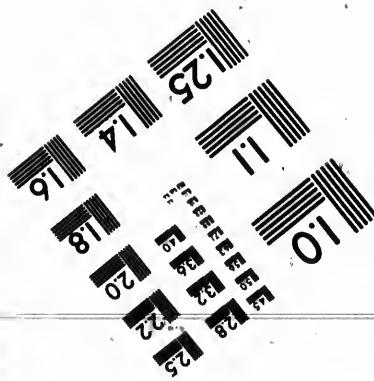
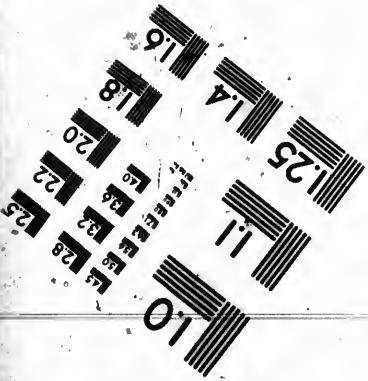
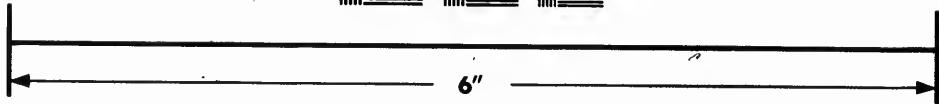
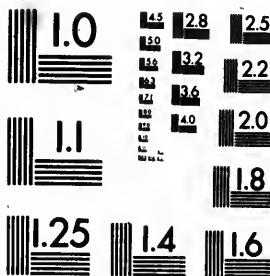


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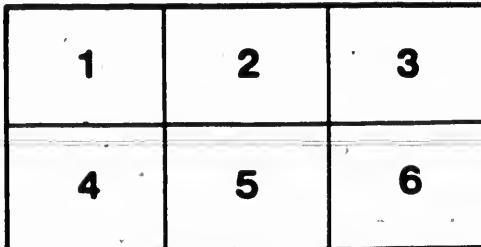
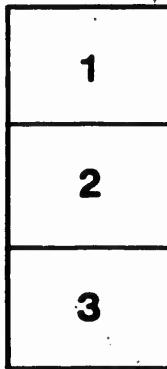
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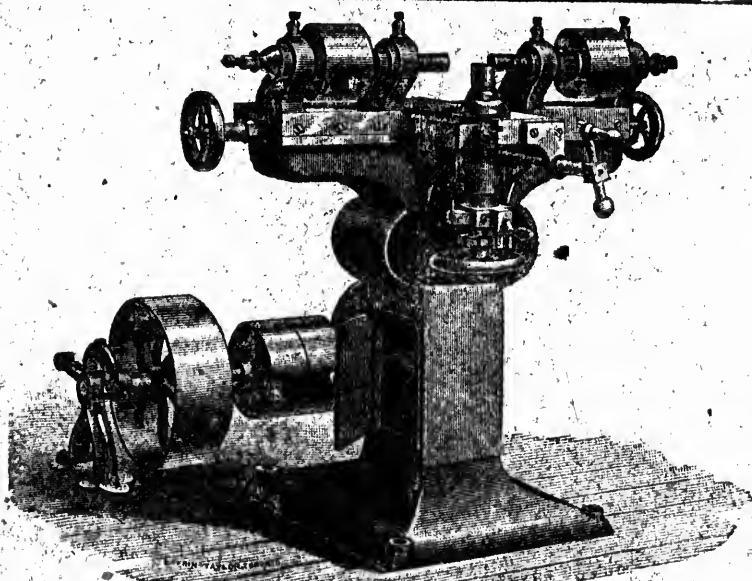
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NO. 11.

# PRICE LIST

ENGINEERS BRASS GOODS AND  
SUPPLIES.



(Two Spindle Valve Milling Machine.)

\*\*\* A. R. WILLIAMS, \*\*\*  
SOHO \* MACHINE \* WORKS,  
ESPLANADE STREET.  
(Near Union Station)

TORONTO,

ONTARIO.

O. O. PERRY, Printer, 18 Wellington Street, Toronto.

## CIRCULAR.

I have added to my stock a full line of Engineers' Brass and Iron Goods, Malleable and Iron Fittings, &c., MANUFACTURED SPECIALLY FOR MY TRADE, OF THE BEST MATERIAL, AND WITH THE LATEST IMPROVED AUTOMATIC MACHINERY. I enclose Price List and Discount Sheet, and will be pleased to have a sample order from you when in need of goods. All goods are fully guaranteed.

I desire to call special attention to the "GALVIN COMPOUND WEDGE GATE VALVE," as being the most complete valve—in every respect—offered in this market, and I am convinced that users of Peet or Gate Valves when they see this valve will use no other.

Awaiting your favors, I am

Yours faithfully,

A. R. WILLIAMS.

A. R. WILLIAMS,

# "WESTERN EMPIRE"

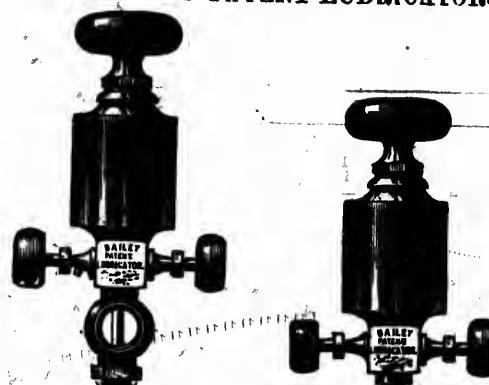


## BOILER FEEDERS.

| No. | Gallons per Hour. | Horse Power will Supply. | Suction and Feed. | Steam. | PRICE.  |
|-----|-------------------|--------------------------|-------------------|--------|---------|
| 1   | 60                | 8                        | 8                 | 8      | \$18 00 |
| 2   | 90                | 12                       | 12                | 8      | 20 00   |
| 3   | 120               | 16                       | 12                | 5/8    | 24 00   |
| 4   | 220               | 30                       | 2                 | 1      | 30 00   |
| 5   | 300               | 40                       | 3/4               | 1      | 35 00   |
| 6   | 420               | 56                       | 1                 | 1      | 45 00   |
| 7   | 540               | 72                       | 1                 | 3/4    | 50 00   |
| 8   | 720               | 96                       | 1 1/4             | 1      | 55 00   |
| 9   | 900               | 120                      | 1 1/2             | 1      | 60 00   |
| 10  | 1260              | 168                      | 1 1/2             | 1 1/2  | 75 00   |
| 11  | 1740              | 230                      | 1 1/2             | 1 1/2  | 90 00   |
| 12  | 2236              | 298                      | 2                 | 1 1/2  | 110 00  |
| 13  | 2820              | 376                      | 2                 | 1 1/2  | 125 00  |
| 14  | 3480              | 464                      | 2 1/2             | 2      | 150 00  |
| 15  | 3600              | 600                      | 2                 | 2      | 175 00  |

ESPLANADE ST., TORONTO, ONT.

## THE BAILEY PATENT LUBRICATOR.



With Sight Feed.

Without Sight Feed.

| No. | For Engine<br>of Horse<br>power. | PRICE.                 |                     | Size of<br>Shank<br>Threaded. | 20<br>per cent.<br>for black<br>nickel plating<br>add<br>For finishing partly in the<br>rough, deduct 15c. to<br>25c.<br>each, according to size. |
|-----|----------------------------------|------------------------|---------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
|     |                                  | Without<br>Sight Feed. | With<br>Sight Feed. |                               |                                                                                                                                                   |
| 1   | 4                                | \$ 2 75                | \$ 5 00             | 8 in.                         |                                                                                                                                                   |
| 2   | 8                                | 3 2                    | 5 50                | "                             |                                                                                                                                                   |
| 3   | 12                               | 3 75                   | 6 00                | "                             |                                                                                                                                                   |
| 4   | 15                               | 4 50                   | 7 00                | 1/2 in.                       |                                                                                                                                                   |
| 5   | 25                               | 5 50                   | 8 00                | "                             |                                                                                                                                                   |
| 6   | 40                               | 6 50                   | 9 00                | "                             |                                                                                                                                                   |
| 7   | 70                               | 8 50                   | 11 00               | 1/2 in.                       |                                                                                                                                                   |
| 8   | 100                              | 10 50                  | 13 00               | "                             |                                                                                                                                                   |

## ADVANTAGES.

The following are some of the advantages we claim:

1. That our Lubricator can use any kind of oil, tallow, suet or grease.
2. The perfect oiling of all the working parts of the engine, including the throttle, governor, steam chest, cylinder, etc.
3. That the flow of the lubricant can be regulated to any desired quantity, and that such flow is regular and continuous.
4. Economy in quantity of lubricant used.
5. Simplicity of construction and durability—no intricate arrangements to get out of order.
6. Cheapness.
7. The ease with which anyone can work it.
8. Its requiring only one connection with the steam pipe, or wherever attached.
9. The sight feed, if desired.

ESPLANADE ST., TORONTO, ONT.

# WROUGHT IRON PIPE.

## FOR GAS, STEAM AND WATER.

TABLE OF STANDARD DIMENSIONS AND SIZES.

| Nominal Inside Diameter in Inches. | Weight per Foot in lbs. | Actual Inside Diameter in Inches. | Actual Outside Diameter in Inches. | Number of threads to Inch of Screw. | Price per foot. |
|------------------------------------|-------------------------|-----------------------------------|------------------------------------|-------------------------------------|-----------------|
| $\frac{1}{8}$                      | 0.24                    | .27                               | 0.405                              | 27                                  | \$0 06          |
| $\frac{3}{16}$                     | 0.42                    | .36                               | 0.54                               | 18                                  | 0 06            |
| $\frac{1}{4}$                      | 0.56                    | .49                               | 0.675                              | 18                                  | 0 07            |
| $\frac{5}{16}$                     | 0.85                    | .62                               | 0.84                               | 14                                  | 0 08            |
| $\frac{3}{8}$                      | 1.12                    | .82                               | 1.05                               | 14                                  | 0 12            |
| $\frac{1}{2}$                      | 1.67                    | 1.04                              | 1.315                              | 11 $\frac{1}{2}$                    | 0 17            |
| $1\frac{1}{8}$                     | 2.25                    | 1.38                              | 1.66                               | 11 $\frac{1}{2}$                    | 0 22            |
| $1\frac{1}{4}$                     | 2.69                    | 1.61                              | 1.90                               | 11 $\frac{1}{2}$                    | 0 28            |
| 2                                  | 3.66                    | 2.06                              | 2.375                              | 11 $\frac{1}{2}$                    | 0 41            |
| $2\frac{1}{8}$                     | 5.77                    | 2.46                              | 2.875                              | 8                                   | 0 75            |
| 3                                  | 7.54                    | 3.06                              | 3.5                                | 8                                   | 1 10            |
| $3\frac{1}{8}$                     | 9.05                    | 3.54                              | 4.0                                | 8                                   | 1 38            |
| 4                                  | 10.72                   | 4.02                              | 4.5                                | 8                                   | 1 75            |
| $4\frac{1}{2}$                     | 12.49                   | 4.50                              | 5.0                                | 8                                   | 2 25            |
| 5                                  | 14.56                   | 5.04                              | 5.563                              | 8                                   | 2 75            |
| 6                                  | 18.76                   | 6.06                              | 6.625                              | 8                                   | 3 50            |
| 7                                  | 23.41                   | 7.02                              | 7.625                              | 8                                   | 4 75            |
| 8                                  | 28.34                   | 7.98                              | 8.625                              | 8                                   | 6 50            |

Pipe cut and screwed to specification.

ESPLANADE ST., TORONTO, ONT.

# MALLEABLE IRON FITTINGS.

A. R. WILLIAMS,

| SIZE                | 1     | 8    | 1     | 4    | 3    | 1    | 14   | 14   | 2    | 24   | 3     | 34    | 4     | 5     | 6     |
|---------------------|-------|------|-------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|
| UNIONS.....         | 0.18  | 0.22 | 0.25  | 0.32 | 0.40 | 0.55 | 0.70 | 1.00 | 1.75 | 2.75 | 4.00  | 5.00  | ..... | ..... | ..... |
| BUSHINGS.....       | 0.06  | 0.06 | 0.07  | 0.09 | 0.12 | 0.15 | 0.20 | 0.31 | 0.45 | 0.65 | 0.90  | 1.20  | 2.00  | 3.00  | ..... |
| PLUGS.....          | 0.04  | 0.04 | 0.05  | 0.06 | 0.08 | 0.10 | 0.14 | 0.22 | 0.35 | 0.60 | 0.90  | 1.25  | 1.81  | 2.35  | ..... |
| NIPPLES—Shoulder    | 0.05  | 0.06 | 0.07  | 0.09 | 0.11 | 0.15 | 0.20 | 0.28 | 0.55 | 0.75 | 1.00  | 1.40  | 2.40  | 3.50  | ..... |
| Do. Long.....       | 0.07  | 0.08 | 0.10  | 0.12 | 0.15 | 0.22 | 0.28 | 0.39 | 0.77 | 1.05 | 1.40  | 2.00  | 3.20  | 5.00  | ..... |
| Do. Close.....      | 0.08  | 0.09 | 0.11  | 0.14 | 0.18 | 0.23 | 0.29 | 0.41 | 0.70 | 1.00 | 1.40  | 2.00  | 3.20  | 5.00  | ..... |
| Do. R. & L....      | 0.10  | 0.10 | 0.12  | 0.15 | 0.18 | 0.24 | 0.30 | 0.40 | 1.00 | 1.25 | 1.60  | 2.40  | 4.00  | 5.50  | ..... |
| Stop Cocks.....     | ..... | 0.8c | ..... | 0.90 | 1.30 | 1.85 | 2.40 | 3.30 | 5.90 | 8.90 | 14.00 | 17.55 | 40.00 | 70.00 | ..... |
| FLANGES.....        | ..... | 0.20 | 0.28  | 0.36 | 0.50 | 0.65 | 0.90 | 1.40 | 2.00 | 2.75 | 3.50  | 5.00  | 6.00  | ..... | ..... |
| FLANGED UNIONS..... | 0.75  | 0.89 | 1.00  | 1.25 | 1.50 | 1.75 | 2.00 | 2.75 | 3.50 | 4.20 | 6.00  | 7.50  | ..... | ..... | ..... |

ESPLANADE ST., TORONTO, ONT.

# MALLEABLE IRON FITTINGS.

**Classified and sold by weight as under.**

**CLASS A** {  
ELBOWS -  $\frac{1}{2}$  lb.  $\frac{1}{2}$  lb.  
RED. COUPLINGS -  $\frac{1}{2}$  lb.  $\frac{1}{2}$  lb.  
Per lb. 26c.

TEES -  $\frac{1}{2}$  lb.  $\frac{1}{2}$  lb.  $\frac{1}{2}$  lb.  
RED. COUPLINGS -  $\frac{1}{2}$  lb.  $\frac{1}{2}$  lb.

**CLASS B** {  
ELBOWS & TEES -  $\frac{1}{2}$  in. to  $\frac{1}{2}$  in.  
ELBOWS - side outlet, all sizes.  
DROP ELBOWS & DRO. TEES - All sizes. CAPS -  $\frac{1}{2}$  in. to 1 in.  
RED. COUPLINGS -  $\frac{1}{2}$  in. to  $\frac{1}{2}$  in.  
R. & L. COUPLINGS -  $\frac{1}{2}$  in. and  $\frac{1}{2}$  in.  
LOCK NUTS -  $\frac{1}{2}$  in.  $\frac{1}{2}$  in. and  $\frac{1}{2}$  in.  
Per lb. 18c. 72c.

STREET ELBOWS -  $\frac{1}{2}$ ,  $\frac{3}{4}$ , 1.  
CROSSES -  $\frac{1}{2}$  in. to 1 in.  
EXTENS. ON PIECES.  
R. H. COUPLINGS -  $\frac{1}{2}$  in. and  $\frac{3}{4}$  in.  
RETURN BENDS -  $\frac{1}{2}$ ,  $\frac{3}{4}$ .  
STRAPS - All sizes.

**CLASS C** {  
ELBOWS & TEES -  $\frac{1}{2}$ ,  $\frac{3}{4}$ , and 1 in.  
CROSSES -  $\frac{1}{2}$  and larger.  
RED COUPLINGS -  $\frac{1}{2}$  and larger.  
R. H. COUPLINGS -  $\frac{1}{2}$  and 1.  
LOCK NUTS -  $\frac{1}{2}$  and larger.  
Per lb. 14c.

STREET ELBOWS -  $\frac{1}{2}$  and larger.  
R & L COUPLINGS - 1 and larger.  
RETURN BENDS - 1 and larger.  
CAPS - 1 inch and larger.

**CLASS D** {  
ELBOWS -  $\frac{1}{2}$  in. and larger.  
R. H. COUPLINGS -  $\frac{1}{2}$  and larger.  
Per lb. 12c.

TEES -  $\frac{1}{2}$  in.  $\frac{1}{2}$  in. and larger.

ESPLANADE ST., TORONTO, ONT.

# CAST IRON FITTINGS.

*A. R. WILLIAMS,*

| SIZE.                                                   | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     |
|---------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Elbows & Reducing<br>Elbows, each                       | 0.06  | 0.08  | 0.11  | 0.15  | 0.21  | 0.30  | 0.60  | 0.90  |
| Elbows, Right and<br>Left, "                            | 0.071 | 0.10  | 0.134 | 0.183 | 0.261 | 0.374 | 0.652 | 0.93  |
| Elbows, 45°                                             | 0.10  | 0.15  | 0.20  | 0.26  | 0.35  | 0.50  | 1.30  | 1.60  |
| Tees & Reduc'g Tees<br>Crosses & Reducing<br>Crosses, " | c. 08 | 0.12  | 0.16  | 0.22  | 0.31  | 0.45  | 0.90  | 1.35  |
| Return bends, close                                     | 0.134 | 0.134 | 0.134 | 0.134 | 0.134 | 0.134 | 0.243 | 0.304 |
| " Open                                                  | 0.19  | 0.26  | 0.44  | 0.64  | 1.00  | 1.75  | 2.50  | 3.75  |
| Caps                                                    | 0.030 | 0.04  | 0.05  | 0.06  | 0.08  | 0.11  | 0.16  | 0.25  |
| Plugs                                                   | 0.030 | 0.030 | 0.04  | 0.05  | 0.06  | 0.08  | 0.11  | 0.16  |
| Reducing Couplings                                      | 0.050 | 0.06  | 0.07  | 0.08  | 0.10  | 0.14  | 0.20  | 0.30  |
| Flange Unions<br>Bushings & Reduc'g                     | 0.55  | 0.60  | 0.70  | 0.80  | 1.00  | 1.20  | 1.50  | 1.90  |
| Bushing,                                                | 0.050 | 0.06  | 0.07  | 0.08  | 0.10  | 0.14  | 0.20  | 0.30  |

*ESPLANADE ST., TORONTO, ONT.*

A. R. WILLIAMS,

**ENGINEER'S BRASS GOODS.**  
**BEST STEAM METAL.**

| S I Z E .                                   | $\frac{1}{2}$ | $\frac{3}{4}$ | $\frac{1}{2}$ | $\frac{1}{4}$ | $1$   | $1\frac{1}{4}$ | $2$  | $2$  | $3$   | $3\frac{1}{4}$ | $4$   |
|---------------------------------------------|---------------|---------------|---------------|---------------|-------|----------------|------|------|-------|----------------|-------|
| Globe valves                                | each          | 60.0          | 75.1          | 100.          | 135.1 | 80.2           | 80   | 3.90 | 5.90  | 11.75          | 16.00 |
| Angle Valves                                | each          | "             | "             | "             | "     | 5.00           | 7.00 | 9.00 | 14.00 | 20.00          | 30.00 |
| Check Valves, Horizontal, Angle or vertical | each          | 60.0          | 60.0          | 85.1          | 151.  | 55.2           | 30   | 3.25 | 5.30  | 10.00          | 14.00 |
| Stop Cocks                                  | each          | 60.0          | 75.1          | 90.1          | 151.  | 90.2           | 35.5 | 6.00 | 4.80  | 7.25           | 14.50 |
| " extra heavy                               | each          | 55.2          | 60.0          | 85.1          | 151.  | 85.1           | 50   | 4    | 7.00  | 12.00          | 22.00 |
| " three way                                 | each          | 55.2          | 60.0          | 85.1          | 151.  | 85.1           | 50   | 7.00 | 12.00 | 28.00          | 45.00 |
| Pist Valves                                 | each          | 30.1          | 65.2          | 70.3          | 100.  | 4.00           | 6.75 | 9.50 | 14.00 | 28.00          | 36.40 |
| Cross Valves                                | each          | 50.2          | 60.0          | 50.2          | 100.  | 4.00           | 4.45 | 5.95 | 9.20  | 17.75          | 23.75 |
| " (with flanges)                            | each          | 50.3          | 50.2          | 50.3          | 50.2  | 50.3           | 50   | 5.00 | 7.00  | 16.00          | 24.00 |
| Radiator Valves (wood wheel)                | each          | 5.1           | 80.2          | 40.3          | 75.4  | 75             | 4.75 |      |       |                |       |
| " N. P. Mountings                           | each          | 75.2          | 30.3          | 30.3          | 40    | 5.50           | 5.50 |      |       |                |       |
| Combined Cock and Check Valves              | each          | 50.2          | 40.3          | 12            | 4     | 5.00           | 5.00 |      |       |                |       |
| Safety Valves (Cross or Angle pattern)      | each          | 50.4          | 15.5          | 50            |       |                |      |      |       |                |       |
| Foot Valves (with Strainer)                 | each          | 75.3          | 50.5          | 50            | 50    | 50             | 50   | 8.50 | 12.00 | 20.00          | 30.00 |
| Whistle Valves                              | each          | 75.2          | 35.3          | 25            | 4     | 5.00           | 6.50 | 6.50 | 11.00 | 15.50          | 20.00 |
| Safety Valves (Cresby Pop.)                 | each          | 70.3          | 30.4          | 12            | 15    | 5.00           | 5.00 | 5.00 | 10.00 | 15.00          | 20.00 |

ESPLANADE ST., TORONTO, ONT.

# ENGINEERS' BRASS GOODS,

## BEST STEAM METAL.

A. R. WILLIAMS,

| SIZE.                                           | $\frac{1}{4}$ | $\frac{3}{8}$                           | $\frac{1}{2}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | $2\frac{1}{4}$ | $2\frac{1}{2}$ | 3     | $3\frac{1}{4}$ | 4     | $5\frac{1}{4}$ | 5     | 6     |  |
|-------------------------------------------------|---------------|-----------------------------------------|---------------|---------------|-------|----------------|----------------|----------------|----------------|-------|----------------|-------|----------------|-------|-------|--|
| Hose Valves<br>Steam Whistles,<br>(with Valves) | ea. h.        | Diameter of Bell.<br>For Iron pipe..... |               |               |       |                |                |                |                |       |                |       |                |       |       |  |
| Expansion Joints.....                           | 2 20 3        | 3 08 4                                  | 2 06 50       | 1 30 00       | 18 00 |                |                |                |                |       |                |       |                |       |       |  |
| Hose Couplings.....                             | 2 36 1        | 2 54 70                                 | 6 50 95       | 7 50          | 9 00  | 12 00          | 12 00          | 12 00          | 12 00          | 12 00 | 12 00          | 12 00 | 12 00          | 12 00 | 12 00 |  |
| Hose Branches.....                              | 0 30 0        | 0 50 1                                  | 2 01 65 2     | 3 0 50        | 5 00  | 7 50           |                |                |                |       |                |       |                |       |       |  |
| Plain Oil<br>Cups,<br>Screwed for Pipe.....     | 0 39 2        | 7 53 34 4                               | 17 50         | 7 50          | 7 50  | 7 50           |                |                |                |       |                |       |                |       |       |  |
| Screwed Covers (Price each).....                | 0 35 0        | 4 00 45 0                               | 50 0          | 60 0          | 90 0  | 1 25 1         | 1 75 2         | 2 25           | 2 75           | 3 00  |                |       |                |       |       |  |

| Glass Oil Cups<br>(with Guards.) | Dia. and length of Glass.<br>Screwed for pipe..... | $1\frac{1}{2} \times 1\frac{1}{2}$ | $1\frac{1}{2} \times 1\frac{1}{2}$ | $2 \times 2$          | $2 \frac{1}{2} \times 2\frac{1}{2}$ | $2 \frac{1}{2} \times 2\frac{1}{2}$ | $3 \times 3$          | $3\frac{1}{2} \times 3\frac{1}{2}$ |  |
|----------------------------------|----------------------------------------------------|------------------------------------|------------------------------------|-----------------------|-------------------------------------|-------------------------------------|-----------------------|------------------------------------|--|
|                                  | (Price each).....                                  | $1\frac{1}{2}$<br>2 10             | $\frac{3}{8}$<br>2 20              | $\frac{1}{2}$<br>3 30 | $\frac{1}{2}$<br>3 60               | $\frac{1}{2}$<br>5 50               | $\frac{1}{2}$<br>6 60 | $\frac{1}{2}$<br>7 75              |  |

ESPLANADE ST., TORONTO, ONT.

ENGINEER'S BRASS GOODS. (*Best steam metal*)

| SIZE.                                                                                          | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ |
|------------------------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|
| Cylinder Cocks, T Handle, straight.                                                            | 0 65          | 0 65          | 0 80          | 1 40          |               |
| " " Lever "                                                                                    | 0 8           | 0 80          | 0 90          | 1 25          |               |
| " " " bent nose                                                                                | 1 00          | 1 00          | 1 25          | 2 15          |               |
| Compression Guage Cocks, Wood Handle.....                                                      |               |               | 1 50          | 1 75          | 2 00          |
| Compression Guage Cocks, with Stuffing Box, <del>iron</del> <del>brass</del> , and Guards..... |               |               | 1 70          | 1 80          | 2 00          |
| Water Guage, Glass and Rubbers...                                                              |               | 3 20          | 3 20          |               |               |
| " " Complete, 3 Guards, polished body.....                                                     |               | 5 00          | 4 00          |               |               |
| " " 4 Guards, Complete..                                                                       | 10 0          | 10 0          |               |               |               |

## STEAM GUAGES.

| SIZE OF DIAL..                | 5    | $5\frac{1}{2}$ | 6     | $6\frac{3}{4}$ | $8\frac{1}{2}$ |
|-------------------------------|------|----------------|-------|----------------|----------------|
| Japaned Case-finished Ring .. | 6 00 | 8 00           | 10 00 | 14 00          | 21 00          |
| " " N. P. " ..                | 6 50 | 8 50           | 10 60 | 14 75          | 21 75          |
| Bronzed " " " ..              | 8 25 | 10 25          | 12 75 | 16 75          | 25 00          |
| Brass " and ring.....         | 9 00 | 11 00          | 14 00 | 18 00          | 27 00          |

## PUMP VALVES.

| SIZE.            | $\frac{1}{8}$ | $\frac{3}{16}$ | $\frac{1}{4}$ | $\frac{5}{16}$ | $\frac{1}{2}$ | 2     | $2\frac{1}{2}$ | 3     |
|------------------|---------------|----------------|---------------|----------------|---------------|-------|----------------|-------|
| With Air Chamber | 2 00          | 3 00           | 4 00          | 6 00           | 9 00          |       |                |       |
| " do. and Cock   | 3 00          | 4 00           | 5 25          | 7 25           | 10 50         |       |                |       |
| WHISTI EVALVES   | 3 50          | 4 50           | 5 75          | 0 5            | 11 25         |       |                |       |
|                  | 2 70          | 3 30           | 4 40          | 5 10           | 5 50          | 11 00 | 19 00          | 25 00 |

ESPLANADE ST., TORONTO, ONT.

# ENGINEERS IRON BODY GOODS.

## BRASS MOUNTED

| SIZE.                                                  | $\frac{1}{4}$ | $\frac{1}{2}$ | $2$ | $2\frac{1}{4}$ | $3$ | $3\frac{1}{4}$ | $4$ | $4\frac{1}{4}$ | $5$ | $6$ | $7$ | $8$ | $10$ |    |
|--------------------------------------------------------|---------------|---------------|-----|----------------|-----|----------------|-----|----------------|-----|-----|-----|-----|------|----|
| Globe Valves<br>Screwed without Yoke<br>and<br>Flanged | 50            | 3             | 5'  | 4 50           | 7   | 50             | 10  | 50             |     |     |     |     |      |    |
| "<br>Screwed with Yoke..                               | 3             | 254           | 50  | 5 75           | 9   | 90             | 12  | 50             |     |     |     |     |      |    |
| Angle Valves<br>Screwed<br>Flanged                     | 10            | 00            | 14  | 50             | 16  | 00             | 12  | 20             | 00  | 32  | 00  | 44  | 00   |    |
| "<br>Screwed<br>Horizontal                             | 11            | 50            | 16  | 50             | 18  | 50             | 23  | 00             | 32  | 00  | 49  | 00  | 75   | 00 |
| Check Valves<br>Angle                                  | 3             | 75            | 6   | 25             | 8   | 75             | 11  | 50             | 15  | 20  | 00  | 24  | 00   |    |
| Check Valves<br>Horizontal                             | 3             | 75            | 6   | 25             | 8   | 75             | 11  | 50             | 15  | 20  | 00  | 33  | 00   |    |
| Safety Valves<br>Cross and<br>Angle                    | 5             | 00            | 7   | 75             | 10  | 75             | 14  | 00             | 18  | 00  | 24  | 00  | 28   | 00 |
| Back Pressure<br>Valves                                | 6             | 50            | 12  | 00             | 15  | 00             | 20  | 00             | 24  | 00  | 30  | 00  | 36   | 00 |
| Stop Valves<br>Screwed                                 | 4             | 75            | 14  | 25             | 11  | 00             | 23  | 75             | 28  | 50  | 35  | 59  | 41   | 00 |
| Cocks<br>Flanged                                       | 9             | 00            | 10  | 50             | 13  | 50             | 15  | 00             | 18  | 00  | 22  | 20  | 30   | 00 |
| Three Way<br>Cock                                      | 2             | 25            | 3   | 00             | 10  | 25             | 12  | 00             | 15  | 50  | 17  | 50  | 21   | 00 |
| Cock<br>Flanged                                        | 2             | 40            | 3   | 35             | 5   | 75             | 9   | 50             | 14  | 00  | 22  | 20  | 25   | 00 |
| Cock<br>Flanged                                        | 3             | 65            | 4   | 85             | 7   | 70             | 11  | 00             | 16  | 00  | 25  | 75  | 32   | 50 |
| Foot<br>Screwed                                        | 1             | 75            | 2   | 50             | 3   | 25             | 4   | 00             | 5   | 00  | 6   | 50  | 8    | 00 |
| Valves<br>Flanged.....                                 | 1             | 00            | 1   | 30             | 4   | 00             | 4   | 75             | 5   | 75  | 7   | 75  | 9    | 50 |
|                                                        |               |               |     |                |     |                |     |                |     |     |     |     | 17   | 00 |
|                                                        |               |               |     |                |     |                |     |                |     |     |     |     | 19   | 50 |
|                                                        |               |               |     |                |     |                |     |                |     |     |     |     | 14   | 00 |

ESPLANADE ST. TORONTO.



A. R. WILLIAMS,

11

## ENGINEERS' AND PIPE-FITTERS' TOOLS.

## MALLEABLE IRON PIPE VICES.

|                                                              |         |
|--------------------------------------------------------------|---------|
| No. 1, holds pipe $\frac{1}{2}$ to 2 in., weighs 15 lbs..... | \$10 00 |
| No. 2, " $\frac{1}{2}$ to 2 " " 30 lbs.....                  | 15 00   |
| No. 1, " $\frac{1}{2}$ to 2 " " 22 lbs., open jaw.....       | 12 50   |
| No. 2, " $\frac{1}{2}$ to 2 " " 36 " " ..... 16 00           |         |

## PIPE TONGS.

## BROWN'S PATENT ADJUSTABLE.

| NUMBER.        | 1                              | $\frac{1}{2}$      | 2                               | 3      | 4                  | 4                   | 6       | 7       |
|----------------|--------------------------------|--------------------|---------------------------------|--------|--------------------|---------------------|---------|---------|
| Size of pipe.. | $\frac{1}{2}$ to $\frac{3}{4}$ | $\frac{3}{4}$ to 1 | $\frac{1}{2}$ to $1\frac{1}{2}$ | 1 to 2 | $\frac{1}{2}$ to 3 | $2\frac{1}{2}$ to 4 | 3 to 5  | 4 to 7  |
| Price .....    | \$1 50                         | \$1 75             | \$1 00                          | \$2 75 | \$4 50             | \$9 00              | \$20 00 | \$28 00 |

## BROCK'S PATENT CHAIN WRENCH.

| NUMBER.            | 1                                   | 2                                   | 3          | 4          | 5           |
|--------------------|-------------------------------------|-------------------------------------|------------|------------|-------------|
| Size of pipe ..... | $\frac{1}{2}$ to $1\frac{1}{2}$ in. | $\frac{3}{4}$ to $2\frac{1}{2}$ in. | 1 to 4 in. | 2 to 8 in. | 3 to 12 in. |
| Price .....        | \$3 50                              | \$5 50                              | \$7 50     | \$11 00    | \$18 00     |

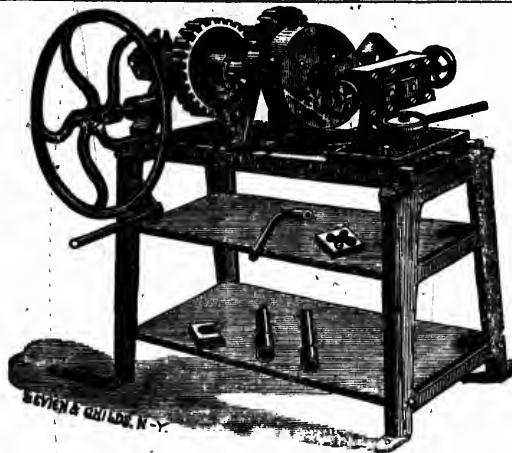
## ALLIGATOR WRENCHES.

| NUMBER.              | 1                                  | 2                                  | 3                                   | 4                       | 5          |
|----------------------|------------------------------------|------------------------------------|-------------------------------------|-------------------------|------------|
| Size of pipe .....   | $\frac{1}{2}$ to $\frac{3}{4}$ in. | $\frac{3}{4}$ to $\frac{5}{8}$ in. | $\frac{1}{2}$ to $2\frac{1}{2}$ in. | $1\frac{1}{2}$ to 2 in. | 2 to 3 in. |
| Price, per doz ..... | \$4 00                             | \$12 00                            | \$24 00                             | \$36 00                 | \$54 00    |

## WHEEL PIPE CUTTER.

|                                             |        |
|---------------------------------------------|--------|
| No. 1, cuts pipe $\frac{1}{2}$ to 1 in..... | \$4 00 |
| No. 2, " 1 to 2 in.....                     | 6 00   |
| No. 3, " 2 to 3 in.....                     | 18 50  |

ESPLANADE ST., TORONTO, ONT.

**I. X. L.****NEW AND IMPROVED****Pipe Cutting & Threading Machine****HAND MACHINE.**

With set of right hand solid dies,  $\frac{1}{2}$  to 2 inches, inclusive, fly wheel, and set of sockets for making nipples  $\frac{1}{2}$  to 2 in., complete..... \$120 00

**POWER AND HAND MACHINE.**

With set of right hand solid dies,  $\frac{1}{2}$  to 2 inches, inclusive, fly wheel, pulleys, countershaft, and set of sockets for making nipples  $\frac{1}{2}$  to 2 inches, complete..... \$150 00  
 (Speed of countershaft, 150 revolutions per minute; pulley 11 inches in diameter.)

Attachments fitted to these machines, when ordered, for threading bolts and tapping nuts  $\frac{1}{2}$  to  $1\frac{1}{2}$  inches, seven sizes, at an additional cost of \$90.

Particulars and prices of larger sizes of Saunders Sons' Pipe Machines on application.

**ESPLANADE ST., TORONTO, ONT.**

## BRASS WORKERS MACHINERY.

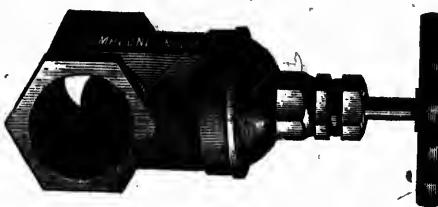
The London Machine Tool Co., (the only builders of fine grade Machinery for Engineers and Brass Finishers use, in Canada) are manufacturing Tools, as hereunder, specially and exclusively for this trade.

Prices will be given on applications for Planers, Shapers, Lathes, Drills, Milling Machinery, and other Engineers Tools.

|                                   |                                                         |  |     |    |
|-----------------------------------|---------------------------------------------------------|--|-----|----|
| 12                                | Turret Lathe Plain                                      |  | 400 | 00 |
| 16                                | " "                                                     |  | 500 | 00 |
| 12                                | " {power feed                                           |  | 500 | 00 |
| 16                                | " and backgear                                          |  | 600 | 00 |
|                                   | Fox Lathe                                               |  | 400 | 00 |
|                                   | Fox Monitor Lathe                                       |  | 500 | 00 |
|                                   | Cock Grinder                                            |  | 140 | 00 |
| 2                                 | Spindle Valve Miller                                    |  | 325 | 00 |
| 8                                 | Bench Lathe with C Shaft                                |  | 75  | 00 |
| 12                                | " " "                                                   |  | 90  | 00 |
| 14                                | Lathe with Set over Tail Stock                          |  | 160 | 00 |
| 12                                | Hand Lathe with C Shaft                                 |  | 120 | 00 |
| 14                                | " " "                                                   |  | 140 | 00 |
| 12                                | " " with C mpound Tool Rest                             |  | 150 | 00 |
| 14                                | " " " " "                                               |  | 175 | 00 |
| No. 1                             | Globe Valve Chuck takes $\frac{1}{2}$ inch<br>to 1 inch |  | 60  | 00 |
| No. 2                             | " " $\frac{1}{2}$ inch to 2 inch                        |  | 75  | 00 |
| I. X. L. Pipe Machine, hand power |                                                         |  | 120 | 00 |
| " "                               | power and hand                                          |  | 150 | 00 |

**ESPLANADE STREET, TORONTO.**

## GALVINS "COMPOUND WEDGE" GATE VALVE.



ALL BRASS, BEST STEAM METAL.

| Size, Inches.                          | $\frac{1}{2}$ | 1  | $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{2}{3}$ | 2    | $\frac{2}{3}$ | 3    |
|----------------------------------------|---------------|----|---------------|---------------|---------------|------|---------------|------|
| Price each.                            | 68            | 10 | 00            | 445           | 595           | 20   | 1775          | 2375 |
| Quick opening<br>with Lever<br>Handle. |               |    | 480           | 600           | 840           | 1200 | 2180          | 3000 |

## IRON BODY, BRASS MOUNTED.

| SIZE.<br>DIAMETER.<br>INCH | INCHES.<br>FLANG<br>INCH | $\frac{1}{2}$ | 3  | $3\frac{1}{2}$ | 4  | 5  | 6  | 7  | 8  | 10 | 12 | 14 |    |     |
|----------------------------|--------------------------|---------------|----|----------------|----|----|----|----|----|----|----|----|----|-----|
| Flanged<br>Screwed<br>End. | PRICE.                   | \$18          | 22 | 25             | 28 | 50 | 37 | 25 | 48 | 50 | 60 | 75 | 90 | 125 |

## Water Gates, Extra Heavy.

2 IN. TO 60 IN. PRICES ON APPLICATION.

(See cut on back of cover.)

Entirely new in construction, and warranted to be the best and  
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ESPLANADE ST., TORONTO, ONT.

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Shops, Brass Works,  
Etc., Etc.



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Vises, Forges, Chucks, Taps and Dies,  
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ESPLANADE ST., TORONTO.

# Galvin "Compound Wedge"

## GATE VALVE.

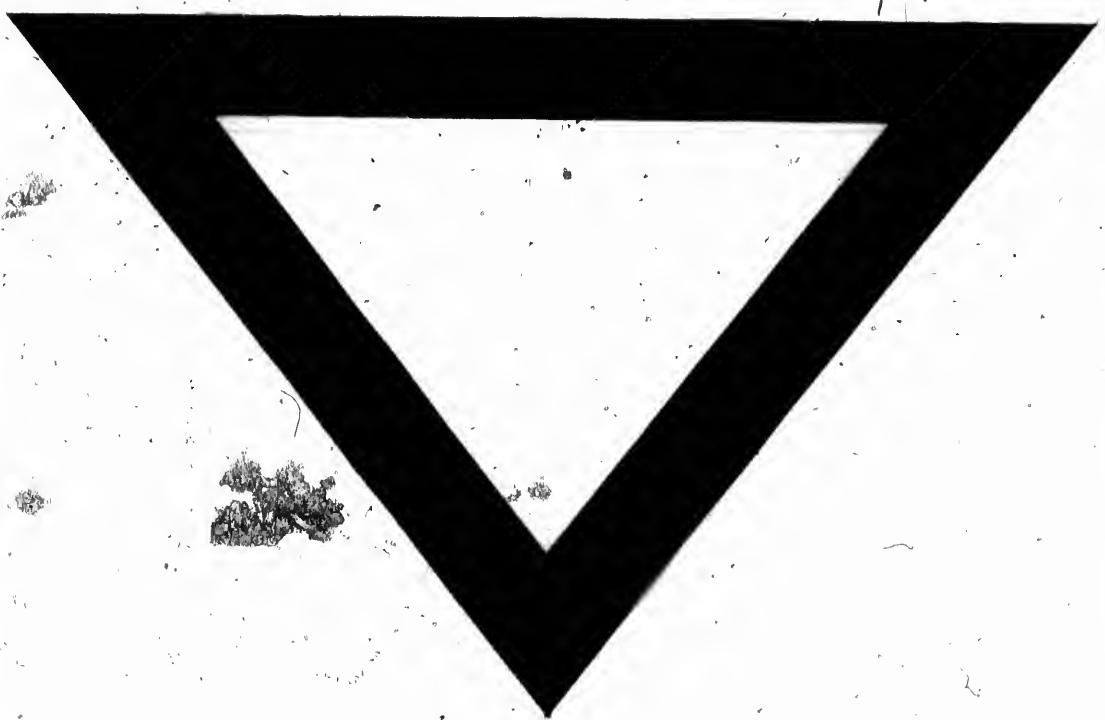
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PRICES ON APPLICATION. Give Size and Particulars.





$$\frac{d}{dt} \sum_{i=1}^n \frac{\partial f_i}{\partial t}$$