

No. 710,384.

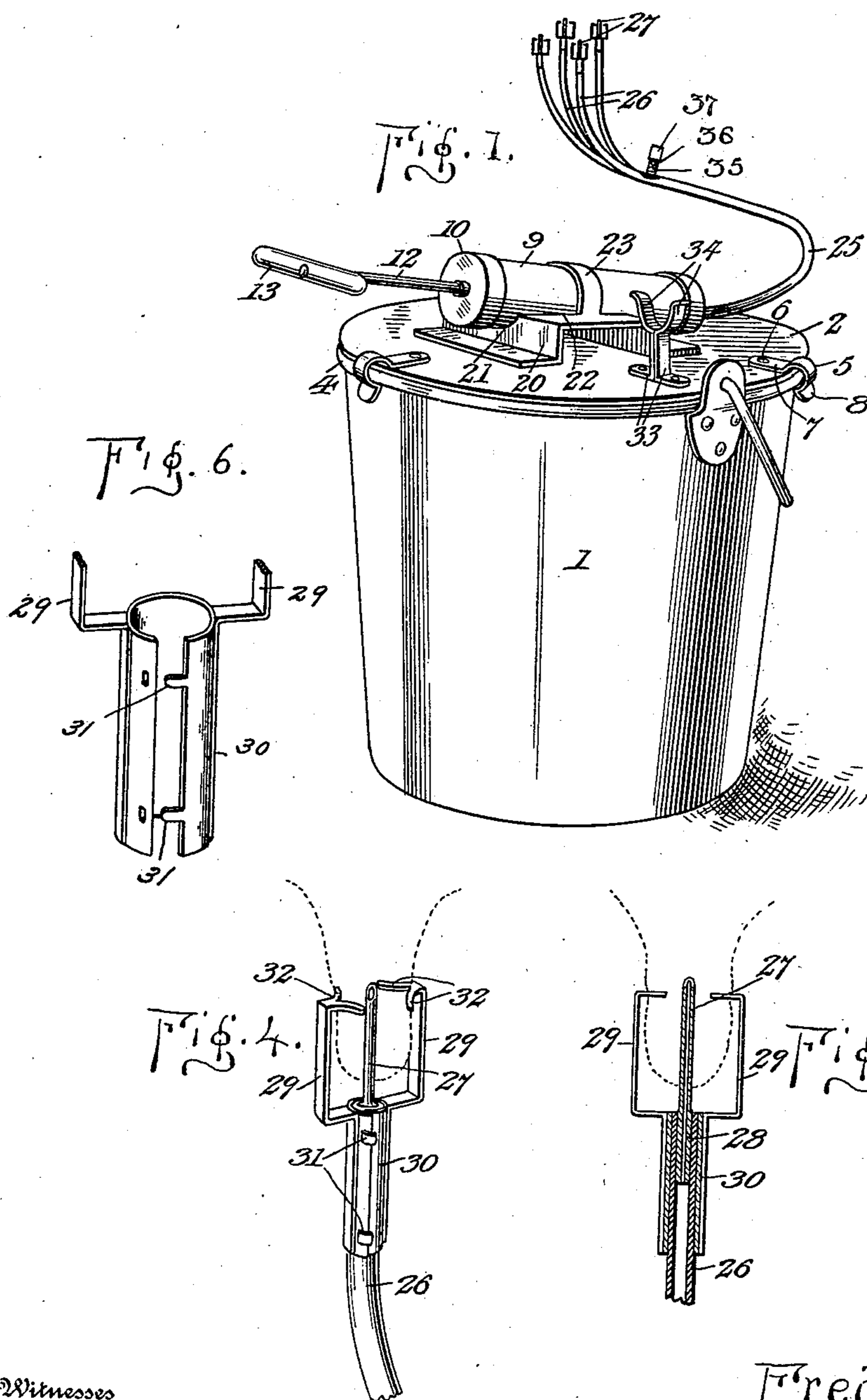
Patented Sept. 30, 1902.

F. A. WEST.
COW MILKER.

(Application filed Oct. 17, 1901.)

(No Model.)

2 Sheets—Sheet 1.



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Fig. 2.

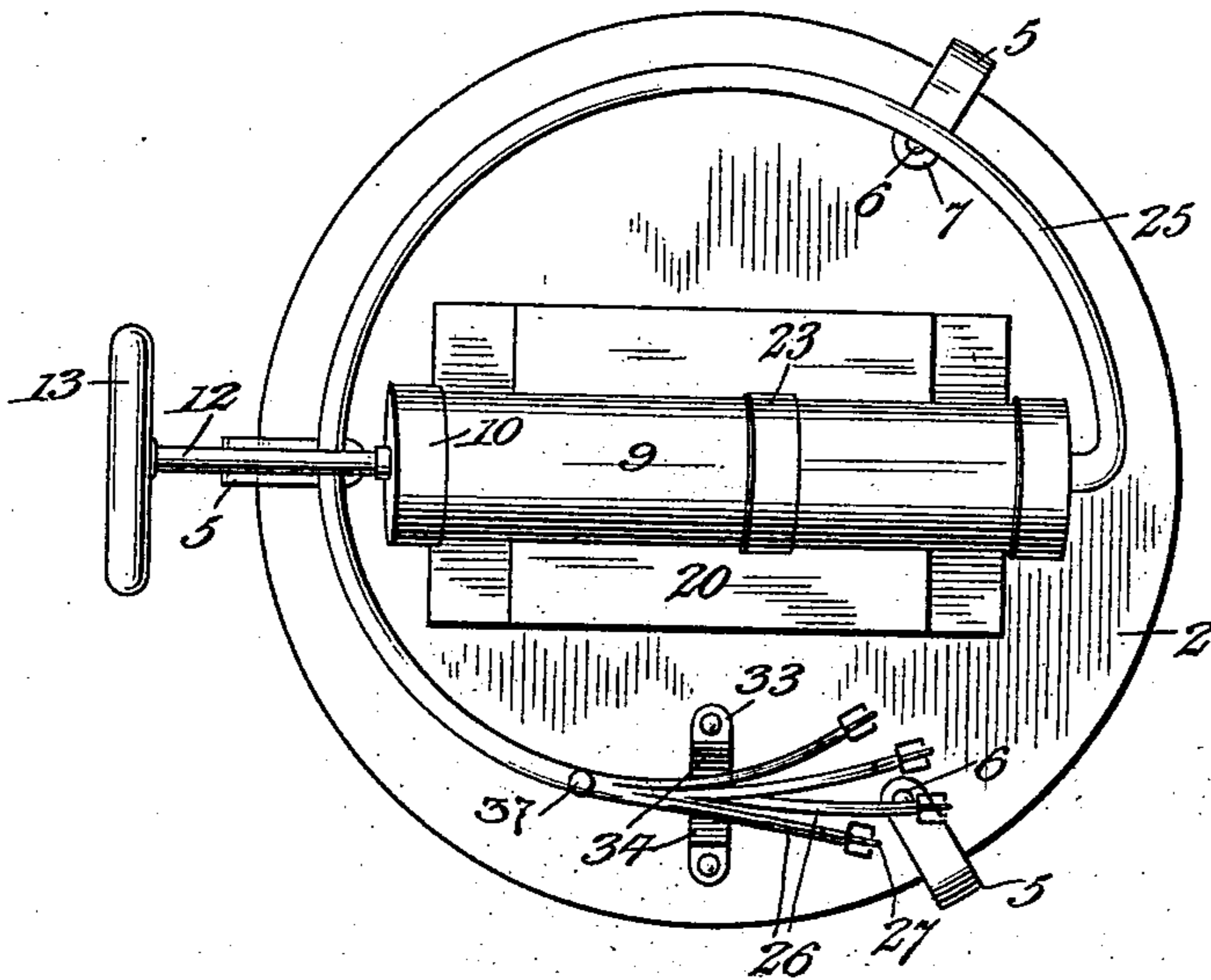
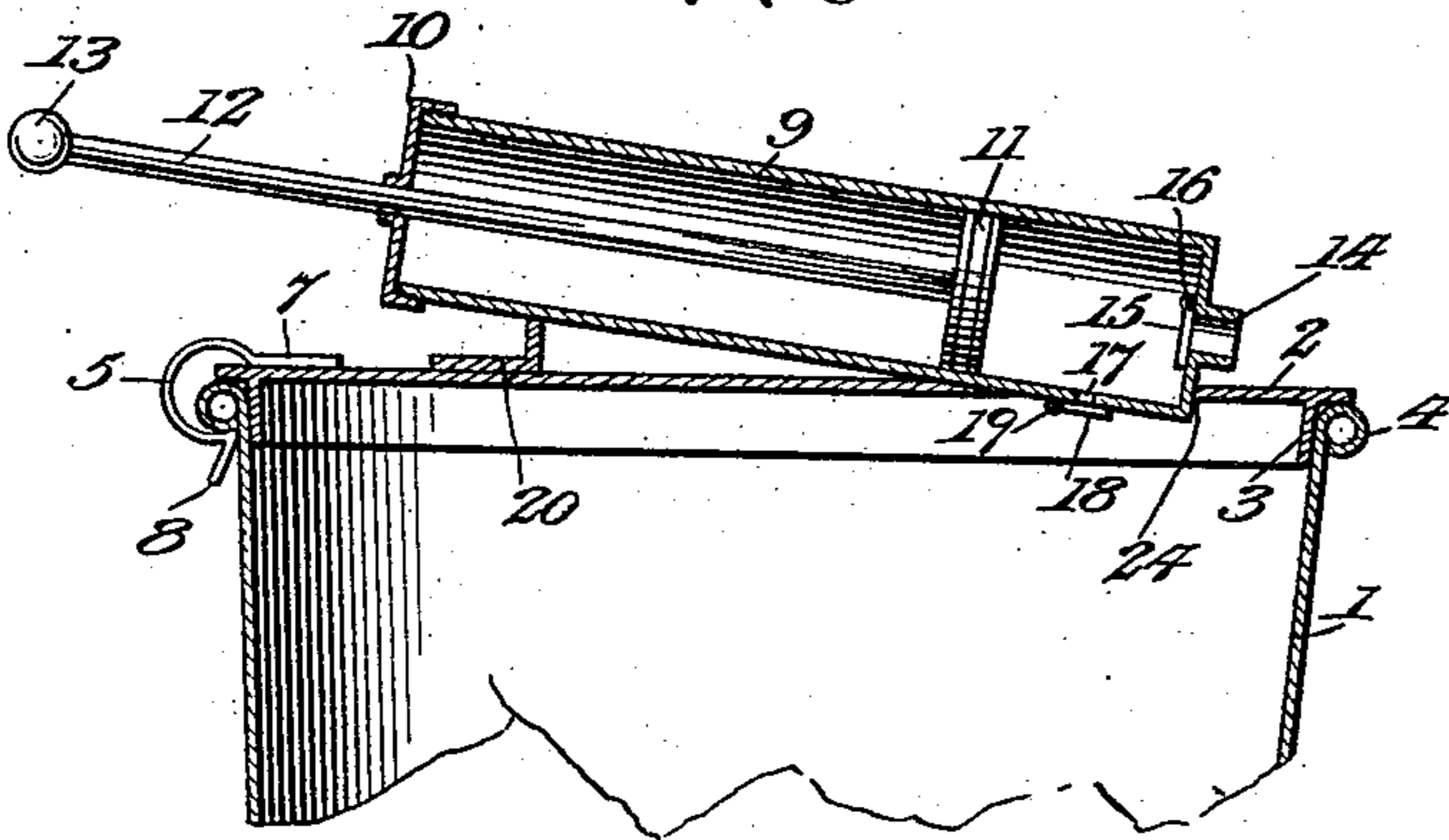


Fig. 3.



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UNITED STATES PATENT OFFICE.

FRED A. WEST, OF BROWNING, WISCONSIN.

COW-MILKER.

SPECIFICATION forming part of Letters Patent No. 710,384, dated September 30, 1902.

Application filed October 17, 1901. Serial No. 78,986. (No model.)

To all whom it may concern:

Be it known that I, FRED A. WEST, a citizen of the United States, residing at and whose post-office address is Browning, in the county of Marquette and State of Wisconsin, have
5 invented new and useful Improvements in Cow-Milkers, of which the following is a specification.

My invention relates to cow-milkers, and
10 more particularly to that class of devices in which a pump is used for drawing the milk from the cow.

Among the objects of the invention is to provide means for securely retaining the teat-
15 needles in place, and, furthermore, to provide a simple, durable, and inexpensive device which will perform its work in an efficient manner.

In the drawings, Figure 1 is a perspective
20 view of my invention complete. Fig. 2 is a top plan view thereof. Fig. 3 is a vertical sectional view of the milk-pail and pump. Fig. 4 is a perspective view of the teat-needle and the holder therefor, the teat being in dotted
25 lines to show its application; and Fig. 5 is a sectional view through the teat-needle and holder, the teat being in dotted lines. Fig. 6 is a detail perspective view showing the teat-clamp open and the spring-arms secured
30 thereto.

In the drawings, 1 denotes the milk-receptacle, having a tight-fitting cover 2. The cover 2 is provided on its lower face, a short space from its edge, with a depending annular flange 3, which is adapted to fit snugly
35 against the sides of the milk-receptacle. The space between the annular flange 3 and the edge of the top is adapted to rest upon the upper edge 4 of the bucket, which edge is bent upon itself to form an annular rib for the
40 spring-clasps 5 of the top to engage, and thereby securely hold the top in position. The clasps 5 are secured to the upper side of the bucket-top by any suitable means, such as
45 rivets, (designated by the numeral 6,) which pass through the base portion 7 thereof. The body of the clasp is substantially semicircular and extends outward and downward from its
50 portion extending under the rib 4 of the bucket. A finger-piece 8 extends outward from the lower extremity of the body portion

at an acute angle thereto, by which means the spring-clasps may be readily operated.

9 designates the pump-cylinder, which is
55 provided at one end with screw-threads to engage a detachable internally-screw-threaded cap 10.

11 designates the piston of the pump, and 12 the piston-rod, which is secured in any desired manner to the piston. The piston-rod extends outward through an opening in the detachable cap 10 and is provided at its outer end with a suitable handle 13. The forward
60 end of the pump-body is provided at its central portion with an annular extension or flange 14 for the reception of the rubber hose. An opening passes through the extension 14 and communicates with the interior of the body of the pump.
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15 designates a swinging spring-pressed check-valve hinged at 16 at the inner end of the opening in the end of the pump-body. Arranged in the side wall of the pump-body adjacent to the valve 15 is an opening 17. A
75 swinging spring-operated valve 18, hinged at 19, is secured on the exterior of the side walls to cover said opening 17.

The pump is mounted in a suitable stand
20 in an inclined position on the lid 2 of the pail, the forward end thereof, or the end containing the valves, being below the plane of the rear end of the pump. The stand 20 comprises two sides substantially L-shaped in cross-section, the lower portion of which sides
85 serve as a base, the upper portions thereof being connected by the top cross-bar. The upper portion of the sides of the stand 20 are provided with substantially semicircular cut-out portions 21, which register with an opening 22 in the top of the stand. The semi-
90 circular cut-out portion of the front side of the stand is deeper than the one in the rear thereof, so as to give the proper inclination to the pump. Arranged centrally in the top
95 of the stand 20 is an arched band 23, each end of said arch terminating on either side of the opening 22 therein.

24 designates an opening or cut-out portion in the bucket cover or top 2 in front of the
100 pump-stand for the reception of the valved end of the cylinder. This opening should be large enough to admit the swinging valve 18, so that the same may freely operate therein.

25 designates a flexible tube connected to the pump and terminating at its outer end in a series of short flexible tubes 26.

27 denotes a hollow teat-needle, which is enlarged at its lower end, as at 28, to form an air-tight connection with the end of a short flexible tube. The front end of the teat-needles 27 are inclined from one side, so as not to injure the teat, as is the case where large pointed needles are used.

Secured to the upper end of the short tube 26 is a pair of spring-arms 29. These arms are secured to a cylindrical body portion 30, which is clamped around the free end of the short tube. The cylindrical body portion 30 is provided at one of its edges with short arms 31, which pass through openings in the opposite edges of the body portion 30. The arms 31 after passing through the engaging slots are bent upon themselves, as shown in Fig. 4, thereby securely locking the attachment to the tubing. It will be understood, however, that I do not restrict myself to this particular clamping means. To prevent injury of the teats, the spring-arms 29 are bent outward from the cylindrical portion at right angles thereto and then bent upward and terminate in a pair of fingers 32, which are adapted to embrace the teat. By this construction of clamp I am enabled to place the teat therein without permitting it to touch at any other point except at its extreme end, thereby obviating all unnecessary discomfort and injury to the cow.

It will be seen that by arranging the pump in the inclined position the milk is kept in that portion of the pump in which the valve which communicates with the pail is located.

From the foregoing description the operation of my invention is apparent. The needles are first inserted in the duct of the teats, and the spring-arms are then clasped about the same. The rearward movement of the piston opens the valve 15 and admits the milk into the pump, while a forward stroke of the piston closes the valve 15 and opens the valve 18 and admits the milk into the milk-receptacle.

It will of course be understood that various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Upon the lid of the pail I provide a bracket or stand for the reception of the flexible tubes. This stand is preferably formed in two duplicate sections 33. The upper portion of each

section is outwardly curved to form an arc, as at 34, so that when the two sections are placed together a substantially semicircular opening is formed in the top of the stand. Depending from the curved portion 34 is an upright body portion, which terminates in a suitable base arranged at right angles to the upright body portion. By placing rivets through openings in the base of the duplicate sections 33 the stand is secured in position.

In the drawings I have shown a means for regulating the drawing of the milk, which consists, preferably, of a valve 35 secured to the tube 25 adjacent the diverging short tubes 26. The stem of the valve is externally screw-threaded and is provided in its side with an opening 36, adapted to be closed or opened by an internally-screw-threaded cap 37, the threads of which register with the threads of the stem. In operation if it is desired to prevent a vacuum being formed or too strong a suction being brought to bear upon the teats the safety-valve is opened.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A cow-milker, comprising a milk-receptacle having a suitable top or lid, spring retaining-clasps for said lid, a pump-stand mounted upon the said top or lid comprising two substantially L-shaped sides and a connecting bar or top, substantially semicircular cut-out portions in the sides of said pump-stand, an opening in the top of the stand which extends its whole length and communicates with the cut-out portions in the sides, a pump adapted to lie in said stand, and an arched band mounted on either side of the cut-out portion in the top of the stand to secure the pump in position.

2. A teat-clamp comprising a body portion bent to cylindrical contour and having one of its edges formed with openings, arms on the opposite edge adapted to be inserted through the said openings and then bent upon themselves whereby the clamp is secured on the end of a tube, upwardly-extending spring-arms formed integral with the said body portion to embrace a teat, and a central tube with which the foregoing devices engage.

In testimony whereof I affix my signature in presence of two witnesses.

FRED A. WEST.

Witnesses:

CHARLIE KESSLER,
WM. BREMNER.