



This blade is especially adapted to cutting soft steel or iron solids, and Rails. Not recommended for Brass, Pipe, Tubing, etc.

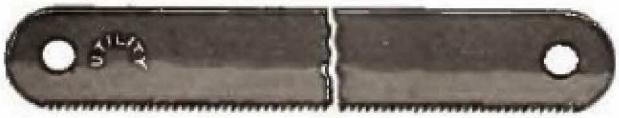
MEDIUM CUT—20 Pts. per inch



We recommend twenty point blades used in a hand frame as the best for general purposes. Especially adapted to cutting Brass Castings, Iron Pipe and Heavy Tubing.

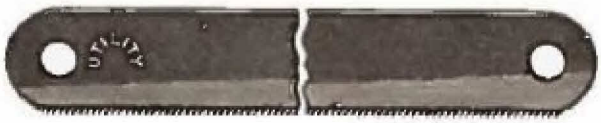
This cut of tooth will be furnished on all orders where full specifications are not given.

FINE CUT—24 Pts. per inch



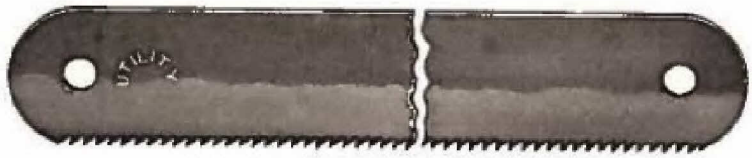
The 24 point or fine cut of tooth is most satisfactory for cutting light work, i. e., Brass Rod, Drill Rod, Brass Pipe or Medium Tubing.

TUBING CUT—32 Pts. per inch



For thin tubing, thin sheet metal, etc.

"UTILITY" HACK SAWS



POWER MACHINE BLADES

LENGTH	WIDTH	GAUGE	TEETH PER INCH	PER DOZ.	PER GRO.	NO. IN BOX
12 inches	⅝ inch	21 = .032	14	$1.05	$12.60	½ Gross
12 "	¾ "	21 = .032	14	1.15	13.80	½ "
13 "	⅝ "	21 = .032	14	1.15	13.80	½ "
13½ "	⅝ "	21 = .032	14	1.25	15.00	½ "
13½ "	¾ "	21 = .032	14	1.45	17.40	½ "
14 "	⅝ "	21 = .032	14	1.25	15.00	½ "
14 "	¾ "	21 = .032	14	1.45	17.40	½ "
16 "	⅝ "	21 = .032	14	1.45	17.40	½ "
16 "	¾ "	21 = .032	14	1.65	19.80	½ "
16½ "	⅝ "	21 = .032	14	1.55	18.60	½ "
16½ "	¾ "	21 = .032	14	1.75	21.00	½ "

"Utility" power saws are made extra heavy and will stand a great amount of strain. Many prefer them to an all hard blade as even with very rough usage they will not snap or break.

Many sizes listed under Hand Blades may be used effectively in power machines on special work where a fine tooth is desirable.

Table of Weights, Page 40.

"UTILITY" BAND SAWS

WIDTH	GAUGE	FEET PER LB.	PRICE PER FT.	PRICE PER LB.
1-4 inch	23 = .025	60	$0.06	$3.50
3-8 "	23 = .025	35	.05	1.75
1-2 "	23 = .025	25	.05	1.25
5-8 "	21 = .032	16	.07	1.12
3-4 "	21 = .032	12	.08	1.00

23 Ga. stock made in **16, 20** and **25** teeth per inch.

21 Ga. stock made in **14, 16** and **20** teeth per inch.

Brazing **20c** per saw, net.

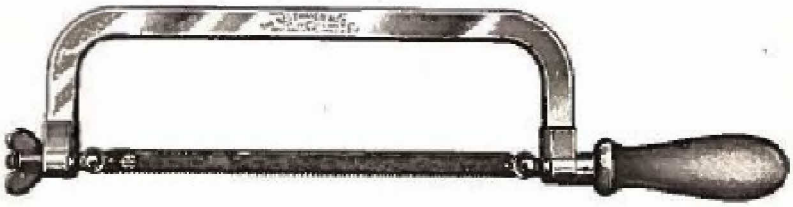
"Utility" Band Saws are made in different widths, gauges, and number of teeth per inch for cutting all kinds of metal: Brass, Nickel, Bronze, Gun Metal, Sheet Metal, Mica, Copper, Tool Steel, Iron, Pearl, Onyx, Fibre, etc., and are furnished in any length desired.

If you are not familiar as to the cut of tooth best adapted to the material you desire to cut, give the length of saw and name of metal to be cut, and we will send the saw best adapted to such metal.

We carry in stock in the coil ¼ inch, ⅜ inch, ½ inch, ⅝ inch, and ¾ inch widths, differing in set, number of teeth per inch and temper.

The most economical way to buy band saws is in the coil by the pound, doing your own brazing when practicable.

"UNIVERSAL" HACK SAW FRAMES



No. 5 "UNIVERSAL" SOLID

8 inch	Each	$ .85	Per Doz.		$10.20
9 "	"	.90	"	"	10.80
10 "	"	.95	"	"	11.40
12 "	"	1.00	"	"	12.00

NOTE

The body of this frame is made of Crucible steel and highly finished. All small parts are case hardened. Handles of hard wood. Blades adjustable to face four different directions without removing from frame. Distance from bottom of frame to tooth edge of saw blade on the 8-inch, 9-inch and 10-inch size is 2¾ inches, and on the 12-inch size, 3⅛ inches.

No. 6 "UNIVERSAL" SOLID

Same as No. 5 above, except with "Easy Grip" handle.

8 inch	Each	$1.20	Per Doz.		$14.40
9 "	"	1.25	"	"	15.00
10 "	"	1.30	"	"	15.60
12 "	"	1.40	"	"	16.80

"UNIVERSAL" HACK SAW FRAMES

1908 "UNIVERSAL" ADJUSTABLE FRAME

Each $1.00 **Per Doz. $12.00**

ARGUMENT

This frame is made of extra heavy stock, highly finished, and is very rigid. The hard wood handle is fully in keeping with the frame and fits the hand perfectly. The adjustments are easy, positive and accurate. All small parts are case hardened. Packed one or two in a box as ordered.

SPECIFICATIONS

Takes blades from 8 to 12 inches.
Distance from bottom of frame to tooth edge of saw, 3⅛ inches.
Diameter of handle, 1⅜ inches.
Length of handle, 4⅛ inches.
Body of frame, ¾ inch by 3-16 inch.

"UNIVERSAL" HACK SAW FRAMES

No. 12 "EASY GRIP" EXTENSION

Each $1.50 **Per Doz. $18.00**

ARGUMENT

Can be used to advantage as far as the arm can reach. In fact, it is just what the name implies: "Easy Grip." Extension features all retained. A rigid solid back with all the advantages possible. Full nickel plated. Small parts case hardened. Handles checked with Gun Butt finish. Takes blades from 8 to 12 inches. Distance from bottom of frame to tooth edge of saw 3⅛ inches. Body of frame ¾ inch by 3-16 inch.

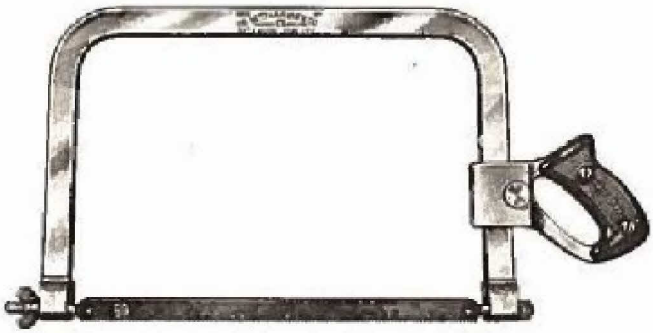
"UNIVERSAL" HACK SAW FRAMES

No. 7 "UNIVERSAL" SOLID

Distance from bottom of frame to tooth edge of saw is 6 inches.

Especially designed for Architectural Iron Workers and others requiring a frame of greater depth than the ordinary. Has "Easy Grip" movable handle which may be raised or lowered as convenience requires. Made of 1 by ¼ inch crucible steel.

12 inch only,	Polished,	Each	$1.75	Per Doz. $21.00
12 " "	Nickeled,	"	2.00	" " 24.00



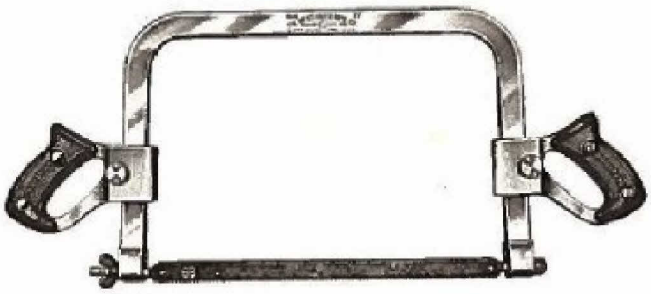
No. 8 "UNIVERSAL" R. R. TRACK FRAME

Distance from bottom of frame to tooth edge of saw is 10¼ inches.

For Girders, Beams, and Street Railroad Track Work, etc. Important feature—"Easy Grip" movable handle, which may be raised or lowered to suit depth of work when used for cutting rails in street. Made of 1 by ¼ inch crucible steel.

12 inch,	Polished,	Each	$1.85	Per Doz. $22.00
12 "	Nickeled,	"	2.20	" " 26.00
14 "	Polished,	"	1.95	" " 23.00
14 "	Nickeled,	"	2.25	" " 27.00

"UNIVERSAL" HACK SAW FRAMES



No. 9 "UNIVERSAL" R. R. TRACK FRAMES

For Girders, Beams, and Street Railroad Track Work, etc. Important feature: Two "Easy Grip" movable handles, one on either end, which may be raised or lowered to suit depth of work when used for cutting rails in street. A "Two Man" frame. Made of 1 by ¼ inch crucible steel.

12 inch,	Polished,	Each	$2.00	Per Doz.	**$24.00**
12 "	Nickeled,	"	2.35	" "	**28.00**
14 "	Polished,	"	2.10	" "	**25.00**
14 "	Nickeled,	"	2.45	" "	**29.00**

REGISTERED TRADE MARKS

UNIVERSAL

Pertaining to Hack Saw Blades—Registered U. S. Patent Office, June 25, 1907.

Pertaining to Hack Saw Blades—Registered U. S. Patent Office, June 18, 1907.

NUVERSAL

Pertaining to Hack Saw Blades—Registered U. S. Patent Office, July 12, 1910.

UTILITY

Pertaining to Hack Saw Blades—Registered U. S. Patent Office, Oct. 15, 1907.

UNIVERSAL

Pertaining to Hack Saw Frames—Registered U. S. Patent Office, July 30, 1907.

THE WEST HAVEN MANUFACTURING COMPANY

MAKERS OF

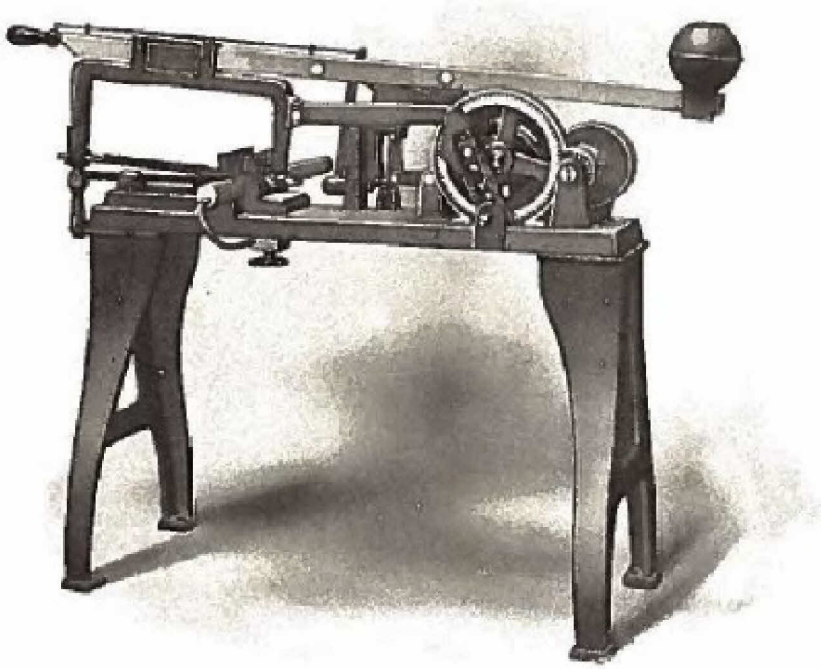
"Universal" Hack Saw Blades, Frames, Machines, and Hardware Specialties

POST OFFICE	NEW HAVEN, CONN.
WORKS	WEST HAVEN, CONN.
NEW YORK	30 CHURCH STREET, ROOM 416
SAN FRANCISCO	No. 171 NEW MONTGOMERY STREET
LONDON GLASGOW PARIS HAMBURG	

1912
THE TUTTLE, MOREHOUSE & TAYLOR COMPANY
NEW HAVEN, CONN.

"UNIVERSAL" POWER HACK SAW

1910 MODEL



Capacity	6 inch solids	Floor Space	52 x 16 inches
Size of Pulley	6 × 1¾ inches	Height Work Vise	28 inches
Speed	240 revolutions	Height over all	42 inches
Length Saw Blades	12 and 14 inches	Measurements	52 × 16 × 42 inches
Net Weight, 240 pounds.		Gross Weight, 300 pounds.	

Special Features: Quick Return Stroke, 3 to 1: Blade lifts entirely off work on return stroke

This machine is designed especially for economy and speed.

There are two fixed strokes, viz.: 5 inch and 7 inch with only one adjustment required, i. e., for work above 5 inches diameter or square; and this adjustment can be made in 15 seconds.

The automatic lift is adjustable for wear, the automatic stop is absolute, and the pulley can be oiled without throwing off the belt.

EXTRAORDINARY

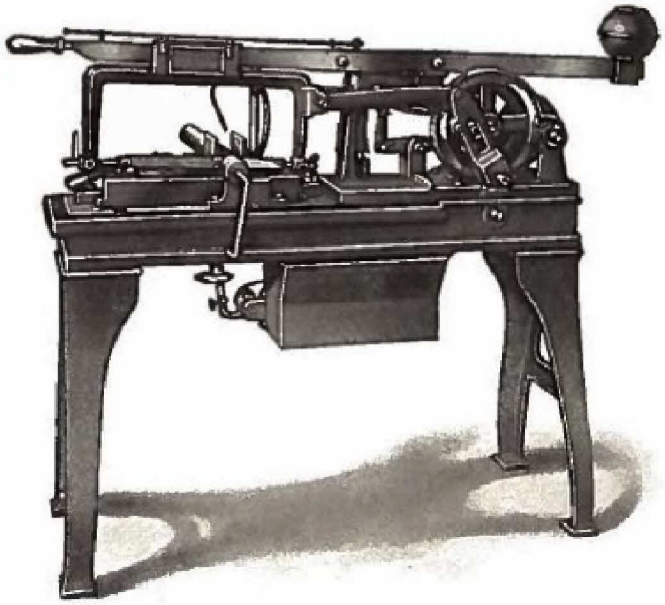
As all shafts are silent, it is obvious that bearings on bed of machine cannot wear out, and it will never, therefore, be necessary to return machine to factory for repairs.

As all movable parts are interchangeable immediate delivery can be made of any part desired.

PRICE, $50.00

"UNIVERSAL" POWER HACK SAW

1912 MODEL



Capacity	6 inch solids	Floor Space	52 × 16 inches
Size of Pulley	6 × 2 inches	Height Work Vise	28½ inches
Speed	240 revolutions	Height over all	42 inches
Length Saw Blades	12 and 14 inches	Measurements	56 × 16 × 42 inches
Net Weight, 350 pounds		Gross Weight, 425 pounds.	

Special Features: Quick Return Stroke, 3 to 1: Blade lifts entirely off work on return stroke

This machine is designed especially for economy and speed.

There are two fixed strokes, viz.: 5 inch and 7 inch with only one adjustment required, i. e., for work above 5 inches diameter or square; and this adjustment can be made in 15 seconds.

The automatic lift is adjustable for wear, the automatic stop is absolute, and the pulley can be oiled without throwing off the belt.

EXTRAORDINARY

Deep Bed. Finished surfaces on bed and vise jaws. Tank and Pump. Removable vise. Parts interchangeable. Silent Shafts.

PRICE, $90.00

REPAIR PARTS FOR "UNIVERSAL" HACK SAW MACHINE

1910 MODEL

CASTINGS

The castings on this machine are all numbered, and it will only be necessary, therefore, to use numbers in ordering.

No.		List	No.		List
1	Bed	$13.50	13	Lifting Clamp	$ .75
2	Vise Jaw	.90	14	Lifting Lever	.50
3	Quick Return Lever	1.25	15	Gauge Clamp Wheel	.15
4	Large Gear	2.75	16	Gauge Clamp	.10
5	Pulley	1.75	17	Automatic Stop Lever	.25
6	Small Gear	1.25	18	Starting Cam	.20
7	Connecting Rod	.50	19	Starting Lever	.75
8	Saw Frame Arm	3.00	20	Weight	2.00
9	Saw Frame Cap	.50	21	Gear Shield	1.00
10	Saw Frame	2.50	22	Vise Screw with Handle	.75
11	Leg	5.00	23	Frame Supporting Lever	.15
12	Lifting Link	.15	24	Thumb Screw	.15

No. 25 Thumb Nut, List, $ .10

STEEL PARTS

Automatic Stop Lever Pin	$ .10	Pulley Shaft	$ .50
Automatic Stop Lever Spring	.10	Push Bar	.15
Fiber Washer ¼ inch Thick	.05	Push Bar Nut	.05
Fiber Washer $\frac{1}{16}$ inch Thick	.05	Push Bar Spring	.10
Gauge Rod	.25	Saw Frame Bar	3.00
Knurled Pin	.15	Saw Frame Wrist Pin	.10
Large Gear Stud	.40	Saw Holder (Long)	.40
Lifting Cam Roll	.15	Saw Holder (Short)	.35
Lifting Clamp Pin	.10	Sliding Block	.15
Lifting Clamp Plate (Narrow)	.30	Spring Washer	.30
Lifting Clamp Plate (Wide)	.30	Spring Washer Spring	.05
Lifting Lever Link Pin	.15	Steel Washer	.10
Lifting Lever Spring	.10	Vise Strap	.15
Lifting Lever Wrist Pin	.15		

SQUARE KNURLED NAIL SETS

Cut Full Size.

"EASY HOLD, WON'T ROLL"

Sizes at Points 1-32 inch, 2-32 inch, 3-32 inch, 4-32 inch, 5-32 inch.

Packed One Doz. in Box, or, Two Doz. in Display Box.

This nail set is of a high grade crucible steel, and in use is the easiest set to hold, on the market, a feature appreciated by carpenters, and all users of this class of tool. Head drawn to blue temper, and point to straw. Cupped and beveled.

In absence of full specifications, orders will be filled with the following assortment per dozen:

1-32 inch—one, 2-32 inch—four, 3-32 inch—four, 4-32 inch—two, 5-32 inch—one.

Display Box for "Easy Hold, Won't Roll" Nail Sets.
Provided with cover securely fastened on.

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ROUND KNURLED NAIL SETS

"O. K." BRAND

Sizes at Points 1-32 inch, 2-32 inch, 3-32 inch, 4-32 inch, 5-32 inch.

Packed One Doz. in Box, or, Two Doz. in Display Box.

Made of high grade steel, body knurled and finely finished. Points are cupped and beveled. Warranted free from defects. Body of $\frac{3}{32}$ inch is $\frac{5}{64}$ inch. Other sizes $\frac{1}{16}$ inch.

In absence of full specifications, orders will be filled with the following assortment per dozen:

1-32 inch—two, 2-32 inch—four, 3-32 inch—four, 4-32 inch—two.

DISPLAY BOX FOR "O. K." BRAND NAIL SETS

POLISHED WOOD

Capacity, one dozen

DISPLAY BOX FOR "O. K." BRAND NAIL SETS

Capacity, two dozen

Display Boxes are provided with covers.

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ROUND KNURLED LARGE NAIL OR SPIKE SETS

"O. K." BRAND

BODY	LENGTH	POINT	PACKING
5/16 inch	5 inches	7/32 inch	1 Doz. in Box
11/32 "	5 "	1/4 "	1 " " "
1/2 "	5 "	1/8 "	1 " " "

Also packed one doz. in box with sizes evenly assorted.

SQUARE KNURLED PRICK PUNCH

Cut Full Size.

"EASY HOLD, WON'T ROLL"

The square knurled body provides a positive grasping surface. Packed one doz. in box.

ROUND KNURLED PRICK PUNCHES

"O. K." BRAND

Length 4 inches. Body 5/16 or 7/32 inch, as desired. Packed one doz. in box. In absence of specifications, orders will be filled with four 5/16 inch and eight 7/32 inch to each dozen.

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SQUARE KNURLED CENTER PUNCH

Cut Full Size.

"EASY HOLD, WON'T ROLL"

The square knurled body provides a positive grasping surface. Packed one doz. in box.

ROUND KNURLED CENTER PUNCHES

"O. K." BRAND

BODY	LENGTH	PACKING
5/32 inch	4 inches	1 Doz. in Box
1/4 "	4 "	1 " " "
5/16 "	4 "	1 " " "
7/16 "	4 "	1 " " "
1/2 "	4 "	1 " " "
1/2 "	5 "	1 " " "

Also packed one doz. in box, 5/32 and 1/4 inch x 4 inches, evenly assorted; or 5/16, 7/16, and 1/2 inch x 4 inches, evenly assorted.

Table of Weights, Page 41.

SQUARE KNURLED SOLID DRIVE PUNCH

Cut Full Size.

"EASY HOLD, WON'T ROLL"

The square knurled body provides a positive grasping surface. Packed one doz. in box.

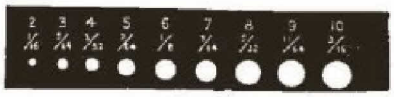


Plate giving sizes at points and trade numbers.

ROUND KNURLED SOLID DRIVE PUNCHES

"O. K." BRAND

BODY	LENGTH	POINT
7/32 inch	4 inches	1/8 inch
5/16 "	4 "	7/32 "
5/16 "	5 "	7/32 "
7/32 "	4 "	1/4 "
7/32 "	5 "	1/4 "
1/2 "	4 "	7/32 "
1/2 "	5 "	7/32 "

Packed one doz. of a size in box, one doz. 4 inch lengths, or one doz. 5 inch lengths, evenly assorted.

Table of Weights, Page 41.

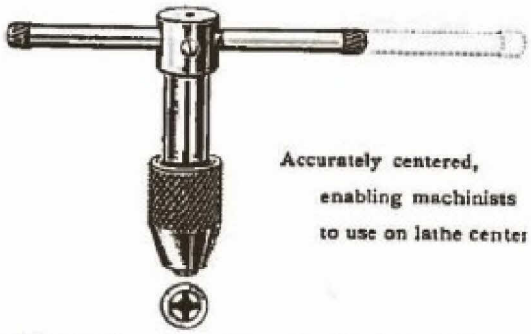
TAP AND REAMER WRENCH

"HOLD FAST"

This wrench holds tight, each size of tap or reamer within the range specified, and there is therefore, no liability of wearing off the corners of taps. The line of applying leverage is in direct line with the center of reamer or tap. This, and the secure hold greatly lessens the liability of breaking the taps in use. Wrench is of steel, highly polished, and shows the best workmanship in its manufacture. Packed one in a box.

No. 1 =	Length 5	in.	Holds	taps	¼	in.	down or	Nos. 1-4	and 1	incl.
" 2 =	" 9	"	"	"	¼	"	and ½	in.	incl.	
" 3 =	" 15	"	"	"	½	"	" ⅞	"	"	
" 4 =	" 20	"	"	"	⅞	"	" 1⅛	"	"	
" 5 =	" 30	"	"	"	1¼	"	" 1½	"	"	

SLIDE OR RIGID T-HANDLE TAP WRENCH



Accurately centered, enabling machinists to use on lathe center

This Tap Wrench is made with a handle that slides, permitting its use in many places where a rigid handle cannot be turned. For ordinary work the handle may be set rigid by means of set screw. The jaws are tempered, sleeve case hardened, and the tool made up to meet the requirements of mechanics desiring a first class wrench in every detail.

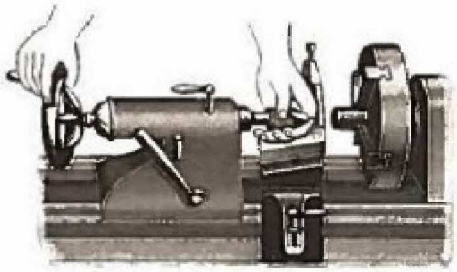
No. 10, packed ½ doz. in a box. Holds taps 1-16 and ¼ in. inclusive.
No. 11, packed ½ doz. in a box. Holds taps 3-16 and ⅜ in. inclusive.
No. 12, packed 1-6 doz. in a box. Holds taps ¼ and ½ in. inclusive.

Table of Weights, Page 41.

"SURE" CENTER FINDER

A NEW LATHE TOOL

Cut full size of No. 2.



Illustrating "Sure" Center Finder in Use.

The "Sure" Center Finder has a socket that fits on the 60° angle taper of Center in tail stock of lathe, and when held in that position and fed up to work held and revolving in lathe chuck it immediately locates the center. The friction of the center finder on lathe center is sufficient to hold for drilling and countersinking, enabling one to make the three operations without change or use of any other tool. The fingers need to do little more than steady the tool. Each Center Finder is sent out with a combination drill and countersink which are stock sizes with many makers. The No. 0 and 1 have a short single end drill and countersink about half the length of the double end ones on the market, for the sake of compactness, but the double end ones may, however, be used. The No. 2 and No. 3 are supplied with the regular double end combination drill and countersink.

Packed ½ Dozen in a box.

OUTSIDE DIAMETER	DRILL DIAMETER	DIAMETER OF BODY OF COMB. DRILL
No. 0.—1 in.	1-8 in.	3-10 in.
No. 1.—1 in.	5-64 in.	15-64 in.
No. 2.—⅞ in.	1-16 in.	13-64 in.
No. 3.—¾ in.	3-64 in.	5-32 in.

Extra combination countersink and drill either size $1.50 per dozen.
"Sure" Center Finders per set of each size, No. 0, 1, 2 and 3 in a box.

Table of Weights, Page 41.

"WESTHAVEN"
PATENT PLIER WRENCHES

PLIER AND ADJUSTABLE WRENCH

Drop Forged—Tempered Steel

Set screw takes the opening strain of handles when used as a wrench

This plier is different from all others, in having a set screw located on one of the arms, by which means, the jaws can be set to the size of the work and all back strain of the plier arms when put to use entirely sustained by the set screw, and all the strength applied to this tool goes to its work. It can be used in places difficult to get at with other pliers and wrenches. It will grasp and release round work instantly, working as a ratchet. The tool is sufficiently strong to grasp by one plier arm only and so use as a wrench. For work that needs only the ordinary plier requirements the set screw can be turned back, where it is as much out of the way as though it was not on the plier. The plier is also provided with a wire cutter. Part of one jaw has teeth milled crosswise while the opposite one is all smooth with a groove milled lengthwise of the jaw, adapting it to grip and hold wire lengthwise. Made up throughout for the strongest pliers of their length on the market. This tool is more efficient as a plier because of the set screw and also makes an efficient adjustable wrench.

Especially adapted for use about farm implements, machinery, automobiles, motor-vehicles, etc.; and is an all-round handy tool for plumbers, mechanics, metal construction workers, etc.

Packed one in box. Case 12 dozen.

No. 8—Full polished, nickel plated—Full length 6½ inches; jaws open 1 inch.
No. 9—Black handles, polished jaws—Full length 6½ inches; jaws open 1 inch.
No. 18—Full polished, nickel plated—Full length 8½ inches; jaws open 1½ inches.
No. 19—Black handles, polished jaws—Full length 8½ inches; jaws open 1½ inches.

Table of Weights, Page 41.

"WESTHAVEN" MACHINISTS' JACK SCREW

"HIGH LOW JACK"

4 inches High 2 1-4 inches Low 1 inch Diameter

This Jack Screw is made with a telescoping base, giving a greater range of adjustment than is obtained in any other pattern on the market. All parts are machine-turned, of steel, and fully case-hardened. The tilting cap has a milled V slot adapting it to use under round work. Several of these tools could be used to an advantage in any machine shop for leveling up work on planers, shapers and milling machines; as an adjustable blocking for clamping work to be machined, or as a support under lathes and screw machine tools for heavy cuts. The tilting cap with a hexagon head screw can be removed and the telescoping base used as a blocking, giving a range from 1 5-16 in. low to 2½ high. In this position another "High Low Jack" can be set on top of the telescoping base, giving an adjustment up to 6 in.

Packed ½ dozen in a box.

"WESTHAVEN" MACHINISTS' SCRIBERS

No. 1

No. 2

These Scribers are properly tempered and made of high grade steel.

Packed one dozen in a box.

No. 1 is 7 in. to 8 in. long, knurled body, ¼ in. dia.
No. 2 is 4¼ in. long, knurled body, ¼ in. dia.

Either pattern supplied with bent points.

Table of Weights, Page 41.

"WESTHAVEN" PLUMB BOBS

MACHINE TURNED—HIGHLY POLISHED

Cut full size No. 1 — Packed one-half dozen in box

WEIGHTS:

No. 1	3 Oz.	No. 3	8 Oz.
No. 2	6 Oz.	No. 4	14 Oz.

"WESTHAVEN" REVOLVING HEAD SCREW DRIVERS

For Assembling Light Work
and Electricians' and Opticians' Use.

With Reversible Blade — Full Length, 5 inches — Nickel Plated

No. 4. Dia. Body 1/4 inch. Width of blade at points 7/32 and 1/8 inch.
No. 5. " " 5/16 " " " " " " " " 1/8 " 3/32 "

With Solid Fixed Blade — Full length, 5 inches — Polished only

No. 14.	Dia.	Body	1/4	inch.	Width	of	blade	at	point	3/32	inch.
No. 24.	"	"	1/4	"	"	"	"	"	"	1/16	"
No. 15.	"	"	5/16	"	"	"	"	"	"	3/16	"
No. 25.	"	"	5/16	"	"	"	"	"	"	3/32	"

These screw drivers are time savers for turning in or out small screws. In use the revolving head should rest in the hollow of the hand and the driver twirled between finger and thumb. The blade is made of drill-rod steel, temper drawn to a blue. Hexagon head prevents rolling when laid down.

Jewelers' Special — Head Cupped for Finger Rest — Nickel Plated

No. 30. Dia. Body 1/4 inch. Width of blade at point 3/32 inch. Full Length 4 1/2 inches.

No. 32. Dia. Body 1/4 inch. Width of blade at point 1/8 inch. Full Length 4 1/2 inches.

Table of Weights, Page 41.

WEIGHTS—"UNIVERSAL" SAWS

For the convenience of our customers to whom transportation is quite an important item we publish the approximate weight per gross of the different sizes of Universal blades. By consulting this list together with list of freight rates found on pages 42 and 43, transportation charges can be very correctly figured.

For weight of case, from 15 to 20 pounds should be added to every 200 pounds of blades, as we ship in cases of this weight as near as possible.

SIZE	WEIGHT PER GROSS	SIZE	WEIGHT PER GROSS
6 × ½ × 23 Gauge	3 Pounds	14 × 1 × 16 Gauge	32½ Pounds
7 × ½ × 23 "	3½ "	16 × 1 × 21 "	22 "
8 × ½ × 23 "	4 "	16 × 1 × 18 "	32 "
8 × ⅝ × 22 "	6 "	16 × 1 × 16 "	42½ "
9 × ½ × 23 "	4½ "	17 × ¾ × 21 "	17 "
9 × ⅝ × 22 "	6½ "	17 × 1 × 21 "	22 "
10 × ½ × 23 "	4¾ "	17 × ¾ × 18 "	26 "
10 × ⅝ × 22 "	7¾ "	17 × 1 × 18 "	34 "
10 × ¾ × 21 "	9¾ "	17 × 1 × 16 "	44 "
10 × ¾ × 18 "	15¼ "	18 × 1 × 21 "	25 "
11 × ½ × 23 "	5¼ "	18 × 1 × 18 "	37 "
12 × ⅜ × 23 "	7 "	18 × 1 × 16 "	48 "
12 × ⅝ × 22 "	7¾ "	19 × 1 × 18 "	39 "
12 × ⅝ × 22 "	8¾ "	19 × 1 × 16 "	51 "
12 × ¾ × 21 "	8½ "	20 × 1 × 18 "	41 "
12 × ⅝ × 21 "	9¾ "	20 × 1 × 16 "	54 "
12 × ¾ × 21 "	11½ "	20 × 1 × 14 "	68 "
12 × ¾ × 18 "	17¾ "	21 × 1 × 18 "	43 "
12 × 1 × 18 "	24½ "	21 × 1 × 16 "	56 "
14 × ⅜ × 22 "	9 "	23 × 1 × 18 "	48 "
14 × ⅝ × 21 "	10¾ "	23 × 1 × 16 "	61 "
14 × ¾ × 21 "	12½ "	24 × 1 × 18 "	47 "
14 × ¾ × 18 "	20 "	24 × 1 × 16 "	63 "
14 × 1 × 18 "	28 "	24 × 1 × 14 "	78 "

WEIGHTS—MECHANICS' TOOLS

ARTICLE	WEIGHT PER DOZ.
Center Finders.	
"Sure," No. 0	3½ lbs.
"Sure," No. 1	3½ "
"Sure," No. 2	2¾ "
"Sure," No. 3	1¾ "
Center Punches.	
"Easy Hold"	⅞ lbs.
"O. K." Brand.	
4 × 3/32 × 1/16" Ass't'd	⅞ lbs.
4 × 5/32"	1¼ "
4 × 7/64"	1¾ "
4 × 1/32"	2¼ "
5 × 1/32"	2¾ "
Jack Screws.	
No. 2	4 lbs.
Nail Sets.	
"Easy Hold"	⅞ lbs.
"O. K." Brand.	
4 × 3/32 and 1/16" Ass't'd	⅞ lbs.
5 × 5/64"	1½ "
5 × 7/64"	2¼ "
5 × 1/32"	2¾ "
Plier Wrenches.	
No. 8 and No. 9	8 lbs.
No. 18 and No. 19	14 "
Plumb Bobs.	
No. 1	2½ lbs.
No. 2	4 "
No. 3	6 "
No. 4	10½ "
Prick Punches.	
"Easy Hold"	⅝ lbs.
"O. K." Brand, Ass't'd	⅝ "
Screw Drivers.	
Revolving Head.	
Nos. 4, 14 and 24	1½ lbs.
Nos. 5, 15 and 25	1 "
Solid Drive Punches.	
"Easy Hold"	¾ lbs.
"O. K." Brand.	
4 × 1/8 × 3/16"	⅝ lbs.
4 × 3/16 × 3/32"	1¼ "
4 × 1/8 × 1/4"	1¾ "
4 × 1/2 × 5/32"	2¼ "
5 × 3/16 × 3/32"	1½ "
5 × 1/8 × 1/4"	2¼ "
5 × 1/2 × 1/32"	2¾ "
Tap Wrenches.	
No. 1	1½ lbs.
No. 2	5 "
No. 3	18 "
No. 4	30 "
No. 5	72 "
No. 10	1¾ "
No. 11	3½ "
No. 12	7 "

FREIGHT RATES TO 126 CITIES

Below we publish a list of through freight rates from New Haven, Conn., to 126 different cities, together with minimum charge on any shipment. This list is prepared purely for the accommodation of our customers, from information furnished us by the N. Y., N. H. & H. R. R., at the issuance of this catalog. We disclaim any liability, however, for errors or changes in rates, but trust the list will materially aid our patrons in determining transportation charges.

CITY	RATE PER 100 LBS.	MIN. CHARGE	CITY	RATE PER 100 LBS.	MIN. CHARGE
Albany, N. Y.	$ .22	$ .30	Detroit, Mich.	$ .30	$ .50
Alexandria, Va.	.34	.45	Duluth, Minn.	1.05	1.15
Allentown, Pa.	.19	.30	East St. Louis, Mo.	.58	.88
Amsterdam, N. Y.	.22	.32	Easton, Pa.	.19	.30
Atchison, Kan.	1.03	1.28	Elmira, N. Y.	.27½	.40
Attleboro, Mass.	.18	.25	El Paso, Tex.	No thro rates	
Auburn, N. Y.	.27½	.40	Erie, Pa.	.33	.50
Baltimore, Md.	.32	.42	Evansville, Ind.	.55	.83
Bath, Me.	.30½	.44	Fall River, Mass.	.19	.26
Battle Creek, Mich.	.48	.72	Fitchburg, Mass.	.21	.29
Beverly, Mass.	.19	.27	Fort Wayne, Ind.	.45	.68
Binghamton, N. Y.	.25	.38	Fort Worth, Tex.	No thro rates	
Bloomington, Ill.	.55	.83	Galveston, Tex.	No thro rates	
Boston, Mass.	.18	.25	Geneva, N. Y.	.27½	.40
Bridgeport, Conn.	.09	.25	Grand Rapids, Mich.	.40	.72
Bristol, Conn.	.13	.25	Hamilton, Ont.	.39	.75
Buffalo, N. Y.	.30½	.44	Harrisburg, Pa.	.25	.38
Butte, Mont.	3.15	3.05	Harrison, N. J.	.19	.30
Canton, O.	.36	.53	Holyoke, Mass.	.13	.25
Chattanooga, Tenn.	.93	1.05	Hoosick Falls, N. Y.	.19	.28
Chicago, Ill.	.50	.75	Indianapolis, Ind.	.47	.70
Cincinnati, O.	.44	.65	Jamestown, N. Y.	.33	.50
Cleveland, O.	.36	.53	Jersey City, N. J.	.19	.30
Columbus, Ind.	.48	.72	Kansas City, Mo.	1.03	1.28
Columbus, O.	.39	.59	Knoxville, Tenn.	.85	1.00
Davenport, Ia.	.66	1.17	Lansing, Mich.	.48	.71
Dayton, O.	.42	.63	Lawrence, Mass.	.19	.27
Decatur, Ill.	.55	.83	London, Ont.	.39	.59
Denver, Col.	1.47	1.78	Los Angeles, Cal.	2.60	2.60
Des Moines, Ia.	.93	1.17	Louisville, Ky.	.50	.75

FREIGHT RATES—Continued

CITY	RATE PER 100 LBS.	MIN. CHARGE	CITY	RATE PER 100 LBS.	MIN. CHARGE
Lowell, Mass.	$ .20	$ .20	Rockford, Ill.	$ .58	$ .87
Lynn, Mass.	.19	.27	Rutland, Vt.	.22	.30
Manchester, N. H.	.23	.34	Sacramento, Cal.	1.75	2.60
Memphis, Tenn.	.65	1.00	Saginaw, Mich.	.46	.69
Milford, Mass.	.18	.25	St. Louis, Mo.	.59	.88
Milwaukee, Wis.	.50	.75	St. Paul, Minn.	.76	1.15
Minneapolis, Minn.	.76	1.15	Salem, Mass.	.18	.27
Montreal, Que.	.33	.75	Salina, Kan.	1.65	2.38
Muskegon, Mich.	.48	.72	San Francisco, Cal.	1.75	2.60
Nashville, Tenn.	.60	.91	Schenectady, N. Y.	.22	.30
Newark, N. J.	.19	.30	Scranton, Pa.	.25	.38
New Bedford, Mass.	.19	.27	Seattle, Wash.	1.75	2.60
Newburgh, N. Y.	.19	.30	S. Norwalk, Conn.	.10	.25
New Orleans, La.	.78	1.18	Spokane, Wash.	3.10	3.80
New York City	.14	.25	Springfield, Ill.	.58	.88
Norfolk, Va.	.34	.45	Springfield, O.	.42	.62
North Adams, Mass.	.14	.50	Syracuse, N. Y.	.25	.38
No. Attleboro, Mass.	.18	.25	Tacoma, Wash.	1.75	2.60
Omaha, Neb.	1.15	1.28	Taunton, Mass.	.18	.25
Ottawa, Ont.	.55	.75	Terre Haute, Ind.	.55	.75
Pawtucket, R. I.	.17	.25	Toledo, O.	.39	.59
Peoria, Ill.	.55	.83	Toronto, Ont.	.39	.75
Philadelphia, Pa.	.19	.30	Trenton, N. J.	.19	.30
Pittsburgh, Pa.	.33	.50	Troy, N. Y.	.22	.30
Pittsfield, Mass.	.16	.25	Utica, N. Y.	.25	.38
Plainfield, N. J.	.19	.35	Waltham, Mass.	.20	.26
Portland, Me.	.25	.38	Washington, D. C.	.34	.45
Portland, Ore.	1.75	2.60	Whitehall, N. Y.	.22	.30
Poughkeepsie, N. Y.	.19	.30	Wilkesbarre, Pa.	.25	.38
Providence, R. I.	.17	.25	Williamsport, Pa.	.25	.38
Quincy, Ill.	.62	.88	Wilmington, Del.	.25	.38
Reading, Pa.	.25	.38	Worcester, Mass.	.17	.25
Richmond, Va.	.34	.45	York, Pa.	.25	.38
Rochester, N. Y.	.27½	.40	Youngstown, O.	.36	.53
Rock Island, Ill.	.66	1.17			

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ILLUSTRATIONS