



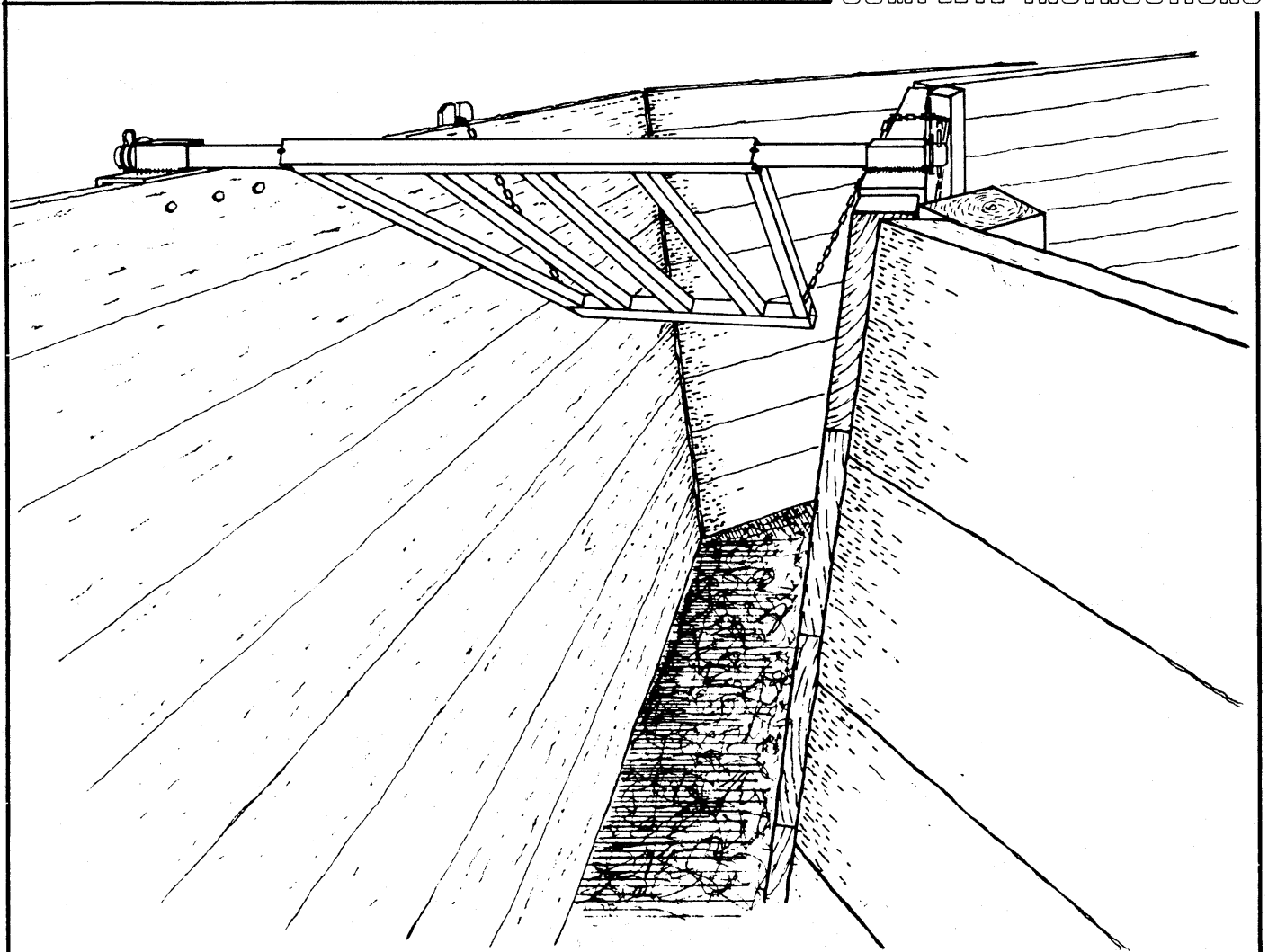
Saskatchewan
Agriculture
and Food

Agricultural
Engineering
Branch

Plan S - 182

One-Way Gates for Solid-Sided Working Chutes

COMPLETE INSTRUCTIONS



This leaflet describes three one-way gates or check stops for use in curved working chutes with solid sides. Each can be easily constructed, although commercial devices are also available.

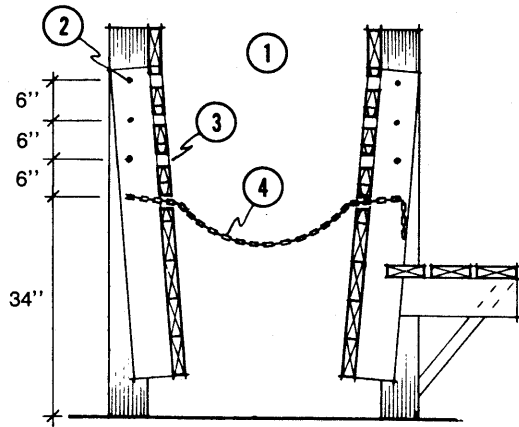
Locate the one-way gate approximately 12 feet before the entrance to the squeeze. The gate should not impair the animals sight down the chute, and should operate quietly to prevent balking.

A simple chain hanging across the working chute will work quite well with animals of uniform size. The chain should have an 8 inch sag and be easily adjustable. Calves and mature cows may be handled in the chute by adjusting the mounting height of the chain.

The overhead gate works equally well for cows and small calves. It is easily adjustable by means of an attached chain. For large bulls or exotic breeds of animals, headroom may be a consideration.

A pivoting pipe has also proven successful as a one-way gate. Since the pipe pivots upward at an angle it is basically self closing; however, a light spring may be required to assist in pulling the pipe from its fully open position. The pipe must extend far enough across the width of the chute, so it will not pinch an animal if it attempts to back up.

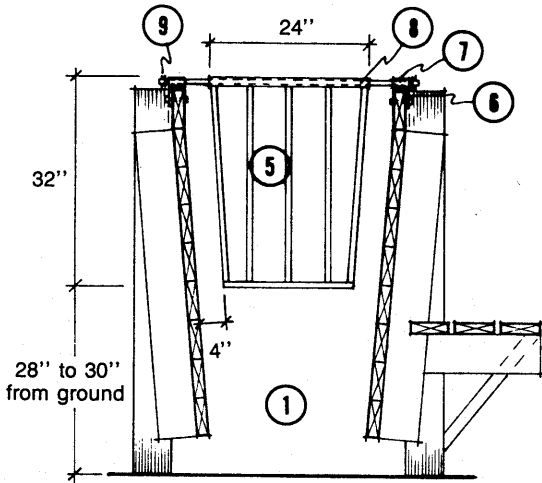
Details for the chute design used in this plan are shown in plan S-184. Some gate dimensions may have to be altered to suit a different chute design.



Front Cross Section

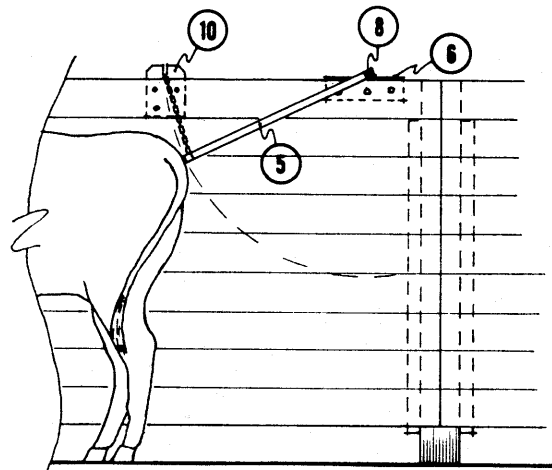
Chain Gate

1. Solid-sided working chute - see plan S-184
2. 3/8" lag bolts into post; leave 2" of bolt exposed
3. 1 1/2" diameter holes in planks
4. Chain; loop links over lag bolts (2) to attain an 8" sag at the center
5. 1" square x .125 steel tubing welded together to form gate
6. 2" x 3" x 12" angle iron bolted to outside of top rail
7. 1" square x .125 x 2" long steel tube hinge welded to (6)
8. 3/4" dia. steel shaft through (7) and top frame of (5); weld top frame to shaft
9. Washer and spring lock pin each end; to remove gate, remove pins and washers, and slide gate sideways
10. Chain bolted or welded to each side of gate; adjust gate by hooking chain links in a slot cut into a 3/8" x 6" x 8" steel plate; bolt plate to outside of top rail
11. 1 1/2" dia. x 2'-6" long std. steel pipe; cap and smooth chute end of pipe
12. 2" x 2" x 36" angle irons bolted to outside of chute rails; cut slot in chute rails between angle irons
13. 1/2" pivot bolt through (11) and (12)
14. 3/8" x 2" steel stop welded across (12)
15. Light spring and chain if required

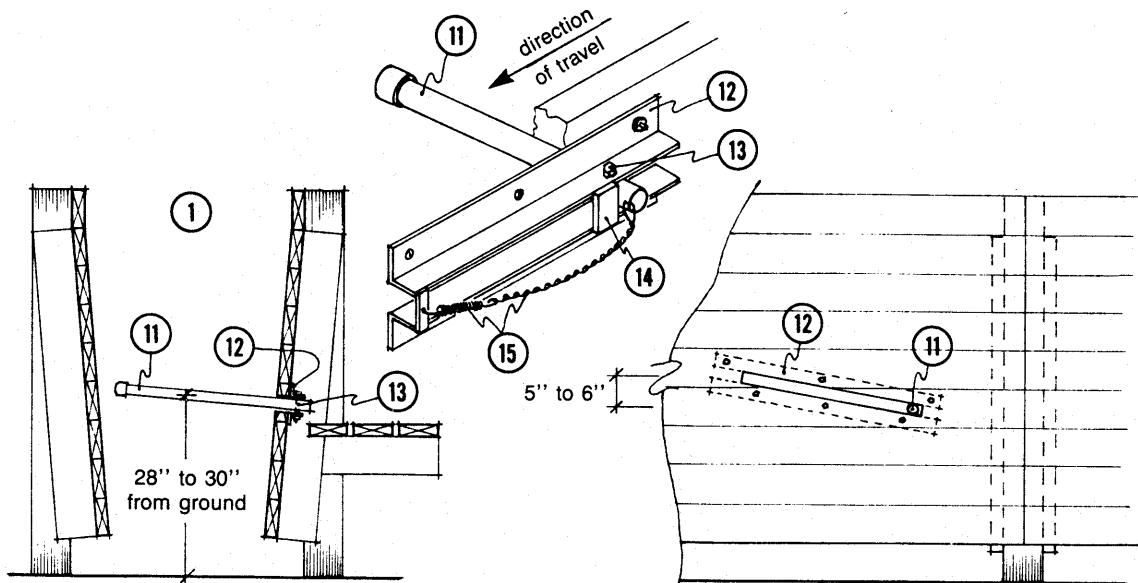


Front Cross Section

Overhead Gate



Side Cross Section



Front Cross Section

Side Cross Section

Pivoting Bar Gate