L. W. HURFF.

ANIMAL OILER.

APPLICATION FILED SEPT. 4, 1917.

1,289,458. Patented Dec. 31, 1918.

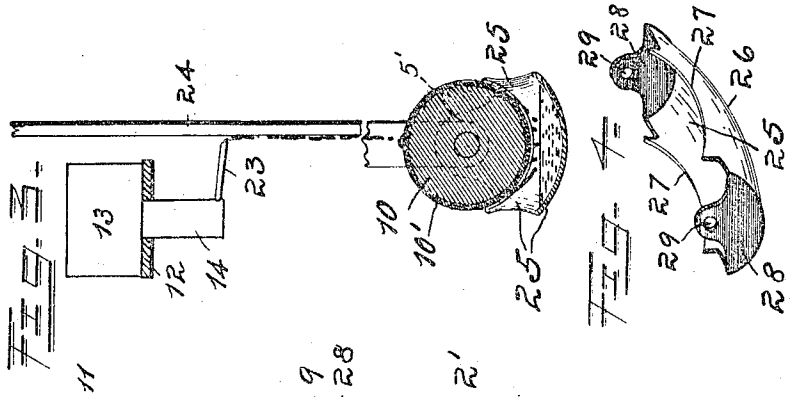


FIG. 3.

FIG. 4.

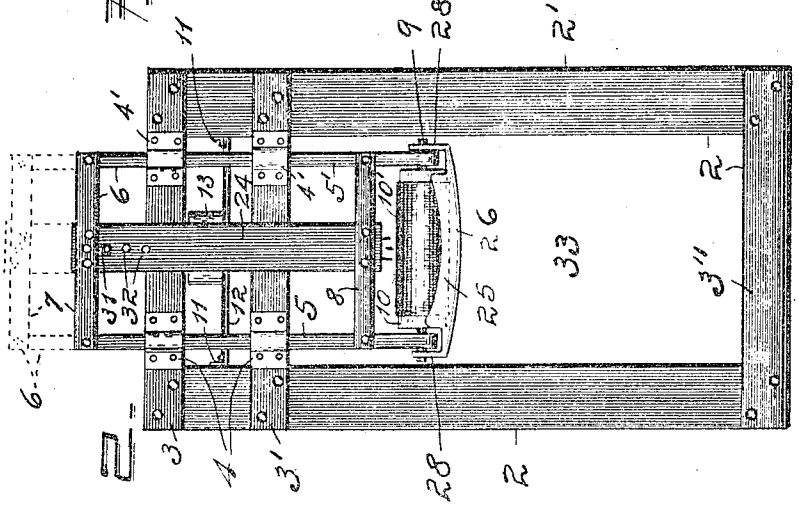


FIG. 2.

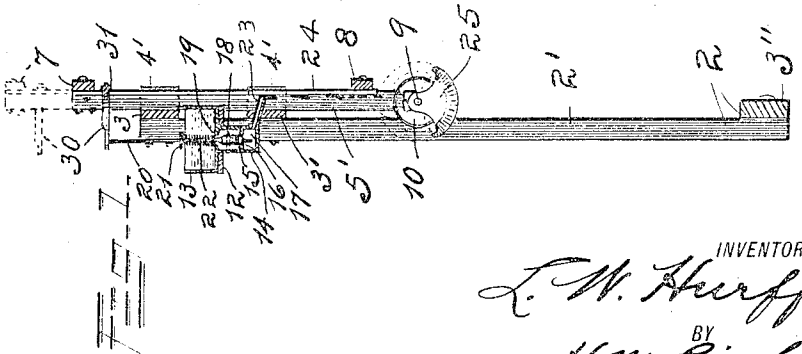


FIG. 1.

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ANIMAL-OILER.

1,289,458. Specification of Letters Patent. Patented Dec. 31, 1918.

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To all whom it may concern:

Be it known that I, LUCIEN W. HURFF, a citizen of the United States, and a resident of Galesburg, in the county of Knox and State of Illinois, have invented a new and useful Animal-Oiler, of which the following is a specification.

My present invention relates to devices whereby an oil, a dip, or any other suitable liquid is automatically applied to an animal as he passes beneath and strikes a valve-actuating roller or the like.

Among the main objects of the invention are to provide an extremely simple device of the elevated-roller type; to apply the liquid with great efficiency; to prevent waste of liquid; to provide a novel drip-pan; and to provide a novel coacting roller and drip-pan. Minor objects will also appear; some of these will be obvious and others particularly pointed out.

The device herein shown and described is of the same general type disclosed in Letters Patent No. 1,237,784, issued to me August 21, 1917, and several of the features of the device illustrated therein are embodied in the present invention, which consists, substantially, in the novel combinations and novel structural features herein described and pointed out in the appended claims.

In the accompanying drawings, which embody my improvements in the best way now known to me:

Figure 1 is a vertical, substantially central section, partly in elevation;

Fig. 2, a front elevation;

Fig. 3, an enlarged transverse section substantially centrally in Fig. 2; and

Fig. 4, an enlarged perspective of the drip-pan.

Referring to the elements and, where necessary, to the parts thereof, each by a distinguishing reference character, uniformly employed, and considering said drawings in detail, 1 indicates a frame, adapted to be set in a gateway, a doorway, an opening into a pen or other inclosure, or at any suitable place. It comprises side bars 2, 2′, and cross-bars 3, 3′, 3″. Secured to the bars 3, 3′ are coacting pairs of guides 4 and 4′ in which are slidably mounted the side frame-bars 5, 5′ of a roller-carrying and valve-actuating frame 6, these bars being united by upper and lower cross-bars 7 and 8 respectively. Mounted on a shaft 9 having bearings in the lower ends of the bars 5, 5′ is a liquid-applying roller 10 having an absorbent cover 10′.

Brackets 11 each of which is suitably secured to one of the frame-bars 2, 2′ support a shelf 12 on which is secured a tank 13 having at its bottom a centrally arranged discharge opening which communicates with a valve-casing 14 having a cross-partition 15 provided with an opening 16, the partition, the continuation of the casing-walls, and the bottom of the casing providing a compartment 17 just sufficient in size to hold the quantity of oil which it is desired to free at each reciprocatory movement of a valve or cut-off 18 the head of which closes the opening 19 and the foot of which closes the opening 16. 20 indicates a valve-guide or stem, 21 a collar fixed thereon, 22 an expansion spring embracing the stem, and 23 a discharge-pipe which receives liquid from the compartment 17 and discharges it onto an oil-carrying plate 24 secured to the mid-lengths of the frame-bars 7 and 8. A plate 30 is secured by a nut 31 in the preferred one of a series of apertures 32 in the oil-carrying plate 24. The parts 2—24 inclusive above described, and the parts 30 and 31, are shown also in my above noted Letters Patent and are not claimed specifically herein, for, upon the nature of the novel features being disclosed, any other suitable source of liquid-supply and valve-mechanism may be substituted therefor.

The principal feature of my improvement resides in a pan 25 purposed to catch all oil dripping from the roller 10 and its absorbent cover 10′, and to discharge the oil onto the animal in a manner presently fully described. Inasmuch as the novel structural features of the pan are important I shall now describe them in detail. Its body is concaved both transversely and longitudinally, in order that the oil will tend to run to the central point 26. Each of its longitudinal edges 27 is downwardly curved toward its center, for a purpose presently described. Each of its ends 28 is apertured to provide bearings 29 for the ends of the shaft 9, on which the pan freely swings.

In operation, it is to be understood that the frame 2 is secured in any suitable opening of the nature earlier herein described and through which animals are accustomed to voluntarily pass or through which they may be driven. It is the nature of beasts,

and especially swine, to seek an opening, and they will pass without fear through the one indicated by 33. As they do so the head of each will strike and tilt the pan axially forward or rearward as the case may be, (due to the direction from which he is approaching,) and the liquid therein contained will be discharged onto his body, almost universally, it has been found in practice, between and just back of his ears. As he advances, the yielding roller-cover 10′ will spread the liquid over his back, and if there be any excess it will run down his sides, thus effectively applying the liquid where it is most needed. Each animal, in passing through the device, will strike the under side of the roller-cover with sufficient force to elevate it and the roller 10 and thereby the frame 6 to or nearly to the dotted line positions shown in Figs. 1 and 2, thus freeing the plate 30 from the valve-stem 20. The spring 22 is thus permitted to expand and in so doing it elevates the collar 21 and thereby frees the valve from the opening 16, allowing a charge of liquid to pass into and be discharged from the pipe 23 onto the carrying-plate 24, from whence it drips, as shown in each of Figs. 1, 2 and 3, onto the roller-cover 10′. The frame 6 falls by its own gravity, after each upward actuation, to its normal position. There can be no waste of liquid, for as soon as the animal passes from beneath the roller the pan will swing back to its normal position, where all the drip from the saturated roller-cover will fall thereinto.

Many of the detail features and combinations herein described are not essential to the invention, broadly considered. This will be indicated in the claims hereof, wherein the omission of an element or the noninclusion of reference to the detail features of the elements recited, is intended to be a formal declaration of the fact that the omitted elements or features are not essential to the invention covered by that claim. Therefore I claim as new the following, to-wit:

1. In an animal-oiler, a frame having an opening for the passage of an animal, a frame reciprocable therein, a roller carried in the reciprocable frame, means for supplying liquid to the roller, and a pan carried by the reciprocable frame and adapted to catch the drip from the roller.

2. In an animal-oiler, a frame having an opening for the passage of an animal, a frame reciprocable in said opening, an absorbent element carried by the reciprocable frame, means for supplying liquid to the absorbent element, and a pan carried by the reciprocable frame and adapted to catch the drip from the absorbent element.

3. In an animal-oiler, a frame having an opening for the passage of an animal, a frame reciprocable in said opening, an absorbent element carried by the reciprocable frame, means for supplying liquid to the absorbent element, and a pan adapted to catch drippings from the absorbent element and to be displaced by an animal passing through said opening.

4. In an animal-oiler, a roller, means for supplying liquid thereto, a drip-catching pan arranged beneath the roller displaceable by an animal whereby to permit him to come in contact with said roller, and means controlled by the actuation of said roller, for controlling the liquid-supply.

5. In an animal-oiler, a horizontally arranged reciprocable absorbent element, an animal controlled valve for supplying it with liquid, and a swinging pan arranged beneath the absorbent element and adapted to catch liquid dripping from the reciprocable element.

6. In an animal-oiler, a horizontally arranged reciprocable roller, an absorbent cover thereon, means for supplying said cover with liquid, and a swinging drip-catching pan arranged beneath the roller and adapted to be tilted by an animal passing beneath said roller.

7. In an animal-oiler, a reciprocable frame, a shaft carried thereby, a liquid-applying element carried by said shaft, means for supplying it with liquid, and a swinging pan carried on said shaft, said pan adapted to be tilted by an animal passing beneath the liquid-supplying element whereby to discharge liquid onto the animal.

8. In an animal-oiler, a horizontally arranged reciprocable oil-applying element, valve-mechanism, actuated by reason of the movement of said element for supplying it with oil, and a swinging pan disposed beneath the oil-applying element.

9. In an animal-oiler, an axially elongated swinging drip-catching and liquid discharging pan having the median portion of each of its sides cut away whereby to permit its contents to spill therefrom, a liquid-applying element arranged above the pan, and means for supplying liquid to the liquid-applying element.

10. In combination an animal-oiler, a vertically reciprocable liquid-applying element, a swinging pan reciprocable therewith and adapted to catch drip therefrom, and means for supplying liquid to the oil-applying element.

11. In an animal-oiler, a horizontally arranged liquid-applying element adapted to be moved by an animal, a source of liquid-supply, valve-means controlled by the movement of said liquid-applying element, for intermittently controlling the discharge of liquid from the supply-source, and a pan hinged to swing beneath said liquid-applying element.

12. In an animal-oiler, a liquid-applying element adapted to be moved by an animal, a source of liquid-supply, valve-means controlled by the movement of said liquid-applying element, for intermittently controlling the discharge of liquid from the supply-source, and a pan hinged to swing beneath said liquid-applying element, and to be moved from its normal position by an animal as it passes beneath the liquid-applying element.

13. In an animal-oiler, a horizontally arranged liquid-applying element, a source of liquid supply, animal-actuated valve-means actuated from said liquid-applying element for intermittently controlling the discharge of liquid from the supply-source, and a pan hinged to swing beneath said liquid-applying element.

14. In an animal-oiler, a liquid-applying element, a source of liquid supply, animal-actuated valve-means actuated from said liquid-applying element for intermittently controlling the discharge of liquid from the supply-source, and a pan hinged to swing beneath said liquid-applying element, and to be moved from its normal position by an animal as it passes beneath the liquid-applying element.

15. In an animal-oiler, an absorbent element for applying liquid to the body of an animal contacting it, means for supplying liquid thereto, and a tilting pan into which the absorbent element extends, the pan adapted to be tilted, by an animal passing under the absorbent element, from beneath the latter.

16. In an animal-oiler, an absorbent element for applying liquid to the body of an animal contacting it, means for supplying liquid thereto, and a pan hinged to swing beneath the absorbent element and adapted to be moved from its normal position by the animal.

17. In an animal-oiler, an element for applying liquid to the body of an animal contacting it, means for supplying liquid thereto, animal-actuated valve-means actuated from said liquid-applying element interposed between said elements, and a swinging pan disposed beneath the liquid-applying element, to be moved out of normal position by an animal passing beneath the liquid-applying element, and to return to its normal position when the animal has passed from beneath said liquid-applying element.

18. In an animal-oiler, a reciprocable frame, a pan reciprocable therewith and adapted to be tilted by an animal passing beneath and striking it, a source of liquid supply, and valve-means actuated by the animal simultaneously with his passage beneath the pan, the valve-means communicating with the source of liquid-supply.

19. In an animal-oiler, a horizontally arranged element adapted to apply liquid to the back of an animal passing beneath it, means for supplying it with liquid, and a drip-catching pan arranged beneath the liquid applying element and displaceable by the animal as he passes beneath the latter.

20. In an animal-oiler, a horizontally arranged, vertically reciprocating element adapted to apply liquid to the back of an animal passing beneath it, means for supplying it with liquid, and a drip-catching pan arranged beneath the liquid-applying element and displaceable by the animal as he passes beneath the latter.

In testimony whereof I hereunto subscribe my name this 28th day of August, 1917.

LUCIEN W. HURFF.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."