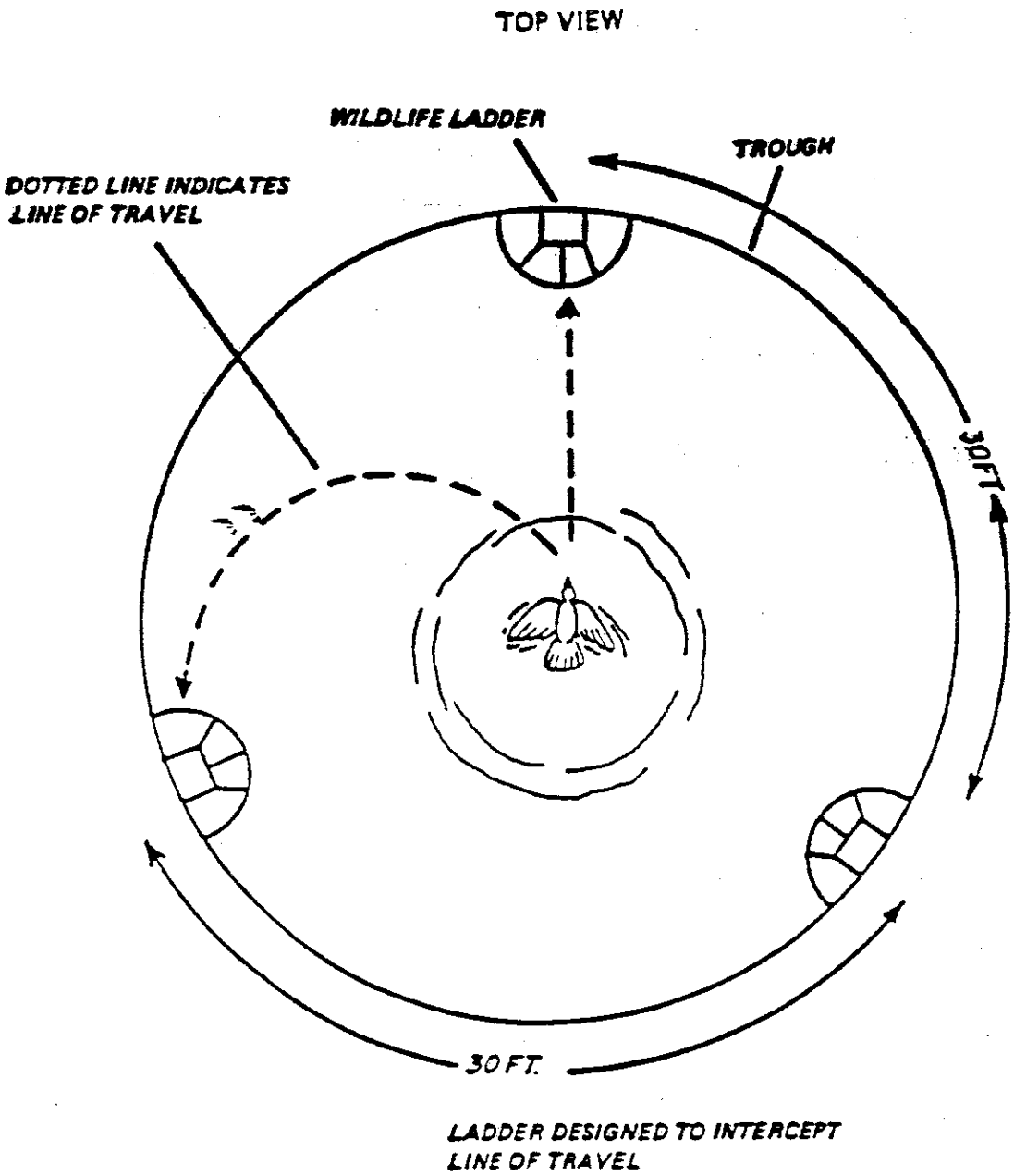
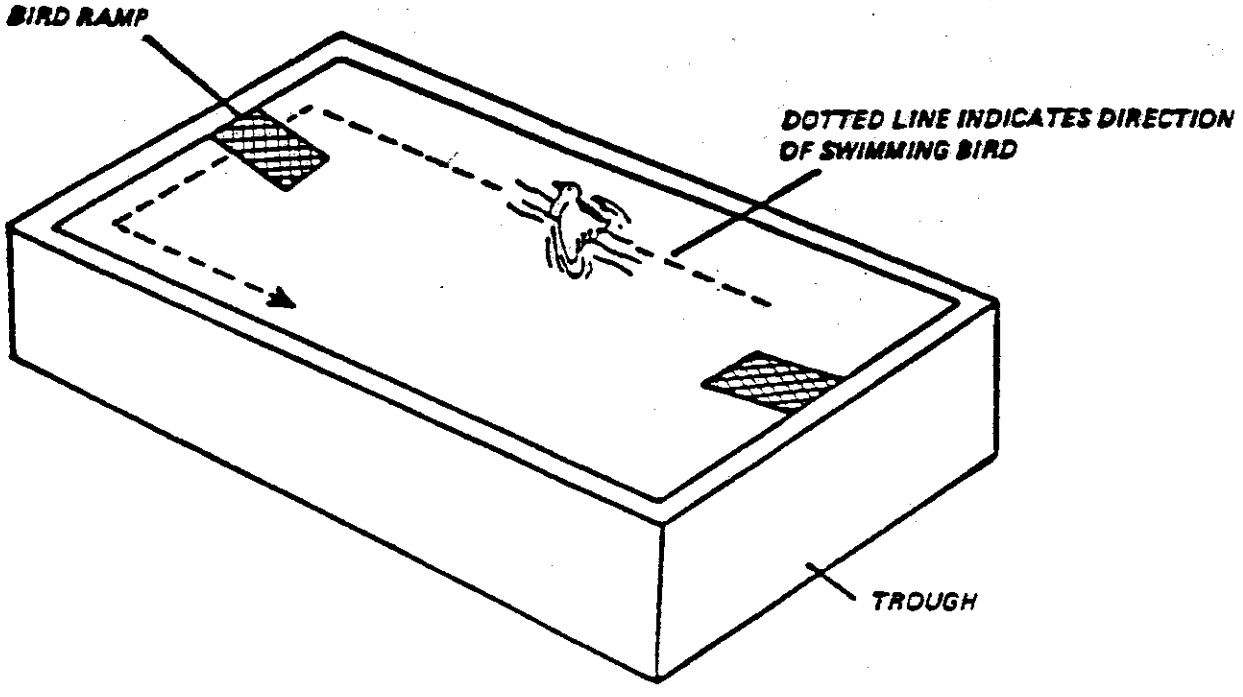
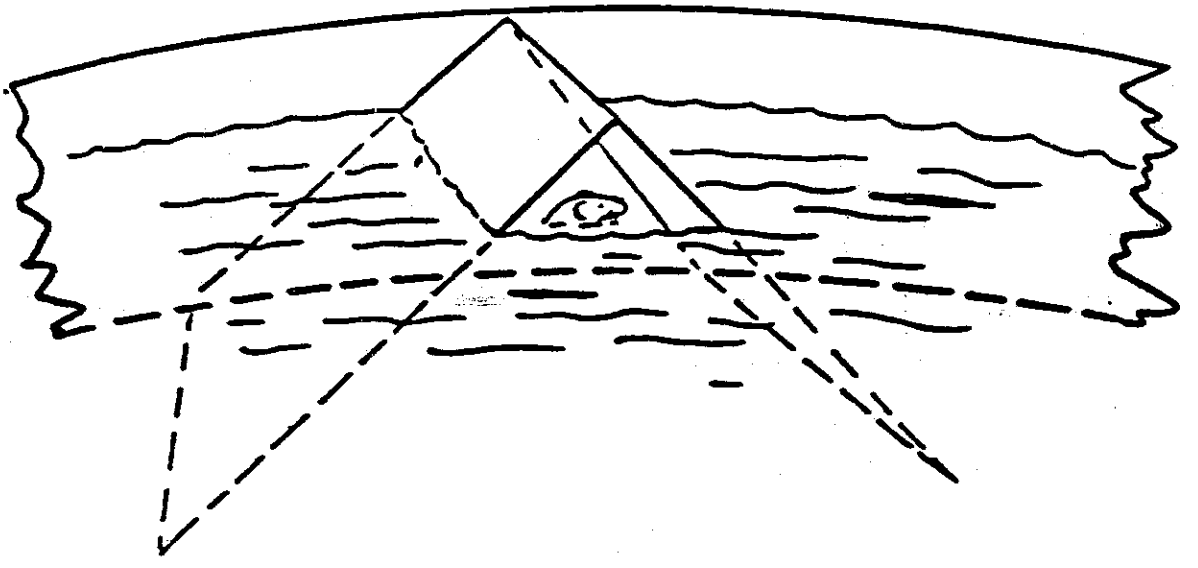


ILLUSTRATION 10: This drawing depicts probable swimming patterns from an animal falling into a circular trough. The wildlife ladders are properly installed. A minimum of one ladder per 30 ft. of trough perimeter is recommended.

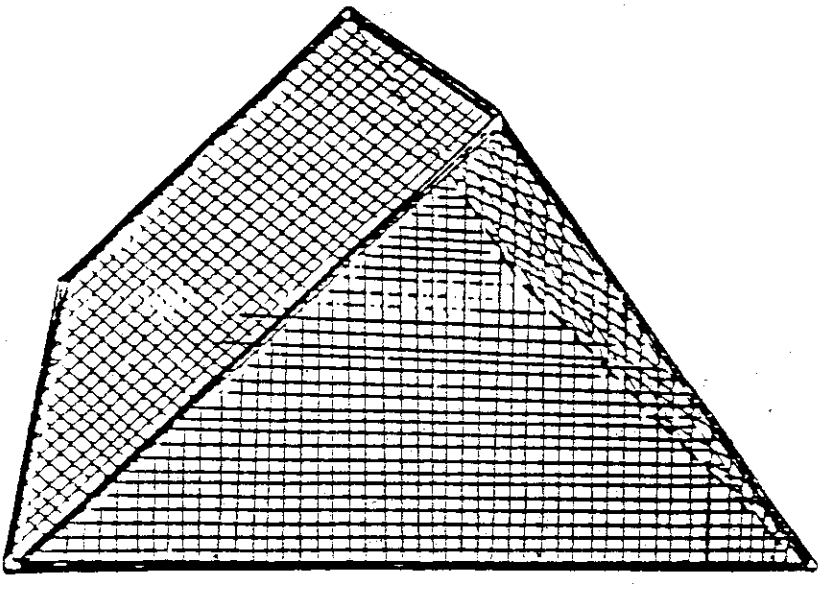


WILDLIFE LADDER, BIRD RAMP AT A 45° ANGLE TO TROUGH DOES NOT INTERCEPT LINE OF TRAVEL

ILLUSTRATION 11: Drawing depicts line of swimming pattern of an animal falling in a livestock watering trough and the probable problem with improperly designed wildlife ladder.



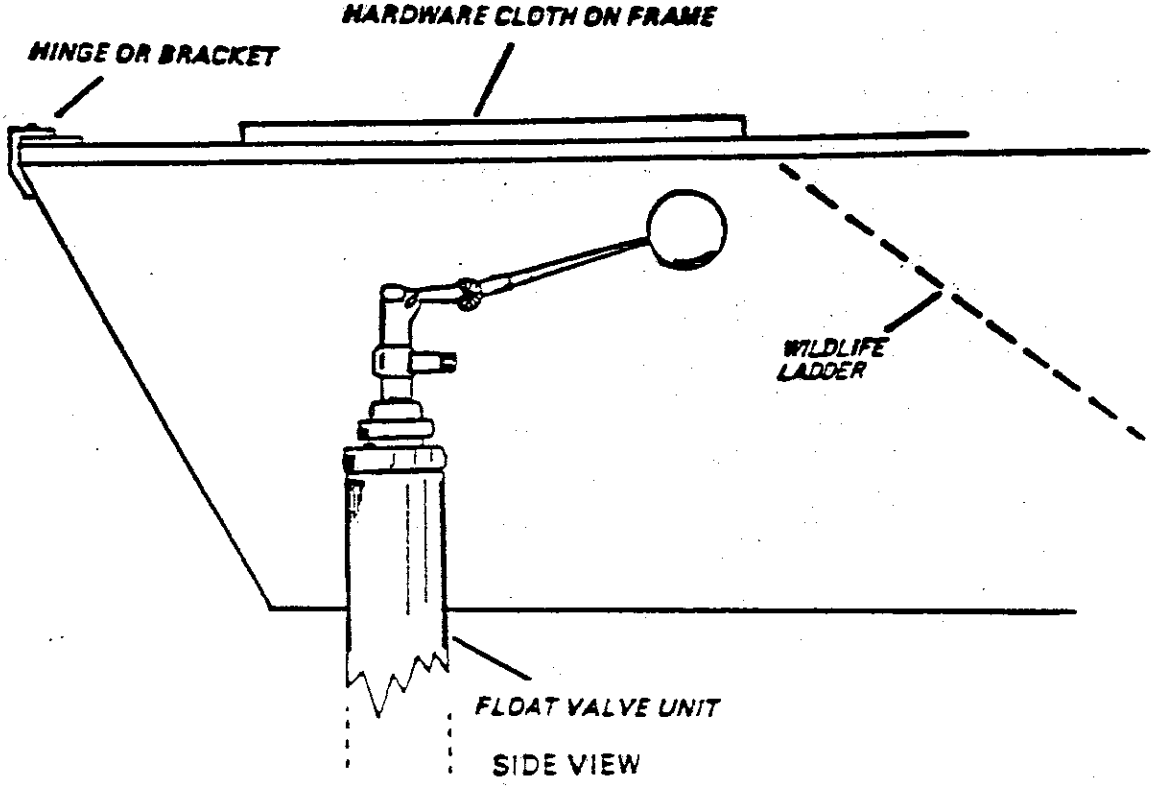
Improperly designed wildlife ladders can result in an animal becoming entrapped.



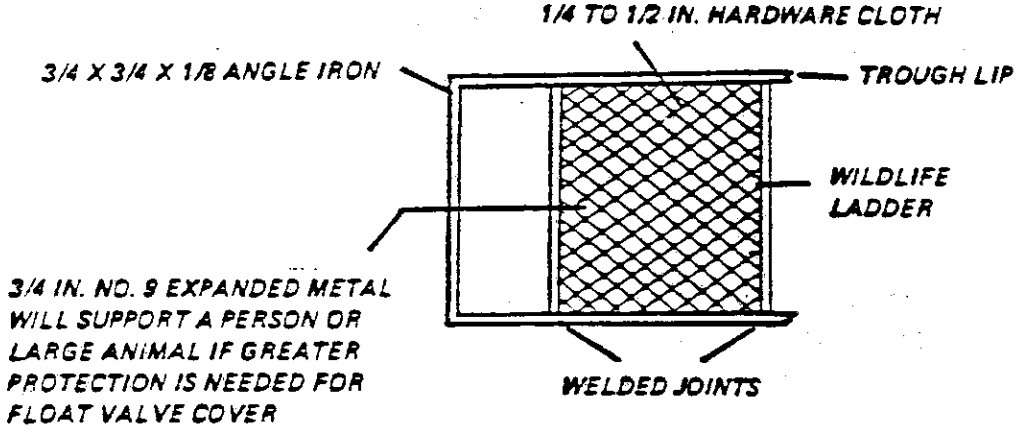
Closing the ladder opening makes it safe.

ILLUSTRATION 12

ILLUSTRATION 13: Float valve protective cover — wildlife ladder serves three purposes.



SIDE VIEW



TOP VIEW

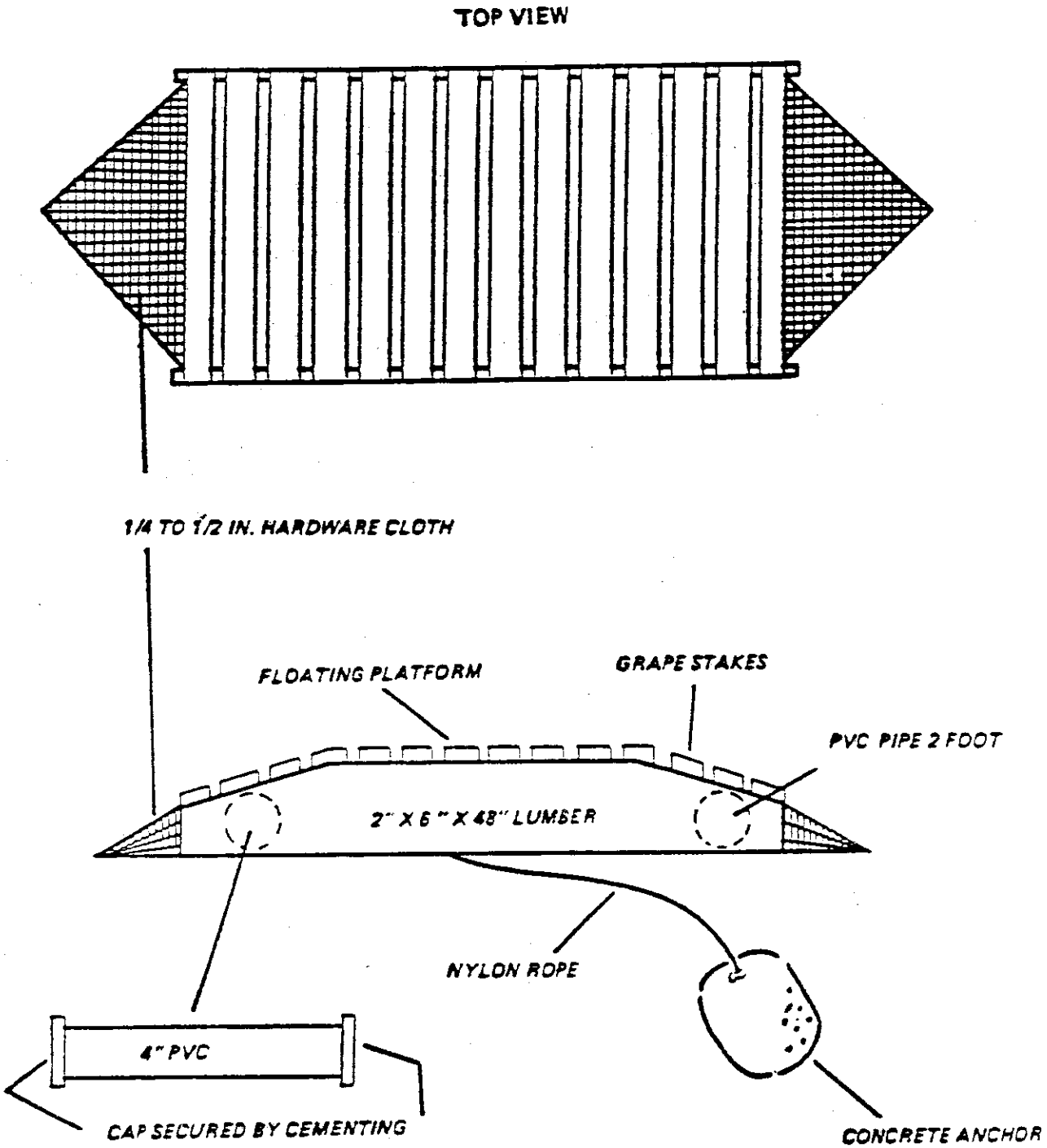
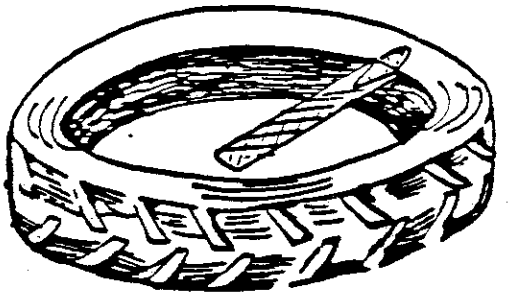
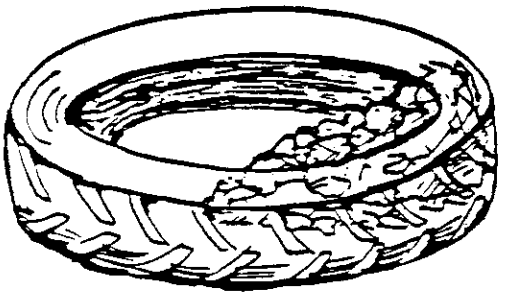


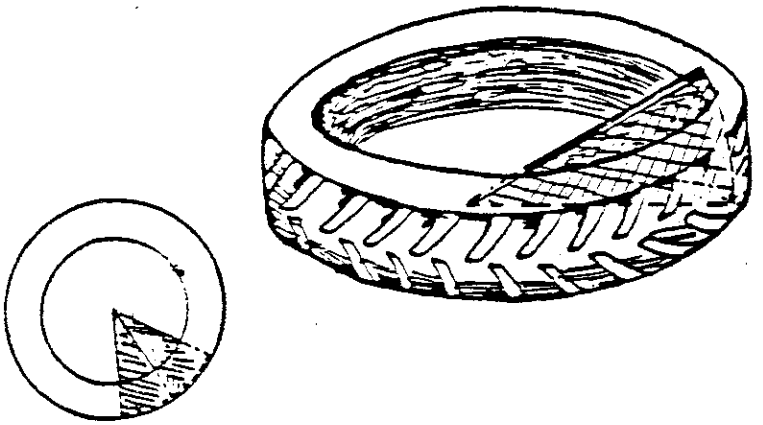
ILLUSTRATION 14: Floating wildlife platforms recommended for large open storage tanks.



Wood ramp with strap hinge, covered with 1/2" hardware cloth.
Length of ramp should be a least 18" greater than depth of tank.



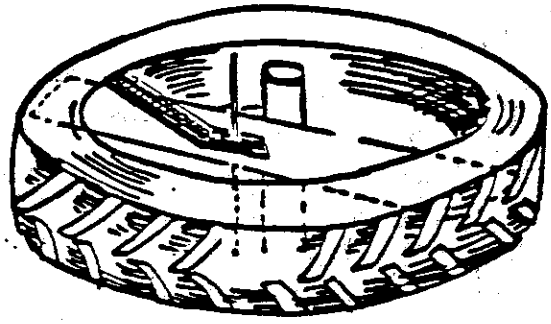
Rocks piled loose or cemented to form ramp.



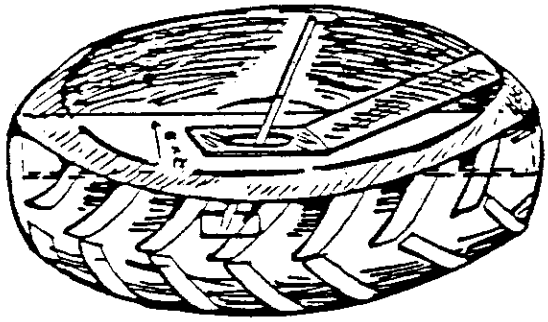
Expanded metal ramp (can be modified for other circular troughs)

Equipment tire water troughs

ILLUSTRATION 16

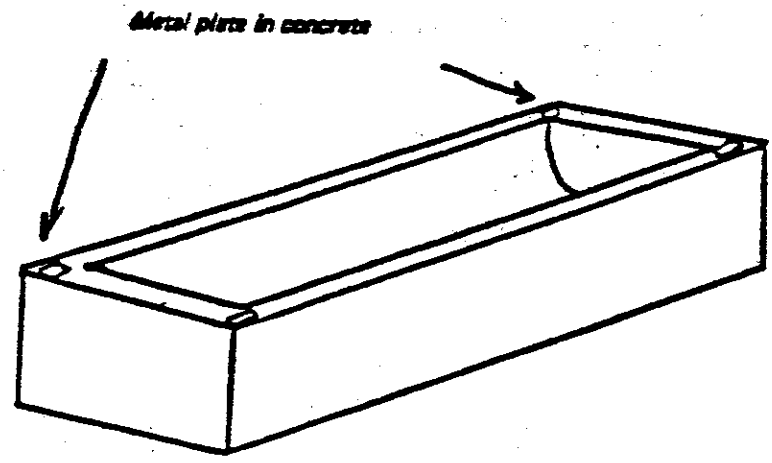


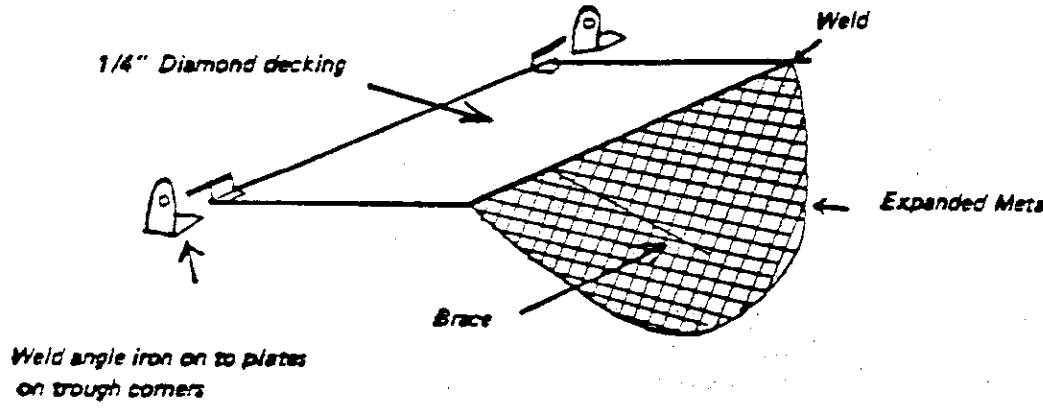
Floating board—ramp — offset mount



Floating board-ramp — center mount

ILLUSTRATION 17

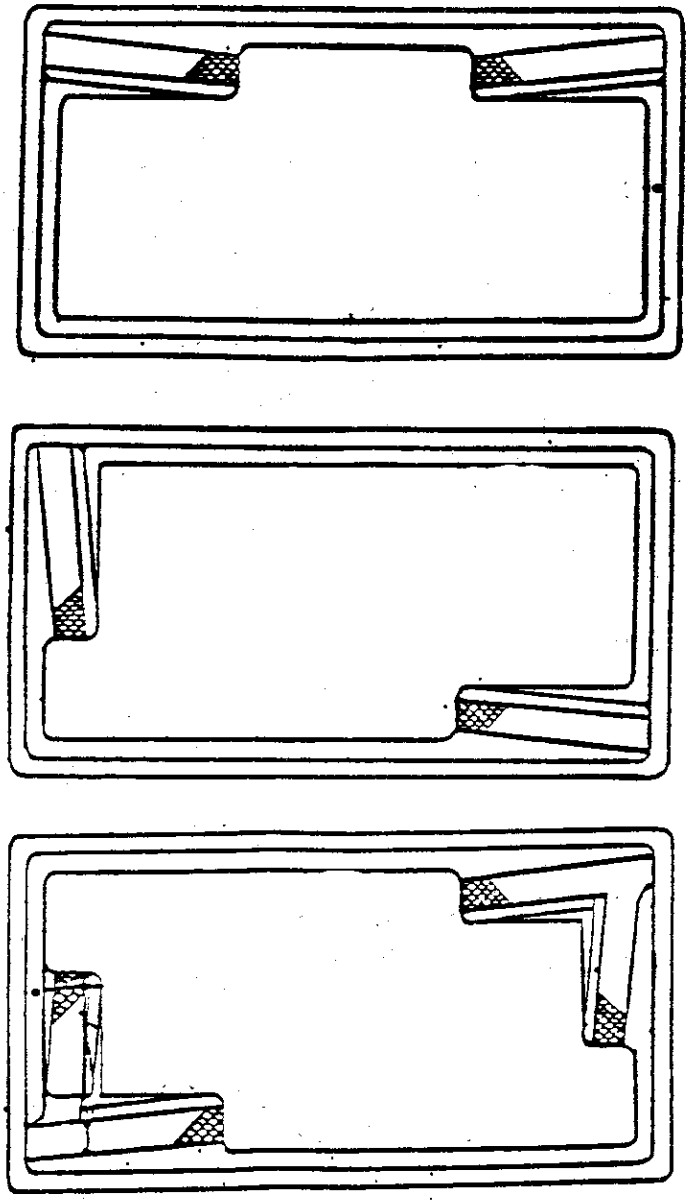




Round bottom cement trough

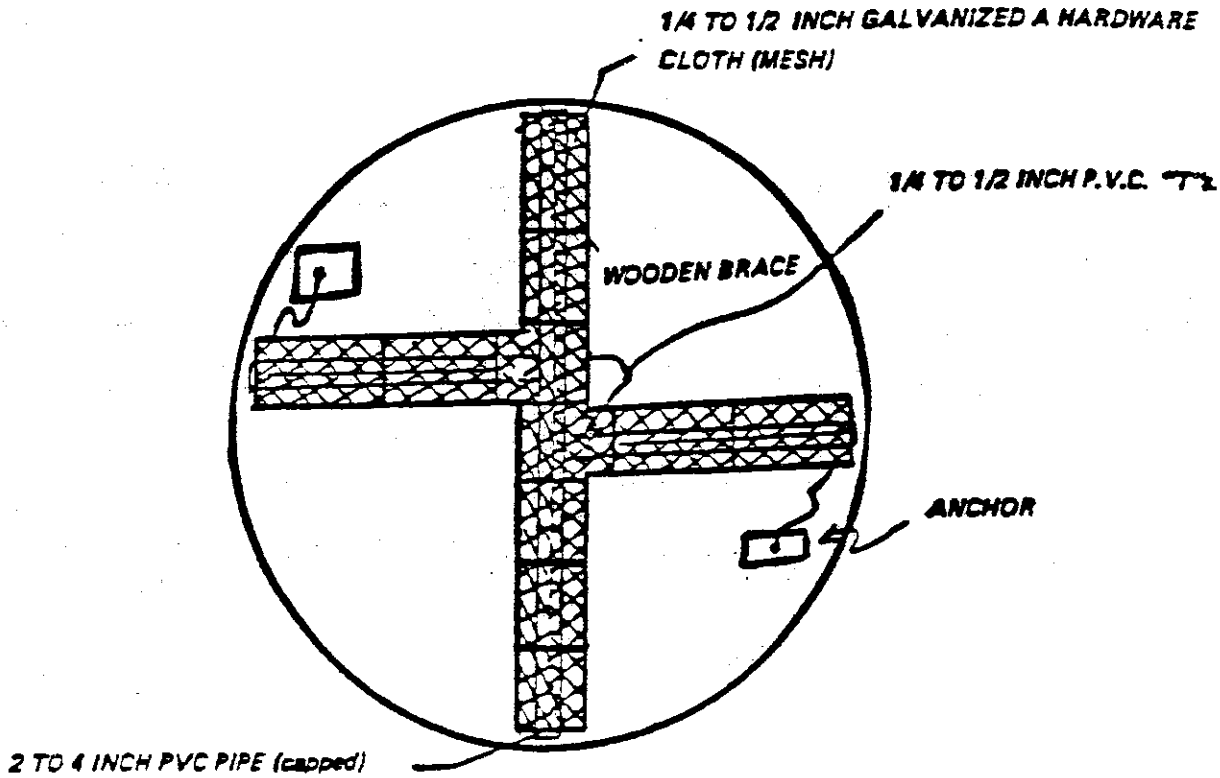
ILLUSTRATION 18

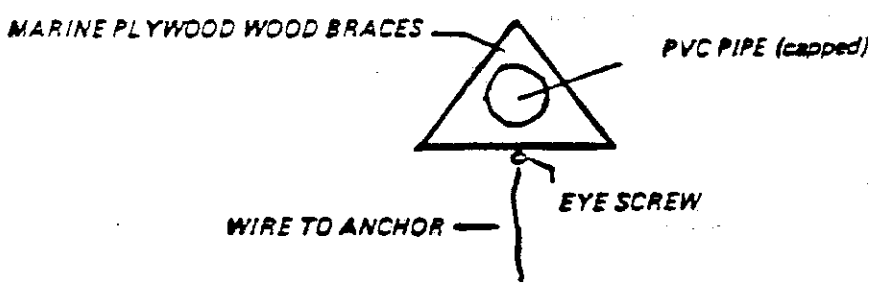
Preferred wildlife ramp locations.



These ramps could be molded in concrete or fiberglass troughs. For metal troughs the ramps may be constructed of wood or metal and attached. Note: these ramps are fully enclosed to prevent entrapment.

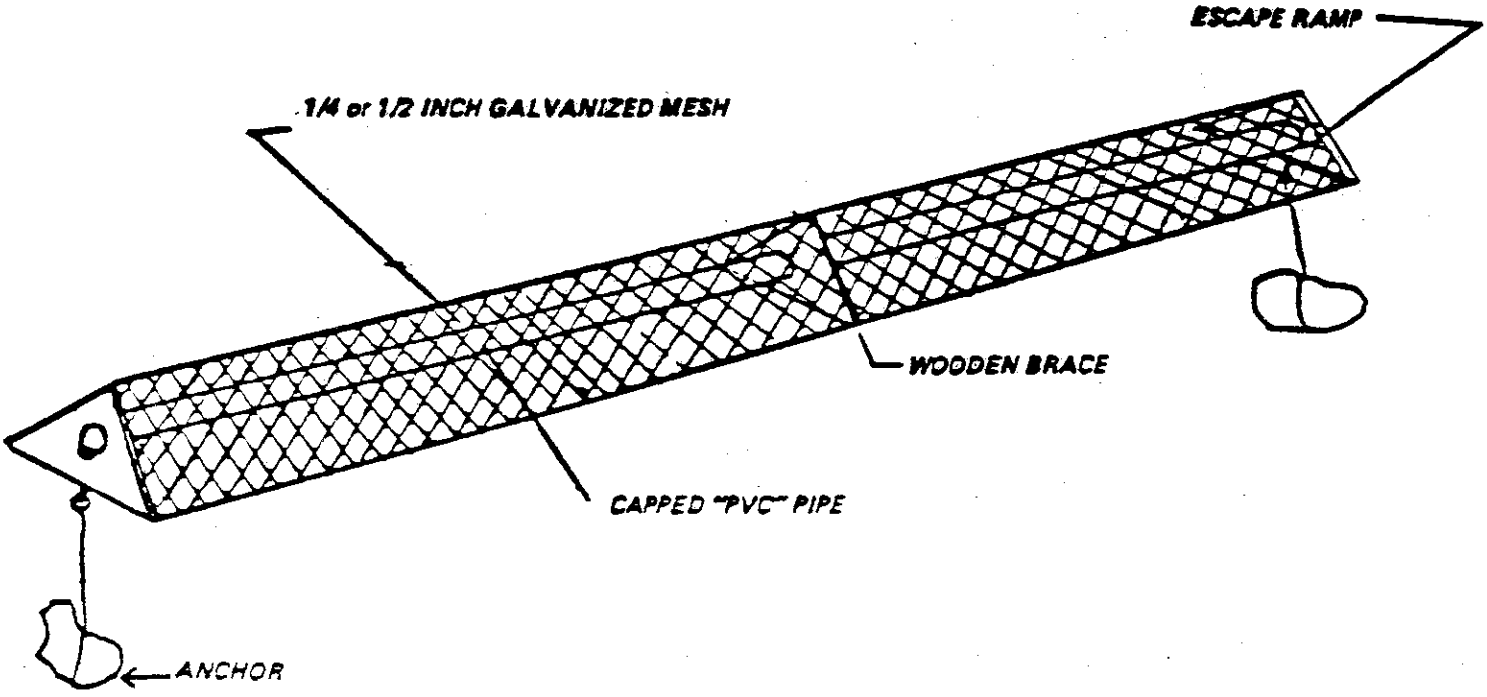
ILLUSTRATION 19: Preferred wildlife ramp locations





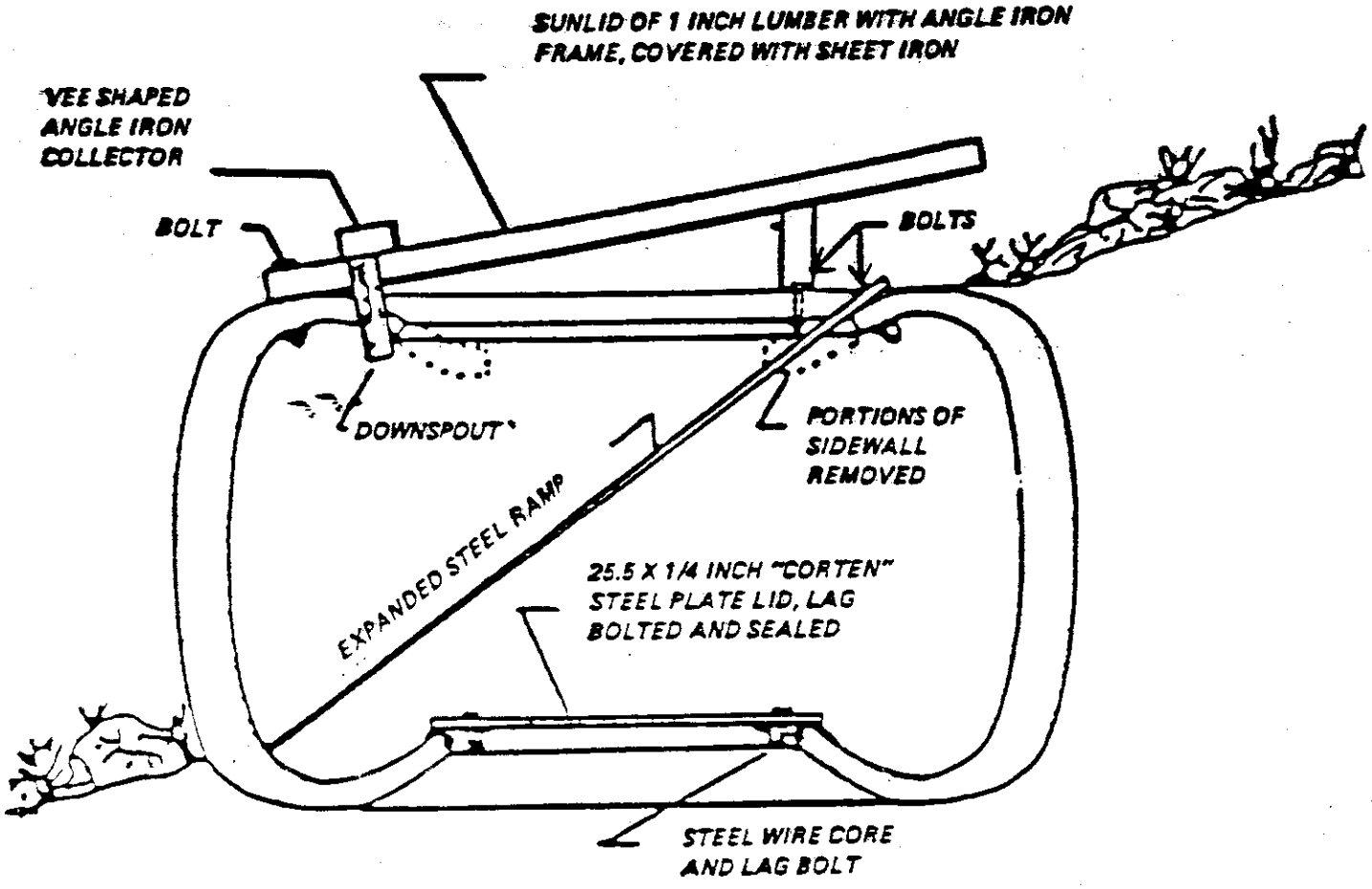
"PVC" escape ramp for circular troughs

ILLUSTRATION 20



"PVC" Escape ramp for straight troughs

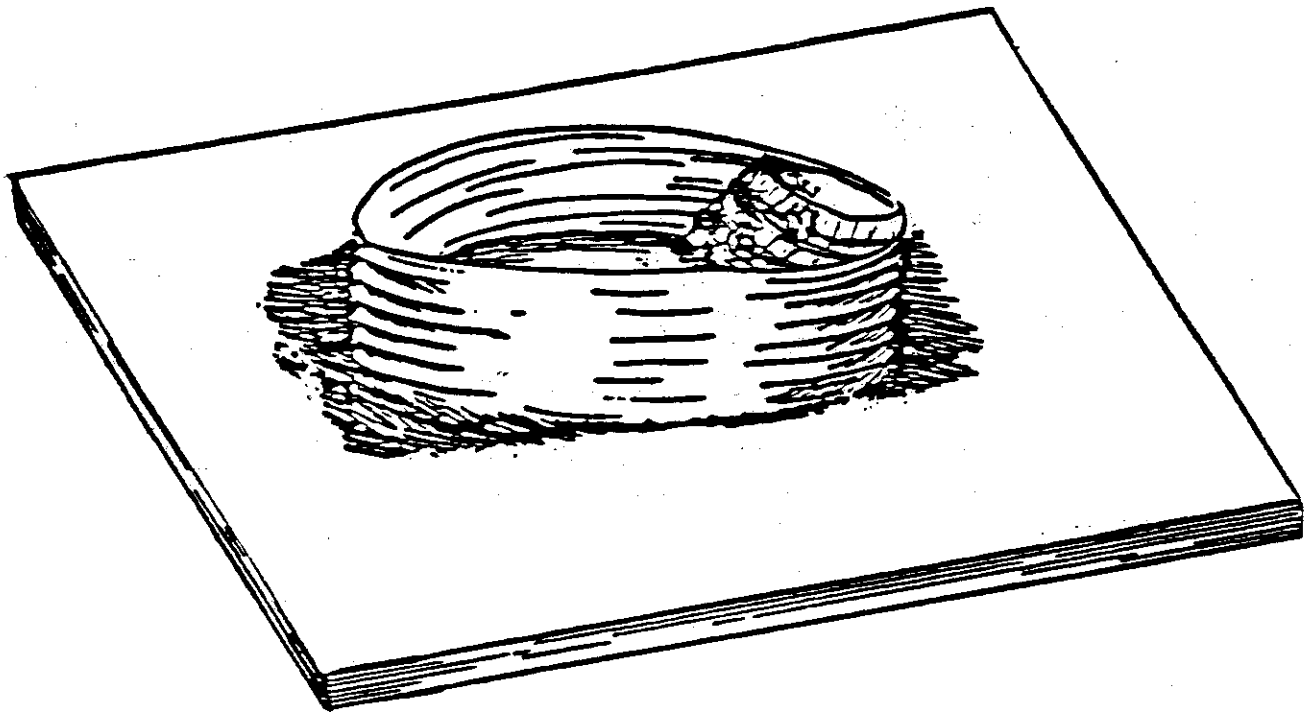
ILLUSTRATION 21



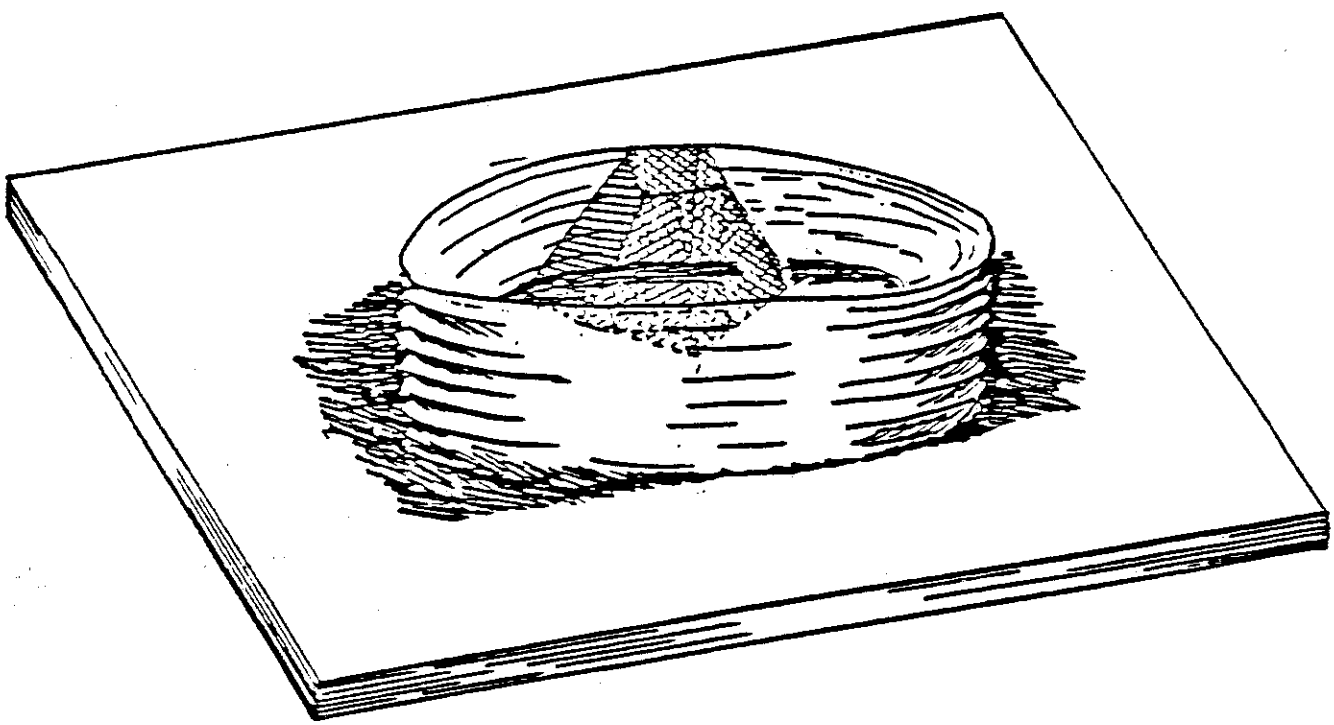
A CROSS-SECTIONAL VIEW OF A GUZZLER CONSTRUCTED FROM A LARGE TIRE

ILLUSTRATION 22

Sloped concrete ramps for wildlife and livestock.

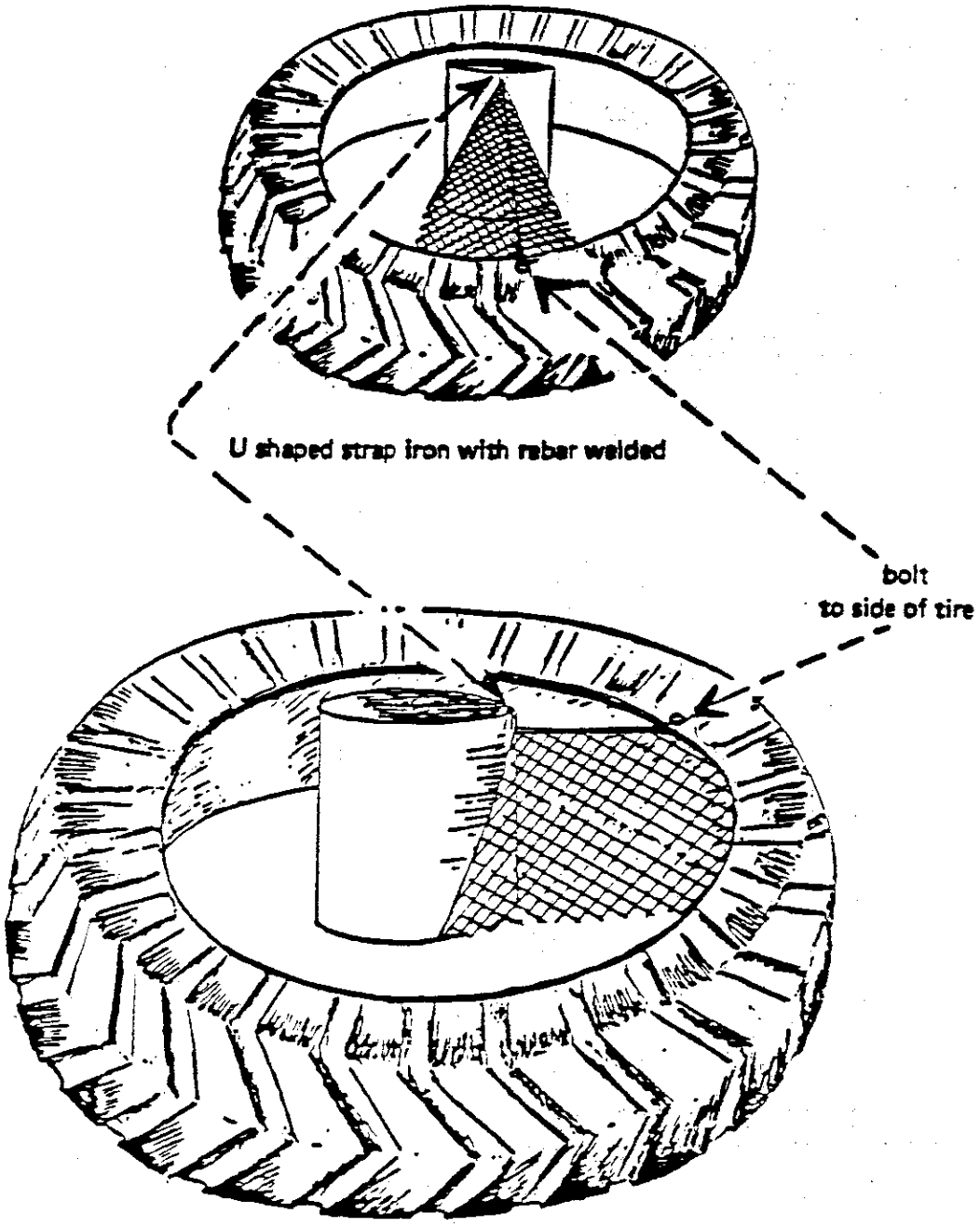


Expanded metal wildlife ramp and float protector (can make hinged opening on top or sides for access to float))



Ramps for metal tanks

ILLUSTRATION 23

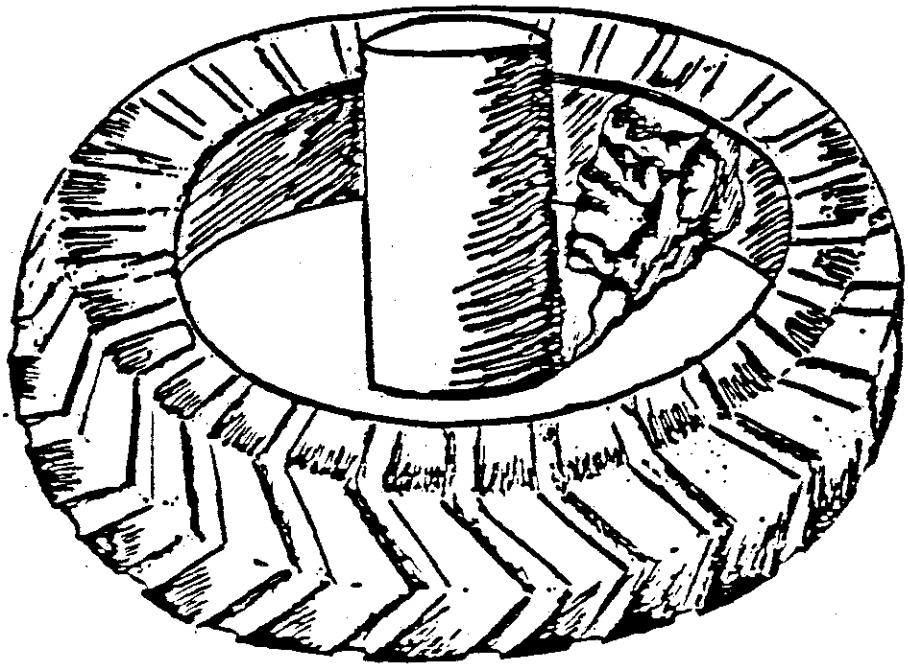


Large equipment tires with cement float protector (top covered)

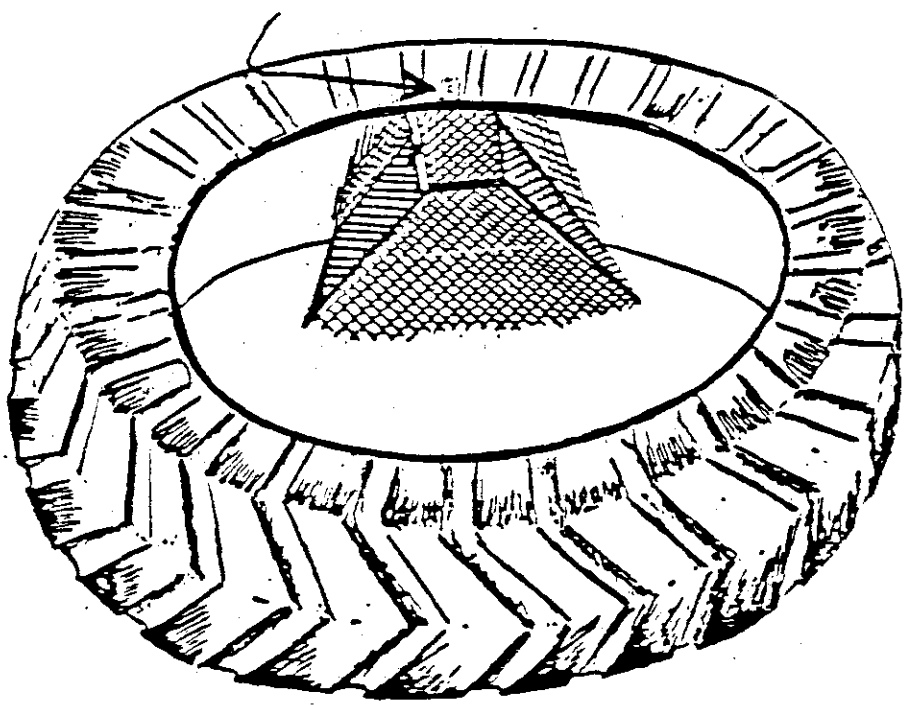
Ramps for equipment tire

ILLUSTRATION 24

Cemented rock ramp



bolt holds ramp to side of tire



expanded metal wildlife escape ramps and float protector

ILLUSTRATION 25

References

Elderkin, Robert L. Jr. and James Morris. Design for a Durable and inexpensive Guzzler. Wildl. Soc. Bull. 17: 192-194. 1989.

Ferguson, James R. BLM Wildlife Biologist (Illustration 19).

Numerous US Forest Service and BLM personnel.

Wilson, Lanny O. 1977. Guidelines and Recommendations for Design and Modification of Livestock Watering Developments to Facilitate Safe Use by Wildlife. Technical Note 305. BLM.