

D

C

B

A

3

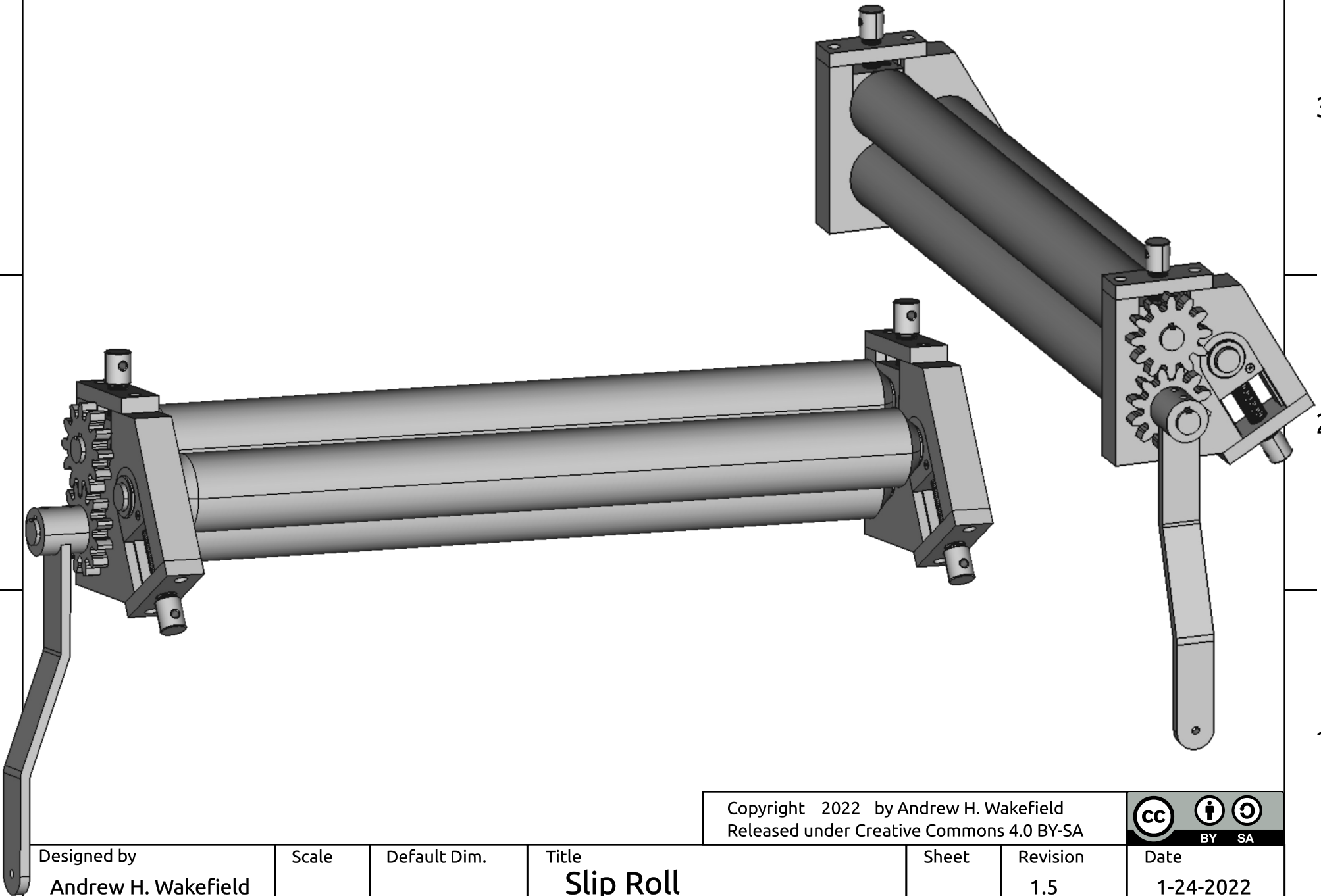
3

2

2

1

1



Copyright 2022 by Andrew H. Wakefield
Released under Creative Commons 4.0 BY-SA



Designed by
Andrew H. Wakefield

Scale

Default Dim.

Title

Slip Roll

Sheet

Revision

1.5

Date

1-24-2022

D

C

B

A

D

C

B

A

3

2

1

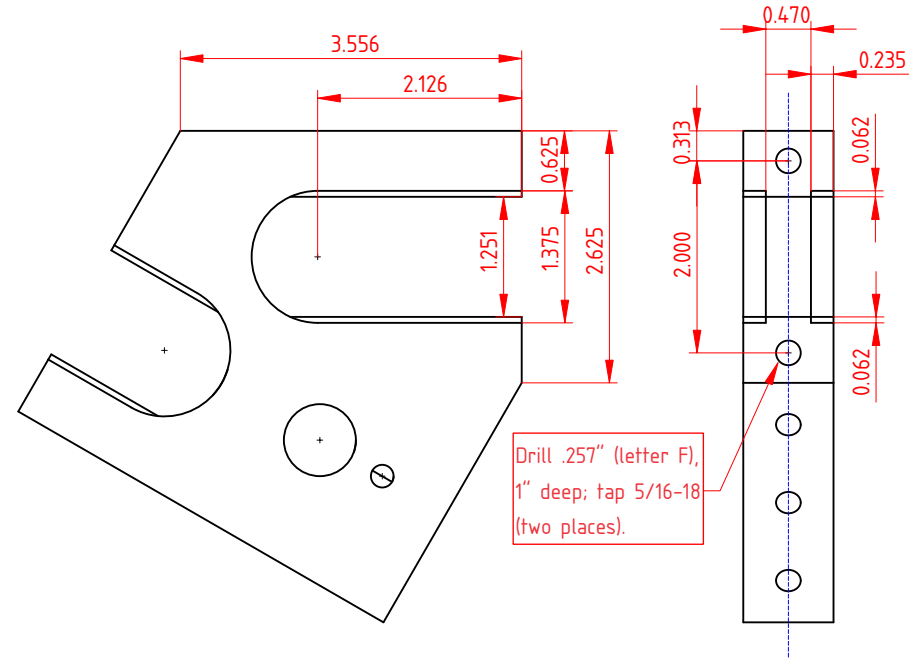
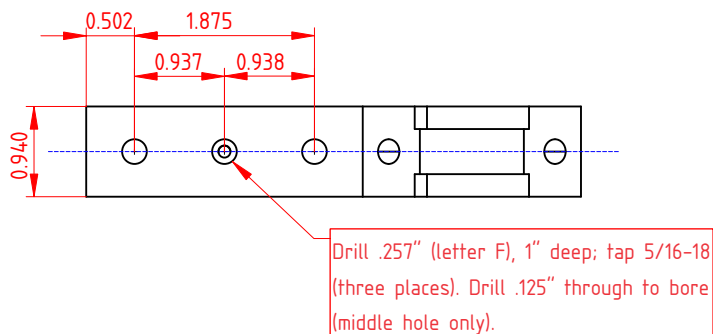
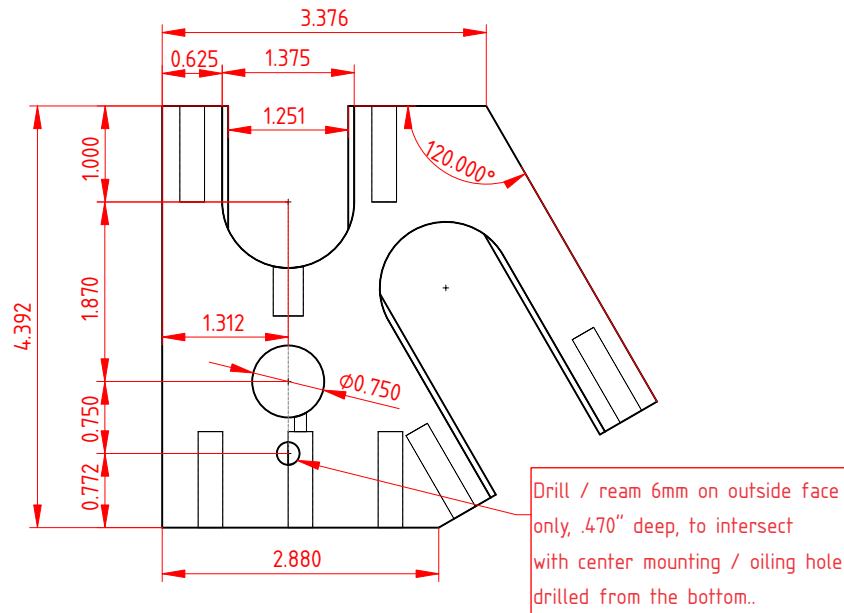
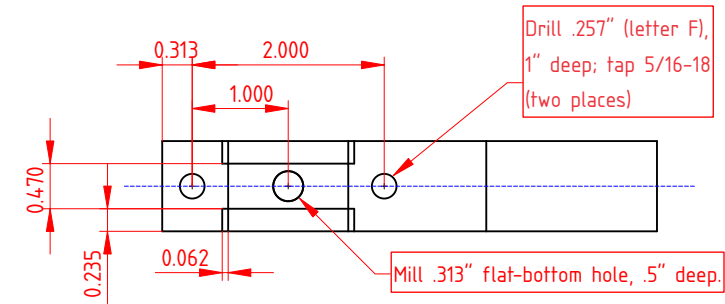
3

2

1

End Plates

Mild steel; two pieces. Note that these will be mirror images with respect to the placement of the ball oiler (in the reamed 6mm hole on the outside face of each end plate).



Copyright 2022 by Andrew H. Wakefield
Released under Creative Commons 4.0 BY-SA



Designed by
Andrew H. Wakefield

Scale
1:2

Default Dim.
+/- .001"

Title
Slip Roll: End Plates

Sheet
1

Revision
1.5

Date
1/18/2022

D

C

B

A

Roller Carriers

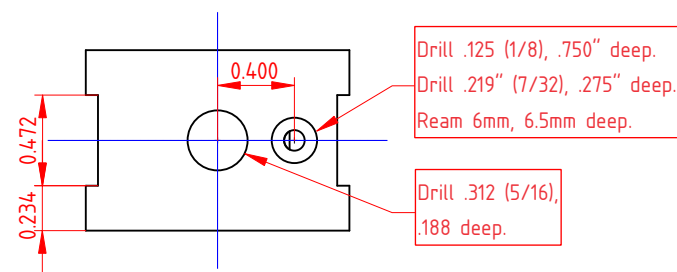
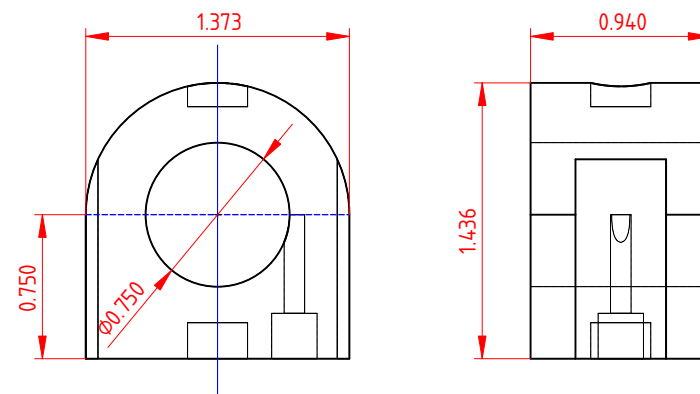
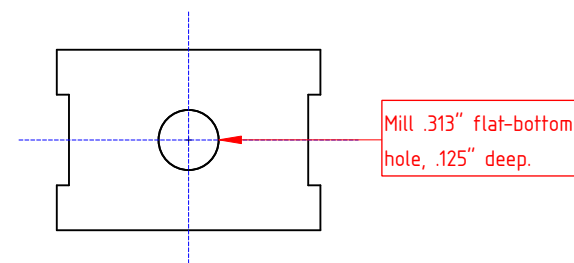
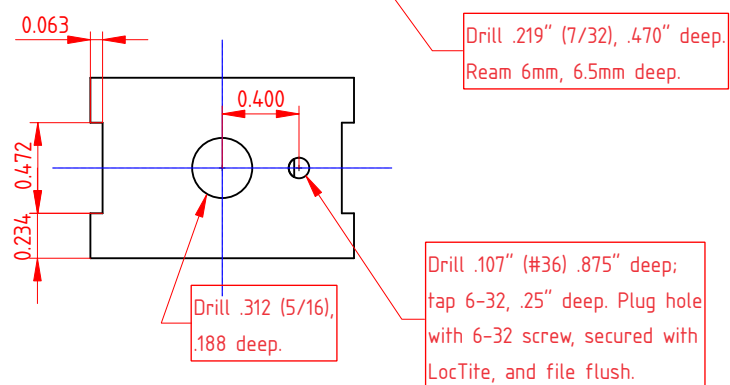
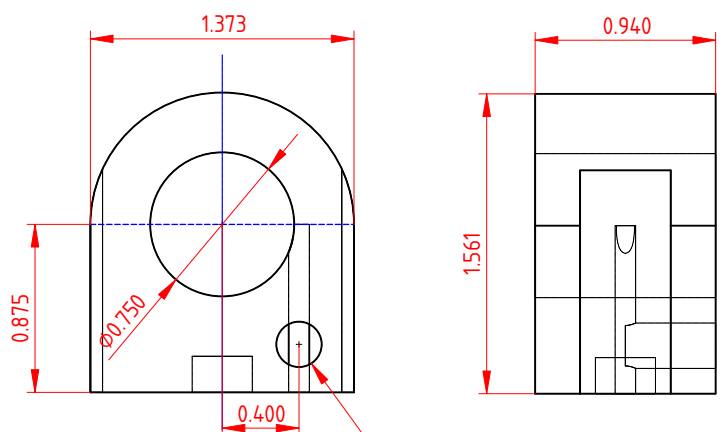
mild steel

Pinch Roller Carrier

(2 pieces)

Adjustable Roller Carrier

(2 pieces)



Copyright 2022 by Andrew H. Wakefield
Released under Creative Commons 4.0 BY-SA



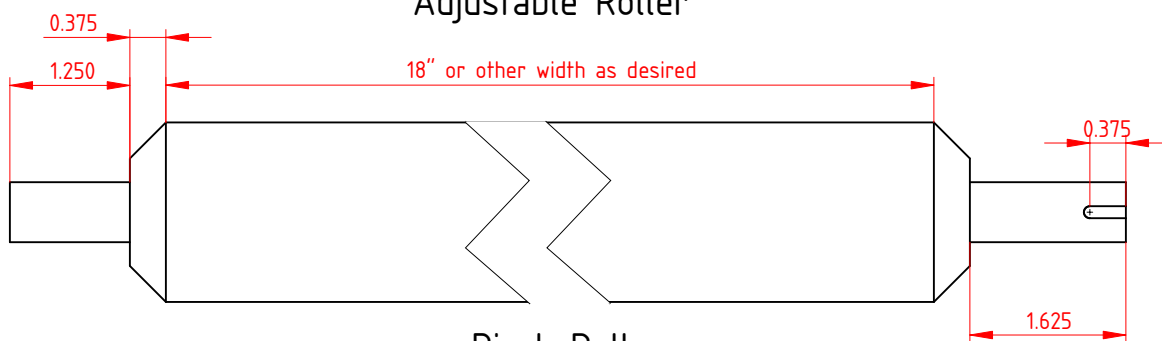
Designed by Andrew H. Wakefield	Scale 1:1	Default Dim. +/- .001"	Title Slip Roll: Carriers	Sheet 3	Revision 1.5	Date 1-18-2022
------------------------------------	--------------	---------------------------	------------------------------	------------	-----------------	-------------------

Rollers

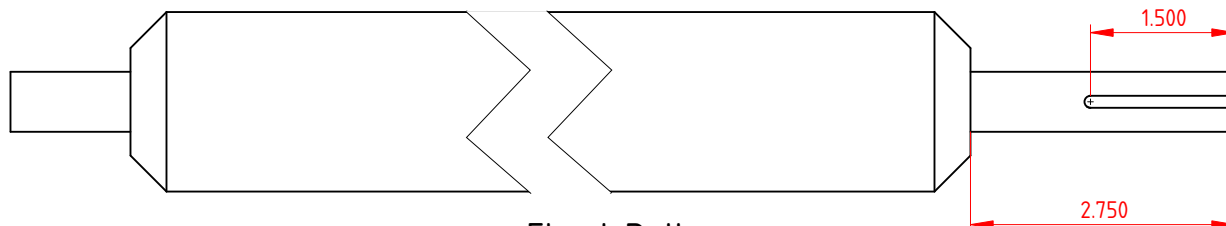
1.5" Schedule 40 steel pipe (nominal OD = 1.9"), with mild steel plugs and shafts welded into each end, then turned to size as shown below.



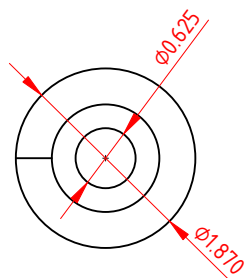
Adjustable Roller



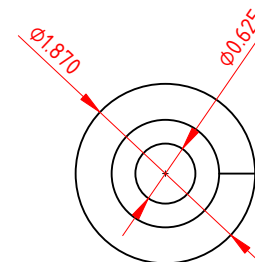
Pinch Roller



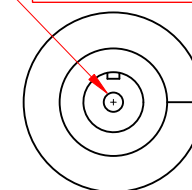
Fixed Roller



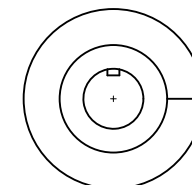
left end:
same dimensions
for each roller;
no key



Drill .201" (letter F)
1" deep; tap 1/4-20.



right end: pinch
and fixed rollers
each have 1/8" key.



Copyright 2022 by Andrew H. Wakefield
Released under Creative Commons 4.0 BY-SA



Designed by
Andrew H. Wakefield

Scale
1:2

Default Dim.
+/- .001"

Title
Slip Roll: Rollers

Sheet
3

Revision
1.5

Date
1-17-2022

D

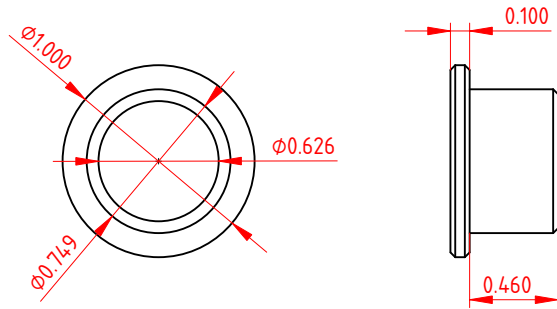
C

B

A

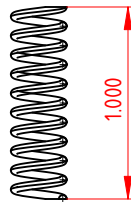
Bushing

bronze, 12 pieces



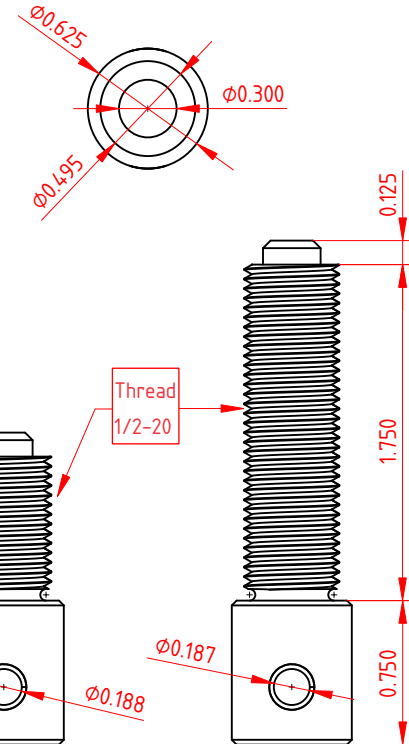
Spring

.041 music wire,
10 turns @ 10 tpi
on 0.180" mandrel.
(2 pieces)



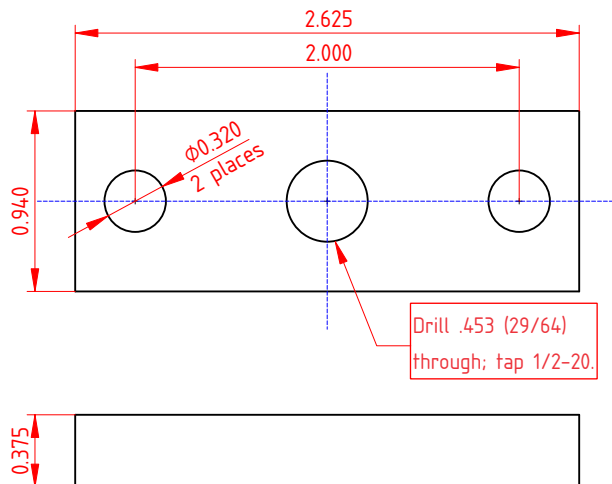
Adjustment Screws

mild or stainless steel
2 pieces of each size



Screw Plate

mild steel, 4 pieces



Copyright 2022 by Andrew H. Wakefield
Released under Creative Commons 4.0 BY-SA



Designed by

Andrew H. Wakefield

Scale

1:1

Default Dim.

+/- .001"

Title

Slip Roll: Miscellaneous

Sheet

4

Revision

1.5

Date

1-19-2022

D

C

B

A

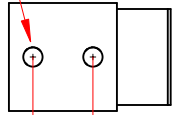
D

C

B

A

Drill .201" (#7) through to bore; tap 1/4-20 (2 places).



0.625

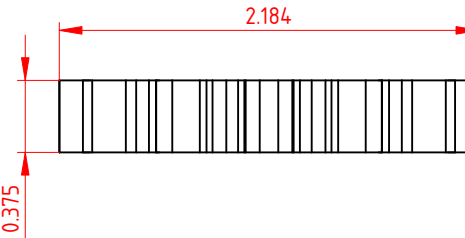
1.125

Handle

mild steel
(scale 1:2)

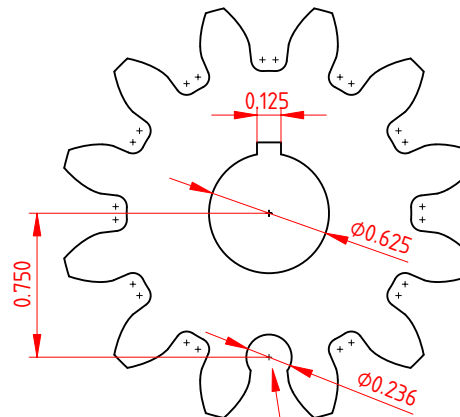
Gears

mild steel or cast iron
M4 20° PA 12 tooth
reduce OD to 2.184"
(two pieces; scale 1:1)



2.184

0.375



0.125

Ø0.625

Ø0.236

Drill 6mm hole as shown to provide access to the fixed-roller ball oiler (1 gear only).

3

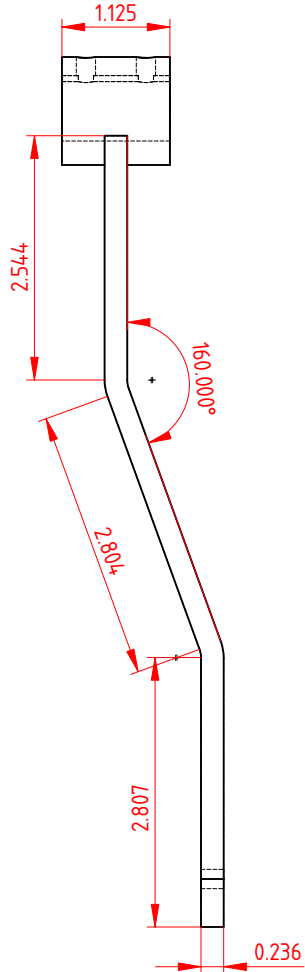
2

1

3

2

1



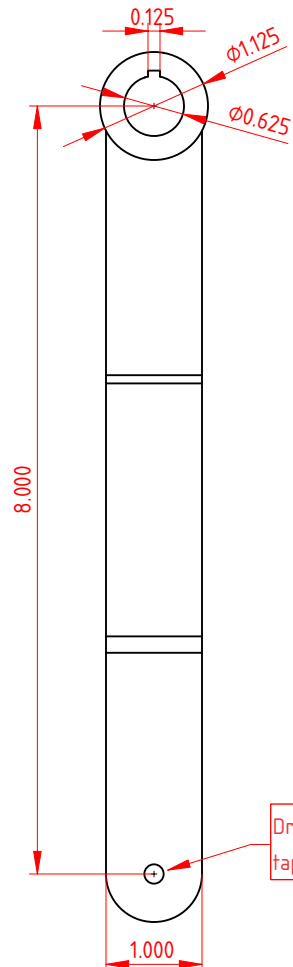
2.544

160.000°

2.801

2.807

0.236



0.125

Ø1.125

Ø0.625

8.000

Drill .201" (#7);
tap 1/4-20.

1.000

Copyright 2022 by Andrew H. Wakefield
Released under Creative Commons 4.0 BY-SA



Designed by
Andrew H. Wakefield

Scale
varies

Default Dim.
+/- .001"

Title
Slip Roll: Drive System

Sheet
5

Revision
1.5

Date
1-23-2022

D

C

B

A

D

C

B

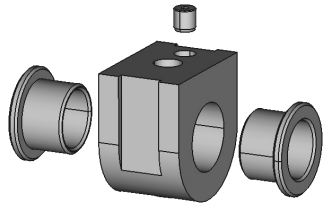
A

Loctite bushings into end plates and carriers. Press ball oilers into 6mm holes on end plates and carriers.

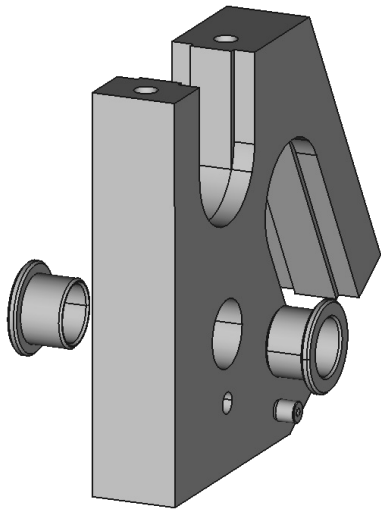
Assembly

Assemble parts as shown below. Use 1/8" x 1/8" x .375" keys to fix each gear on its shaft. Upper gear is held in place by a 1/4-20 bolt and washer in end of shaft. Lower gear is held in place by the handle, which is secured using a 1/8" x 1/8" x 1" key along with 1/4-20 x .25" set screws. Screw plates are attached using 5/16-18 x 3/4" bolts/SHCS. Mount assembly to steel or wood base using 5/16-18 bolts/SHCS.

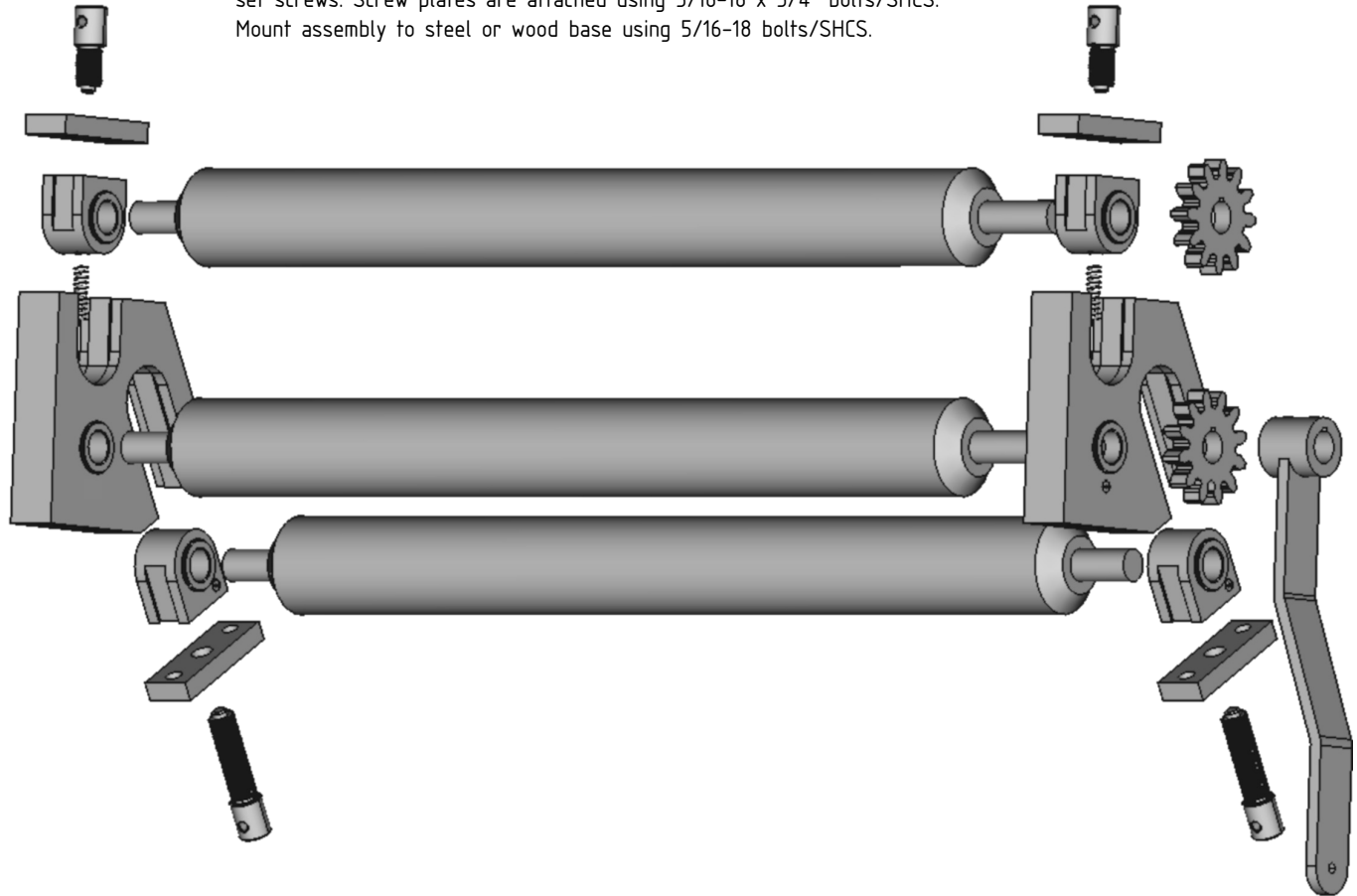
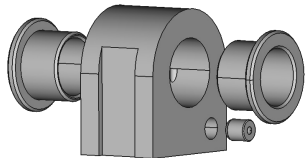
3



2



1



3

2

1

Copyright 2022 by Andrew H. Wakefield
Released under Creative Commons 4.0 BY-SA



Designed by

Andrew H. Wakefield

Scale

1:1

Default Dim.

+/- .001"

Title

Slip Roll: Assembly

Sheet

6

Revision

1.5

Date

1-24-2022

D

C

B

A