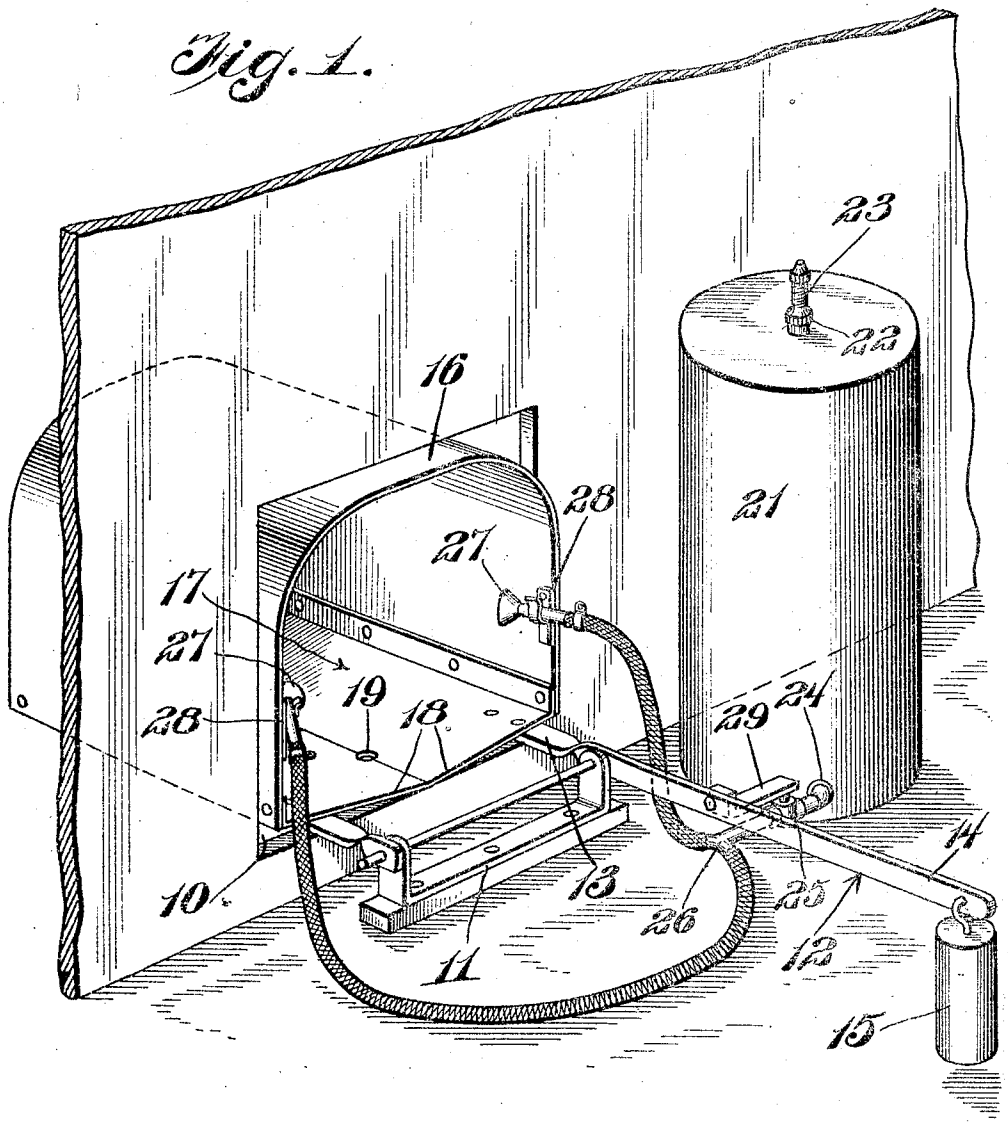
March 9, 1926. 1,576,046

G. A. GUTHRIE

SPRAYING DEVICE

Filed May 14, 1925 2 Sheets-Sheet 1

Fig. 1.



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Fig. 2.

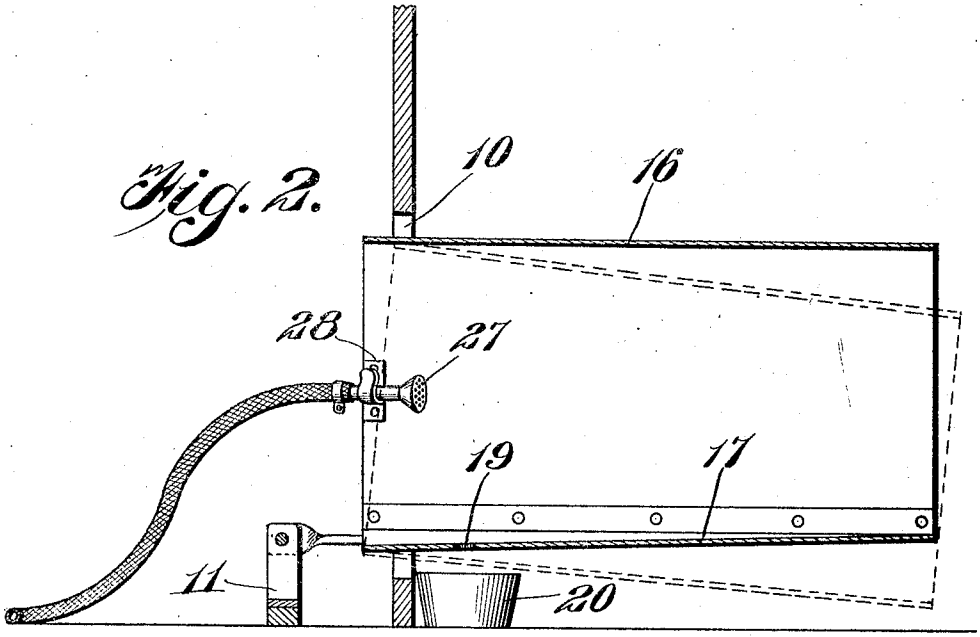


Fig. 3.

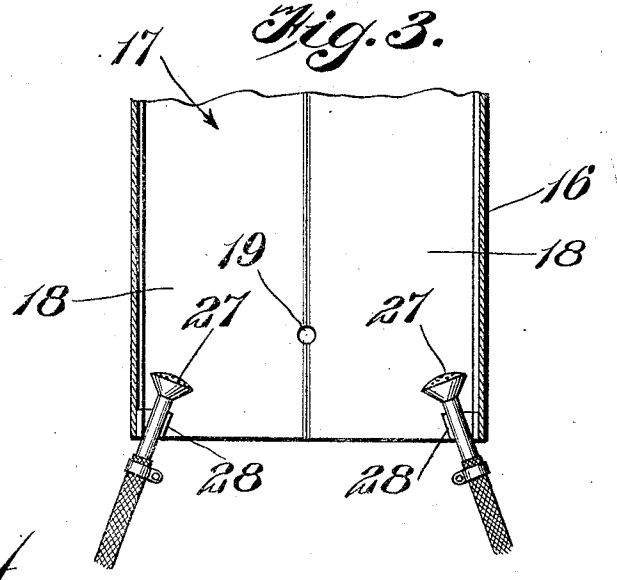
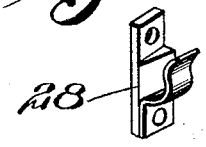


Fig. 4.



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Patented Mar. 9, 1926. 1,576,046

UNITED STATES PATENT OFFICE.

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SPRAYING DEVICE.

Application filed May 14, 1925. Serial No. 30,290.

To all whom it may concern:

Be it known that I, GEORGE A. GUTHRIE, a citizen of the United States, residing at Forgan, in the county of Beaver and State of Oklahoma, have invented certain new and useful Improvements in Spraying Devices, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to spraying devices and more particularly to a device for spraying chickens for lice or mites.

An important object of the invention is to provide a device of this character which may be very readily and cheaply produced and attached to the exit door of a chicken coop for treating chickens as they leave the coop.

As is well known to those familiar with the art, when it becomes necessary to spray or dust chickens which have become infected with lice, this treatment is ineffectual unless applied to all of the occupants of the coop and unless it is accompanied by a thorough treatment of the coop itself. By the ordinary method, it is necessary that each fowl be separately handled, the usual procedure being to coop the fowls within the chicken house and then release each fowl from the chicken house as it has been treated. This method causes considerable confusion and occupies a considerable portion of the breeder's time. In addition, it renders the fowls nervous so that they do not lay probably for several days with a consequent loss to the breeder. Accordingly an important object of the invention is the provision of a device by means of which each chicken is properly sprayed by simply applying the device to the exit door of the chicken house and then causing each of the fowls to pass through this door, the device being of such character that it prevents the return of the fowls while the spraying is being carried on and the device being such that it may be likewise employed for spraying the chicken house.

A still further object of the invention is to provide a device of this character in which the spraying only takes place as the fowls are leaving the chicken house, thus conserving the spraying solution.

These and other objects I attain by the construction shown in the accompanying drawings, wherein for the purpose of illustration is shown a preferred embodiment of my invention and wherein:—

Figure 1 is a perspective view of a portion of the interior of a hen house having spraying apparatus constructed in accordance with my invention applied to the exit thereof;

Figure 2 is a longitudinal sectional view through the exit tunnel;

Figure 3 is a horizontal sectional view therethrough; and

Figure 4 is a perspective of the clips for holding the spray nozzles in position.

Referring now more particularly to the drawings, the numeral 10 designates the exit opening of a chicken house containing chickens which are to be sprayed. In accordance with my invention, I secure adjacent this opening and preferably interiorly of the chicken house a support 11 upon which is pivoted a beam 12 having a short end 13 projecting through the exit opening to the exterior of the house and a long end 14 arranged within the house and provided with a counter-weight 15. To the short end 13 exteriorly of the house is secured a tunnel element 16 of such size that any fowl leaving the house through the exit opening must pass therethrough. This tunnel element is of such weight that it is normally balanced by the counter-weight 15 and the long end of the arm indicated at 14 and so remains in a horizontal position. The tunnel has a bottom 17 which inclines downwardly from its sides to the center thereof, as indicated at 18, and further inclines downwardly from its outer toward its inner end, as more clearly shown in Figure 2. Its inner end has an opening 19 beneath which and exteriorly of the chicken house, a receptacle 20 is preferably disposed.

Arranged within the chicken house is a tank 21 for the reception of a spraying solution of any suitable character, this tank having a filling opening provided with a cap 22 including an air valve 23 similar to the air valve of pneumatic tires so that the pump may be engaged therewith and pressure placed upon the contents of the tank. The tank has at its lower end an outlet 24 provided with a valve 25 of any usual self-closing type. The outlet of this valve has connected therewith a conduit 26, communicating with a pair of spray nozzles 27 suitably supported from brackets 28 at oppo-

site sides of the spray tunnel so that they are directed toward the outlet end of the spray tunnel. Between the operating element of the valve and the long arm 14 of the lever, a connection 29 is provided by means of which the valve is opened when the tunnel is weighted to overcome the action of the counter-weight 15, and assumes an inclined position, as illustrated in Figure 2.

In the use of the device, the parts being arranged as above described, the fowls are forced from the chicken house through the exit opening and tunnel. Each fowl, as it passes through the tunnel, will cause the tunnel to tilt, operating the valve 25 and permitting the air pressure within the tank to become effective to force the solution through the spray nozzles and into engagement with the feathers of the fowl. The nozzles are so arranged that the weight of the fowl passing through the tunnel will not cause operation of the valve 25 until the fowl has passed the nozzles so that this spraying solution is forced into the feathers from the rear and will effectively engage therewith. Furthermore, the tilting of the tunnel which has a smooth bottom will cause the fowls to tend to slide and in attempting to resist this sliding motion, they will fluff their feathers in such manner that the spraying solution may very effectively engage therewith. After all of the fowls have been driven from the house and treated in their passage with the spraying solution, the nozzles may be disengaged from the brackets and the solution employed for spraying the interior of the house. Due to the fact that at each attempt of a fowl to re-enter to the house through the tunnel, its weight will be placed against the outer end of the tunnel and so cause tilting thereof, the re-entry of the fowls to the chicken house is prevented until the tunnel is removed. When in horizontal position, the bottom of the tunnel inclines toward the outer wall of the chicken house and accordingly spraying solution which has come to rest upon this bottom will flow toward this wall and pass through the opening 19 to the receptacle 20 from which it may be returned to the tank.

It will be obvious that the structure hereinbefore set forth is capable of a considerable range of change and modification without materially departing from the spirit of my invention and I accordingly do not limit myself to such specific structure except as hereinafter claimed.

I claim:—

1. In a device for treating fowls by spraying, a tunnel structure, means for pivotally supporting the tunnel structure to receive fowls passing through such exit opening, the tunnel being normally horizontally disposed and tilting toward its outlet during each passage of a fowl therethrough, a tank for the storage of a spraying solution under pressure, a valved outlet for the tank, a nozzle connected with the outlet and arranged within the entrance end of the tunnel and directed toward the outlet end thereof and an operative connection between the tunnel and the valve of the storage tank opening the valve of the storage tank at each tilting of the tunnel, said tunnel having a smooth bottom surface.

2. In a device for treating fowls by spraying, a tunnel structure, means for pivotally supporting the tunnel structure to receive fowls passing through such exit opening, the tunnel being normally horizontally disposed and tilting toward its outlet during each passage of a fowl therethrough, a tank for the storage of a spraying solution under pressure, a valved outlet for the tank, a nozzle connected with the outlet and arranged within the entrance end of the tunnel and directed toward the outlet end thereof and an operative connection between the tunnel and the valve of the storage tank opening the valve of the storage tank at each tilting of the tunnel, said tunnel having a smooth bottom surface, the sides of which depress toward the center of the tunnel, the tunnel when in horizontal position having the bottom thereof inclining slightly toward one end and being provided in the bottom thereof adjacent said end with an opening.

In testimony whereof I hereunto affix my signature.

GEORGE AMBROSE GUTHRIE.