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CATTLE GRUB REMOVER AND INSECTICIDE APPLICATOR
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6 Claims. (Cl. 119—159)

The present invention relates to cattle grub removers and insecticide applicators and it consists in the combinations, constructions and arrangements of parts herein described and claimed.

Generally there is provided an apparatus, the passage of cattle through which will cause such cattle to be automatically administered definite amounts of insecticide powder while at the same time interspaced ropes will automatically massage the powder into the hair upon the hides of such cattle. The ropes also act to remove the heads of cattle grubs whereby the powder may then act to kill the same.

It is accordingly an object of the invention to provide an apparatus of the character set forth having means for automatically dispensing insecticide powder to cattle.

Another object of the invention is to provide an apparatus of the character set forth having means for automatically deheading grubs which may be attached to the backs of cattle.

Another object of the invention is to provide an apparatus of the character set forth which is simple and inexpensive to manufacture, easy to repair and effective and efficient in use.

A still further object of the invention is the provision of novel means for massaging and scraping the hides of live cattle.

A still further object of the invention is to provide a novel agitating means for powder in a dispensing hopper forming a part of the invention.

Other and further objects of the invention will become apparent from a reading of the following specification taken in conjunction with the drawings, in which:

Figure 1 is a front elevational view of an embodiment of the invention,
Figure 2 is a plan view thereof,
Figure 3 is a sectional view taken along line
2—3 of Figure 1,
Figure 4 is a sectional view taken along line
4—4 of Figure 1,
Figure 5 is a sectional view taken along line
5—5 of Figure 1,
Figure 6 is a fragmentary perspective view illustrating certain details of construction,
Figure 7 is a fragmentary vertical sectional view of a powder dispenser forming a part of the invention, and
Figure 8 is a fragmentary perspective view likewise illustrating certain construction details.

Referring more particularly to the drawings, there is shown therein a frame preferably formed of channel iron and comprising a pair of vertical side members 10 interconnected at their upper ends by a horizontal cross bar 11. Angular braces 12 interconnect the side members 10 and the cross bar 11 and each of the side members 10 is affixed by means of bolts 13 to posts 14 which may be embedded in the ground wherever convenient.

A hopper 15 is carried by four vertical arms 16 affixed to the sides of the cross bar 11 and is provided at its upper end with a filler cap 17 and has its lower, narrower end affixed in communication with a transversely extending hollow cylinder 18 mounted by means of legs 19 atop the cross bar 11.

A piston rod 20 extends entirely through the cylinder 18 and has affixed thereto within the cylinder, a piston 21. The rod 20 is provided with eyes 22 and 23, one at each end thereof.

A threaded rod 24 is horizontally disposed in a bracket 25 and is provided with an eye 26 at its inner end which eye is interconnected with the eye 23 by means of a spring 27 and has a wing nut 28 mounted on its outer end.

A dispensing tube 29 is vertically dependent from the cross bar 11, as at 30, and an angularly disposed feeder tube 31 interconnects one end of the cylinder 18 with the dispensing tube 29 at a point adjacent the upper end thereof.

An agitator comprising a vertical mast 32 and a horizontally disposed cross piece 33 is affixed in the upper side of the piston 21 and projects into the lower end of the hopper 15.

A cable 34 is affixed at one end to the eye 22 and extends horizontally to a pulley 35 mounted atop the cross bar 11 and thence downwardly to connect with a belt coupling 36, which is in turn, connected to the upper end of a tension spring 37, the lower end of which is connected to a hook 38 affixed to the inner side of one of the side members 10.

To the inner side of each of the side members 10 is affixed one leaf 39 of a hinge and, in each case, the other leaf 40 has affixed thereto, by means of a clamp 41, the lower ends of a plurality of ropes 42 of which three are shown in each case in the drawings, the ropes 42 extend upwardly at an angle and have their upper ends affixed, by means of clamps 43, to belts 44, each of which extends upwardly and over a roller 45 and thence downwardly to connect with belt couplings 36 and 45, respectively. A tension spring 47 interconnects the coupling 46 and a hook 48 mounted on the inner side of one of the side members 10.
3. A pair of guide rings 49 is connected to ears 59, carried by the tube 29 adjacent the lower end thereof, by means of flexible cords 51.

It will be noted from an examination of Figure 6 of the drawings that the individual ropes 42 in each set pass one another in alternate relationship at points immediately below the bottom of the tube 29.

In operation, it will be apparent that cattle may be led through the apparatus and that their backs will abut against the ropes 42 thereby causing the springs 37 and 47 to be stretched and at the same time allowing the spring 27 to contract, thus causing the piston 21 to force insecticide powder 52 which may be in the cylinder 18 to be forced through the tube 31 into the dispensing tube 29 whence it falls by gravity upon the back of the cattle.

By positioning the wing nut 28 upon the rod 24, the tension of the spring 27 may be adjusted and, hence, the amount of powder dispensed to each head of cattle passing through the apparatus may be regulated.

As each head of cattle passes through the apparatus, the springs 37 and 47 will act to return the ropes 42 to their normal position and at the same time cause the piston 21 to return to its normal position, whereupon additional powder 52 will drop into the cylinder 18. As the piston 21 reciprocates it will, of course, move the agitator 33—33 through the powder 52 thus ensuring a supply of the same to the cylinder 18 at all times so long as some remains in the hopper 15.

Again, it will be noted that as cattle pass through the apparatus, the ropes 42 will act to not only remove surplus hair but also to cut the heads from grubs which may be infecting such cattle and that the powder will then act to completely kill the grubs such cattle.

While one form of the invention has been shown and described herein, it will be readily apparent to those skilled in the art that many minor modifications may be made without departing from the spirit of the invention or the scope of the appended claims.

What is claimed is:

1. An apparatus of the character described comprising a U-shaped frame having dependent vertical legs, a hopper mounted upon said frame, a dispensing cylinder connected with the lower end of the hopper, a dispensing tube dependent from said cylinder, a piston in said cylinder, a plurality of ropes angularly extending from each of said legs and alternately passing each other and means connecting at least one of said ropes with said piston to dispense material from said tube.

2. An apparatus of the character described comprising a U-shaped frame having dependent vertical legs, a hopper mounted upon said frame, a dispensing cylinder connected with the lower end of the hopper, a dispensing tube connected with said cylinder, a piston in said cylinder, a plurality of ropes angularly extending from each of said legs and alternately passing each other, a spring connected to one end of at least one of said plurality of ropes and means connecting said piston with at least one of said ropes for operating the piston to dispense material from said tube.

3. An apparatus of the character described comprising a U-shaped frame having dependent vertical legs, a hopper mounted upon said frame, a dispensing cylinder connected with the lower end of the hopper, a dispensing tube dependent from said cylinder, a piston in said cylinder, a plurality of ropes angularly extending from each of said legs and alternately passing each other, means connecting said piston with at least one of said ropes for operating the piston to dispense material from said tube.

4. An apparatus of the character described comprising a frame having dependent vertical legs, a hopper mounted on said frame, a dispensing cylinder connected to the lower end of the hopper, a dispensing tube dependent from said cylinder, a piston transversely reciprocable in said cylinder, a set or plurality of ropes angularly extending from each of said legs, each rope of each set alternately passing a rope of the other set, a spring connected to one end of at least one rope of each set of ropes, means interconnecting said piston and at least one of said ropes and operable by cattle scraping against said ropes for operating the piston to dispense material through said dispensing tube.

5. An apparatus of the character described comprising a frame having dependent vertical legs, a hopper mounted on said frame, a dispensing cylinder connected to the lower end of the hopper, a dispensing tube dependent from said cylinder, a piston transversely reciprocable in said cylinder, a set or plurality of ropes angularly extending from each of said legs, each rope of each set alternately passing a rope of the other set, a spring connected to one end of at least one rope of each set of ropes, means interconnecting said piston and at least one of said ropes and operable by cattle scraping against said ropes for operating the piston to dispense material through said dispensing tube upon the backs of said cattle, means for regulating the extent of the path of travel of said piston.

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