DISSTON
Tool Steel

Catalog No. 4-S

HENRY DISSTON & SONS INC.
PHILADELPHIA U. S. A

Henry Disston & Sons

Incorporated

Steel Makers

Disston Special High Speed Steel

Disston High Speed Steel

Disston Special Oil Hardened Steel

Disston Special Tool Steel

Disston Best Tool Steel

Disston Extra Tool Steel

Disston Standard Tool Steel

Disston Chisel Steel

Disston Mine Drill Steel

Disston Saw Steel

Disston File Steel

General Offices and Works:

Tacony, Philadelphia, Penna.

PRINTED IN U. S. A.

HENRY DISSTON & SONS, INC.

General Offices and Works:

Tacony, Philadelphia, Penna.

Branch Offices:

Chicago	San Francisco
New York	Seattle
Boston	Portland
Cincinnati	Bangor
New Orleans	Toronto
Memphis	Vancouver, B. C.

Sydney, Australia

Warehouses:

Philadelphia, Penna.

HENRY DISSTON & SONS, INC.

Tacony

Chicago

CHAS. G. STEVENS CO.

Western Ave., Boulevard & 45th Place

Boston

HENRY DISSTON & SONS, Inc.

118 Pearl Street

WE began the manufacture of **Crucible Steel** in the year 1855, hence our experience is the longest of American manufacturers.

We have constantly continued improvement, development and enlargement, until to-day our plant, comprising seven Siemens-Martin Crucible Melting Furnaces, five sheet mills, four bar mills, five hammers and twelve cold rolling mills, is the largest plant of its kind in the country.

Adjacent to our Steel Plant is our own Saw Works, the largest in the world, to which we supply a very large quantity and variety of Steel for the manufacture of Saws, Files, Tools, Milling Cutters, etc.

Constantly in touch with the finishing into tools of a large tonnage of steel, we are enabled thereby to follow the working and make improvements in quality as demonstrated by practical experience.

HENRY DISSTON & SONS, *Incorporated*
PHILADELPHIA, PENNA.

Terms

NET CASH within thirty days from date of invoice.

PRICES subject to change without notice.

CLAIMS for errors must be made within TEN days after receipt of goods.

WE WILL replace steel that proves defective, but will not allow any claims for labor or damage.

WE SECURE at all times the lowest rate of freight, and our responsibility for goods ceases from the time they are delivered into the hands of the transportation company.

ALL SALES AND CONTRACTS are subject to the stipulation that we will not be liable for any loss or damage resulting from the non-fulfillment of same, when due to fire, strikes, manufacturing contingencies or any other cause beyond our control.

Important

When ordering

Disston Steel

Specify plainly—

Grade wanted

Temper

Exact size

For what purpose to be used; whether to be hardened in Oil or Water.

Disston Kutkwik High Speed Tool Steel

Base Sizes, per lb. 1300

Uses

This Steel is the best that can be used for taking the heaviest cuts at the highest speeds on lathes, planers, boring mills, slotters and shaping tools. The heat produced by heavy cutting does not impair its efficiency.

Disston Mansil Tool Steel

Base Sizes, per lb. 1301

A Special Oil Hardening Steel

Made especially for Metal Saws, Milling Cutters, Taps, Reamers, Hard Steel Bushings, Ball Bearings and for all purposes where great hardness is desired without contraction or expansion.

Treatment

For Forging, heat slowly and uniformly to a bright red, and do not forge or hammer when below a bright red heat.

To Harden, heat slowly and uniformly to 1300 to 1500° Fr.; quench in oil.

Disston Special Tool Steel

Base Sizes, per lb. 1302

A high-grade steel recommended for lathe and planer tools, taps, reamers, threading and cutting dies, punches and for purposes in general where maximum strength and toughness are required.

Disston Best Tool Steel

Base Sizes, per lb. 1303

This grade of tool steel is of fine quality for general use, for making punches and dies, shear blades, chisels, lathe and planer tools, cutters, taps, edge tools, etc.

Disston Extra Tool Steel

Base Sizes, per lb. 1304

A good grade of steel for stone tools, hammers, axes, cold chisels, edge tools, etc.

Per Bar - - - - - - - - - 1340

Disston Standard Tool Steel

Base Sizes, per lb. 1305

For ordinary purposes where a moderate priced steel is required for cold chisels, smiths' tools, hammers, swages, edge tools, etc.

Directions For Working Disston High Speed Steels

Cutting to Lengths

In cutting to tool lengths from bars High Speed Steel should never be cut cold; the bar should be heated at the cutting point to a bright cherry red.

Annealing

High Speed Steel may be annealed by heating slowly in a furnace or open fire to a blood red, or about 1300° Fr., then bury in hot sand or lime and allow to remain well covered until thoroughly cool; or it can be close annealed by packing bars or tools in lime or fine charcoal and enclosing in metal box carefully sealed. Heat slowly to about 1300° Fr. until heat has penetrated to centre of box, then allow to cool as slowly as possible.

Forging

Heat slowly, thoroughly and uniformly to a yellow heat and do not hammer too cold.

This Steel should be kept as nearly as possible at a uniform heat, re-heating as often as necessary.

Hardening

For rough turning tools, heat slowly, thoroughly and uniformly to a lemon color and cool in a light air blast.

For finishing tools, automatic and turret lathe tools and brass workers' tools, heat as above to nearly a white heat (lemon color) and allow tools to cool down in open air to a bright red color, then plunge quickly in a bath of best Winter Whale Oil.

Tools hardened in this manner will retain a sharp edge.

Directions For Working Disston Brands of Tempering Tool Steel

Forging

Heat regularly and thoroughly to a bright red, also keep a good body of fuel between Tuyere and the Steel. Do not heat the steel to a higher heat than is necessary. Begin forging immediately the proper heat is obtained and hammer vigorously, reducing the force of the blows as the steel gets colder, and stop forging when the steel is a faint brown.

Hardening

Always reheat the piece of steel after forging for hardening.

Never harden at the same heat at which the forging was finished.

Heat uniformly and slowly to proper color or temperature; quench in good, clean water at a temperature of 60 to 70° Fr.

Keep tool in motion while in cooling liquid, and do not remove until thoroughly cooled.

Avoid a sharp limit between the hardened and unhardened part of tool.

Temper Numbers

No. 1. Carbon 1.30—1.40%

Suitable for Planer, Lathe, Drill and Slotter Tools, for machining chilled castings, wheel tires and hard materials.

Should be heated carefully. Forge at bright red heat. Harden at dark red heat.

No. 2. Carbon 1.20—1.30%

Suitable for Taps, Dies, Cutters, Small Drills, Boring Tools, Turning Tools, Gravers' Tools, Forming Tools, Tube Drawing Dies, Brass Working Tools, Granite Chisels and Drills.

Should be heated carefully. Forge at bright red heat. Can be welded if heated carefully. Harden at dark red heat.

No. 3. Carbon 1.10—1.20%

Suitable for Drills, Taps, Reamers, Milling Cutters, Circular Cutters, Nail Dies, Bolt Threading Dies, Screw Cutting Dies, Trimming Dies, Mill Picks, Blanking Punches and Dies, Cold Stamping Dies, Paper Knives, Bush Hammers, Large Thrust and Ball Bearings, Balls, etc.

Can be welded if heated carefully.

Harden at dark cherry red.

No. 4. Carbon 1.00—1.10%

Suitable for Screw Cutting Dies, Large Cutting and Trimming Dies, Small Punches, Small Hand Chisels, Jewelers' Dies, Bushings, Scale Pivots, Bush Hammers, Cups, Cones, Ball Bearings, etc.; also suitable for a great variety of general shop tools.

Can be welded. Forge at light red heat.

Harden at bright red heat.

Temper Numbers—Continued

No. 5. Carbon .90—1.00%

Suitable for Hand Chisels, Punches, Punch Dies, Shear Blades, Leather Cutting Dies, Small Chisels, Peen-hammers, Cold Heading Dies, Mint Dies, Edge Tools, Wood Bits, Rock Drills; also suitable for a great variety of general Shop Tools.

Can be welded. Forge at light red.

Harden at cherry red.

No. 6. Carbon .80—.90%

Suitable for Chisels, Large Punches, Dies, Pneumatic Rivet Sets, Cold Heading Dies, Shear Blades, Trimming Dies, Small Hammer Dies, Mining Tools, Well Drills, Vice Jaws, Set Screws, Nail Sets.

Welds well. Forge at light red heat.

Harden at bright red heat.

No. 6½. Carbon .75—.85%

Suitable for Drop Forging Dies, Hammers, Cold Sets, Track Chisels, Smiths' Tools, Well Drills, Hot Bolt and Rivet Dies, Cold Chisels.

Welds well. Forge at light red heat.

Harden at light red.

No. 7. Carbon .70—.80%

Suitable for Sets, Cupping Tools, for Hot Work, Snaps, Large Hot Drop Forging Dies, Sledges, Hammers, Smiths' Tools, such as Flatters, Fullers, for Hot Working Tools, generally.

Welds easily.

Harden at light red.

Heat Colors

		Fahr.	Cent.
No. 1.	Faint Red	900°	480°
No. 2.	Dull Red	1050°	570°
No. 3.	Bright Red	1200°	650°
No. 4.	Light or Ink Red	1450°	790°
No. 5.	Very Light Red	1575°	855°
No. 6.	Salmon Color	1650°	900°
No. 7.	Orange	1725°	940°
No. 8.	Light Orange	1800°	985°
No. 9.	Lemon	1950°	1070°
No. 10.	Straw	2050°	1120°
No. 11.	White	2300°	1260°

The colors as shown above are approximately the heat-colors appearing at different temperatures, when seen in daylight.

1341

High Speed Steel

Standard Classification of Extras.

Rounds, Squares and Octagons

Inches	Extra per lb. Cents
5/8 to 2	Base
2-1/8 to 2-1/2	2
2-5/8 to 3	2-1/2
3-1/8 to 3-1/2	3
3-5/8 to 4	3-1/2
4-1/8 to 4-1/2	4
4-5/8 to 5	4-1/2
5-1/8 to 5-1/2	5
5-5/8 to 6	5-1/2
6-1/8 to 6-1/2	6
6-5/8 to 7	6-1/2
9/16 to 1/2	2
7/16 to 3/8	3-1/2
5/16 to 11/32	6
1/4 to 9/32	8-1/2

Flats

Inches	Extra per lb. Cents
5/8 to 2 x 5/8 to 2	Base
1/8 x 3/16	40
1/8 x 1/4	30
1/8 x 5/16	20
1/8 x 3/8 to 2	14
3/16 x 1/4 to 3	14
1/4 x 5/16 to 1/2	8
1/4 x 5/8 to 1	5
1/4 x 1-1/8 to 4	3
5/16 x 3/8 to 5/8	5
5/16 x 3/4 to 1	3-1/2
5/16 x 1-1/8 to 4-1/2	3
3/8 x 7/16 to 3/4	3
3/8 x 7/8 to 1-1/2	3
3/8 x 1-5/8 to 5	2-1/2
7/16 x 1/2 to 1	3
7/16 x 1-1/8 to 5-1/2	2-1/2
1/2 x 5/8 to 1	2-1/2
1/2 x 1-1/8 to 6	2
9/16 x 5/8 to 1	2-1/2
9/16 x 1-1/8 to 6	2
5/8 to 2 x 2-1/8 to 4	2
5/8 to 2 x 4-1/8 to 7	4
2-1/8 to 3 x 2-1/8 to 4	2
2-1/8 to 3 x 4-1/8 to 7	4

Intermediate sizes take next higher extra.
All dimensions inclusive.
Annealing 2 cents per lb. extra.
Bevels—same classification as flats, plus 10 cents per lb. for shape.

Cutting Extras

Cutting to specified single and multiple lengths.

24″ and over	1c. per lb. extra
18″ to 23 15/16″	2c. " " "
12″ to 17 15/16″	3c. " " "
6″ to 11 15/16″	4c. " " "
Less than 6″	Per Agreement

High Speed Steel Classification of Forged Die Blocks

	Extra per lb. Cents
Weighing above 25 pounds	4
" 15 to 25 "	6
" 10 to 15 "	10
" 7½ to 10 "	14
" 5 to 7½ "	16
" 3 to 5 "	18
" 2 to 3 "	22
" 1 to 2 "	24

Annealing 2 cents per pound extra.
Under 1 pound, flat price of $1.00 each

High Speed Steel Classification of Forged Discs

	Extra per lb. Cents
Weighing above 25 pounds	6
" 15 to 25 "	10
" 10 to 15 "	12
" 7½ to 10 "	14
" 5 to 7½ "	16
" 3 to 5 "	18
" 2 to 3 "	22
" 1 to 2 "	24

Annealing 2 cents per pound extra.
Under 1 pound, flat price of $1.00 each

Tool Steel Classification

Sizes not listed take price of next higher on the list

Round, Square, Octagon, Quarter Octagon and Hexagon

$\frac{5}{8}$ to 2 in. . . . . Base

Extra per lb.	Cts.
$2\frac{1}{8}$ to 3	1.0
$3\frac{1}{8}$ to 4	1.5
$4\frac{1}{8}$ to 5	2.0
$5\frac{1}{8}$ to 6	2.5
$6\frac{1}{8}$ to 7	3.0
$7\frac{1}{8}$ to 8	3.5
$8\frac{1}{8}$ to 9	4.0
$9\frac{1}{8}$ to 10	5.0

Extra per lb.	Cts.
$\frac{9}{16}$ to $\frac{1}{2}$	0.5
$\frac{7}{16}$ to $\frac{3}{8}$	1.0
$\frac{5}{16}$ to $\frac{11}{32}$	2.0
$\frac{1}{4}$ to $\frac{9}{32}$	3.0
$\frac{3}{16}$	5.0
$\frac{5}{32}$	10.0
$\frac{1}{8}$	18.0

Flat

$\frac{5}{8}$ to 2 in. thick x $\frac{9}{16}$ to 2 in. wide . . . . . Base

Extra per lb.	Cts.
$\frac{1}{8}$ x $\frac{3}{16}$	20.0
$\frac{1}{8}$ x $\frac{1}{4}$	15.0
$\frac{1}{8}$ x $\frac{5}{16}$	8.0
$\frac{1}{8}$ x $\frac{3}{8}$	4.0
$\frac{1}{8}$ x $\frac{7}{16}$ to $\frac{1}{2}$	3.0
$\frac{1}{8}$ x $\frac{9}{16}$ to 7	2.0
$\frac{1}{8}$ x $7\frac{1}{8}$ to 8	3.0
$\frac{3}{16}$ x $\frac{1}{4}$	5.0
$\frac{3}{16}$ x $\frac{5}{16}$	4.0
$\frac{3}{16}$ x $\frac{3}{8}$	3.0
$\frac{3}{16}$ x $\frac{7}{16}$ to $\frac{5}{8}$	2.0
$\frac{3}{16}$ x $\frac{11}{16}$ to 2	1.5
$\frac{3}{16}$ x $2\frac{1}{8}$ to 7	1.0
$\frac{3}{16}$ x $7\frac{1}{8}$ to 8	2.0
$\frac{1}{4}$ x $\frac{5}{16}$ to $\frac{3}{8}$	2.0
$\frac{1}{4}$ x $\frac{7}{16}$ to $\frac{5}{8}$	1.5
$\frac{1}{4}$ x $\frac{11}{16}$ to 2	1.5
$\frac{1}{4}$ x $2\frac{1}{8}$ to 7	1.0
$\frac{1}{4}$ x $7\frac{1}{8}$ to 8	2.0

Extra per lb.	Cts.
$\frac{5}{16}$ x $\frac{3}{8}$ to $\frac{5}{8}$	1.5
$\frac{5}{16}$ x $\frac{11}{16}$ to 8	1.0
$\frac{3}{8}$ x $\frac{7}{16}$ to 8	1.0
$\frac{7}{16}$ x $\frac{1}{8}$ to 8	1.0
$\frac{1}{2}$ x $\frac{9}{16}$ to 8	1.0
$\frac{9}{16}$ x $2\frac{1}{8}$ to 8	1.0
$\frac{9}{16}$ to 2 x $\frac{5}{8}$ to 2	0.0
$\frac{5}{8}$ to 2 x $2\frac{1}{8}$ to 7	1.0
$\frac{5}{8}$ to $1\frac{3}{4}$ x $7\frac{1}{8}$ to 8	1.0
$1\frac{7}{8}$ to 2 x $7\frac{1}{8}$ to 8	1.5
$2\frac{1}{8}$ to 3 x $2\frac{1}{8}$ to 5	1.0
$2\frac{1}{8}$ to 3 x $5\frac{1}{8}$ to 8	1.5
$3\frac{1}{8}$ to 4 x $3\frac{1}{8}$ to 6	1.5
$3\frac{1}{8}$ to 4 x $6\frac{1}{8}$ to 8	2.0
$4\frac{1}{8}$ to 5 x $4\frac{1}{8}$ to 7	2.0
$4\frac{1}{8}$ to 5 x $7\frac{1}{8}$ to 8	2.5
$5\frac{1}{8}$ to 6 x $5\frac{1}{8}$ to 8	2.5
$6\frac{1}{8}$ to 7 x $6\frac{1}{8}$ to 7	3.0
$6\frac{1}{8}$ to 8 x $7\frac{1}{8}$ to 8	3.5

Cutting to Specified Single and Multiple Lengths

	Per lb. Cts.
24 inches and over	0.5
18 to 24 inches	1.0
12 to 18 "	1.5
6 to 12 "	2.0

Less than 6 inches, special price.

Tool and Die Steel Forgings

Tool Steel Forgings at prices corresponding to size, shape and quality of Steel.

Suitable for Dies, Shear Blades and other purposes.

Die Block Classification Extras

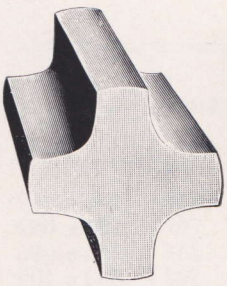
Above 25 lbs.	2	cents	above	base	price,	per lb.
15 to 25 lbs.	3	"	"	"	"	"
10 to 15 lbs.	5	"	"	"	"	"
7½ to 10 lbs.	7	"	"	"	"	"
5 to 7½ lbs.	8	"	"	"	"	"
3 to 5 lbs.	9	"	"	"	"	"
2 to 3 lbs.	11	"	"	"	"	"
1 to 2 lbs.	12	"	"	"	"	"

Under 1 lb., special price.

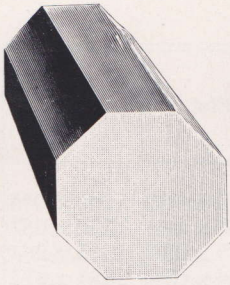
1339

Disston Drill and Chisel Steel

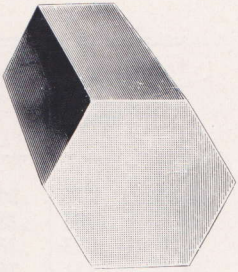
For Mines and Quarries



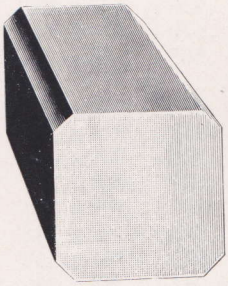
Cruciform



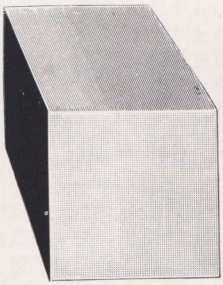
Octagon



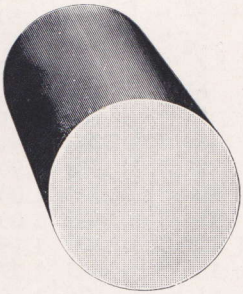
Hexagon



Quarter Octagon



Square



Round

We carry these shapes in stock in EXTRA TOOL STEEL quality.

Octagon in all sizes from $\frac{1}{4}''$ to $3''$

Cruciform in sizes $\begin{cases} \frac{3}{4}'', \frac{7}{8}'', 1'', 1\frac{1}{8}'', 1\frac{1}{4}'', 1\frac{3}{8}'', 1\frac{1}{2}'', \\ 1\frac{5}{8}'', 1\frac{3}{4}'', 1\frac{7}{8}'', 2'', 2\frac{1}{4}'', 2\frac{1}{2}'' \end{cases}$

Our Drill Steel is being used in mines and quarries in all parts of United States and Canada, and is giving general satisfaction.

File Steel Sizes

	Square and Round	Flat	Mill	Taper	Half Round
2 in.	.075	.240 x.060	.240 x.045	.134	.240 x.069
2½ "	.094	.288 x.072	.288 x.053	.167	.288 x.082
3 "	.113	.335 x.084	.335 x.064	.234	.336 x.096
3½ "	.131	.384 x.096	.384 x.072	.302	.383 x.109
4 "	.150	.430 x.107	.430 x.081	.369	.431 x.123
4½ "	.169	.478 x.119	.478 x.089	.402	.479 x.137
5 "	.188	.525 x.131	.525 x.098	.436	.527 x.151
5½ "	.206	.573 x.143	.573 x.107	.470	.574 x.164
6 "	.225	.620 x.155	.620 x.116	.503	.622 x.178
6½ "	. . .	.668 x.167	. . . . .	. . .	. . . . .
7 "	.263	.715 x.179	.715 x.134	.570	.718 x.205
8 "	.300	.810 x.202	.810 x.152	.638	.813 x.232
9 "	.338	.905 x.226	.905 x.170	.705	.909 x.260
10 "	.375	1.000 x.250	1.000 x.187	.772	1.004 x.287
11 "	.438	1.090 x.272	1.090 x.204	.839	1.100 x.314
12 "	.500	1.180 x.295	1.180 x.221	.906	1.195 x.341
13 "	.563	1.270 x.317	1.270 x.238	.973	1.291 x.369
14 "	.625	1.360 x.340	1.360 x.255	1.041	1.387 x.396
15 "	.688	1.450 x.362	1.450 x.272	1.108	1.482 x.423
16 "	.750	1.540 x.385	1.540 x.289	1.175	1.578 x.451
17 "	.813	1.630 x.407	1.630 x.306	1.240	1.673 x.478
18 "	.875	1.720 x.430	1.720 x.322	1.309	1.769 x.505
19 "	.938	1.810 x.452	. . . . .	1.375	1.864 x.533
20 "	1.000	1.900 x.475	. . . . .	1.438	1.960 x.560
21 "	1.063	. . . . .	. . . . .	. . .	. . . . .
22 "	1.125	. . . . .	. . . . .	. . .	. . . . .
23 "	1.188	. . . . .	. . . . .	. . .	. . . . .
24 "	1.250	. . . . .	. . . . .	. . .	. . . . .

1306

File Steel Prices

REGULAR SHAPES—Square, Half Round, Round, Flat Pillar, Hand, Mill, Cabinet, Wood and Shoe Rasp.

Base Sizes, per lb. ..... _____

Horse Rasp, Base Sizes, per lb. ..... _____

Base Sizes, 8 inches and over.

KNIFE, SLITTING, CROSSING, TUMBLER, Saddle Tree Rasp, Oval, Cant, Feather Edge Shoe, Roller, Gin Saw, Pit Saw, Cross-Cut (except Great American), 3 cents per pound above REGULAR SHAPES, and subject to classification.

GREAT AMERICAN CROSS-CUT, 2 cents per pound above REGULAR SHAPES, and subject to classification.

ALL SPECIAL SHAPES, not otherwise provided for, 3½ cents per pound above REGULAR SHAPES, and subject to classification.

Classification of All File and Rasp Steel, Excepting Taper and Slim Taper

Extra sizes in inches 7½, 7, 6½, 6, 5½, 5, 4½, 4, 3½, 3
Cents extra per pound ..... ½, 1, 1½, 2, 2½, 3, 3½, 4, 4½, 5

TAPER AND SLIM TAPER, 2 cents per pound above REGULAR SHAPES, and subject to classification.

Taper Classification

4 inches and over Base { Extra sizes in inches . . 3½, 3, 2½ / Cents extra per pound . 1, 4, 8

Slim Taper Classification

6 inches and over Base { Extra sizes in inches . . 5½, 5, 4½, 4, 3½ / Cents extra per pound . ½, 1, 2½, 4, 6½

Crucible Spring Steel

Base Sizes, per lb. 1307

Spring Steel Classification

Round and Square

$\frac{5}{8}$ to $1\frac{1}{2}$ inches, inclusive . . . . . Base

$\frac{9}{16}$ and $\frac{1}{2}$ in. . . . . $\frac{2}{10}$c. extra per lb.
$\frac{7}{16}$ " $\frac{3}{8}$ " . . . . . $\frac{5}{10}$c. " "
$\frac{5}{16}$ " $\frac{11}{32}$ " . . . . . 1 c. " "
$\frac{1}{4}$ " $\frac{9}{32}$ " . . . . . $1\frac{5}{10}$c. " "
$\frac{3}{16}$ " $\frac{7}{32}$ " . . . . . 3 c. " "

Cutting to exact lengths 24 inches and over, $\frac{2}{10}$ cents per pound. Under 24 inches, special price.

Flat

$1\frac{1}{4}$ to 6 inches x No. 4 Gauge to $\frac{1}{2}$ inch, inclusive . . Base

1 in. to $1\frac{1}{8}$ in. x No. 1 to 4 Gauge . . . $\frac{2}{10}$c. extra per lb.
1 " " 3 " x " 5 " 7 " . . . $\frac{5}{10}$c. " "
$\frac{3}{4}$ " " $\frac{15}{16}$" x " 1 " 7 " . . . $\frac{5}{10}$c. " "
$\frac{3}{8}$ " " $\frac{11}{16}$" x " 1 " 7 " . . . 1 c. " "
$\frac{3}{4}$ " " 3 " x " 8 "10 " . . . 1 c. " "
$\frac{3}{4}$ " " 3 " x "11 "16 " . . . $1\frac{5}{10}$c. " "
$\frac{3}{4}$ " " 3 " x "17 "19 " . . . $2\frac{2}{10}$c. " "
$\frac{3}{8}$ " " $\frac{5}{8}$ " x "10 "16 " . . . 4 c. " "
$\frac{3}{8}$ " " $\frac{5}{8}$ " x "17 "19 " . . . 5 c. " "

Thinner than No. 19 Gauge; refer to Sheet Steel list.

Open-Hearth Spring Steel

Base Sizes, per lb. 1308

Classification same as Crucible Spring Steel

All specifications for less than 2000 pounds of a size are subject to following NET differential extras:

Quantities less than 2000 lbs. but not less than 1000 lbs., $\frac{3}{10}$ c. per lb. extra.

Quantities less than 1000 lbs., $\frac{7}{10}$ c. per lb. extra.

The total weight of a size to determine the differential extra, regardless of lengths.

Cutlery Steel 1309

Base Sizes, Per Pound

FINE CUTLERY .....

BUTCHER KNIFE .....

TABLE CUTLERY .....

Cutlery Steel Classification

Flat

	Cents extra per lb.
$1\frac{1}{4}$ to $2\frac{1}{2}$ inches wide x 16 gauge and heavier.....	Base
$1\frac{1}{4}$ to $2\frac{1}{2}$ in. wide x 17 to 19 gauge, inclusive.....	1
$\frac{3}{4}$ " $1\frac{3}{16}$ " x 16 gauge and heavier	$\frac{5}{10}$
$\frac{3}{4}$ " $1\frac{3}{16}$ " x 17 to 19 gauge, inclusive.....	$1\frac{5}{10}$
$\frac{1}{2}$ " $\frac{11}{16}$ " x $\frac{3}{16}$ in. and heavier	$\frac{5}{10}$
$\frac{1}{2}$ " $\frac{11}{16}$ " x $\frac{5}{32}$ to 16 gauge, inclusive.....	1
$\frac{3}{8}$ " $\frac{15}{32}$ " x $\frac{3}{16}$ in. and heavier	1

Round and Square

	Cents extra per lb.
$\frac{3}{8}$ to $\frac{3}{4}$ inch, inclusive.....	Base
$\frac{11}{32}$	$\frac{5}{10}$
$\frac{5}{16}$	1
$\frac{1}{4}$ and $\frac{9}{32}$	2

Crucible Machinery Steel

Base Sizes, per lb. 1310

Classification

Round and Square

	Cents extra per lb.
$\frac{3}{4}$ to 3 inches	Base
$\frac{1}{2}$ to $\frac{11}{16}$	$\frac{3}{10}$
$\frac{3}{8}$ to $\frac{7}{16}$	$\frac{5}{10}$
$\frac{5}{16}$ and $\frac{11}{32}$	1
$\frac{1}{4}$ and $\frac{9}{32}$	1 $\frac{5}{10}$
$\frac{3}{16}$	3

Octagon and Hexagon $\frac{1}{2}$c. lb. extra on this list.

Flat

$\frac{5}{8}$ to 2 in. thick x $\frac{9}{16}$ to 2 in. wide ..... Base

Extras for Flat sizes are one-half those of the Flat Tool Steel Classification.

Hammered Round and Square

	Cents extra per lb.
$3\frac{1}{8}$ to 4 inches	1
$4\frac{1}{8}$ to 6 "	1 $\frac{5}{10}$

Cutting to Specified Single and Multiple Lengths

24 inches and over	$\frac{1}{2}$ cent per lb.
18 to 24 inches	1 " "
12 to 18 "	1$\frac{1}{2}$ " "
6 to 12 "	2 " "

Less than 6 inches, special price.

Open-Hearth Machinery Steel

Base Sizes, per lb. 1311

Machinery and Soft Bar Steel Classification

Round and Square

Rivet

$\frac{3}{4}$ to 3 inches	Base	
$\frac{5}{8}$ " $\frac{11}{16}$ "	$\frac{1}{10}$c.	extra
$\frac{1}{2}$ " $\frac{9}{16}$ "	$\frac{2}{10}$c.	"
$\frac{7}{16}$ "	$\frac{4}{10}$c.	"
$\frac{3}{8}$ "	$\frac{5}{10}$c.	"
$\frac{11}{32}$ "	$\frac{6}{10}$c.	"
$\frac{5}{16}$ "	$\frac{7}{10}$c.	"
$\frac{9}{32}$ "	$\frac{8}{10}$c.	"
$\frac{1}{4}$ "	1 c.	"
$\frac{7}{32}$ "	2 c.	"
$\frac{3}{16}$ "	2 $\frac{1}{2}$ c.	"

Ovals

$\frac{7}{8}$ in. and Larger	$\frac{4}{10}$c.	extra
$\frac{3}{4}$ to $\frac{13}{16}$ in.	$\frac{5}{10}$c.	"
$\frac{5}{8}$ to $\frac{11}{16}$ in.	$\frac{6}{10}$c.	"
$\frac{1}{2}$ to $\frac{9}{16}$ in.	$\frac{8}{10}$c.	"
$\frac{3}{8}$ to $\frac{7}{16}$ in.	1 c.	"

Half Ovals and Half Rounds

$\frac{7}{8}$ in. and Larger	$\frac{5}{10}$c.	extra
$\frac{3}{4}$ to $\frac{13}{16}$ in.	$\frac{8}{10}$c.	"
$\frac{5}{8}$ to $\frac{11}{16}$ in.	1 c.	"
$\frac{1}{2}$ in.	1$\frac{3}{10}$c.	"
$\frac{7}{16}$ in.	2$\frac{1}{10}$c.	"
$\frac{3}{8}$ in.	2 $\frac{1}{2}$ c.	"
$\frac{5}{16}$ in.	2$\frac{6}{10}$c.	"

For Quantity Differentials see following page.
Extras for cutting see page 25.

Open-Hearth Machinery Steel

Machinery and Soft Bar Steel Classification

Flat Bars and Heavy Bands

1	in. to	6	in. x	3/8	in. to	1	in.	Base
1	" "	6	" x	1/4	" and	5/16	"	2/10c. extra
11/16	" "	15/16	" x	3/8	" to	3/4	"	4/10c. "
11/16	" "	15/16	" x	1/4	" and	5/16	"	5/10c. "
9/16	" and	5/8	" x	3/8	" to	1/2	"	5/10c. "
9/16	" "	5/8	" x	1/4	" and	5/16	"	7/10c. "
1/2	"		x	3/8	" "	7/16	"	1 c. "
1/2	"		x	1/4	" "	5/16	"	1 2/10c. "
7/16	"		x	3/8	"		"	1 4/10c. "
7/16	"		x	1/4	" and	5/16	"	1 6/10c. "
3/8	"		x	1/4	" "	5/16	"	2 c. "
1 1/8	" to	6	" x	1 1/16	" to	1 3/16	"	1/10c. "
1 1/8	" "	6	" x	1 1/4	" "	1 1/2	"	2/10c. "
1 3/4	" "	6	" x	1 5/8	" "	2 3/4	"	3/10c. "
3 1/8	" "	6	" x	3	" "	4	"	4/10c. "

Light Bars and Bands

1 1/2	in. to	6	in. x	Nos. 7, 8, 9	and	3/16	4/10c. extra
1 1/2	" "	6	" x	" 10, 11, 12	"	1/8	6/10c. "
1	" "	1 7/16	" x	" 7, 8, 9	"	3/16	5/10c. "
1	" "	1 7/16	" x	" 10, 11, 12	"	1/8	7/10c. "
13/16	" "	15/16	" x	" 7, 8, 9	"	3/16	7/10c. "
13/16	" "	15/16	" x	" 10, 11, 12	"	1/8	8/10c. "
11/16	" and	3/4	" x	" 7, 8, 9	"	3/16	1 c. "
11/16	" "	3/4	" x	" 10, 11, 12	"	1/8	1 2/10c. "
9/16	" "	5/8	" x	" 7, 8, 9	"	3/16	1 2/10c. "
9/16	" "	5/8	" x	" 10, 11, 12	"	1/8	1 3/10c. "
1/2	"		x	" 7, 8, 9	"	3/16	1 3/10c. "
1/2	"		x	" 10, 11, 12	"	1/8	1 5/10c. "
7/16	"		x	" 7, 8, 9	"	3/16	1 8/10c. "
7/16	"		x	" 10, 11, 12	"	1/8	2 1/10c. "
3/8	"		x	" 7, 8, 9	"	3/16	1 9/10c. "
3/8	"		x	" 10, 11, 12	"	1/8	2 4/10c. "

Quantity Differentials

All specifications for less than 2000 lbs. of a size subject to the following NET extras, the total weight of a size to determine the extra, regardless of lengths.

Quantities of less than 2000 lbs. but not less than 1000 lbs., 3/10c. per lb. extra.

Quantities of less than 1000 lbs., 7/10c. per lb. extra.

Extras for cutting see page 25.

Open-Hearth Machinery Steel

Machinery and Soft Bar Steel Classification

Octagon and Hexagon

¾ in. and Larger, Base	Per Pound		
⅝ to 11/16 in.	2/10c.	"	" extra
½ to 9/16 "	4/10c.	"	"
7/16 "	8/10c.	"	"
⅜ "	1 c.	"	"
5/16 "	1 2/10c.	"	"

Extras for Cutting to Specified Lengths

Hot Shearing, 24 inches and longer	1/10c.	per pound
" " 12 to 24 inches	2/10c.	" "
" " 6 to 12 "	3/10c.	" "
Cold Saw Cutting, above 24 inches	3/10c.	" "
" " " 12 to 24 "	4/10c.	" "

Cold Saw Cutting to specified lengths, less than 12 inches, according to contract.

No Charge for shear cutting to multiple lengths of 12 inches and under.

Miscellaneous Steel 1312

Subject to the Various Classifications for Extra Sizes

Anvil Facing Steel 1313

Base Sizes

Crucible ..... Per Pound

Auger Bit Steel 1314

Base Sizes

Crucible ..... Per Pound
Open Hearth ..... "

Cant Hook Steel 1315

Base Sizes

Crucible ..... Per Pound
Open Hearth ..... "

Coal Auger Steel 1316

Flat and Oval

Base Sizes

Crucible ..... Per Pound
Open Hearth ..... "

Trowel Steel 1317

Base Sizes

Best ..... Per Pound
Common ..... "

Composite Die Steel 1318

Soft Steel Back and Tool Steel Face

Base Sizes

Best ..... Per Pound
Extra ..... "

Subject Tool Steel Classification

Fork Steel

1319

Base Sizes

Crucible ..... Per Pound
Open Hearth ..... "

Hammer Steel

1320

Base Sizes

Crucible ..... Per Pound
Open Hearth ..... "

Hatchet and Axe Steel

Plain, Overcoat, Beveled

1321

Base Sizes

Special ..... per Pound
Best ..... "
Extra ..... "
Common ..... "

Wedge Steel

1322

Base Sizes

Crucible ..... Per Pound
Open Hearth ..... "

Hoe Steel

1323

Base Sizes

Crucible ..... Per Pound
Open Hearth ..... "

Magnet Steel

1324.

Furnished in all qualities for Telephone Magnets, Tack Hammers, etc.

Base Sizes

Best ..... Per Pound
Extra ..... "
Common ..... "

Mattock Steel

1325

Beveled or Plain

Base Sizes

Crucible .....Per Pound
Open Hearth ..... "

Nickel Steel

1326

Rolled or hammered Bars for Crank Forgings, Drop Forgings, in Crucible and Open Hearth qualities.

Base Sizes

Crucible .....Per Pound
Open Hearth ..... "

Open-Hearth Die Steel

1327

Annealed if Desired

Base Sizes

Blocks .....Per Pound
Bars ..... "

Pick Steel

1328

Base Sizes

Crucible .....Per Pound
Open Hearth ..... "

Plier Steel

1329

Base Sizes

Cutting .....Per Pound
Plain ..... "

Rake Steel

1330

Base Sizes

Crucible .....Per Pound
Open Hearth ..... "

Screw-Driver Steel

1331

Base Sizes

Crucible .....Per Pound
Open Hearth ..... "

Hot Rolled Sheet Steel

1332

For Saws, Knives, Springs, Shears, Scissors, etc.

Special Quality	Per lb.	Base
Best	"	"
Extra	"	"
No. 7	"	"
Common	"	"

Nos. 10 to 14 Gauge, Base.

Extras for Lighter Gauges

Nos.	15	16	17	18	19	20	21	
Extras	¼c.	¼c.	½c.	¾c.	1c.	1¼c.	1¼c.	per lb.

Nos.	22	23	24	25	26	27	28	29	30	
Extras	1c.	2c.	3c.	4c.	5c.	6c.	7c.	10c.	15c.	per lb.

Unless size be specified, the width of sheets furnished will be 18 inches, to 21 gauge, lengths 48 to 72 inches.

Sheets ordered by gauge will be furnished to the Disston Standard Gauge. See table pages 34, 35 and 36.

Cast Steel Saw Plates
Circular Saw Plates } 1333

Base Sizes..... 10 to 46 Inches .....Per lb.

Extra Prices for Extra Sizes.

48	50	52 to 54	56 to 60	62 to 64 inches.
1	2	3	5	7c. per lb. extra.

66 to 70	72	74	76	78 inches
9	11	13	15	17c. per lb. extra.

Sizes under 10 inches, Special Prices.

Groovers .....Per Pound
Slate Saw ..... "
Segments, to Pattern ..... "
" in Sheets ..... "

Long Saw Plates 1334

Mill and Mulay to No. 7; Gang Plates to 12 Gauge .....Per Pound
Drag Plates, even Gauge to No. 12.... "
Drag Plates, uneven Gauge to No. 12.. "

Cross-Cut Saw Plates 1335

Best Quality .....Per Pound
Common Quality ..... "
Hollow Back, Best Quality ..... "
" " Common Quality ..... "

1336

Disston Crucible and Open Hearth Cold Rolled and Cold Drawn Steel

FLATS from .250″ to .007″ in thickness.
Varying in widths from $\frac{3}{16}$ to 16 inches.

ROUNDS up to .375″ diameter.

We cut to length or furnish in coils for the following:

BAND SAWS
HACK SAWS
BUTCHER SAWS
KNIFE BLADES
SQUARE BLADES
RULERS, ETC.

Our steel can be finished either bright or annealed, tempered, straw colored, blued or polished.

Where boxing or barreling is required, extra charge.

1337

Disston Cold Rolled and Cold Drawn Steel

Classification

Best Crucible	base per lb.
Crucible	" "
Open Hearth	" "

Thickness Extras

1½"—3" x .018" and thicker base.

1½"—3" x	.017"	½c.	per lb.	extra
" "	.016	½c.	"	"
" "	.015	1c.	"	"
" "	.014	1c.	"	"
" "	.013	2c.	"	"
" "	.012	3c.	"	"
" "	.011	4c.	"	"
" "	.010	7c.	"	"
" "	.009	8c.	"	"
" "	.008	9c.	"	"
" "	.007	21c.	"	"

Width Extras

1½"— ⅝"	¼c.
⅝ — 7/16	½c.
7/16 — 5/16	1c.
5/16 — ¼	3c.
¼ — 3/16	5c.

Regular Crucible Steel (that is not listed in catalogue)
1338

Disston Cold Rolled and Cold Drawn Steel

Classification

Tempering

1½"—3" x .018 and thicker	1½c.
" " x .017—.016	1½c.
" " x .015—.014	1¾c.
" " x .013—.012	2c.
" " x .011—.010	2c.
" " x .009—.008½	2½c.
" " x .008—.007½	3c.
" " x .007	4c.

Polishing

1½"—3" x .018 and thicker	1c.
" " x .017—.014	1c.
" " x .013—.012	1½c.
" " x .011—.010	1¾c.
" " x .009—.008½	2c.
" " x .008—.007½	2½c.
" " x .007	3½c.

Coloring—Blue or Straw

1½"—3" x .014 and thicker	½c.
" " x .013—.012	¾c.
" " x .011	1c.

Table Showing

Value of Disston Wire Gauge

Corresponds Exactly with Stubb's English Gauge

In decimal and fractional parts of an inch, with the weight of a square and lineal foot of Sheet Steel.

Gauge Number	Fractional Part of an Inch	Decimals of an Inch	Weight Sq. Feet Pounds	Weight Lineal Foot Pounds
00000	1/2	.50	20.32	16 in. wide, 27.09
	15/32	.4687	19.05	" " 25.40
0000		.454	18.46	" " 24.61
	7/16	.4375	17.78	" " 23.71
000		.425	17.28	" " 23.04
	13/32	.4062	16.51	" " 20.64
00		.380	15.45	" " 20.50
	3/8	.375	15.24	" " 20.32
	11/32	.3437	13.97	" " 18.46
0		.340	13.82	" " 18.27
	5/16	.3125	12.70	" " 16.93
1		.300	12.20	" " 16.27
	19/64	.296	12.07	" " 16.09
2		.284	11.55	" " 15.40
	9/32	.281	11.43	" " 15.24
	17/64	.265	10.80	" " 14.40
3		.259	10.53	" " 14.04
	1/4	.250	10.16	" " 13.55
4		.238	9.68	" " 12.91
	15/64	.234	9.53	" " 12.71
5		.220	8.95	" " 11.93

Table Showing

Value of Disston Wire Gauge

(CONTINUED)

Corresponds Exactly with Stubb's English Gauge

In decimal and fractional parts of an inch, with the weight of a square and lineal foot of Sheet Steel.

Gauge Number	Fractional Part of an Inch	Decimals of an Inch	Weight Sq. Feet Pounds	Weight Lineal Foot Pounds
	$\frac{7}{32}$	.2187	8.89	16 in. wide, 11.85
6	$\frac{13}{64}$	.203	8.26	" " 11.01
	$\frac{3}{16}$	.1875	7.62	" " 10.16
7		.180	7.32	" " 9.76
	$\frac{11}{64}$	.171	6.99	" " 9.32
8		.165	6.71	" " 8.95
	$\frac{5}{32}$	.1562	6.35	" " 8.47
9		.148	6.09	" " 8.12
	$\frac{9}{64}$	.140	5.72	" " 7.63
10		.134	5.45	" " 7.27
	$\frac{1}{8}$	.125	5.08	" " 6.77
11		.120	4.88	" " 6.51
12	$\frac{7}{64}$	.109	4.44	" " 5.92
13		.095	3.86	" " 5.14
	$\frac{3}{32}$	.0937	3.81	" " 5.08
14		.083	3.37	" " 4.49
	$\frac{5}{64}$	.078	3.18	" " 4.24
15		.072	2.93	" " 3.91
16		.065	2.64	" " 3.52
	$\frac{1}{16}$	.0625	2.54	" " 3.49
17		.058	2.36	" " 3.15

Table Showing

Value of Disston Wire Gauge

(CONTINUED)

Corresponds Exactly with Stubb's English Gauge

In decimal and fractional parts of an inch, with the weight of a square and lineal foot of Sheet Steel.

Gauge Number	Fractional Part of an Inch	Decimals of an Inch	Weight Sq. Feet Pounds	Weight Lineal Foot Pounds
18		.049	1.99	16 in. wide, 2.65
	$\frac{3}{64}$	.046	1.91	" " 2.55
19		.042	1.71	" " 2.28
20		.035	1.42	" " 1.89
21		.032	1.30	" " 1.73
	$\frac{1}{32}$	.0313	1.27	" " 1.69
22		.028	1.14	" " 1.32
23		.025	1.02	" " 1.26
24		.022	.90	" " 1.19
25		.020	.81	" " 1.08
26		.018	.73	" " .97
27		.016	.65	" " .87
	$\frac{1}{64}$	.0156	.64	" " .85
28		.014	.57	" " .76
29		.013	.53	" " .71
30		.012	.49	" " .65
31		.010	.41	" " .55
32		.009	.37	" " .49
33		.008	.33	" " .44
34		.007	.28	" " .37
35		.005	.20	" " .27
36		.004	.16	" " .21

Decimal Equivalents

OF

4ths, 8ths, 16ths, 32ds and 64ths of an Inch

For use in connection with

Micrometer Calipers

4ths 8ths

$\frac{1}{8}$=.125
$\frac{1}{4}$=.25
$\frac{3}{8}$=.375
$\frac{1}{2}$=.50
$\frac{5}{8}$=.625
$\frac{3}{4}$=.75
$\frac{7}{8}$=.875

16ths

$\frac{1}{16}$=.0625
$\frac{3}{16}$=.1875
$\frac{5}{16}$=.3125
$\frac{7}{16}$=.4375
$\frac{9}{16}$=.5625
$\frac{11}{16}$=.6875
$\frac{13}{16}$=.8125
$\frac{15}{16}$=.9375

32ds

$\frac{1}{32}$=.03125
$\frac{3}{32}$=.09375
$\frac{5}{32}$=.15625
$\frac{7}{32}$=2.1875
$\frac{9}{32}$=.28125
$\frac{11}{32}$=.34375
$\frac{13}{32}$=.40625
$\frac{15}{32}$=.46875
$\frac{17}{32}$=.53125
$\frac{19}{32}$=.59375
$\frac{21}{32}$=.65625
$\frac{23}{32}$=.71875
$\frac{25}{32}$=.78125
$\frac{27}{32}$=.84375
$\frac{29}{32}$=.90625
$\frac{31}{32}$=.96875

64ths

$\frac{1}{64}$=.015625
$\frac{3}{64}$=.046875
$\frac{5}{64}$=.078125
$\frac{7}{64}$=.109375
$\frac{9}{64}$=.140625
$\frac{11}{64}$=.171875
$\frac{13}{64}$=.203125
$\frac{15}{64}$=.234375
$\frac{17}{64}$=.265625
$\frac{19}{64}$=.296875
$\frac{21}{64}$=.328125
$\frac{23}{64}$=.359375
$\frac{25}{64}$=.390625
$\frac{27}{64}$=.421875
$\frac{29}{64}$=.453125
$\frac{31}{64}$=.484375
$\frac{33}{64}$=.515625
$\frac{35}{64}$=.546875
$\frac{37}{64}$=.578125
$\frac{39}{64}$=.609375
$\frac{41}{64}$=.640625
$\frac{43}{64}$=.671875
$\frac{45}{64}$=.703125
$\frac{47}{64}$=.734375
$\frac{49}{64}$=.765625
$\frac{51}{64}$=.796875
$\frac{53}{64}$=.828125
$\frac{55}{64}$=.859375
$\frac{57}{64}$=.890625
$\frac{59}{64}$=.921875
$\frac{61}{64}$=.953125
$\frac{63}{64}$=.984375

Weight of Bar Steel
Per Lineal Foot

SQUARE		ROUND		OCTAGON		HEXAGON	
Size	Pounds	Size	Pounds	Size	Pounds	Size	Pounds
1/8	.05	1/8	.04	1/8	.04	1/8	
3/16	.12	3/16	.09	3/16	.10	3/16	
1/4	.21	1/4	.17	1/4	.18	1/4	.19
5/16	.33	5/16	.26	5/16	.28	5/16	.30
3/8	.48	3/8	.38	3/8	.40	3/8	.42
7/16	.65	7/16	.51	7/16	.54	7/16	.57
1/2	.85	1/2	.67	1/2	.70	1/2	.74
9/16	1.08	9/16	.85	9/16	.89	9/16	.94
5/8	1.33	5/8	1.04	5/8	1.10	5/8	1.15
11/16	1.61	11/16	1.27	11/16	1.33	11/16	1.40
3/4	1.92	3/4	1.50	3/4	1.58	3/4	1.66
13/16	2.24	13/16	1.76	13/16	1.83	13/16	1.95
7/8	2.60	7/8	2.04	7/8	2.16	7/8	2.26
15/16	3.06	15/16	2.35	15/16	2.48	15/16	2.61
1	3.40	1	2.67	1	2.82	1	3.00
1 1/8	4.30	1 1/8	3.38	1 1/8	3.56	1 1/8	3.80
1 1/4	5.31	1 1/4	4.17	1 1/4	4.40	1 1/4	4.60
1 3/8	6.43	1 3/8	5.05	1 3/8	5.32	1 3/8	5.60
1 1/2	7.65	1 1/2	6.01	1 1/2	6.34	1 1/2	6.70
1 5/8	8.98	1 5/8	7.05	1 5/8	7.32	1 5/8	7.80
1 3/4	10.40	1 3/4	8.18	1 3/4	8.64	1 3/4	9.10
1 7/8	11.90	1 7/8	9.38	1 7/8	9.92	1 7/8	10.00
2	13.60	2	10.71	2	11.28	2	11.80
2 1/8	15.40	2 1/8	12.05	2 1/8	12.71	2 1/8	
2 1/4	17.20	2 1/4	13.60	2 1/4	14.24	2 1/4	
2 3/8	19.20	2 3/8	15.10	2 3/8	15.88	2 3/8	
2 1/2	21.20	2 1/2	16.68	2 1/2	17.65	2 1/2	

Weight of Bar Steel

Per Lineal Foot

(CONTINUED)

SQUARE		ROUND		OCTAGON	
Size	Pounds	Size	Pounds	Size	Pounds
$2\frac{5}{8}$	23.50	$2\frac{5}{8}$	18.39	$2\frac{5}{8}$	19.45
$2\frac{3}{4}$	25.70	$2\frac{3}{4}$	20.18	$2\frac{3}{4}$	21.28
$2\frac{7}{8}$	28.20	$2\frac{7}{8}$	22.06	$2\frac{7}{8}$	23.28
3	30.60	3	24.10	3	25.36
$3\frac{1}{8}$	33.13	$3\frac{1}{8}$	26.12	$3\frac{1}{8}$	27.50
$3\frac{1}{4}$	35.90	$3\frac{1}{4}$	28.30	$3\frac{1}{4}$	29.28
$3\frac{3}{8}$	38.64	$3\frac{3}{8}$	30.45	$3\frac{3}{8}$	32.10
$3\frac{1}{2}$	41.60	$3\frac{1}{2}$	32.70	$3\frac{1}{2}$	34.56
$3\frac{5}{8}$	44.57	$3\frac{5}{8}$	35.20	$3\frac{5}{8}$	37.05
$3\frac{3}{4}$	47.80	$3\frac{3}{4}$	37.54	$3\frac{3}{4}$	39.68
4	54.40	4	42.72	4	45.12
$4\frac{1}{4}$	61.40	$4\frac{1}{4}$	48.30	$4\frac{1}{4}$	50.84
$4\frac{1}{2}$	68.90	$4\frac{1}{2}$	54.60	$4\frac{1}{2}$	56.96
$4\frac{3}{4}$	76.70	$4\frac{3}{4}$	60.30	$4\frac{3}{4}$	63.52
5	85.00	5	66.80	5	70.60
$5\frac{1}{4}$	93.70	$5\frac{1}{4}$	73.60	$5\frac{1}{4}$	77.80
$5\frac{1}{2}$	102.80	$5\frac{1}{2}$	80.80	$5\frac{1}{2}$	85.15
$5\frac{3}{4}$	112.40	$5\frac{3}{4}$	88.30	$5\frac{3}{4}$	93.12
6	122.40	6	96.10	6	101.45
$6\frac{1}{2}$	143.60	$6\frac{1}{2}$	113.20	$6\frac{1}{2}$	117.12
7	166.40	7	130.80	7	138.24
8	217.60	8	170.88	8	180.48
9	275.60	9	218.40	9	227.84
10	340.00	10	267.20	10	282.40
11	411.20	11	323.00	11	340.60
12	489.60	12	384.40	12	405.80

Weight of Flat Bar Steel
Per Lineal Foot

	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/2	4	5	6	7
1/16	.213	.266	.320	.372	.426	.479	.530	.585	.640	.745	.850	.955	1.07	1.18	1.28	1.49	1.70	2.13	2.56	2.98
3/32	.319	.339	.480	.558	.639	.718	.790	.878	.960	1.12	1.28	1.43	1.60	1.76	1.92	2.24	2.55	3.20	3.83	4.47
1/8	.425	.533	.640	.743	.852	.958	1.06	1.17	1.28	1.49	1.70	1.91	2.13	2.34	2.56	2.98	3.40	4.26	5.11	5.96
5/32	.531	.665	.800	.929	1.06	1.20	1.33	1.46	1.60	1.86	2.13	2.39	2.66	2.92	3.19	3.72	4.25	5.32	6.38	7.44
3/16	.638	.798	.960	1.12	1.28	1.43	1.59	1.75	1.91	2.23	2.55	2.87	3.20	3.51	3.83	4.46	5.10	6.40	7.66	8.92
7/32	.744	.931	1.12	1.30	1.49	1.67	1.86	2.05	2.23	2.60	2.98	3.35	3.72	4.09	4.46	5.21	5.95	7.44	8.92	10.40
1/4	. .	1.07	1.28	1.49	1.70	1.91	2.13	2.34	2.55	2.98	3.40	3.83	4.26	4.68	5.10	5.96	6.80	8.52	10.20	11.90
9/32	. .	1.20	1.44	1.67	1.91	2.15	2.39	2.63	2.87	3.35	3.83	4.30	4.78	5.26	5.74	6.69	7.65	9.56	11.50	13.40
5/16	. .	. .	1.60	1.86	2.12	2.39	2.66	2.92	3.19	3.72	4.26	4.79	5.32	5.86	6.39	7.44	8.52	10.64	12.78	14.90
11/32	. .	. .	1.76	2.04	2.34	2.63	2.92	3.22	3.51	4.09	4.68	5.26	5.84	6.43	7.01	8.18	9.35	11.70	14.00	16.40
3/8	. .	. .	. .	2.23	2.55	2.86	3.19	3.50	3.83	4.46	5.10	5.74	6.40	7.02	7.65	8.92	10.20	12.80	15.30	17.90
13/32	. .	. .	. .	2.41	2.76	3.11	3.45	3.80	4.14	4.83	5.53	6.22	6.91	7.60	8.29	9.67	11.10	13.80	16.60	19.30
7/16	. .	. .	. .	. .	2.98	3.34	3.72	4.09	4.46	5.21	5.96	6.70	7.46	8.19	8.94	10.42	11.92	14.92	17.88	20.80
15/32	. .	. .	. .	. .	3.19	3.59	3.98	4.38	4.78	5.58	6.38	7.17	7.97	8.77	9.56	11.20	12.80	15.90	19.10	22.40
1/2	. .	. .	. .	. .	. .	3.82	4.25	4.68	5.10	5.96	6.80	7.66	8.52	9.36	10.20	11.92	13.60	17.04	20.40	23.80
9/16	. .	. .	. .	. .	. .	. .	4.78	5.27	5.74	6.71	7.65	8.61	9.59	10.54	11.48	13.41	15.30	19.17	22.95	26.80
5/8	. .	. .	. .	. .	. .	. .	. .	5.85	6.38	7.45	8.50	9.57	10.65	11.71	12.76	14.90	17.00	21.30	25.61	29.76
11/16	. .	. .	. .	. .	. .	. .	. .	7.02	7.67	8.94	10.20	11.49	12.78	14.04	15.30	17.88	20.40	25.56	30.60	35.70

Weights of Flat Rolled Steel Bars

Per lineal foot in pounds. One cubic foot of steel weighs 489.6 lbs.

Thickness	WIDTH OF BARS																							
	1"	1¼"	1½"	1¾"	2"	2¼"	2½"	2¾"	3"	3¼"	3½"	3¾"	4"	4¼"	4½"	4¾"	5"	5¼"	5½"	5¾"	6"	6¼"	6½"	6¾"
1/16	.212	.265	.319	.372	.425	.478	.531	.584	.637	.690	.743	.797	.849	.902	.956	1.01	1.06	1.11	1.17	1.22	1.28	1.33	1.38	1.43
1/8	.425	.531	.637	.743	.849	.956	1.06	1.17	1.28	1.38	1.49	1.59	1.70	1.81	1.92	2.02	2.12	2.23	2.34	2.45	2.55	2.65	2.76	2.83
3/16	.638	.797	.957	1.11	1.28	1.44	1.59	1.75	1.91	2.07	2.23	2.39	2.55	2.71	2.87	3.03	3.19	3.35	3.51	3.67	3.83	3.99	4.14	4.30
1/4	.850	1.06	1.28	1.49	1.70	1.91	2.12	2.34	2.55	2.76	2.98	3.19	3.40	3.61	3.83	4.04	4.25	4.46	4.67	4.89	5.10	5.31	5.53	5.74
5/16	1.06	1.33	1.59	1.86	2.12	2.39	2.65	2.92	3.19	3.45	3.72	3.99	4.25	4.52	4.78	5.05	5.31	5.58	5.84	6.11	6.38	6.64	6.90	7.17
3/8	1.28	1.59	1.92	2.23	2.55	2.87	3.19	3.51	3.83	4.15	4.47	4.78	5.10	5.42	5.74	6.06	6.38	6.69	7.02	7.34	7.65	7.97	8.29	8.61
7/16	1.49	1.86	2.23	2.60	2.98	3.35	3.72	4.09	4.46	4.83	5.20	5.58	5.95	6.32	6.70	7.07	7.44	7.81	8.18	8.56	8.93	9.29	9.67	10.04
1/2	1.70	2.12	2.55	2.98	3.40	3.83	4.25	4.67	5.10	5.53	5.95	6.38	6.80	7.22	7.65	8.08	8.50	8.93	9.35	9.77	10.20	10.63	11.05	11.48
9/16	1.92	2.39	2.87	3.35	3.83	4.30	4.78	5.26	5.74	6.22	6.70	7.17	7.65	8.13	8.61	9.09	9.57	10.04	10.52	11.00	11.48	11.95	12.43	12.91
5/8	2.12	2.65	3.19	3.72	4.25	4.78	5.31	5.84	6.38	6.91	7.44	7.97	8.50	9.03	9.57	10.10	10.63	11.16	11.69	12.22	12.75	13.28	13.81	14.34
11/16	2.34	2.92	3.51	4.09	4.67	5.26	5.84	6.43	7.02	7.60	8.18	8.76	9.35	9.93	10.52	11.11	11.69	12.27	12.85	13.44	14.03	14.61	15.20	15.78
3/4	2.55	3.19	3.83	4.47	5.10	5.75	6.38	7.02	7.65	8.29	8.93	9.57	10.20	10.84	11.48	12.12	12.75	13.39	14.03	14.67	15.30	15.94	16.58	17.22
13/16	2.76	3.45	4.14	4.84	5.53	6.21	6.90	7.60	8.29	8.98	9.67	10.36	11.05	11.74	12.43	13.12	13.81	14.50	15.19	15.88	16.58	17.27	17.95	18.65
7/8	2.98	3.72	4.47	5.20	5.95	6.69	7.44	8.18	8.93	9.67	10.41	11.16	11.90	12.65	13.39	14.13	14.87	15.62	16.36	17.10	17.85	18.60	19.34	20.08
15/16	3.19	3.99	4.78	5.58	6.38	7.18	7.97	8.77	9.57	10.36	11.16	11.95	12.75	13.55	14.34	15.14	15.94	16.74	17.53	18.33	19.13	19.92	20.72	21.51
1	3.40	4.25	5.10	5.95	6.80	7.65	8.50	9.35	10.20	11.05	11.90	12.75	13.60	14.45	15.30	16.15	17.00	17.85	18.70	19.55	20.40	21.25	22.10	22.95
1 1/16	3.61	4.52	5.42	6.32	7.22	8.13	9.03	9.93	10.84	11.74	12.65	13.55	14.45	15.35	16.26	17.16	18.06	18.96	19.87	20.77	21.68	22.58	23.48	24.39
1 1/8	3.83	4.78	5.74	6.70	7.65	8.61	9.57	10.52	11.48	12.43	13.39	14.34	15.30	16.26	17.22	18.17	19.13	20.08	21.04	21.99	22.95	23.91	24.87	25.82
1 3/16	4.04	5.05	6.06	7.07	8.08	9.09	10.10	11.11	12.12	13.12	14.13	15.14	16.15	17.16	18.17	19.18	20.19	21.20	22.21	23.22	24.23	25.23	26.24	27.25
1 1/4	4.25	5.31	6.38	7.44	8.50	9.57	10.63	11.69	12.75	13.81	14.87	15.94	17.00	18.06	19.13	20.19	21.25	22.32	23.38	24.44	25.50	26.56	27.62	28.69
1 5/16	4.46	5.58	6.69	7.81	8.93	10.04	11.16	12.27	13.39	14.50	15.62	16.74	17.85	18.96	20.08	21.20	22.32	23.43	24.54	25.66	26.78	27.90	29.01	30.12
1 3/8	4.67	5.84	7.02	8.18	9.35	10.52	11.69	12.85	14.03	15.20	16.36	17.53	18.70	19.87	21.04	22.21	23.38	24.54	25.71	26.88	28.05	29.22	30.39	31.56
1 7/16	4.89	6.11	7.34	8.56	9.78	11.00	12.22	13.44	14.66	15.88	17.10	18.33	19.55	20.77	21.99	23.22	24.44	25.66	26.88	28.10	29.33	30.55	31.77	32.99
1 1/2	5.10	6.38	7.65	8.93	10.20	11.48	12.75	14.03	15.30	16.58	17.85	19.13	20.40	21.68	22.95	24.23	25.50	26.78	28.05	29.33	30.60	31.88	33.15	34.43
1 9/16	5.32	6.64	7.97	9.30	10.63	11.95	13.28	14.61	15.94	17.27	18.60	19.92	21.25	22.58	23.91	25.24	26.57	27.89	29.22	30.55	31.88	33.20	34.53	35.86
1 5/8	5.52	6.90	8.29	9.67	11.05	12.43	13.81	15.19	16.58	17.96	19.34	20.72	22.10	23.48	24.87	26.25	27.63	29.01	30.39	31.77	33.15	34.53	35.91	37.29
1 11/16	5.74	7.17	8.61	10.04	11.47	12.91	14.34	15.78	17.22	18.65	20.08	21.51	22.95	24.38	25.82	27.26	28.69	30.12	31.55	32.99	34.43	35.86	37.30	38.73
1 3/4	5.95	7.44	8.93	10.42	11.90	13.40	14.88	16.37	17.85	19.34	20.83	22.32	23.80	25.29	26.78	28.27	29.75	31.24	32.73	34.22	35.70	37.19	38.68	40.17
1 13/16	6.16	7.70	9.24	10.79	12.33	13.86	15.40	16.95	18.49	20.03	21.57	23.11	24.65	26.19	27.73	29.27	30.81	32.35	33.89	35.43	36.98	38.52	40.05	41.60
1 7/8	6.38	7.97	9.57	11.15	12.75	14.34	15.94	17.53	19.13	20.72	22.31	23.91	25.50	27.10	28.69	30.28	31.87	33.47	35.06	36.65	38.25	39.85	41.44	43.03
1 15/16	6.59	8.24	9.88	11.53	13.18	14.83	16.47	18.12	19.77	21.41	23.06	24.70	26.35	28.00	29.64	31.29	32.94	34.59	36.23	37.88	39.53	41.17	42.82	44.46
2	6.80	8.50	10.20	11.90	13.60	15.30	17.00	18.70	20.40	22.10	23.80	25.50	27.20	28.90	30.60	32.30	34.00	35.70	37.40	39.10	40.80	42.50	44.20	45.90

Weights of Flat Rolled Steel Bars—Continued

Per lineal foot in pounds. One cubic foot of steel weighs 489.6 lbs.

Thickness	WIDTH OF BARS																							
	7″	7¼″	7½″	7¾″	8″	8¼″	8½″	8¾″	9″	9¼″	9½″	9¾″	10″	10¼″	10½″	10¾″	11″	11¼″	11½″	11¾″	12″	12¼″	12½″	12⅞″
1/16	1.49	1.54	1.59	1.65	1.70	1.75	1.81	1.86	1.92	1.97	2.02	2.07	2.12	2.18	2.23	2.28	2.34	2.39	2.45	2.50	2.55	2.60	2.65	2.70
1/8	2.98	3.08	3.18	3.29	3.40	3.50	3.62	3.72	3.83	3.92	4.04	4.14	4.25	4.36	4.46	4.56	4.67	4.79	4.90	5.00	5.10	5.20	5.31	5.41
3/16	4.46	4.62	4.78	4.94	5.10	5.26	5.42	5.58	5.74	5.90	6.06	6.22	6.38	6.54	6.70	6.86	7.02	7.17	7.32	7.49	7.65	7.82	7.98	8.13
1/4	5.95	6.16	6.36	6.58	6.80	7.01	7.22	7.43	7.65	7.86	8.08	8.29	8.50	8.71	8.92	9.14	9.34	9.57	9.78	10.00	10.20	10.42	10.63	10.84
5/16	7.44	7.70	7.97	8.23	8.50	8.76	9.03	9.29	9.56	9.83	10.10	10.36	10.62	10.89	11.16	11.42	11.68	11.95	12.22	12.49	12.75	13.01	13.28	13.55
3/8	8.93	9.25	9.57	9.88	10.20	10.52	10.84	11.16	11.48	11.80	12.12	12.44	12.75	13.07	13.39	13.71	14.03	14.35	14.68	14.99	15.30	15.62	15.94	16.26
7/16	10.41	10.78	11.16	11.53	11.90	12.27	12.64	13.02	13.40	13.76	14.14	14.51	14.88	15.25	15.62	15.99	16.36	16.74	17.12	17.49	17.85	18.23	18.60	18.97
1/2	11.90	12.32	12.75	13.18	13.60	14.03	14.44	14.87	15.30	15.73	16.16	16.58	17.00	17.42	17.85	18.28	18.70	19.13	19.55	19.97	20.40	20.82	21.25	21.67
9/16	13.39	13.86	14.34	14.82	15.30	15.78	16.26	16.74	17.22	17.69	18.18	18.65	19.14	19.61	20.08	20.56	21.02	21.51	22.00	22.48	22.95	23.43	23.90	24.39
5/8	14.87	15.40	15.94	16.47	17.00	17.53	18.06	18.59	19.13	19.65	20.19	20.72	21.25	21.78	22.32	22.85	23.38	23.91	24.44	24.97	25.50	26.03	26.56	27.09
11/16	16.36	16.94	17.53	18.12	18.70	19.28	19.86	20.45	21.04	21.62	22.21	22.79	23.38	23.96	24.54	25.13	25.70	26.30	26.88	27.47	28.05	28.64	29.22	29.80
3/4	17.85	18.49	19.13	19.77	20.40	21.04	21.68	22.32	22.96	23.59	24.23	24.86	25.50	26.14	26.78	27.42	28.05	28.68	29.33	29.97	30.60	31.25	31.88	32.52
13/16	19.34	20.03	20.72	21.41	22.10	22.79	23.48	24.17	24.86	25.55	26.24	26.94	27.62	28.32	29.00	29.69	30.40	31.08	31.76	32.46	33.15	33.83	34.53	35.22
7/8	20.83	21.57	22.32	23.05	23.80	24.55	25.30	26.04	26.78	27.52	28.26	29.01	29.75	30.50	31.24	31.98	32.72	33.47	34.21	34.95	35.70	36.44	37.19	37.93
15/16	22.32	23.11	23.91	24.70	25.50	26.30	27.10	27.89	28.69	29.49	30.28	31.08	31.88	32.67	33.48	34.28	35.06	35.86	36.66	37.46	38.25	39.05	39.84	40.64
1	23.80	24.65	25.50	26.35	27.20	28.05	28.90	29.75	30.60	31.45	32.30	33.15	34.00	34.85	35.70	36.55	37.40	38.25	39.10	39.95	40.80	41.65	42.50	43.35
1 1/16	25.29	26.19	27.10	28.00	28.90	29.80	30.70	31.61	32.52	33.41	34.32	35.22	36.12	37.03	37.92	38.83	39.74	40.64	41.54	42.45	43.35	44.25	45.16	46.06
1 1/8	26.78	27.73	28.68	29.64	30.60	31.56	32.52	33.47	34.43	35.38	36.34	37.29	38.25	39.21	40.17	41.12	42.08	43.04	44.00	44.94	45.90	46.86	47.82	48.77
1 3/16	28.26	29.27	30.28	31.29	32.30	33.31	34.32	35.33	36.34	37.35	38.36	39.37	40.38	41.39	42.40	43.40	44.42	45.42	46.44	47.45	48.45	49.46	50.46	51.48
1 1/4	29.75	30.81	31.88	32.94	34.00	35.06	36.12	37.20	38.26	39.31	40.37	41.44	42.50	43.56	44.63	45.69	46.76	47.82	48.88	49.94	51.00	52.06	53.12	54.19
1 5/16	31.23	32.35	33.48	34.59	35.70	36.81	37.93	39.05	40.16	41.28	42.40	43.52	44.64	45.75	46.86	47.97	49.08	50.20	51.32	52.44	53.55	54.67	55.78	56.90
1 3/8	32.72	33.89	35.06	36.23	37.40	38.57	39.74	40.91	42.08	43.25	44.41	45.58	46.75	47.92	49.08	50.25	51.42	52.59	53.76	54.93	56.10	57.27	58.44	59.60
1 7/16	34.21	35.44	36.66	37.88	39.10	40.32	41.54	42.77	44.00	45.22	46.44	47.66	48.88	50.10	51.32	52.54	53.76	54.99	56.21	57.43	58.65	59.87	61.10	62.32
1 1/2	35.70	36.98	38.26	39.53	40.80	42.08	43.35	44.63	45.90	47.18	48.45	49.73	51.00	52.28	53.55	54.83	56.10	57.37	58.65	59.93	61.20	62.48	63.75	65.03
1 9/16	37.19	38.51	39.84	41.17	42.50	43.83	45.16	46.49	47.82	49.14	50.48	51.80	53.14	54.46	55.78	57.11	58.42	59.76	61.10	62.43	63.75	65.08	66.40	67.74
1 5/8	38.67	40.05	41.44	42.82	44.20	45.58	46.96	48.34	49.73	51.10	52.49	53.87	55.25	56.63	58.02	59.40	60.78	62.16	63.54	64.92	66.30	67.68	69.06	70.44
1 11/16	40.16	41.59	43.03	44.47	45.90	47.33	48.76	50.20	51.64	53.07	54.51	55.94	57.38	58.81	60.24	61.68	63.10	64.55	65.98	67.42	68.85	70.29	71.72	73.15
1 3/4	41.65	43.14	44.63	46.12	47.60	49.09	50.58	52.07	53.56	55.04	56.53	58.01	59.50	60.99	62.48	63.97	65.45	66.93	68.43	69.92	71.40	72.90	74.38	75.87
1 13/16	43.14	44.68	46.22	47.76	49.30	50.84	52.38	53.92	55.46	57.00	58.54	60.09	61.62	63.17	64.70	66.24	67.80	69.33	70.86	72.41	73.95	75.48	77.03	78.57
1 7/8	44.63	46.22	47.82	49.40	51.00	52.60	54.20	55.79	57.38	58.97	60.56	62.16	63.75	65.35	66.94	68.53	70.12	71.72	73.31	74.90	76.50	78.09	79.69	81.28
1 15/16	46.12	47.76	49.41	51.05	52.70	54.35	56.00	57.64	59.29	60.94	62.58	64.23	65.88	67.52	69.18	70.83	72.46	74.11	75.76	77.41	79.05	80.70	82.34	83.99
2	47.60	49.30	51.00	52.70	54.40	56.10	57.80	59.50	61.20	62.90	64.60	66.30	68.00	69.70	71.40	73.10	74.80	76.50	78.20	79.90	81.60	83.30	85.00	86.70

CONTENTS

CONTENTS—Continued