

No. 792,362.

PATENTED JUNE 13, 1905.

Y. STOTHARD.
MILKING MACHINE.
APPLICATION FILED MAY 2, 1905.

FIG. 1.

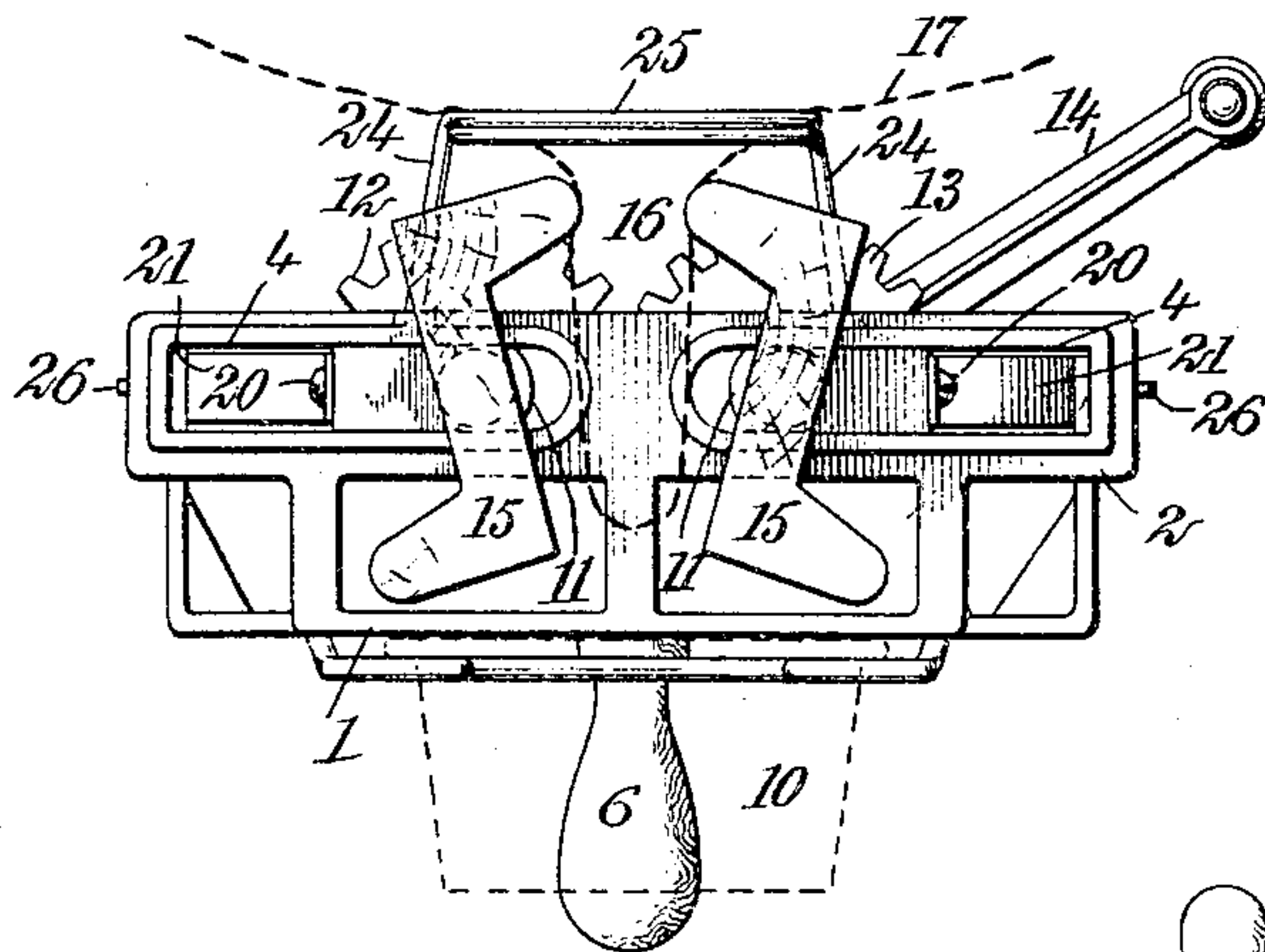
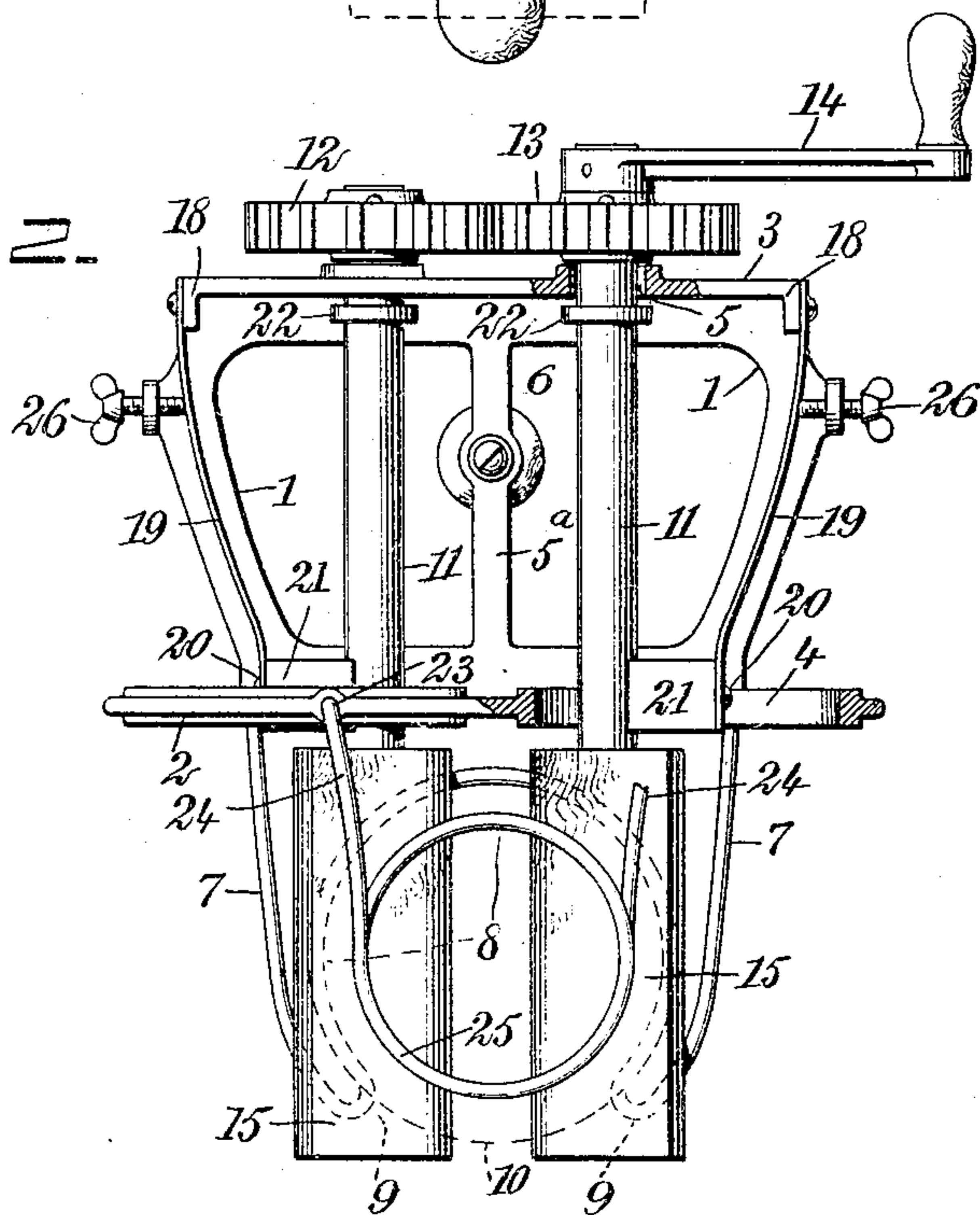


FIG. 2.



WITNESSES:

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YOUNG STOTHARD, OF INDIANOLA, NEBRASKA.

MILKING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 792,362, dated June 13, 1905.

Application filed May 2, 1905. Serial No. 258,448.

To all whom it may concern:

Be it known that I, YOUNG STOTHARD, a citizen of the United States, and a resident of Indianola, in the county of Red Willow and State of Nebraska, have invented a new and Improved Milking-Machine, of which the following is a full, clear, and exact description.

This invention relates to machines for milking cows and other quadrupeds; and it consists, substantially, in the details of construction and combinations of parts hereinafter particularly described, and pointed out in the claims.

One of the principal objects of the invention is to provide a machine of this character which is exceedingly simple in its embodiment, as well as comparatively cheap to manufacture, and one also the elements or members of which may be quickly assembled for use and readily taken apart either for renewal or repair.

A further object is to overcome numerous disadvantages and objections common to many machines hitherto devised for similar purposes and also to provide a machine of the kind referred to which is thoroughly effective and reliable in operation, besides possessing the capacity for long and repeated service.

The above and additional objects are attained by means substantially such as are illustrated in the accompanying drawings, in which—

Figure 1 is an end view of a milking-machine embodying my improvements, and Fig. 2 is a top plan view of the same in part section.

Before proceeding with a more detailed description it may be stated that in the form of my improvements herein shown I employ a frame of special construction in which are supported duplicate geared shafts, on the projecting ends of which are carried duplicate milking-blocks of special construction, between which the teat or projecting organ from the udder of the animal is received. I also employ a specially-constructed guide for the teat, operating to exert the desired upward pressure against the udder during the operation of milking, together with specially constructed and organized pressure devices for exerting a yieldable pressure upon the teat between

the milking-blocks, said pressure devices being provided with means for regulating the degrees of separation of the shafts and milking-blocks in conformity with teats of different sizes. The entire structure may be readily held in one hand while being operated by the other, and means are provided thereon for the support of a pan or other vessel to catch or receive the milk.

While I have herein represented my improvements in a certain preferred embodiment, it will be understood that I am not limited thereto in precise detail, since immaterial changes therein may be resorted to coming within the scope of my invention.

Reference being had to the drawings by the designating characters marked thereon, 1 represents the base of preferably a skeleton supporting-frame for the several operative parts, the same being provided on its upper surface at or near the longer edges thereof with longitudinal members 2 and 3, the former (member 2) being provided therethrough from side to side with duplicate longitudinal slots 4, the inner extremities of which are disposed a suitable distance apart and each slot being of any desired length. The member 3 is also formed with duplicate longitudinal slots 5, which are shorter than the said slots 4 and practically centrally alined with respect thereto.

Beneath the skeleton base 1 of the frame is a handle 6, secured to a central cross-piece 5^a, for conveniently holding the machine in one hand while operating the same with the other, and secured to the base in any suitable way is a spring-frame 7, projecting beyond the side of the machine, as shown in Fig. 2, and formed with an approximately double circular member 8, the ends 9 of which are separated by a throat or space to facilitate the insertion of a pan or vessel 10 within such member 8 to be held or supported to receive the milk from the cow while the machine is in use. Journaled in said slots 4 and 5 of the members 2 and 3 of the frame are the transverse shafts 11, which are provided at one of their projecting ends with intermeshing gears 12 and 13, one of the shafts having a handle 14, by the turning of which the two shafts will be rotated in

opposite directions through the medium of said gears, as is apparent. The opposite projecting ends of said shafts 11 are provided with duplicate reversely-disposed milking-blocks 15, which are of suitable length and practically Z-shaped in cross-section and which are for the purpose of receiving between them the teat 16 from the sack or udder 17 of the animal. (See Fig. 1.) Secured to opposite supports 18 therefor at the ends of the member 3 of the frame are one of the ends of curved springs 19, the other ends of which extend across the machine and work in the slots 4 of the member 2 of the frame. The last-named ends of said springs have secured thereto at 20 the blocks 21, which are seated within the said slots 4 and normally exert a slight inward pressure against the shafts 11 near the milking-blocks. The shafts are provided with collars 22 to prevent endwise displacement thereof, and secured to the upper edge of the member 2 of the frame, as at 23, are the ends of spring members 24 of a circular guide 25 for the teat. As shown at 25 26, suitable set-screws are employed to regulate the pressure of springs 19 in accordance with teats of different sizes.

The parts being constructed and assembled in the manner explained, whenever the milking operations are to be carried out the operator grasps the machine in one hand by its handle 6 and places the same in such a manner as to cause the guide 25 to slip over the teat 16, with the latter entering between the milking-blocks 15, as shown in Fig. 1. The shafts are then operated by turning the handle 14, whereupon the springs 19 and blocks 21 will cause the now revolving blocks 15 to exert the necessary squeezing pressure upon the teat downwardly, to thus draw or force the milk from the udder into the pan for receiving it. The slots 4 permit the shafts and blocks 15 to be spread apart any desired distance to properly receive the teat between the latter, and the spring members 24 of the guide 25 cause the latter to exert an upward pressure against the sack or udder of the animal, and thus assists in causing the discharge of milk therefrom.

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

1. A milking-machine, comprising a frame having a base and longitudinal members thereon, one of said members having duplicate longitudinal slots therethrough and the other having similar slots but shorter in length, parallel shafts journaled in said slots, having means for rotating them in opposite directions, and milking-blocks carried at one of the ends of said shafts.

2. A milking-machine, comprising a frame having a base and longitudinal members thereon, one of said members having duplicate longitudinal slots therethrough and the other hav-

ing similar slots but shorter in length, parallel shafts journaled in said slots, having means for rotating them in opposite directions, and milking-blocks carried at one of the ends of said shafts, said blocks being substantially Z-shaped in cross-section.

3. A milking-machine, comprising milking-blocks and means for rotating the same in opposite directions, and a spring-guide for the projecting organ from the udder of a quadruped, adapted to exert pressure against the udder in milking operations.

4. A milking-machine, comprising a frame having a base and longitudinal members thereon, one of said members having duplicate longitudinal slots therethrough and the other having similar slots but shorter in length, parallel shafts journaled in said slots, having means for rotating them in opposite directions, milking-blocks carried at one of the ends of said shafts, and a spring-guide supported from one of said members to extend over the space between said milking-blocks.

5. A milking-machine, comprising a frame having a base and longitudinal members thereon, one of said members having duplicate longitudinal slots therethrough and the other having similar slots but shorter in length, parallel shafts journaled in said slots, having means for rotating them in opposite directions, milking-blocks carried at one of the ends of said shafts, and pressure devices for said milking-blocks.

6. A milking-machine, comprising a frame having a base and longitudinal members thereon, one of said members having duplicate longitudinal slots therethrough and the other having similar slots but shorter in length, parallel shafts journaled in said slots, having means for rotating them in opposite directions, milking-blocks carried at one of the ends of said shafts, and pressure devices for said milking-blocks, embodying springs secured, at one of their ends, to supports therefor, and having blocks at their other ends working in said longitudinal slots.

7. A milking-machine, comprising a frame having a base and longitudinal members thereon, one of said members having duplicate longitudinal slots therethrough and the other having similar slots but shorter in length, parallel shafts journaled in said slots, having means for rotating them in opposite directions, milking-blocks carried at one of the ends of said shafts, pressure devices for said milking-blocks, embodying springs secured at one of their ends, to supports therefor, and having blocks at their other ends working in said longitudinal slots, and adjusting devices for said springs.

8. A milking-machine, comprising a frame, duplicate shafts supported thereby, and means for rotating the same in opposite directions, Z-shaped milking-blocks carried by one of

the ends of said shafts, a holder for a receptacle beneath the blocks, a teat-guide above the space between the milking-blocks, movable blocks, and springs pressing the same against
5 the shafts, and adjusting set-screws for said springs.

In testimony whereof I have signed my name

to this specification in the presence of two subscribing witnesses.

YOUNG STOTHARD.

Witnesses:

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C. H. KING.