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A VEHICLE MOUNTED BAIT DISPENSER

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ABSTRACT: A 3-inch-diameter plastic tube mounted on a truck was designed for distributing bait (cut carrots or grain) for mammal control. Baits are fed into the tube by an operator standing in the truck bed. The device is light-weight and detachable and permits rapid, accurate placement of bait along a line on the ground or in a plowed furrow.

INTRODUCTION

Since 1963, biologists at the Denver Wildlife Research Center's field station at Twin Falls, Idaho, have been studying methods of controlling damage by black-tailed jackrabbits (Lepus californicus). Investigations showed that the best method of distributing poison baits is placing pieces of cut carrots along a line on the ground or in a furrow.

Furrow poisoning has been successful in controlling rabbits (Oryctolagus cuniculus) in Australia and New Zealand (Thompson, 1958). Control operators in these countries use a baiting tube with a single disc attachment to form and bait furrows in one operation (Douglas, 1961). This device cannot be used for line baiting, and if prebaiting is done, its disc must be removed before baiting in the same furrow. Since it is mounted on the rear tail gate of a vehicle (Douglas, et al., 1959), it must be detached to travel cross-country and appears unsuitable for rough terrain.

In Idaho, another method was needed. Walking a bait line was not feasible in large baiting operations. When carrots were dropped by hand from a moving vehicle, they bounced out of the furrows, becoming covered by dust or rolling beneath the vegetation. Therefore, a light-weight, portable bait-dispensing tube was designed to rapidly bait large areas and accurately place carrots on the ground.

DESIGN OF DISPENSER

The construction of the dispenser is shown in Fig. 1. The tube is made from an 8-foot length of 3-inch-diameter plastic sewer pipe. Type ABS plastic pipe is preferred because of its rigidity and impact resistance, a 45° elbow and a water closet flange are fastened to one end of the pipe. At the other end of the pipe a weighted skid is attached. The skid prevents wear on the tube from abrasion, reduces lateral rolling of carrot baits, and clears a track for the bait to lie in. The weight on the skid (a 1/2-inch iron plate on the underside) reduces bouncing of the tube when it hits rocks and brush and keeps the tube riding at the bottom of the furrow when furrow baiting is used. When furrows are not used, the tube rides at the edge of the tire and the bait falls into the tire track.

An adjustable collar is fitted to the pipe about 2 feet from the elbow. The collar is attached to the truck by short pieces of iron and bolts that make two hinge connections, one pivoting vertically and the other laterally. By loosening the collar, the tube can be adjusted for proper height above the truck bed.

To prevent the tube from wedging between the tire and rear fender on steep hills, a deflector made from a 1-foot iron strap is welded below the rear fender. To reduce abrasive wear, a sheet metal collar is fastened to the tube where it touches the deflector.

A U-shaped bracket welded to the rear of the truck bed provides a support for the tube that permits travel without detaching the tube from the truck (Fig. 2).

BAIT DISPENSING

In baiting operations, one man sits on the spare tire mount next to the tube or stands in the bed of the truck and feeds carrots into the tube (Fig. 3). The carrot supply is carried in a 20-gallon container on a shelf behind the cab. In rough terrain, he can adequately feed the carrots into the tube and guide it when necessary with only his left hand. The driver of the truck follows a desired path and observes, in the side mirror, the interval between carrot pieces in order to regulate the speed of the truck for proper spacing of bait. Carrots are generally spaced about 6 to 9 feet apart. On smooth ground, a truck speed of 5 to 7 miles an hour is used to distribute 75 to 100 pounds of cut carrots per mile traveled.

In rough terrain where slower speeds must be used, the operator simply feeds the carrots into the tube more slowly.

CONCLUSION

This simple, inexpensive baiting tube is designed for use wherever a four-wheel-drive truck can operate. With it, two people can rapidly and accurately bait extensive areas (field borders, for example) without any mechanical changes for different baits or for cross-country travel. When bait is placed in a plowed furrow, the weighted end of the tube rides in the furrow with a minimum of guidance by the operator. In line baiting on unplowed surfaces, the end of the tube follows and distributes bait in the tire track. Although the tube was designed for distributing cut carrots, it is equally useful for distributing other types of bait, such as grain, in any operation that calls for baiting along a line on the ground.

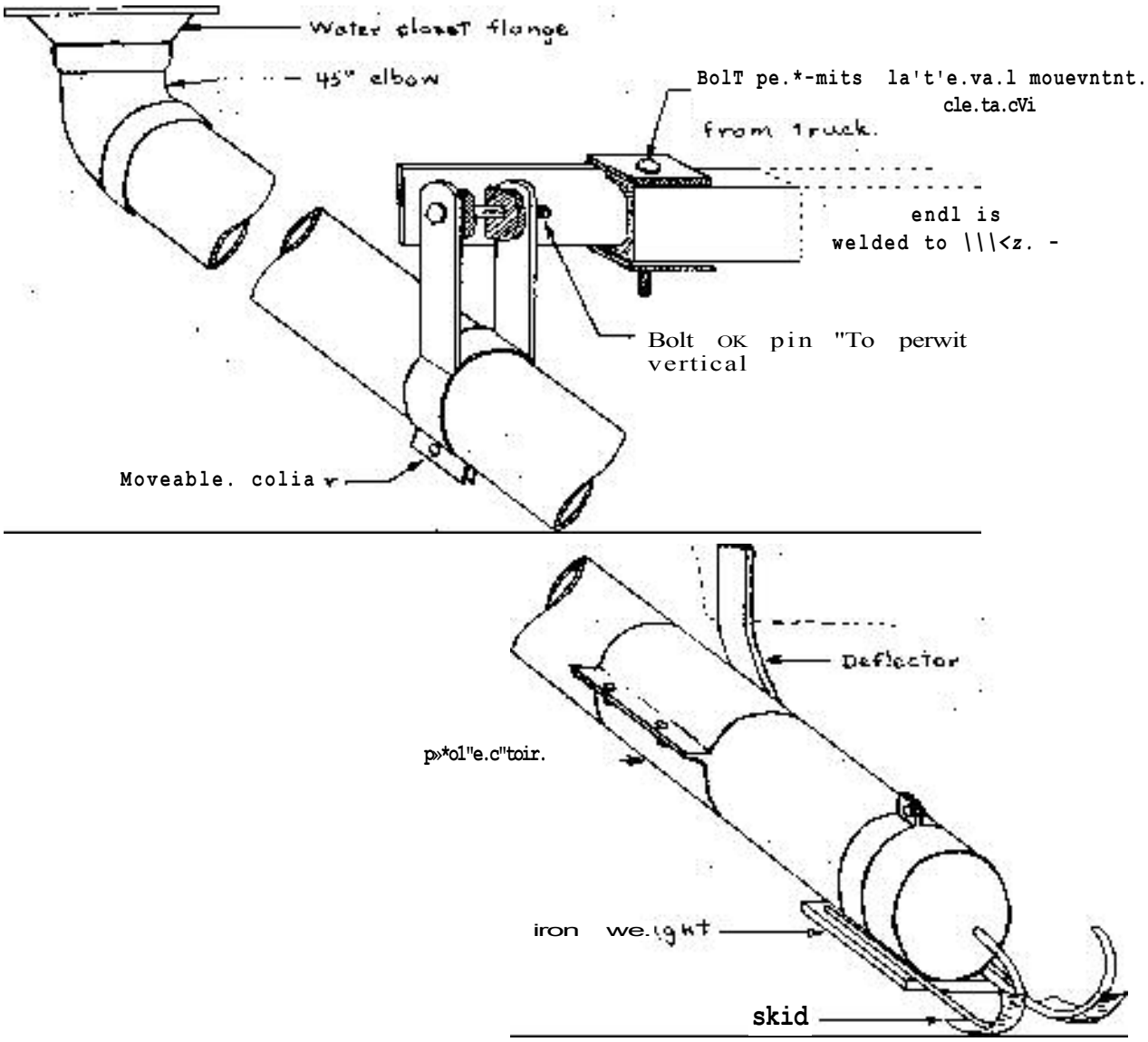

Fig. 1. Design of bait dispenser, made from an 8-foot length of 3"inch-diameter plastic sewer pipe.

Fig. 2. Bottom end of tube is set in a bracket to permit travel without detaching bait dispenser.

Fig. 3. In baiting operations, carrots are transferred from container to tube by operator. Baiting rate is regulated by speed of the vehicle.

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