

Description Enlargement of 4 Shaft Houses.

Made by W.L. Gibson Date 1-17-07

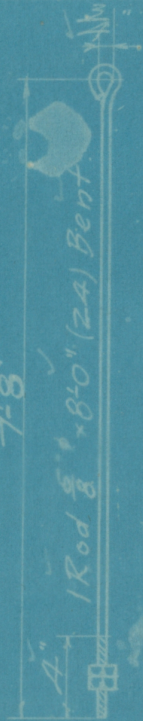
Location Painesdale, Mich.

Traced by W.L. Gibson Date 1-17-07

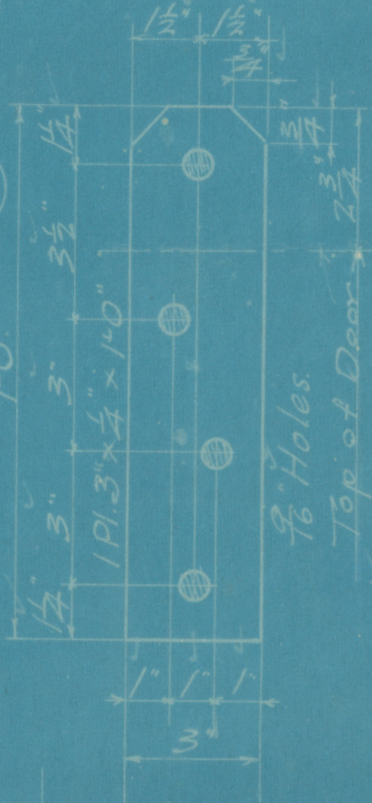
For Champion Copper Company.

Checked by BROWN Date 1-17-07

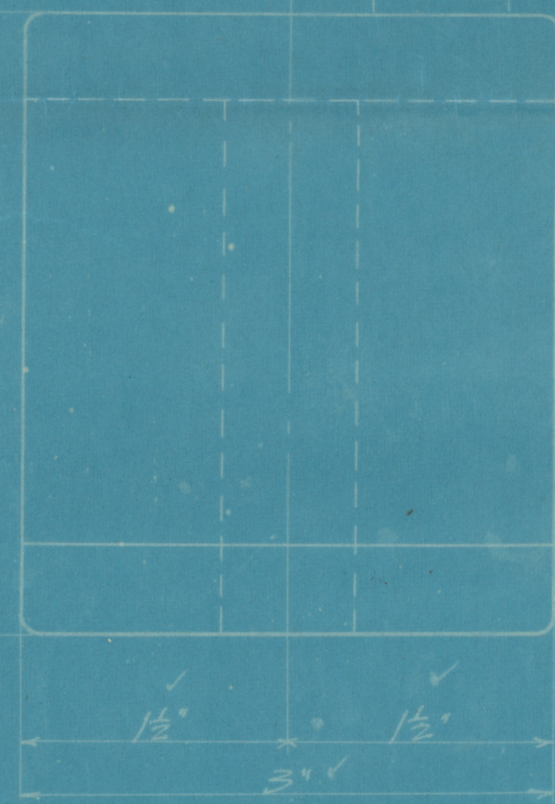
Details of Cast Blocks for Counterweight + Door Fastenings.



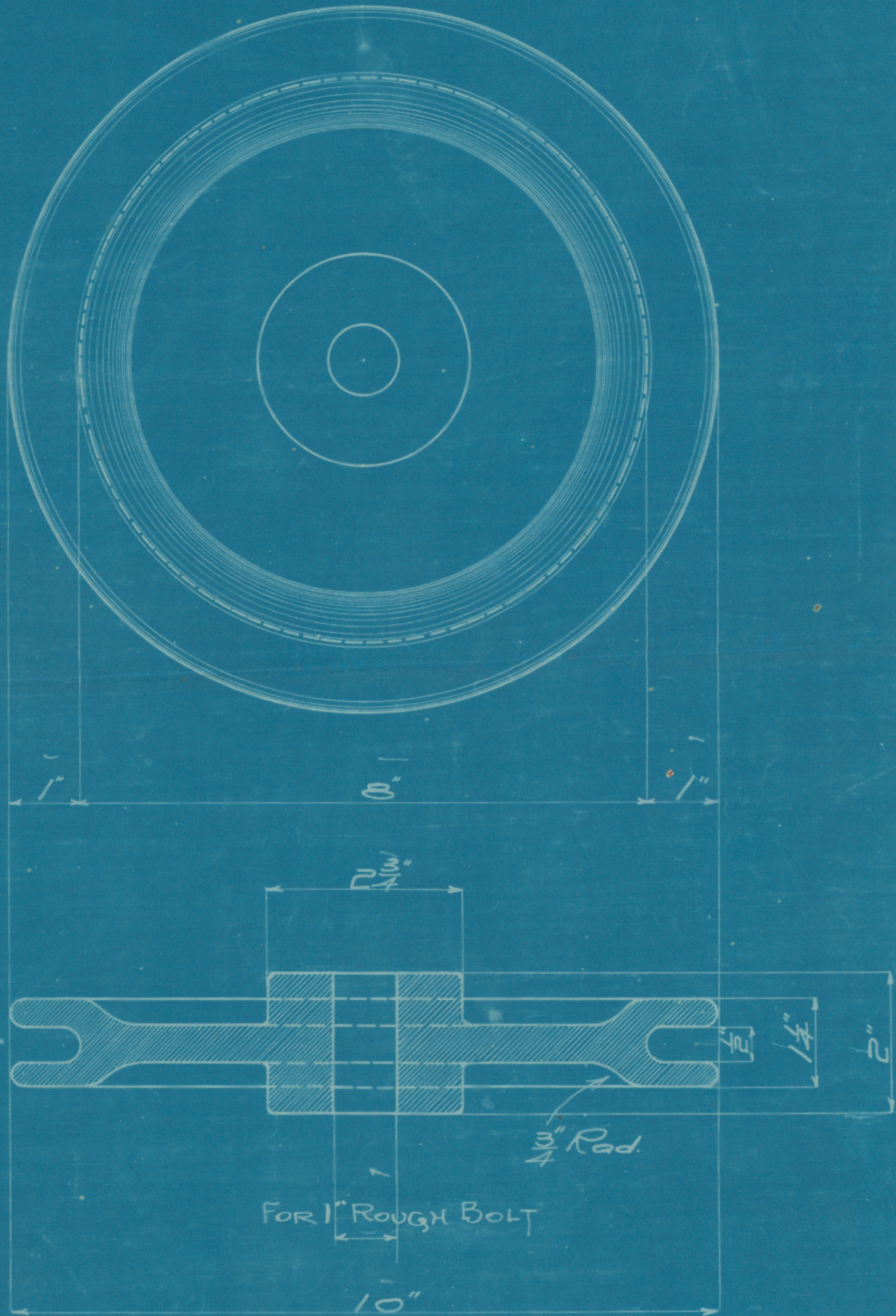
Req. 24 Rods for Counterweight.  
Mark ND3  $\frac{M}{3}$



Req. 24 Plates for Lift Doors.  
Mark ND4  $\frac{M}{3}$



500 Cast Iron Blocks



REQ 24 CAST IRON SHEAVE  
FOR LIFT DOOR.

M  
S

PATT. No.

994.

WISCONSIN BRIDGE AND IRON CO.  
NORTH MILWAUKEE, WIS.

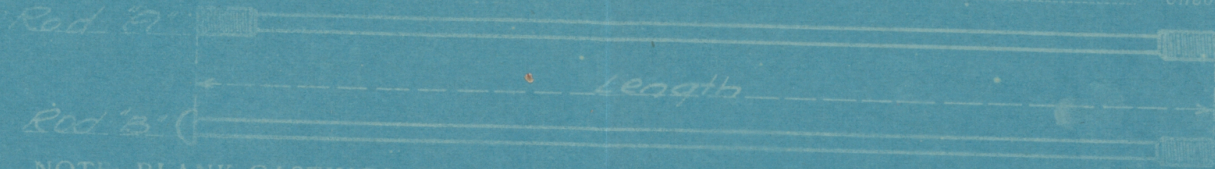
BILL OF LATERAL AND VIBRATION RODS.

BILL No. 302 CONT.

DESCRIPTION: Enlargement of Four Shaft Houses  
FOR Champion Copper Co.

Made by Marsh Date

Checked by BROWN Date



NOTE: BLANK CASTINGS ARE TO BE PUT ON RODS "B" BEFORE HEAD IS MADE.

| NUMBER |     | MARK  | Section | UPSET |        | Length of Thread | Length     | Ordered Length | Ordered Stock | NUTS |      | CLEVISES |      | Blank Castings |          | Threaded Castings |         | Weight | REMARKS      |
|--------|-----|-------|---------|-------|--------|------------------|------------|----------------|---------------|------|------|----------|------|----------------|----------|-------------------|---------|--------|--------------|
| "A"    | "B" |       |         | Diam  | Length |                  |            |                |               | No.  | Kind | No.      | Kind | No.            | Part No. | No.               | Pattern |        |              |
| 12     |     | NR16  | 3/4"    | 8"    | 2 5/8" | 2 5/8"           | 18'-8 1/2" | 18'-10 1/2"    |               | 24   | Hex. |          |      | 24             | 57       |                   |         |        | see B Sec. C |
| 2      |     | NR16B | 3/4"    | 8"    | 2 5/8" | 2 5/8"           | 18'-0 3/4" | 18'-2 3/4"     |               | 4    | Hex. |          |      | 4              | 57       |                   |         |        | 4            |
| 2      |     | NR17B | 4/5"    | 8"    | 2 3/8" | 2 3/8"           | 19'-4 1/4" | 19'-6 1/4"     |               | 4    | Hex. |          |      | 4              | 57       |                   |         |        | 2            |

Adams Township, MI

WISCONSIN BRIDGE & IRON CO.  
NORTH MILWAUKEE, WIS.

# SHOP LIST OF BOLTS, RIVETS, ETC.

BILL No. 301 CONT

DESCRIPTION Enlargement of 4" Shaft Houses  
FOR Champion Copper Co., Painesdale, Mich.

Made by Fuller Dat

Checked by BROWN Dat

QUANTITIES LISTED INCLUDE EXTRA FOR BURNING, LOSS, ETC.

MISCELLANEOUS

## ROUND HEAD RIVETS

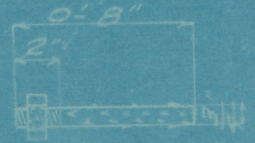
## BOLTS

| QTY | POSITION OR REMARKS | Diam. | GRIP | Length Under Head | No. of Rivet | Kind of Head | Kind of Nut | POSITION OR REMARKS | Diam. | GRIP | Length Under Head | WASHERS |      |
|-----|---------------------|-------|------|-------------------|--------------|--------------|-------------|---------------------|-------|------|-------------------|---------|------|
|     |                     |       |      |                   |              |              |             |                     |       |      |                   | No.     | Kind |

Note  
This material to be  
gotten out at once  
and shipped in  
advance of all  
other material!  
11/30/6

E.F.N.

see letter to J.F.J. 12/28/07  
only 78 Bolts wanted  
from Hoton



Reqd. 104 Anchor  
as shown.

1 anchor  $\frac{3}{4}$ " x 0'-8"  
(104)

DESCRIPTION *Enlargement of Four Shaft Houses*  
FOR *Champion Copper Co.*

Made by Fuller

QUANTITIES LISTED INCLUDE EXTRA FOR BURNING, LOSS, ETC.

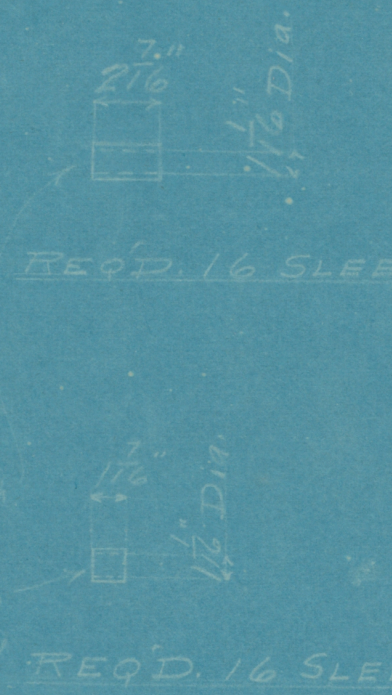
Checked by *Bray*

ROUND HEAD RIVETS

BOLTS

MISCELLANEOUS

| No. Req'd      | POSITION OR REMARKS | Diam.           | GRIP             | Length Under Head | No. Req'd | Kind of Head | Kind of Nut   | POSITION OR REMARKS | Diam.           | GRIP             | Length Under Head | WASHERS       |       |
|----------------|---------------------|-----------------|------------------|-------------------|-----------|--------------|---------------|---------------------|-----------------|------------------|-------------------|---------------|-------|
|                |                     |                 |                  |                   |           |              |               |                     |                 |                  |                   | No. Kind      |       |
| <del>400</del> | Drive Flat Hd.      | $\frac{3}{4}$ " | $\frac{1}{2}$ "  | $1\frac{3}{8}$ "  | 50        | Rd.          | Hx.           |                     | $\frac{1}{2}$ " | 5"               | $1\frac{1}{2}$ "  |               |       |
| 450            | " " "               | "               | $\frac{5}{8}$ "  | $1\frac{1}{2}$ "  | 200       | "            | "             |                     | "               | 4.5"             | $1\frac{1}{2}$ "  |               |       |
| 450            | " " "               | "               | $\frac{3}{4}$ "  | $1\frac{5}{8}$ "  | 80        | "            | "             |                     | "               | 8"               | $1\frac{1}{2}$ "  |               |       |
| 250            | " " "               | "               | $\frac{7}{8}$ "  | $1\frac{3}{4}$ "  | 90        | "            | "             | DRIVE FIT           | "               | 1"               | $2\frac{1}{4}$ "  |               |       |
| 25             | " " "               | "               | 1"               | 2"                | 35        | "            | "             | NST                 | "               | $1\frac{1}{8}$ " | $2\frac{1}{4}$ "  |               |       |
| 100            | " " "               | "               | $1\frac{1}{8}$ " | $2\frac{1}{8}$ "  | 30        | "            | "             | NST                 | "               | 5"               | $1\frac{3}{4}$ "  |               |       |
| 180            | " " "               | $\frac{5}{8}$ " | $\frac{1}{2}$ "  | $1\frac{1}{4}$ "  | 15        | "            | "             | NSTE                | $\frac{3}{4}$ " | $2\frac{1}{4}$ " | $1\frac{1}{2}$ "  |               |       |
| 120            | " " "               | "               | $\frac{3}{4}$ "  | $1\frac{1}{2}$ "  | 8         | Hx           | Hx            |                     | 1"              | $7\frac{1}{2}$ " | $8\frac{3}{4}$ "  | 16 Per Sketch |       |
| <del>250</del> | " " "               | "               | $\frac{5}{8}$ "  | $1\frac{3}{4}$ "  | 8         | "            | "             |                     | 1"              | $2\frac{3}{4}$ " | 4"                |               |       |
| 40             | " " "               | "               | 1"               | $1\frac{3}{4}$ "  | 8         | "            | "             |                     | 1"              | $5\frac{1}{2}$ " | $6\frac{3}{4}$ "  | 16 Per Sketch |       |
|                |                     |                 |                  |                   | 400       | Rd Sy        | Carriage Bt's |                     | $\frac{1}{2}$ " | $4\frac{1}{4}$ " | 5"                | 400 Pressed   |       |
| 800            | " " "               | $\frac{3}{4}$ " | $\frac{1}{2}$ "  | $1\frac{3}{8}$ "  | 650       | "            | "             |                     | "               | $3\frac{1}{4}$ " | 4"                | 650 "         |       |
| 250            | " " "               | "               | $\frac{7}{8}$ "  | $1\frac{5}{8}$ "  | 850       | "            | "             |                     | "               | $2\frac{1}{4}$ " | 3"                | 850 "         |       |
| 25             | " " "               | "               | 1"               | 2"                | 25        | "            | "             |                     | "               | $6\frac{1}{4}$ " | 7"                | 25 "          |       |
| 100            | " " "               | "               | $1\frac{1}{8}$ " | $2\frac{1}{8}$ "  | 75        | "            | "             |                     | "               | $2\frac{1}{4}$ " | $3\frac{1}{2}$ "  | 75 "          |       |
| 180            | " " "               | $\frac{5}{8}$ " | $\frac{1}{2}$ "  | $1\frac{1}{4}$ "  |           | "            | "             |                     | "               |                  |                   |               |       |
| 250            | " " "               | "               | $\frac{5}{8}$ "  | $1\frac{3}{8}$ "  | 500       | "            | "             |                     | "               | $\frac{1}{2}$ "  | $4\frac{1}{4}$ "  | 5"            | 500 " |
| 40             | " " "               | "               | 1"               | $1\frac{7}{8}$ "  | 25        | "            | "             |                     | "               | $6\frac{1}{4}$ " | 7"                | 25 "          |       |



FURNISHED BY HOUGHTON OFFICE