Oct. 15, 1935. J. C. CLARK 2,017,783

CAPSULE ADMINISTERING DEVICE

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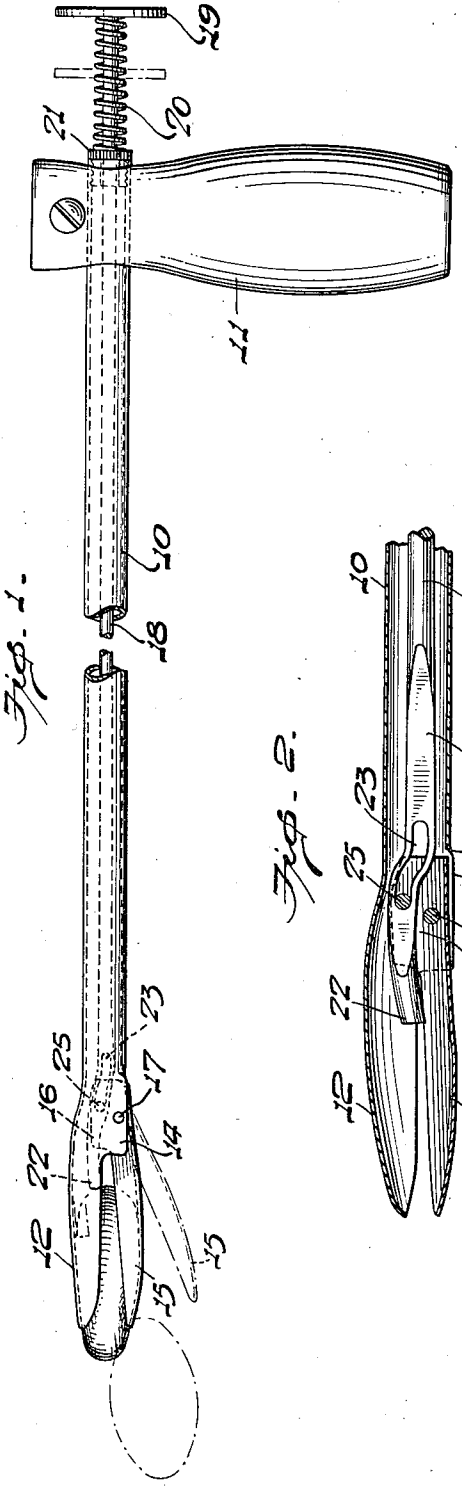

Fig. 1.

Fig. 2.

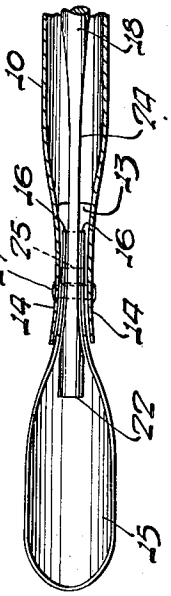

Fig. 3.

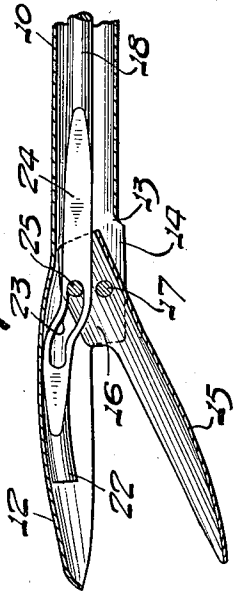

Fig. 4.

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CAPSULE ADMINISTERING DEVICE

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Application October 9, 1933, Serial No. 692,845

4 Claims. (Cl. 128—264)

The invention relates to veterinary instruments and has for its general object the provision of a novel device by means of which medicine in capsule form may be quickly and easily administered to livestock.

It is well known that it is of course frequently necessary to treat sick animals and that it is often more or less a difficult matter. Numerous instruments have been designed for the purpose of administering pills or capsules but the known devices are of a tongs-like nature requiring a positive grip to hold the pill, tablet or capsule preparatory to insertion or disposition down the throat of an animal.

It is with the foregoing facts in view that I have devised the present invention which has for a very important object the provision of an instrument which will positively hold a capsule, pill or tablet, as the case may be, without requiring any muscular effort, the release or discharge of the capsule or the like being brought about by an actual though slight exertion, the advantage being that there is no likelihood of dropping the medicament or releasing it accidentally or prematurely.

Another object of the invention is to provide an instrument of this character which is capable of use in connection with capsules or the like of different sizes, it being readily understood that smaller capsules are necessarily used for treating smaller animals, for instance sheep, lambs, goats, etc. than would be the case in the treatment of larger stock such for instance as horses and cows.

Another object of the invention is to provide an instrument of this character having a species of duck-bill clamp for holding a capsule or the like and moreover of such construction and arrangement as to embody a positive means for ejecting the capsule.

An additional object is to provide a device of this character which will be simple and inexpensive to make, easy to use, positive and rapid in action, durable in service, and a general improvement in the art.

To the attainment of the foregoing and other objects and advantages, the invention preferably consists in the details of construction and the arrangement and combination of parts to be hereinafter more fully described and claimed, and illustrated in the accompanying drawing in which:

Figure 1 is a side elevation of the device showing it as holding a capsule,

Figure 2 is a longitudinal section,

Figure 3 is a fragmentary plan view showing the jaw end of the device,

Figure 4 is an enlarged fragmentary longitudinal section illustrating the jaw action and ejecting means.

Referring more particularly to the drawing I have shown the device as comprising an elongated tube 10 which has one end represented as passing through a handle 11 to which it is immovably secured by any suitable means whatsoever. This handle is of such form as to be grasped conveniently within the hand of the operator. At the other end the tube is somewhat flattened and widened to form a stationary jaw 12 which is preferably of a somewhat spoon shape, that is to say concavo-convex in longitudinal and transverse section. This end of the tube is also partly cut away as shown at 13 and is formed with spaced parallel side portions or ears 14. Cooperating with the stationary jaw 12 is a movable jaw 15 of similar shape and having the sides of its rear end formed with spaced flanges or ears 16 located inwardly of the ears 14 and pivoted thereto by a transverse element such as the rivet 17.

Extending longitudinally through the tube 10 is a plunger or push rod 18 which projects beyond the handle 11 and which has said projecting end provided with a head or button 19 adapted to be engaged by the thumb of the operator. A coil spring 20 surrounds the projecting end of the plunger and abuts at one end against the button or head 19 and at its other end against the handle or against a guide bushing 21 at the end of the tube. The other end of this plunger projects somewhat into the space between the jaws 12 and 15 and constitutes ejecting means for a capsule, for instance as indicated at 22, which is placed within the jaws preparatory to administering to an animal.

It will be observed that the two jaws constitute a species of duck-bill clamp and it becomes apparent that some means is necessary for effecting opening when it is desired to deposit the capsule in an animal's throat. To effect this I form the plunger with a slot 23 which is spaced somewhat back from its forward ejecting end, the material of the plunger at this location being preferably flattened as indicated at 24 to provide the width necessary for formation of the slot. This slot receives and cooperates with a transverse pin or rivet 25 which extends through and across the space between the ears 16 on the movable jaw.

In the use of the device, the operator grasps

the handle 11 in one hand, places his thumb against the button or head 19 and pressed against it so as to move the plunger 18 forwardly, that is to say toward the jaw end of the device. When this movement occurs the rear end of the slot 23 engages against the pin 25 and rocks the movable jaw 15 on its pivot 17. When the jaws are opened in this manner the capsule 22 is inserted between the jaws and the operator releases his pressure upon the button 19. The resultant rearward movement of the plunger under the influence of the spring 20 causes the forward end of the slot 23 to engage against the pin 25 so that the movable jaw will be urged toward the stationary jaw, thereby clamping the capsule firmly in place so that it will not become accidentally dislodged or dropped while the operator is manipulating the instrument to get it properly inserted within the throat of the animal to be treated. After the device has been placed within an animal's mouth so that the capsule is in the desired position with respect to the throat, the operator simply presses upon the button 19 against the resistance of the spring 20 whereupon the plunger 18 is moved forwardly, the rear end of the slot 23 again engaging and coacting with the pin 25 to swing the movable jaw away from the stationary jaw so that the holding action on the capsule will be released. At the same time the forward movement of the plunger causes the forward end thereof to engage against the capsule and positively eject it. As there is considerable relative movement of the jaws it is clear that capsules of widely different sizes may be handled and administered with equal ease. While the medicament has been referred to throughout the specification as being in the form of a capsule, it is apparent that the device may be used to equal advantage for administering tablets or pills, provided of course that they are of reasonably large size capable of being gripped between the jaws. Then, too, this would depend to a great extent on the size of the jaws themselves. It will be noted that owing to the positive clamping action there is no danger of the capsule or the like being dropped accidentally or released from the device prematurely. It will therefore be easily recognized that this instrument will be a great time and labor saver in dosing animals, especially in cases where there are whole flocks or herds to be treated for some ailment or other.

From the foregoing description and a study of the drawing it is believed that the construction, operation and advantages will be readily apparent to one skilled in the art without further explanation.

While I have shown and described the preferred embodiment of the invention, it should be understood that the disclosure is merely an exemplification of the principles involved as the right is reserved to make all such changes in the details of construction as will widen the field of utility and increase the adaptability of the device provided such changes constitute no departure from the spirit of the invention or the scope of the claims hereunto appended.

Having thus described the invention, I claim:

1. An instrument of the character described comprising a hollow shank equipped at one end with a grip extending at an angle thereto, duckbill jaw means at the other end of the hollow shank adapted to grip a capsule in substantially enclosing relation thereto, a plunger slidable longitudinally of said hollow shank and equipped with an operating head, means opposing movement of said plunger in one direction, and means connecting the plunger with the jaw means for moving the latter into open or closed position, said plunger extending into the space within the jaw means for engagement with the capsule to eject the same upon opening of the jaw means.

2. An instrument of the character described comprising an elongated tubular member having one end formed with a stationary jaw, a handle connected with said tubular member at the other end thereof and projecting at an angle with respect thereto to serve as a grip, a movable jaw pivoted to the first named end of the tubular member and cooperating with said stationary jaw, a spring pressed plunger slidable axially through said tubular member and having one end projecting therebeyond and equipped with an operating head, and a slot and pin connection between the other end of the plunger and the movable jaw.

3. An instrument of the character described comprising an elongated tubular member equipped at one end with an angularly disposed handle and having its other end provided with a stationary jaw and spaced ears, a movable jaw having ears thereon arranged in interfitting relation and pivoted to said first named ears, a longitudinally movable plunger disposed within said tubular member and projecting therebeyond, an operating head on said projecting end of the plunger, spring means normally holding said plunger in retracted position, and a pivotal and slidable connection between the other end of the plunger and said movable jaw, both of said jaws being concavo-convex in longitudinal and transverse section.

4. An instrument of the character described comprising a shank equipped at one end with a handle and having its other end provided with a stationary jaw and a movable jaw, a spring pressed plunger movable longitudinally of said shank, and an operative connection between one end of the plunger and said movable jaw for moving the latter, said plunger extending into the space between the jaws and being engageable with an object held therebetween for forcibly ejecting the object simultaneously with movement of the movable jaw.

JOSEPH C. CLARK.