

Squeeze Chute

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The purpose of the chute is to restrain cattle while being branded, vaccinated, etc. by clamping down on the neck and squeezing in on the body.

Pre-Fabrication

Construction Procedure

There are five basic parts to the chute:

1. The frame
2. The sides
3. The front gate and head catch
4. The rear gate
5. The ratchet assembly and squeeze mechanism which is on top of the chute.

The first step was to assemble the frame and the sides separately, then put them together. This required pipe bending, welding cross supports on the bottom, and making clamps for the 2" pipe which would eventually hold the door in place and provide the point of attachment for an adjustable brace which slants from front to back on either side. The clamps were made from 2" lengths of 2W pipe so it would just fit over the frame pipe. A nut and set screw holds the clamp in place. Hinges for the front gate consisted of 2" lengths of 2 1/2" pipe which were allowed to turn around the frame pipe, and held in place by clamps above and below.

The upper half of the squeeze surface consisted of six removable, upright 1" pipes, each 26Vi" long. They ride in a frame which is clamped to the legs of the side. The whole mechanism is adjustable up and down for dif-

ferent size cattle. The lower half of the squeeze surface was wood with a door allowing access to the lower parts of an animal's body while in the chute.

Two support pipes run the length of the chute on top. The ends are flattened and bolted to the frame via a V*¹" x 1 Vi" strap welded to the pipe frame. These pipes held the frame fairly securely while I set the completed sides in place. The pivot holes in the frame and the legs of the sides had been drilled earlier.

The front gate and head catch was salvaged from a scrap iron pile. The only problem was that it was made to be worked from the opposite side from where I wanted it. By changing around a few parts I was able to convert it so it could be used from the correct side.

The rear gate was made in a quarter pie shape so it would swing into and out of the chute alley. 2" channel iron was used for the gate with 3" channel as the track to guide it as it swings. A handle and latch was made from about 18" of 7/16rod.

The ratchet assembly consisted of a 1 Vi" pipe shaft, a 12" notched wheel (1 Vi" plate), a 10" belt pulley 4" wide for the rope to wrap on and another 12" diameter plate to hold the rope in place. A chain winds up on the shaft as the rope is pulled, pulling in the sides while the notched wheel prevents it from slipping back until it is released.

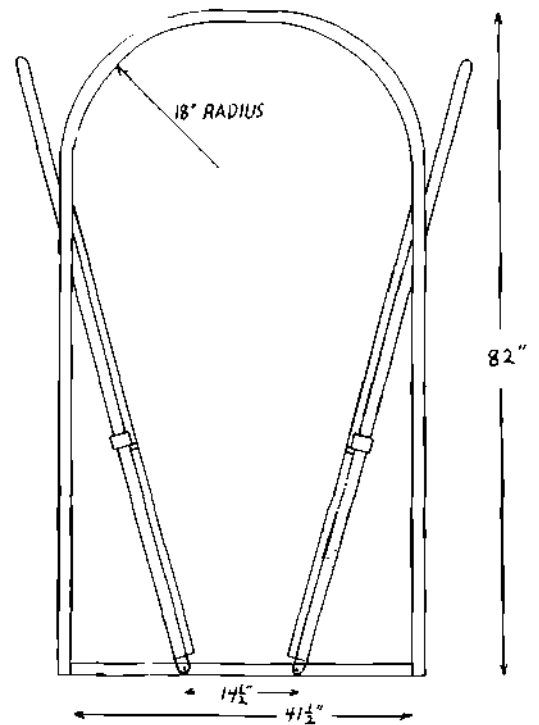
Springs pull the sides back into place. By using a 10" pulley on the rope having the chain wrap up around a 2" pipe, 5 to 1 leverage is gained for squeezing the animal.



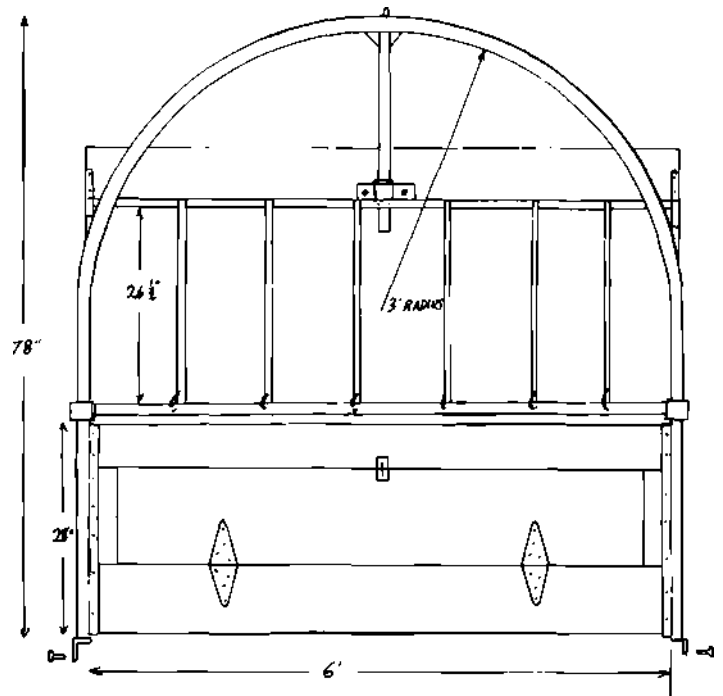
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Materials	Length
2" pipe	79"
1/2" x 2 1/2"	20"
1/4" x 1 1/2" strap	102"
1/4" x 2 1/2" strap	14"
2 1/2" pipe	28"
1" pipe	36"
3/8" x 1 1/4" strap	24"
1 1/4" x 1 1/4" x 1 3/4" angle	16"
1/8" x 2" plate	12"
3/16" x 1" strap	32"
3/8" x 2 1/2" flat	10"
1 1/2" pipe	33"
3/16" x 1 1/2" strap	110"
3/16" x 1 1/4" x 2" angle	24"
1/2" plate 12" dia.	
1/8" plate 12" dia.	
1/4" x 1 3/4" strap	18"
light chain	6"
3/16" x 2" x 1" channel	13"
1/4" plate 6" x 6" x 8"	
1/4" plate 8" x 8" x 11"	
3/16" x 1" strap	42"
3" x 1 1/4" x 1/4" channel	32"
7/16" rod	114"
10" dia pulley x 4"	
3/8" x 1 1/4" flat iron	10"
2 springs	6"
front gate	
1 gal. paint	
1 gal. thinner	
bolts	
8 - 3/8" x 2 1/2"	
1 - 1/2" x 2 1/2"	
40 - s 1/2" x 1/4" carriage bolts	
4 hinges	
2 latches	
boards	
4 - 2" x 6"	6'
4 - 2" x 6"	12"
2 - 2" x 12"	6'
2 - 2" x 12"	62"
1 - 3/4" nylon rope	14'
1 - 1/2" nylon rope	5'
Acetylene and oxygen	
Welding rod	

FRONT VIEW (LESS GATE)



SIPB VIEW



SIDE VIEW

