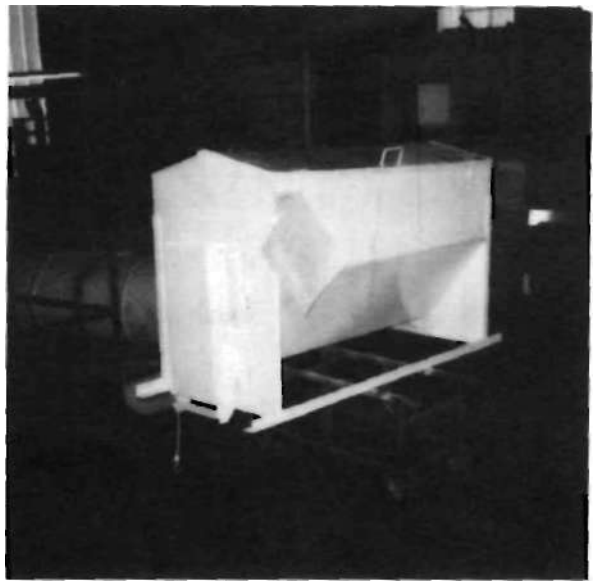
Cattle Cake Feeder



Bill of Materials

Part Description	Qty.	Kind of Material	Size of Part
Bearing flange	2	mild steel	3″ D.
Roller bearing	1		1″ I.D.
Adj. bearing plate	1	sheet metal	8″x 8″
Top lid	1	sheet metal	5′x 2′3″
Lid hinge pins	3	pipe & rod	4″ ⅜″ rod, 3″ ⅜″ pipe
Angle iron supports	4	angle iron	2′1″x 1½″x 1½″
Lid ledges	2	angle iron	2′x 1″x 1″
Power end plate	1	sheet metal	3′6″x 2′3″
Feed end plate	1	sheet metal	3′6″x 2′3″
Lid handle	1	rod	½″ rod, 10″
Lid hasps	2	mild steel	
Lid supports	2	angle iron	2′x 1″x 1″
Motor mount bracket	2	flat iron	½″x 1½″x 10½″
Power source	1	cast iron	
Feed auger	1	flighting	4″x 5′
Variable feed control shield	1	sheet metal	5′x 20″
Angle skids	2	angle iron	2″x 2″x 6′
Sides	2	sheet metal	5′x 3′x 2½″
Spout support hooks	2	chain links	
Long spout	1	sheet metal	2′1″x 11½″
Short spout	1	sheet metal	1′x 11″
Feed end bearing bushing	1	strap iron	6″x 2″
Horizontal angle frame	2	angle iron	2′3″x 1½″x 1½″

All sheet metal is 16 gauge.

Step 1) Cut angle iron for frame and skids and tack frame together. Bend side pieces on metal brake (sheet metal). Cuts: cut 4, 1-1 /2"x 1-1 /2" angle, 2'x 6" long; cut 2, 1-1 /2"x 1-1 /2" angle, 2'x 3' long; cut 2, 2"x 2" angle, 6' long; cut 2 sheet metal 5'x 3'2-l/2"; bend sheet metal 45 degrees I'll" from the bottom.

Step 2) Clamp sides into place on angle iron frame and tack into place. Sides come to point at bottom.

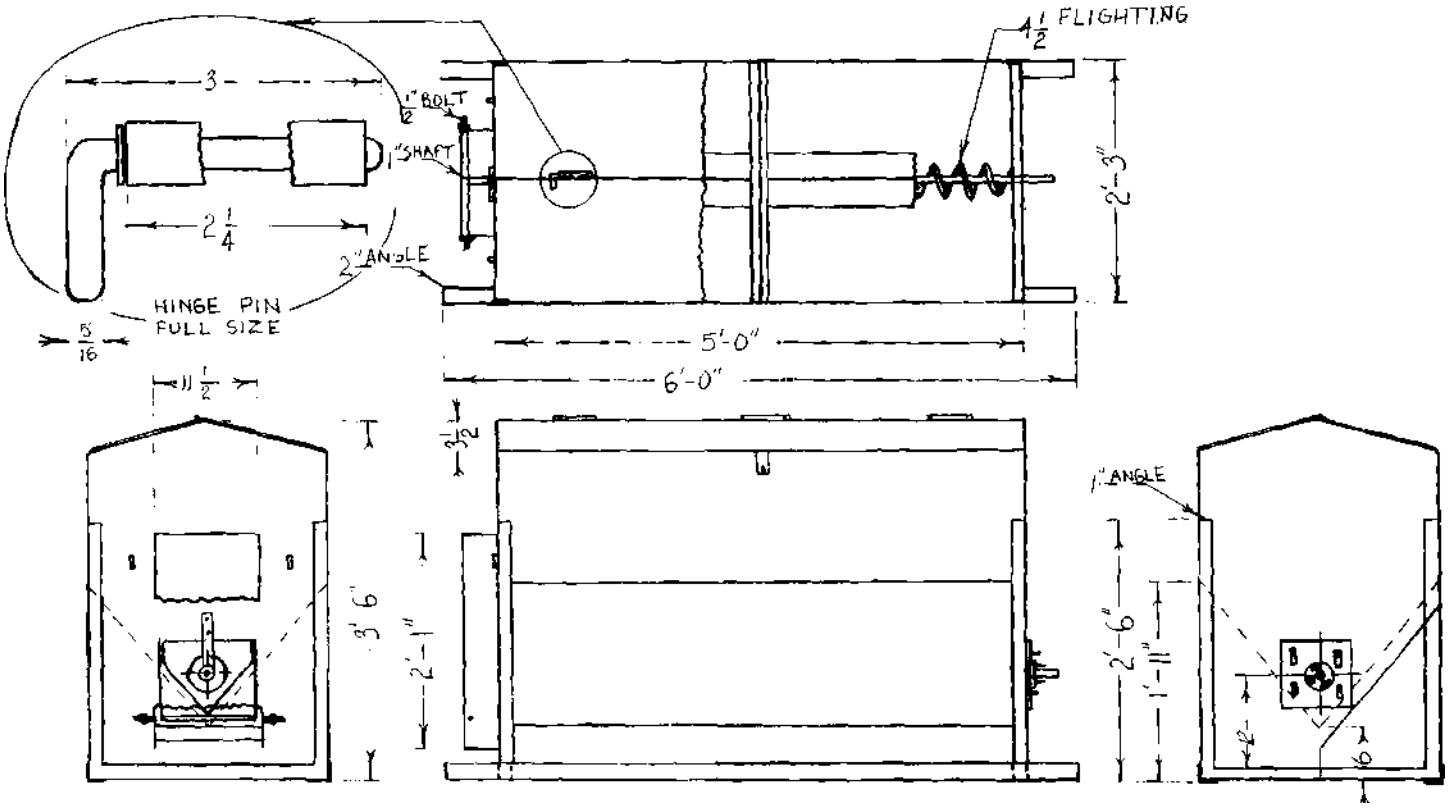
Step 3) Lay out ends and cut and tack these into place. Cuts: cut sheet metal, 2'3" x 3'6" with 3" peak included; cut hole in feed end *V* high along inside slant of sides; cut hole in power end 1' from side and up outside slant of sides; cut hole in power end 7" diameter with centered side to side and 1' high.

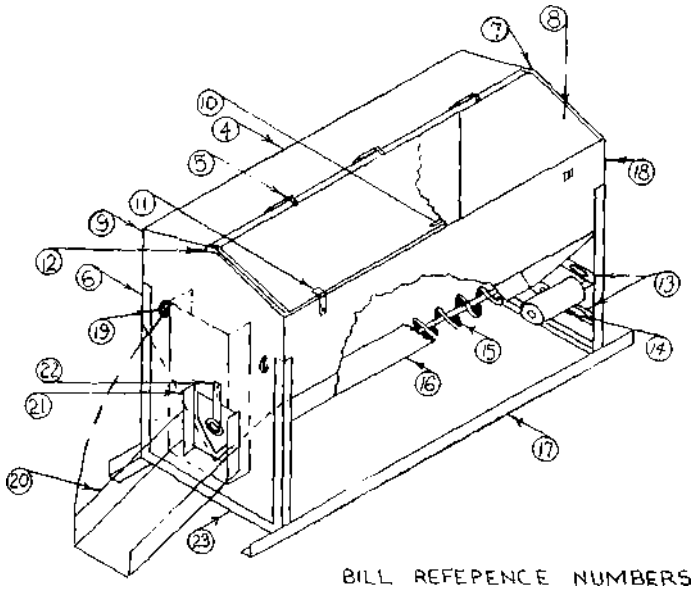
Step 4) Lay out and cut adjustable bearing plate. Cut slots for adjustable plate with cutting torch and put bearing onto plate. Cut sheet metal 8"x 8" with 2" diameter center hole, 3/8" x 1-1/2" slots.

Step 5) Put bearing plate onto end plate with carriage bolts and insert auger. Drill holes for bearing plate in power end to match bearing plate slots.

Step 6) Put in angle cross support member. Cut 1-1/2"x 1-1/2" angle 2'3".

Step 7) Weld stationary spout together and weld to feed out end plate. Cut two pieces sheet metal 3"x 1'. Cut one piece sheet metal 11 "x 5'.





Step 8) Bend metal for fold out spout with metal brake and join to stationary spout with bolt and pipe hinge. Cut sheet metal 19"x 2'1". Bend 4" from each side.

Step 9) Weld sides and end plates solid to angle iron frame.

Step 10) Bend feed adjustment plate and attach strap iron handles with slots cut in them for adjustment to each end. Cut sheet metal 5'x 20" and bend 10" from side, 90 degrees. Cut strap iron 1-1/2"x 3/16"x 12". Cut two 1/2" rod 6".

Step 11) Place one inch angle iron on inside top edge of end plates for lid lips. Cut two l"x 1" angle 2'.

Step 12) Lay out and cut piece for stationary half of lid and bend edge with a ball peen hammer. Cut sheet metal 5'x 1'2-1/2". Bend 1" lip.

Step 13) Place stationary lid on project and tack into place.

Step 14) Bend open half of lid with ledges, same method as before, and place into position. Cut sheet metal 5'x 1'5-1/2". Bend 1" lip and 2" lip.

Step 15) Cut rod and pipe for lid hinges with bolt cutters and pipe cutters. Bend rod at 90 degree angle. Cut three 3" pieces of 3/8" pipe. Cut three 4" pieces of 3/8" rod.

Step 16) Weld hinges onto lid and weld handle of half inch rod in C shape onto lid. Then weld hasps for latches on each end of opening lid. Cut 1/2" rod 10" and bend 90 degrees 2" from each end.

Step 17) Cut 1-1/2x1/2 inch flat iron for motor mounts and weld into place. Cut two 1-1/2"x 1/2" flat iron 10-1/2" long and cut 3/8" slot 7" long in middle.

Step 18) Lay out metal for shield over motor and sprocket and bend into box shape. Then mount with two small hinges.

Step 19) Put on two coats of metal primer.

Step 20) Put on four coats of white metal paint.

Step 21) Mount motor and chain (or belt) onto motor mount with two grade 5 bolts.