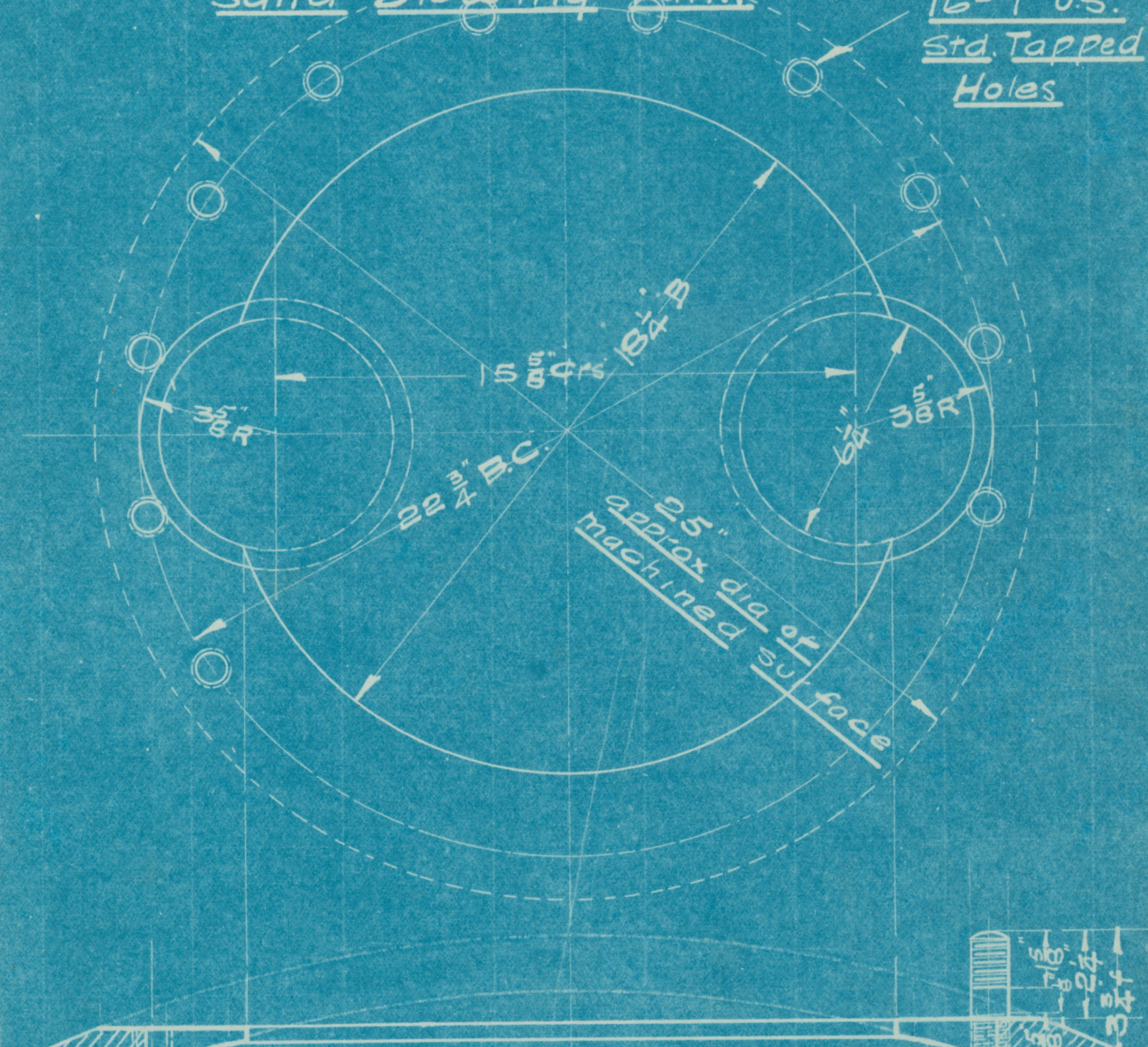


CHAMPION COPPER COMPANY

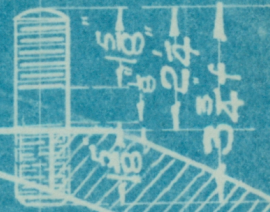
SHOP SKETCH

Subject: Detail of Drilling, Tapping Date Feb 17-1915  
and Boring, G.I. Head for  
Sand Blowing Tank

16-1" U.S.  
Std. Tapped  
Holes



section showing  
Head after being bored



Made by EP

Sketch No. **135 B.**



SHOP SKETCH

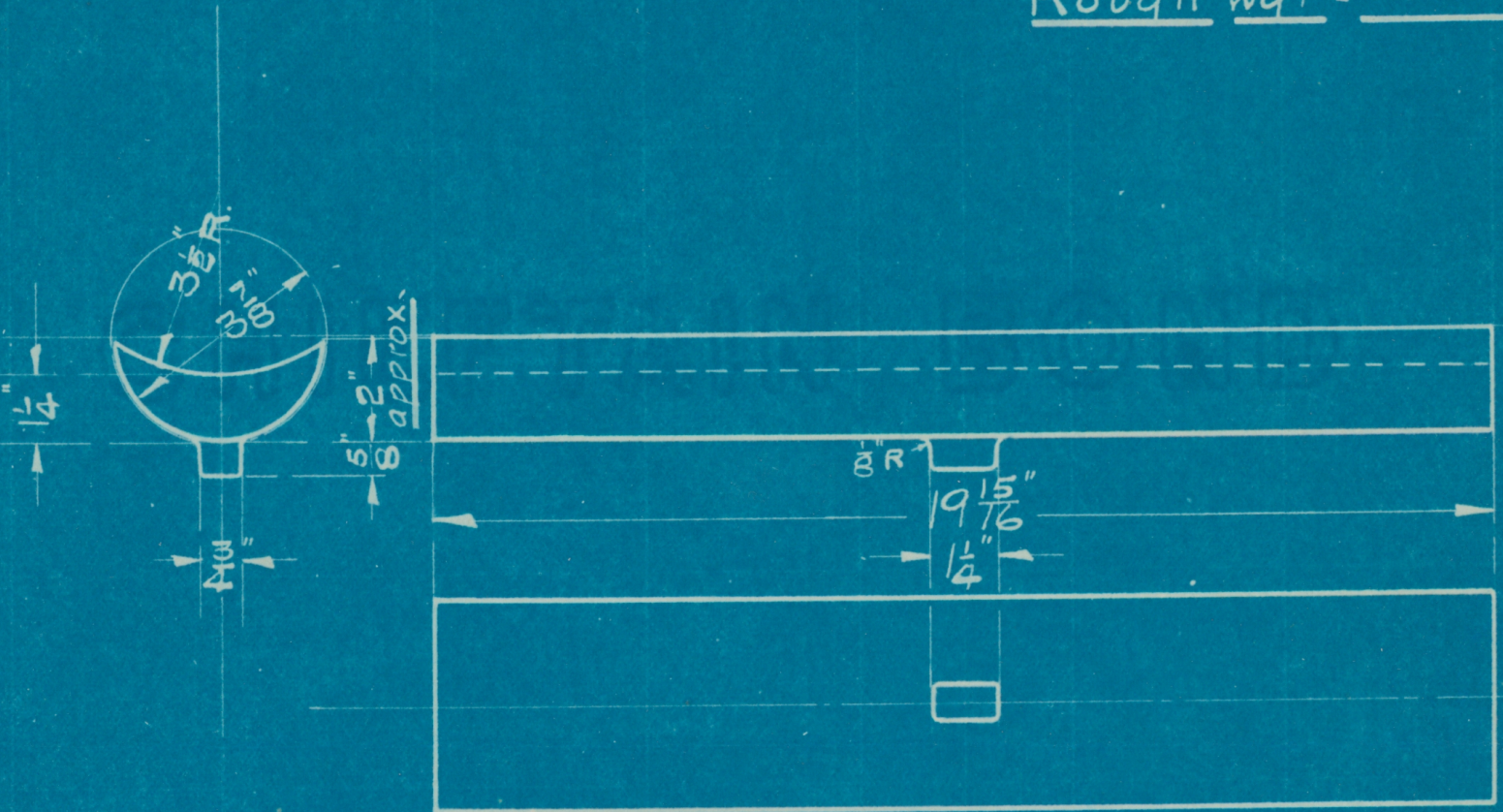
Subject:

Hard Iron Liner for  
4" Tee sand Blowing Tank.

Date May 10-1915.

16849-M. C. CO.

Rough Wgt = \_\_\_\_\_

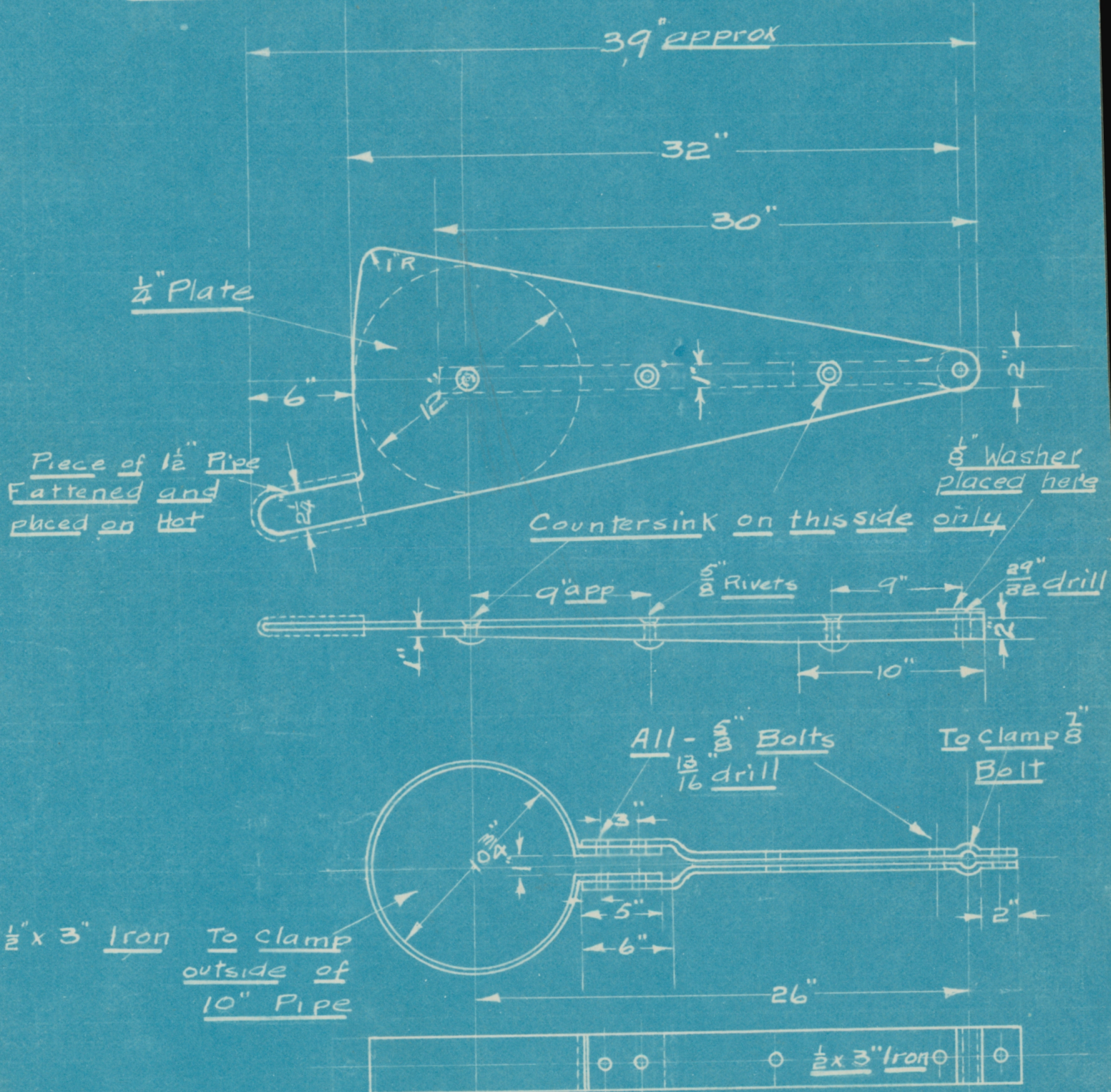


Made by EP

Sketch No. 405.



Subject: Quick Opening Gate for Sand Blowing Tank Date: Mar. 22-1915.



Piece of 1/2" Pipe Fattened and placed on top

Countersink on this side only

8" Washer placed here

All - 5/8" Bolts  
13/16" drill

To clamp 1/2" Bolt

1/2" x 3" Iron To clamp outside of 10" Pipe

1/2 x 3" Iron

Note: - Pipe 12" to 14" long

Made by EP  
Traced by J

Sketch No. **141B.**

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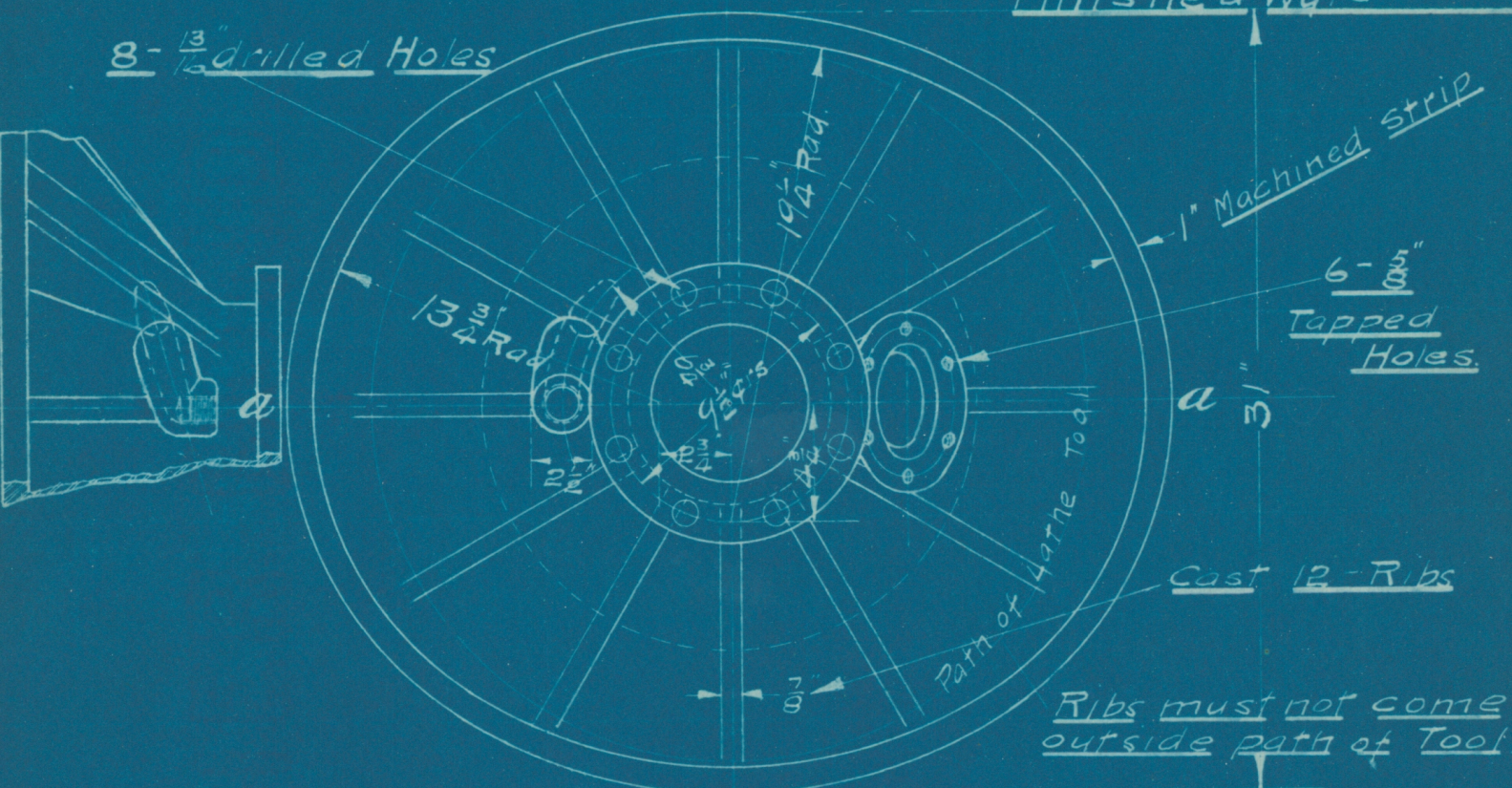
CHAMPION COPPER COMPANY

SHOP SKETCH

Subject: C.S. Lower Cover for Sand Bin Date June 25-1914

Rough Wgt =  
Finished Wgt =

8 -  $\frac{3}{16}$ " drilled Holes



1" Machined Strip  
6 -  $\frac{3}{16}$ " Tapped Holes.

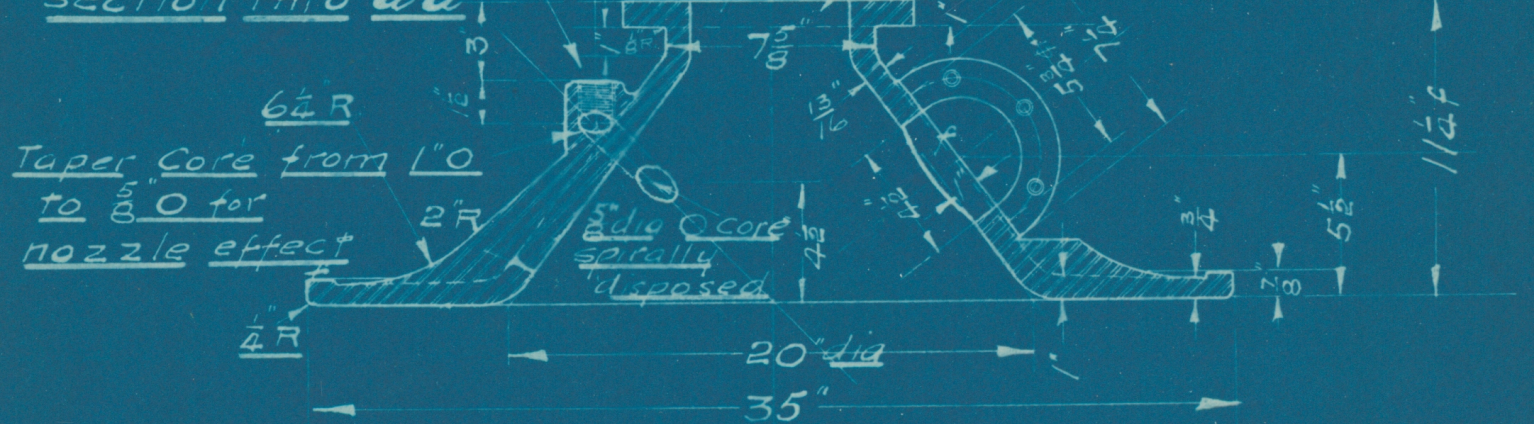
Cast 12-Ribs

Ribs must not come outside path of Tool

W.I. Filling Ring placed here if desired see sketch \* 115B.

drilled for 1" Pipe Tap

section thro a-a



6 1/4 R  
Taper Core from 1" O to 5/8" O for nozzle effect  
2 R  
1/4 R

Allow for finish on surfaces marked f only

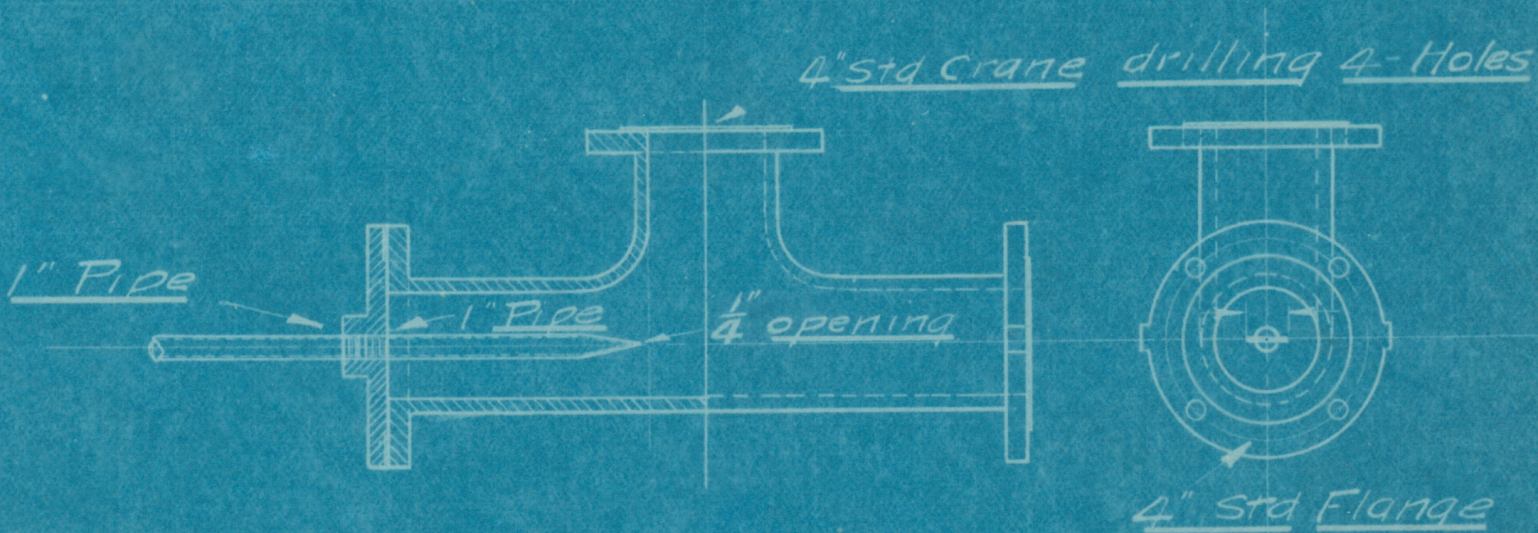
Made by EP.

Sketch No. **355.**

CHAMPION COPPER COMPANY

SHOP SKETCH

Subject: General Arrangement of Sand Blower Date: Feb 19-14.



for detail of Tee see Foundry  
sketch # 324 and 326 for Nozzle  
Flange

Made by EP

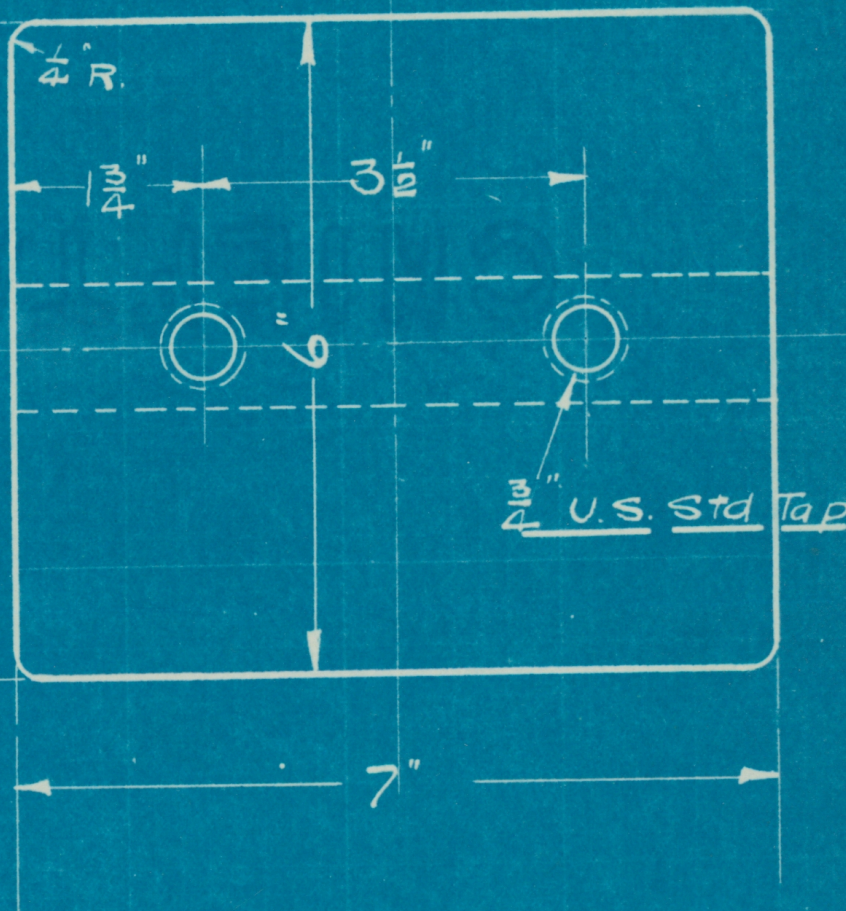
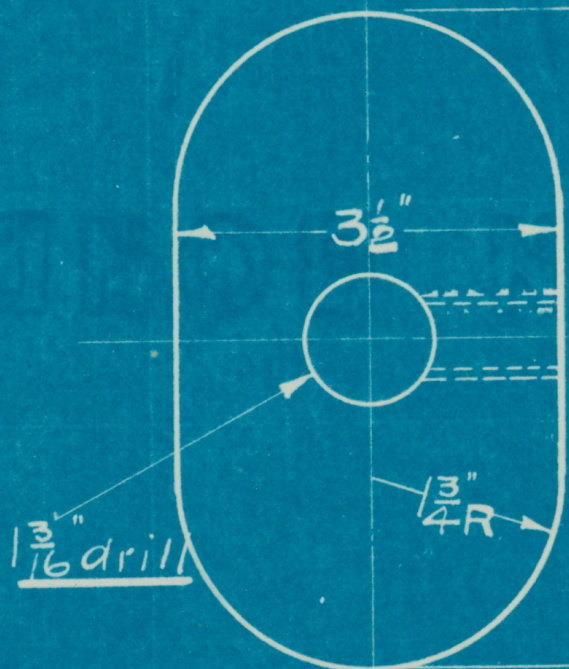
Sketch No. **98B.**

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Subject: C.I. Weight for Gate Sand  
Blowing Tank.

Date April 13-1915.

Rough Wat = 35 #



Made by SP

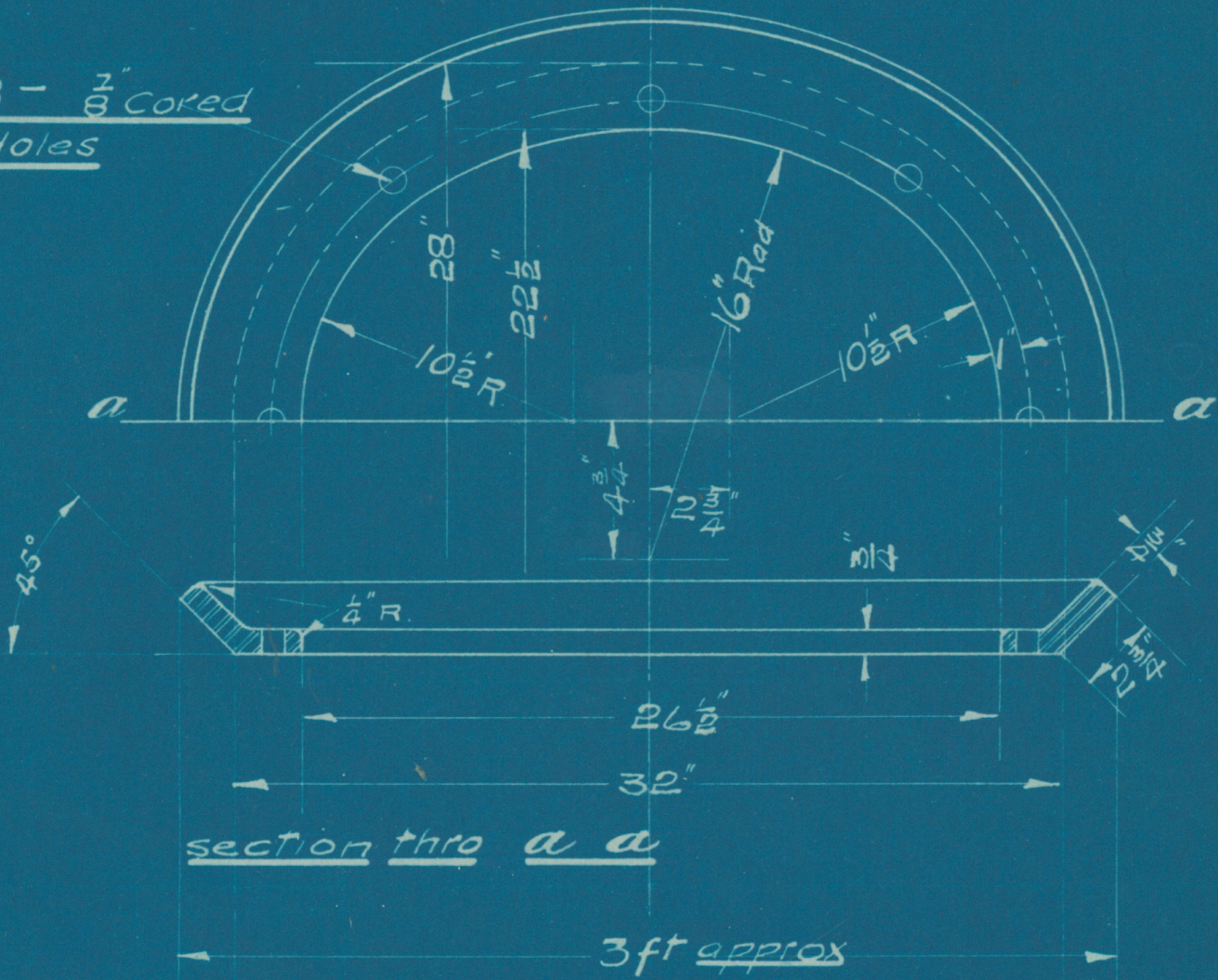
Sketch No. **397.**



Subject: C.S. Suspension Ring for Upper Date June 20-1914  
Corer Sand Bin.

Rough Wat -

8 -  $\frac{1}{8}$ " Cored Holes

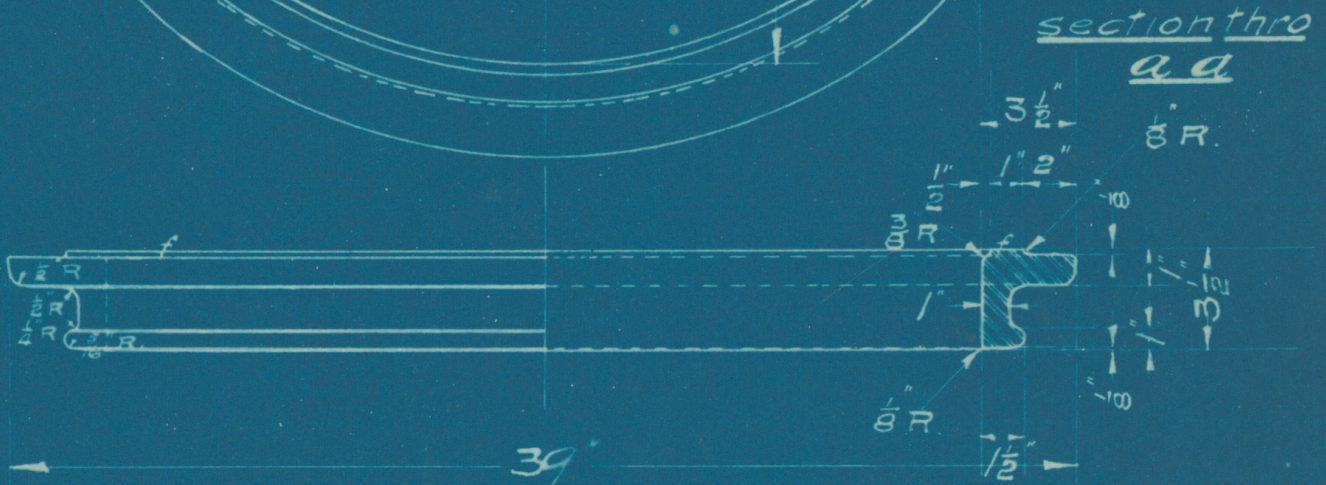
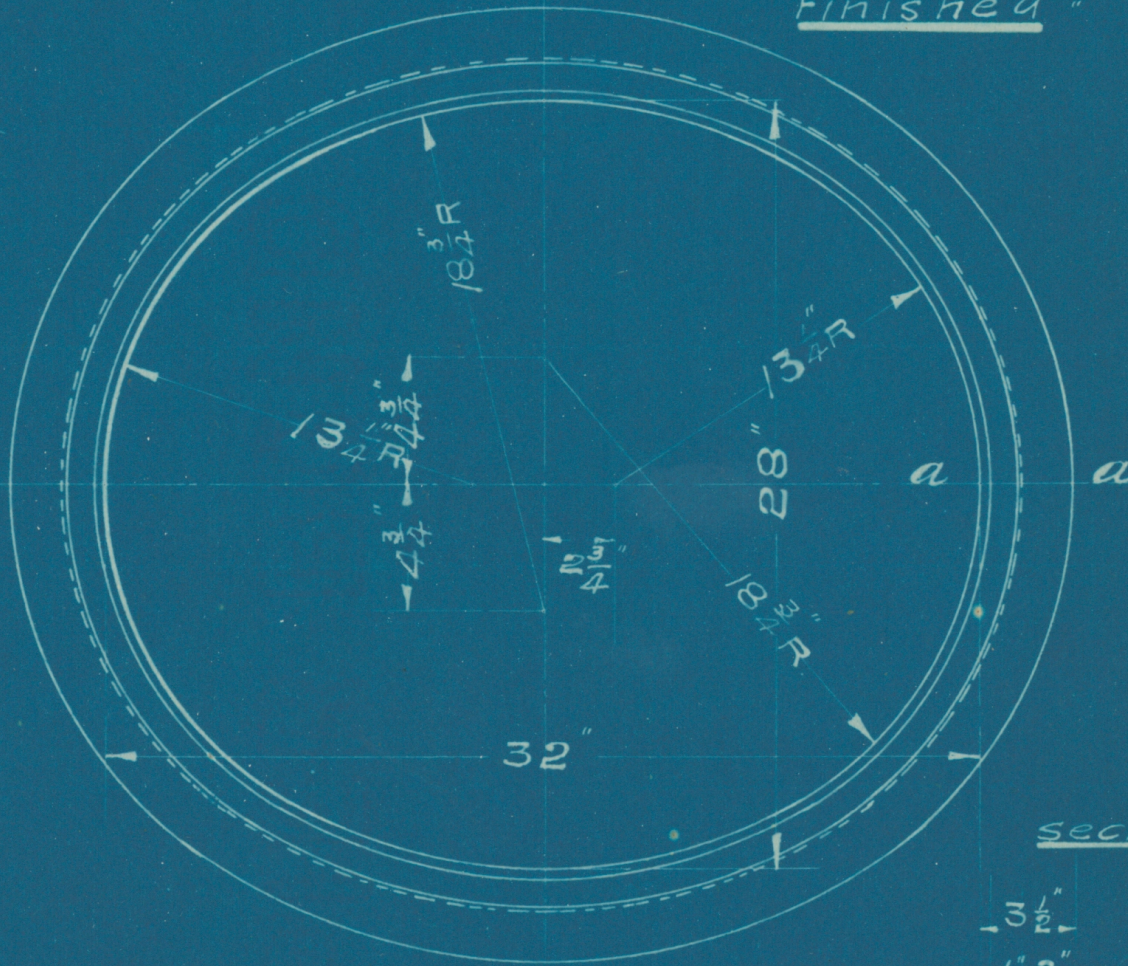


CHAMPION COPPER COMPANY

SHOP SKETCH

Subject: C S Seat for Upper and Lower Date June 23-1914  
Covers Sand Bin

Rough Wgt = \_\_\_\_\_  
Finished " = \_\_\_\_\_

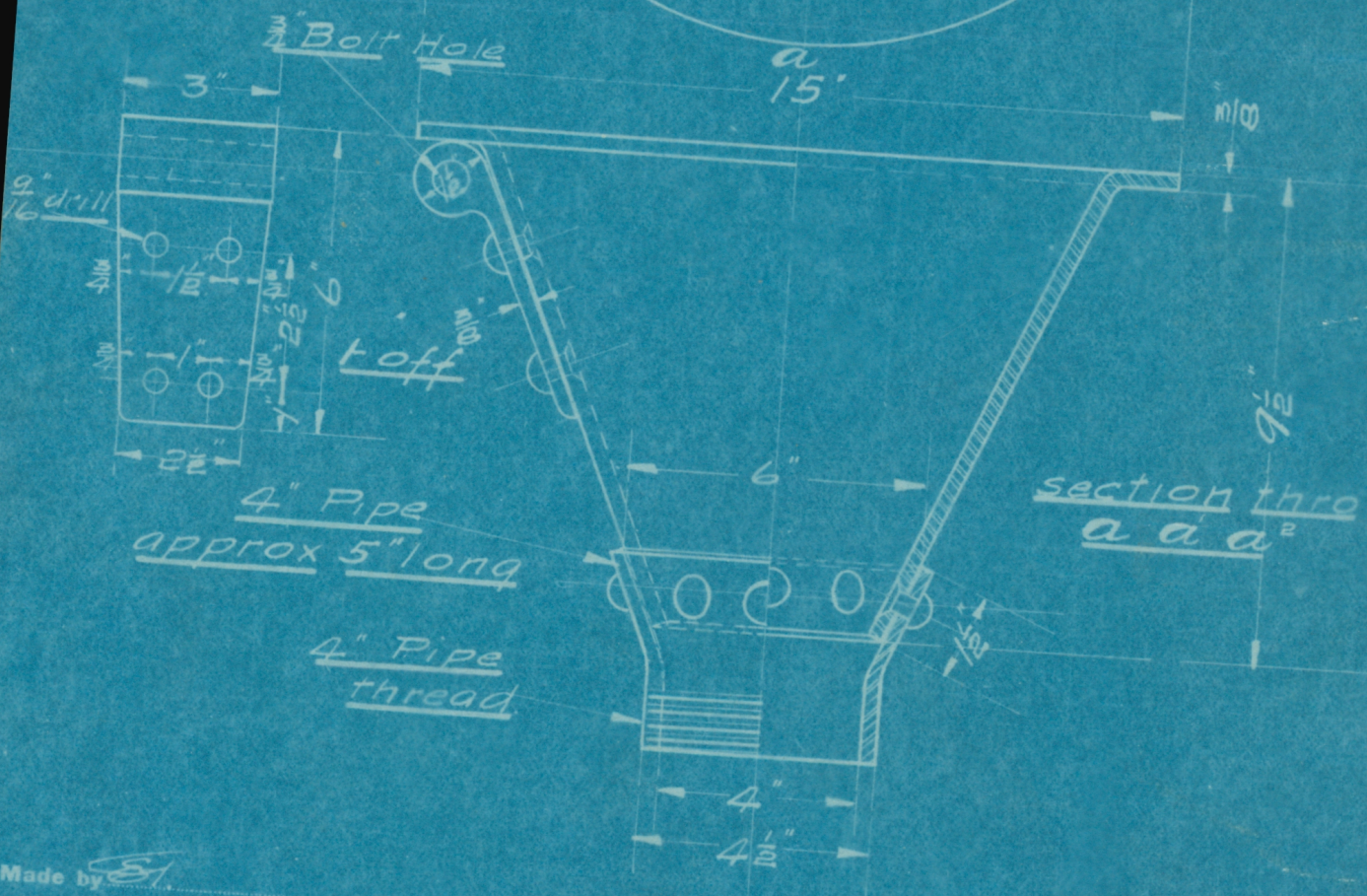
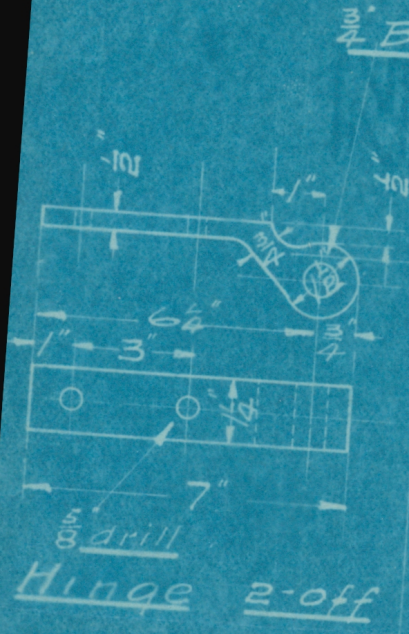
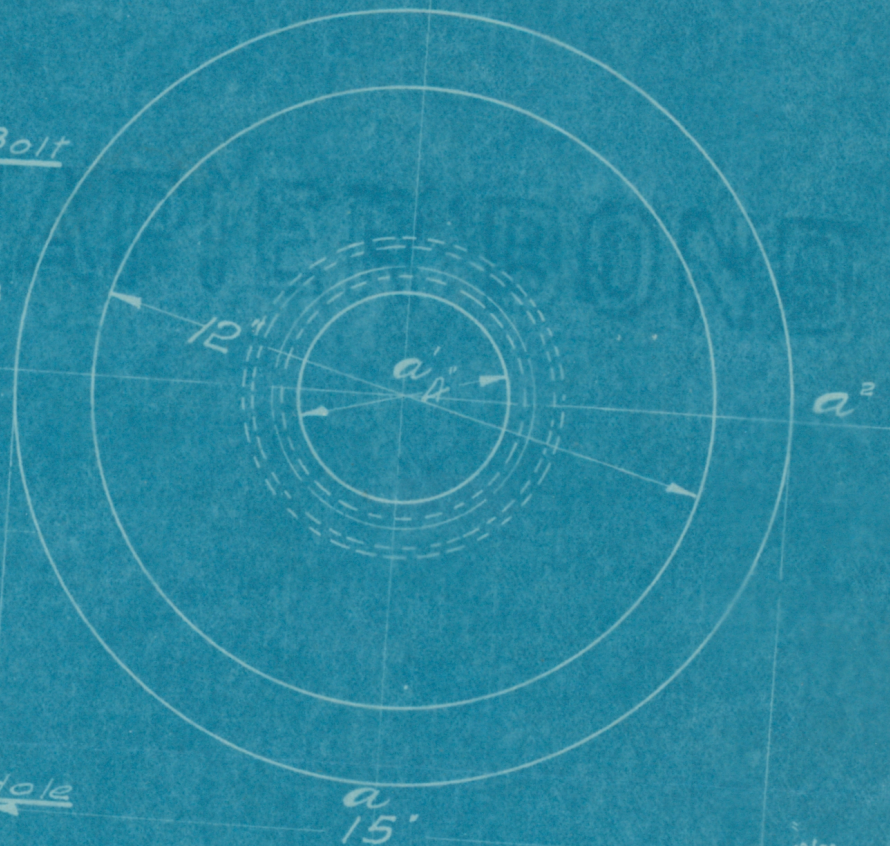


Allow for finish on surfaces marked f only

Made by EP

Sketch No. **353.**

Subject: W.I. Cone for Sand Feeder Date Oct 31-1913.



Made by ES

CHAMPION COPPER COMPANY

SHOP SKETCH

Subject: Sand Blowing Tank and C.S. Heads. Date Feb 20-1915.

38819-M. E. CO.

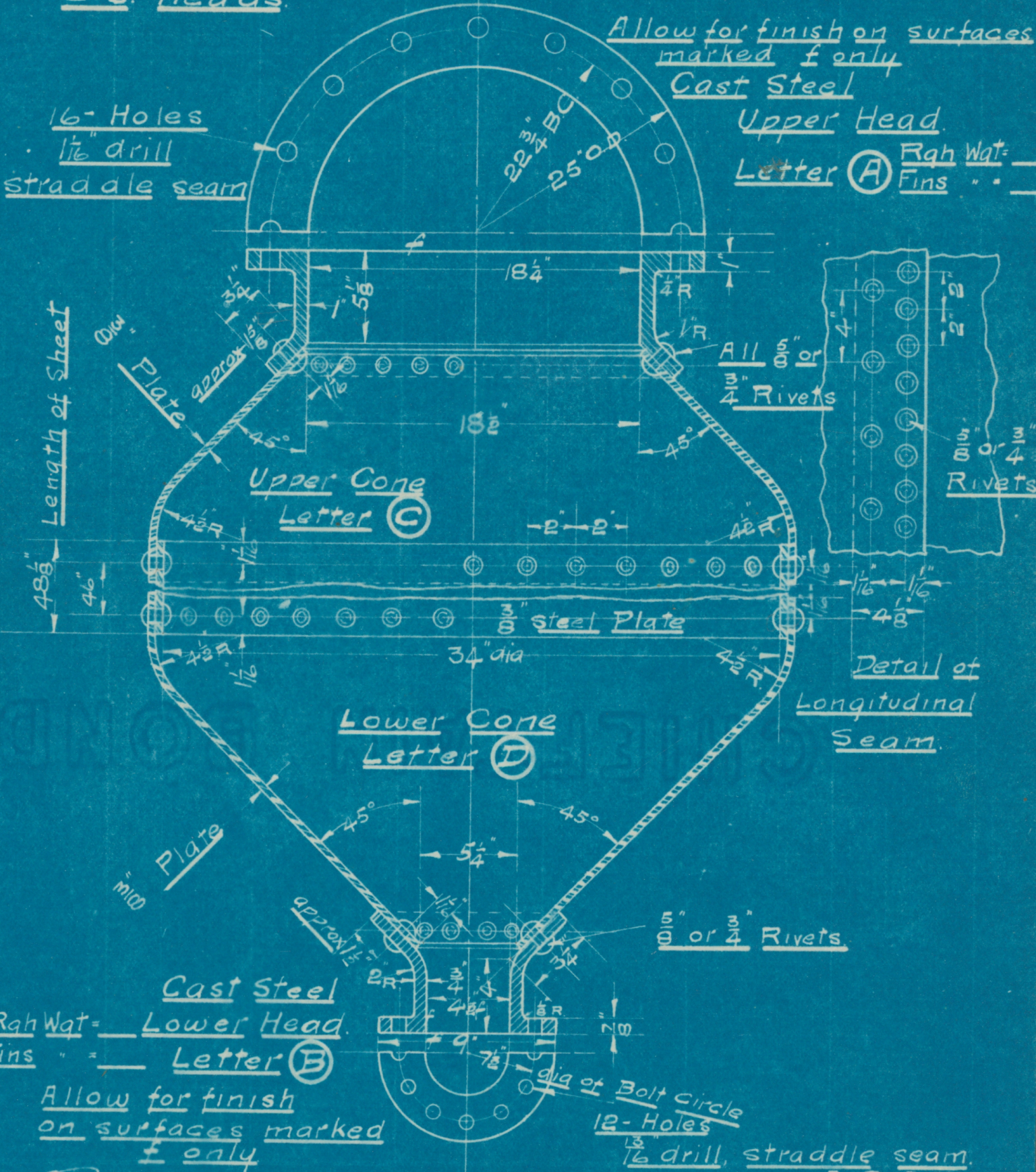
Allow for finish on surfaces marked f only

Cast Steel

Upper Head.

Letter (A) Rgh Wat. Fins

16- Holes  
1/16" drill  
straddle seam



All 5/8" or 1 3/4" Rivets

8 1/2" or 4" Rivets

Detail of Longitudinal Seam.

5/8" or 3/4" Rivets.

Rgh Wat. = Lower Head.  
Fins " = Letter B

Allow for finish on surfaces marked f only

dia of Bolt circle  
12- Holes  
1/16" drill, straddle seam.

Made by

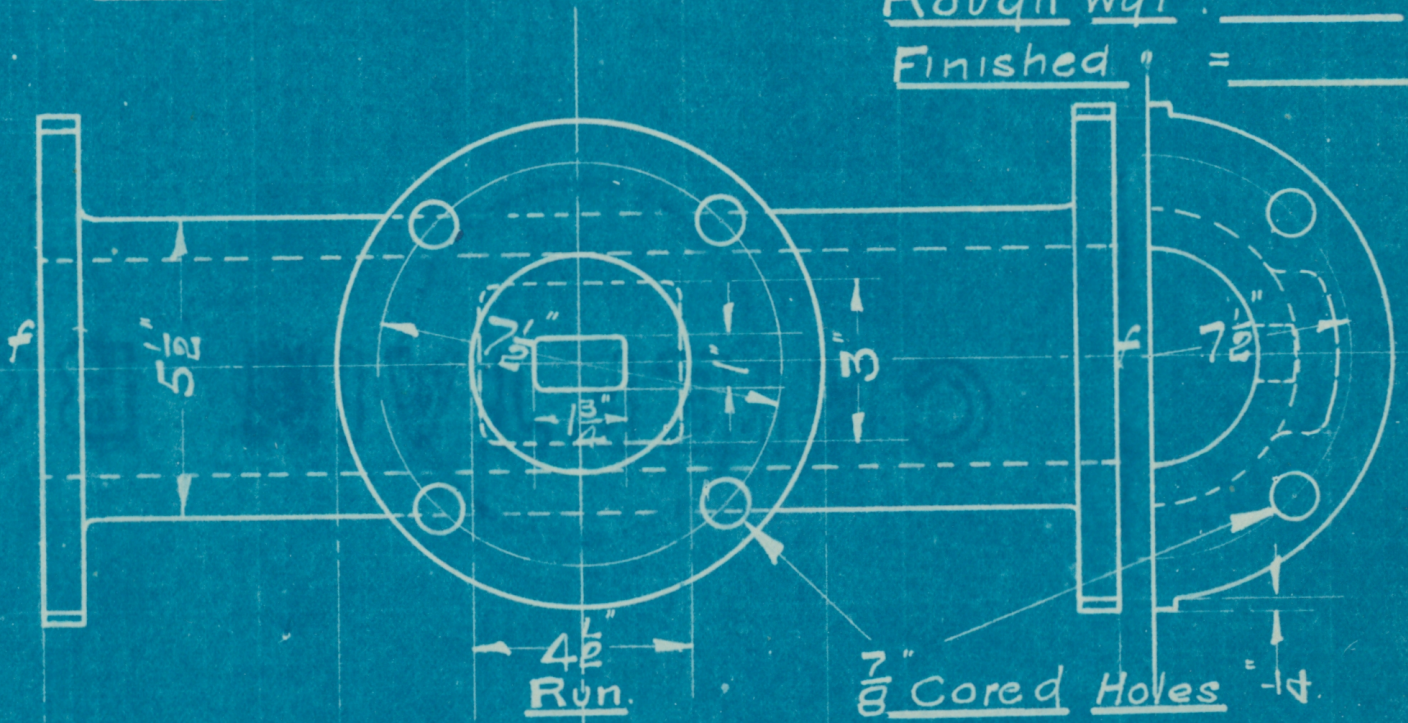
Sketch No. **136B.**

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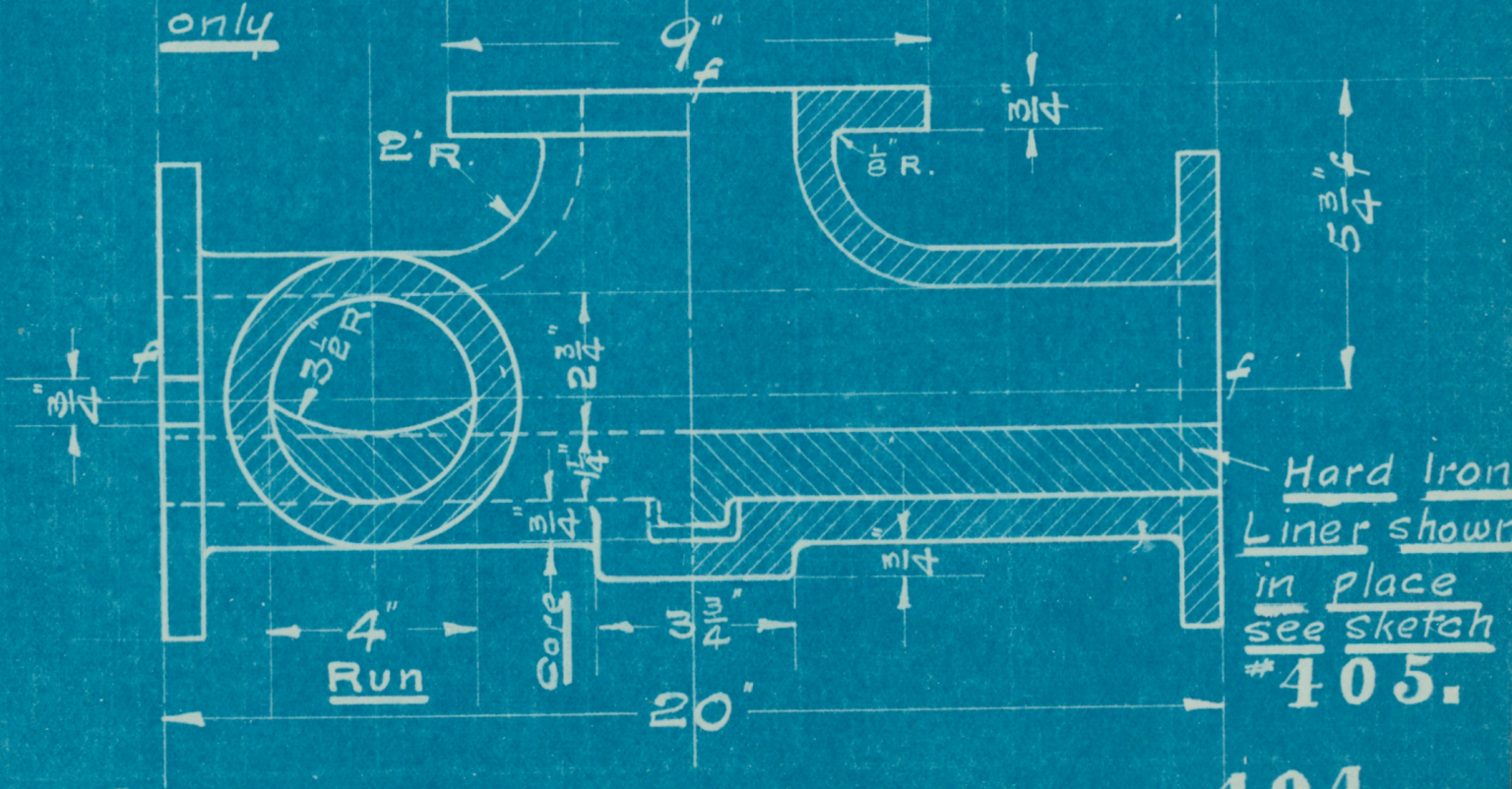
Subject: 4" C.I. Tee, Sand Blowing Tank.

Date May 8-1915.

Rough Wgt = \_\_\_\_\_  
Finished " = \_\_\_\_\_



Allow for finish on surfaces marked f only



Hard Iron Liner shown in place see sketch #405.

Made by SA

Sketch No. 404.

CHAMPION COPPER COMPANY

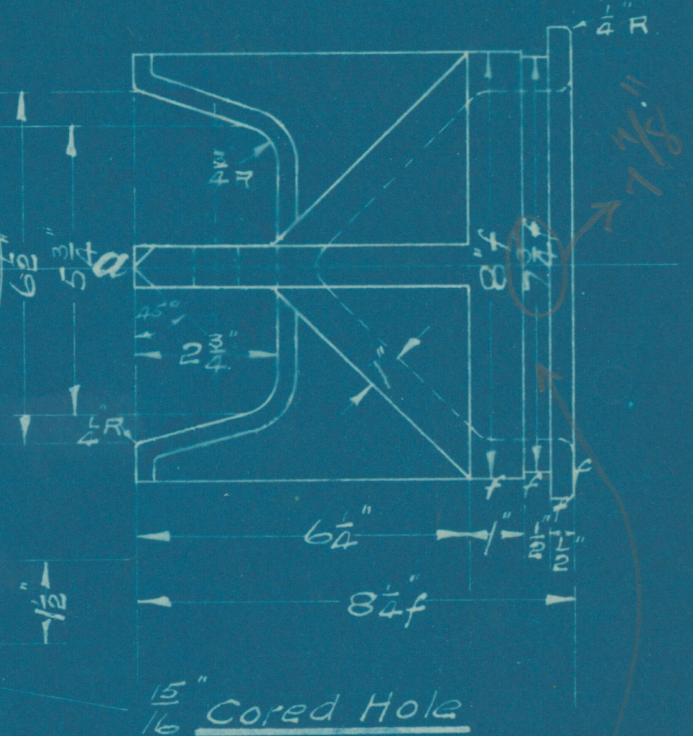
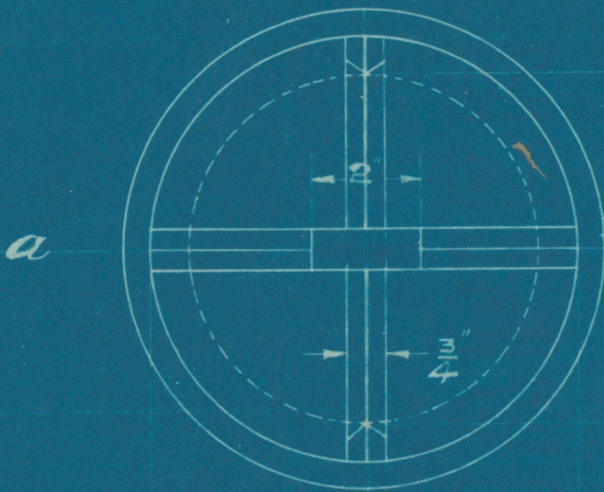
SHOP SKETCH

Subject: C.S. Valve for Upper Cover  
Sand Bin

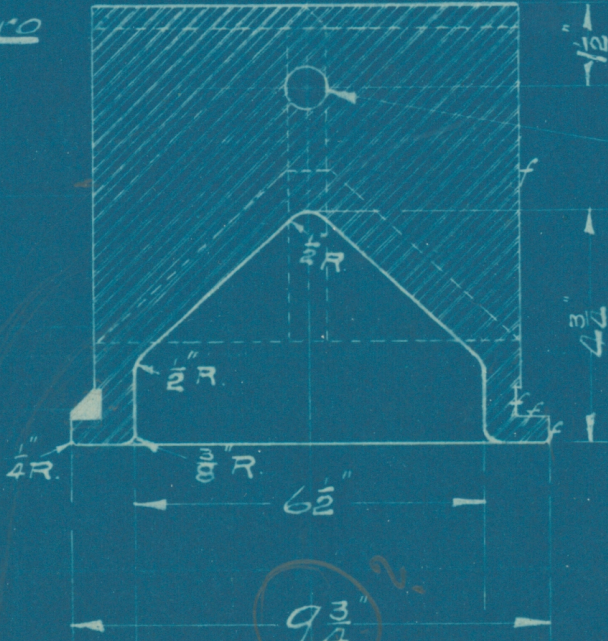
Date June 24-1914

Rough Wat = \_\_\_\_\_

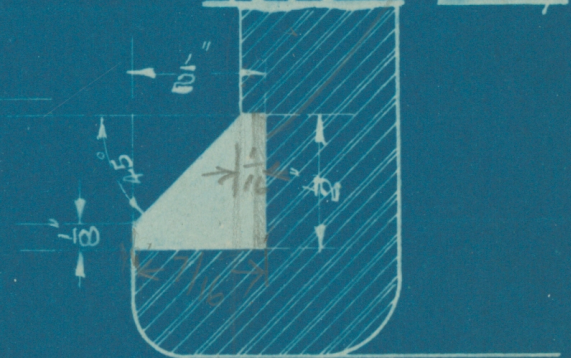
Finished = \_\_\_\_\_



section thro  
aa



Detail of Valve  
Rubber Ring



Handwritten notes in red ink:  $9 \frac{3}{4}$  and  $8 \frac{7}{8}$

Allow for finish on surfaces marked only

For Valve Check and Stop see Sketch # 115 B.



CHAMPION COPPER COMPANY  
SHOP SKETCH

Subject: C.S. Hand Hole Plate for Lower Cover Sand Bin Date June 26-1914

Rough Wgt = \_\_\_\_\_  
Finished " = \_\_\_\_\_



surface to be cored  
continuation of cone  
see Sketch # 355.  
and to conform  
with inside after  
being machined  
at f.

Allow for finish on surfaces marked f only.

Made by Ed.

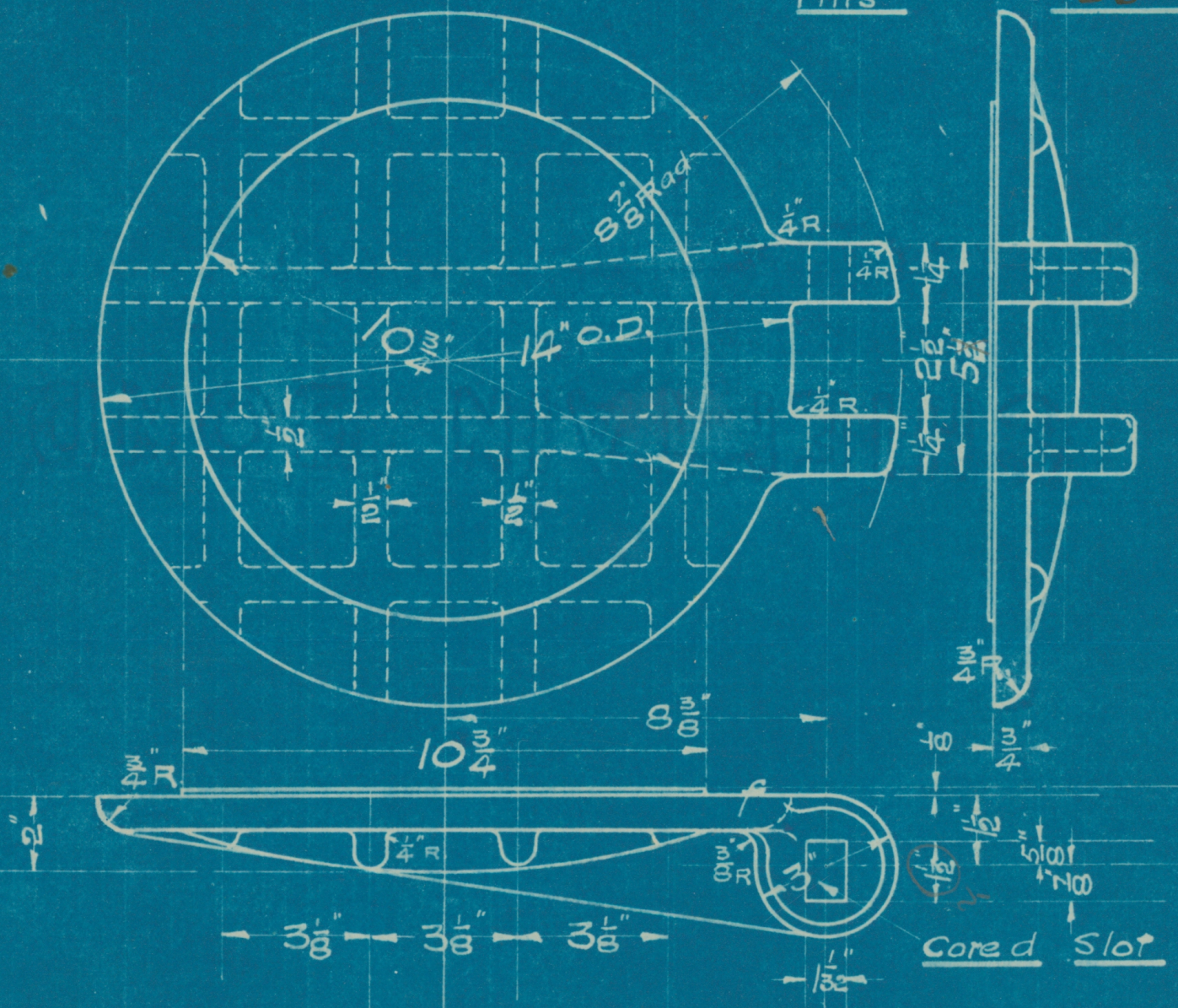
Sketch No **357.**

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Subject: C.S. Gate for Sand Blowing Tank. Date Feb 13-1915.

Rough Wat = 58"  
Fins " = 55"



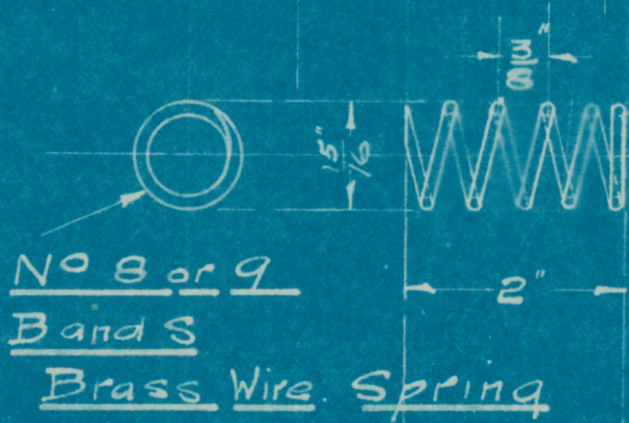
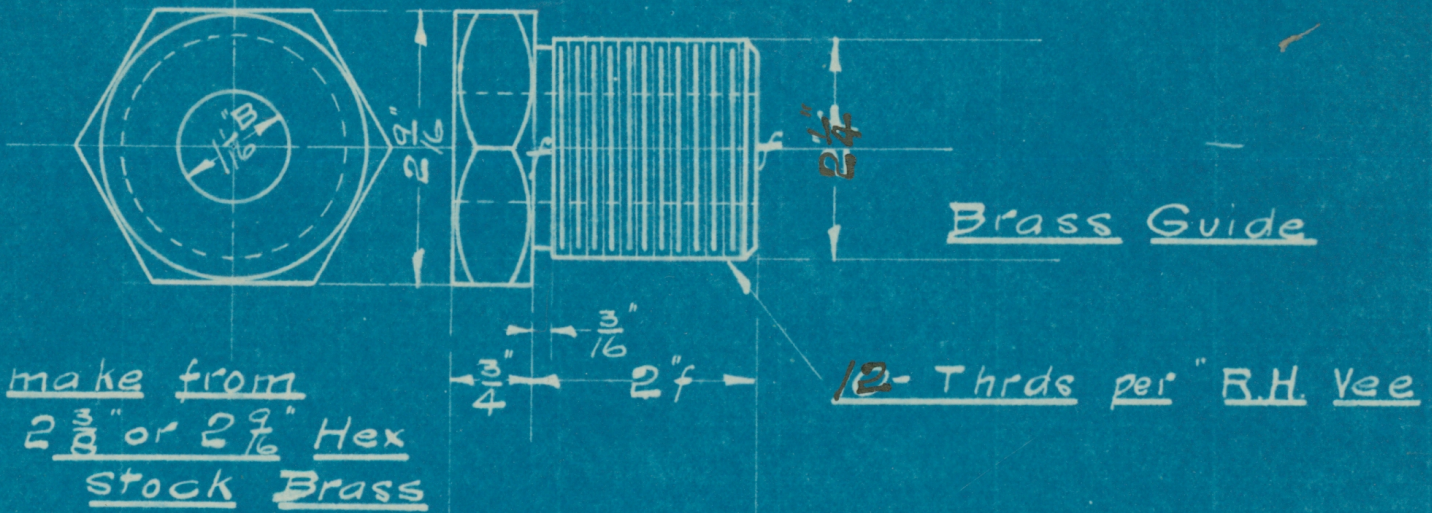
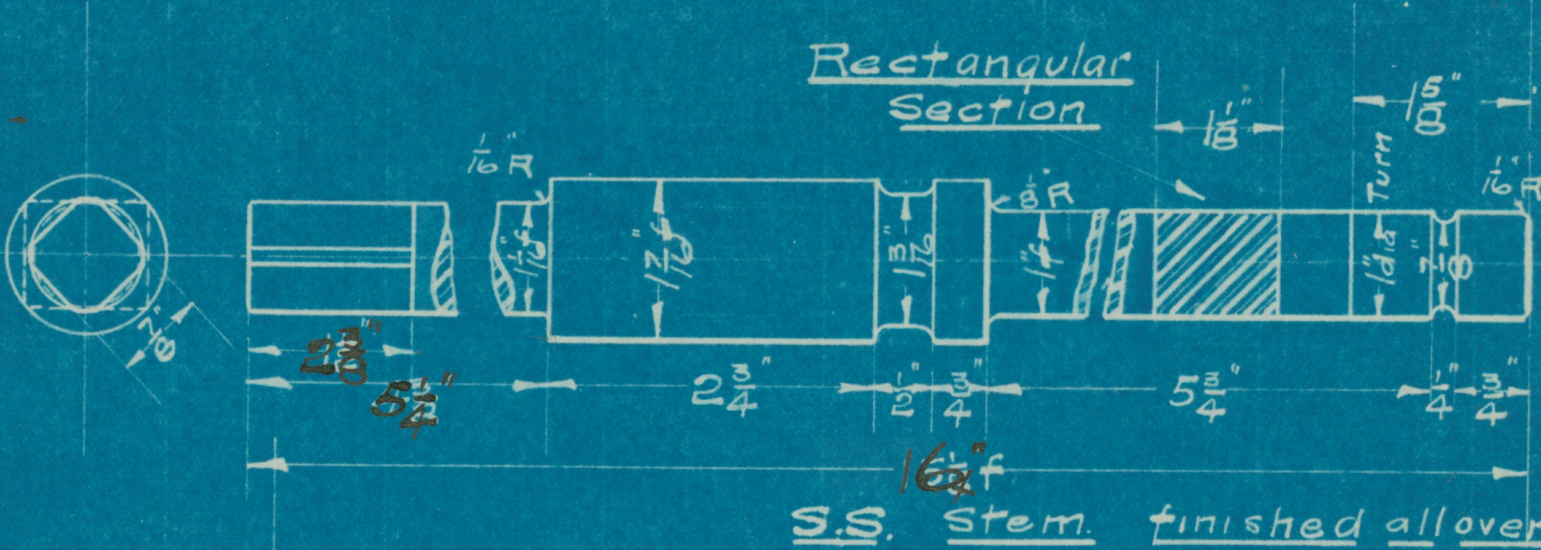
Allow for finish on surfaces  
marked f only

Revised Mar 27-1915.

CHAMPION COPPER COMPANY

SHOP SKETCH

Subject: S Steel Stem and Brass Guide Date Feb 16-1915  
 for C.S. Gate Sand Blowing Tank



Made by *EP*

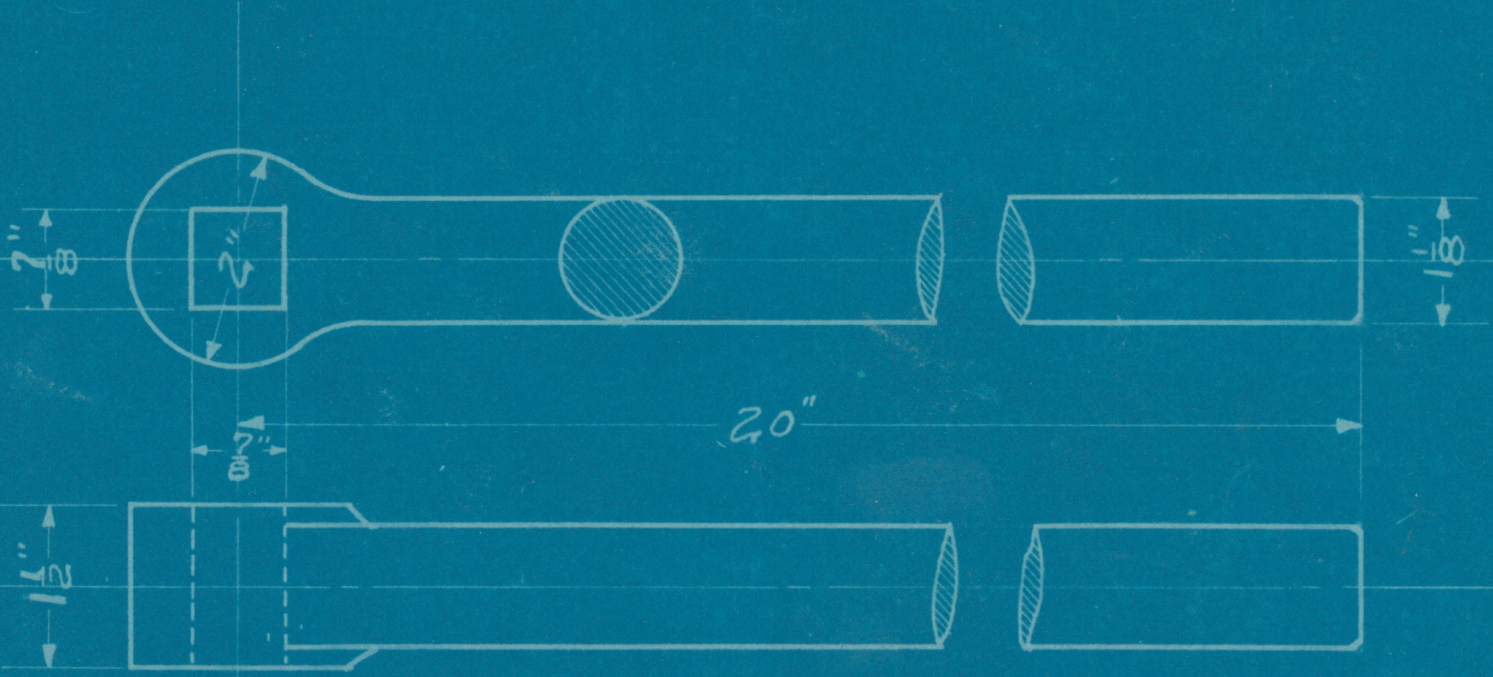
Sketch No. **134B.**

258B

CHAMPION COPPER COMPANY  
SHOP SKETCH

Subject: Balance Weight Lever Date July 18, 1916  
for Sand Blowing Tank

50849-M. G. CO.



Make 12