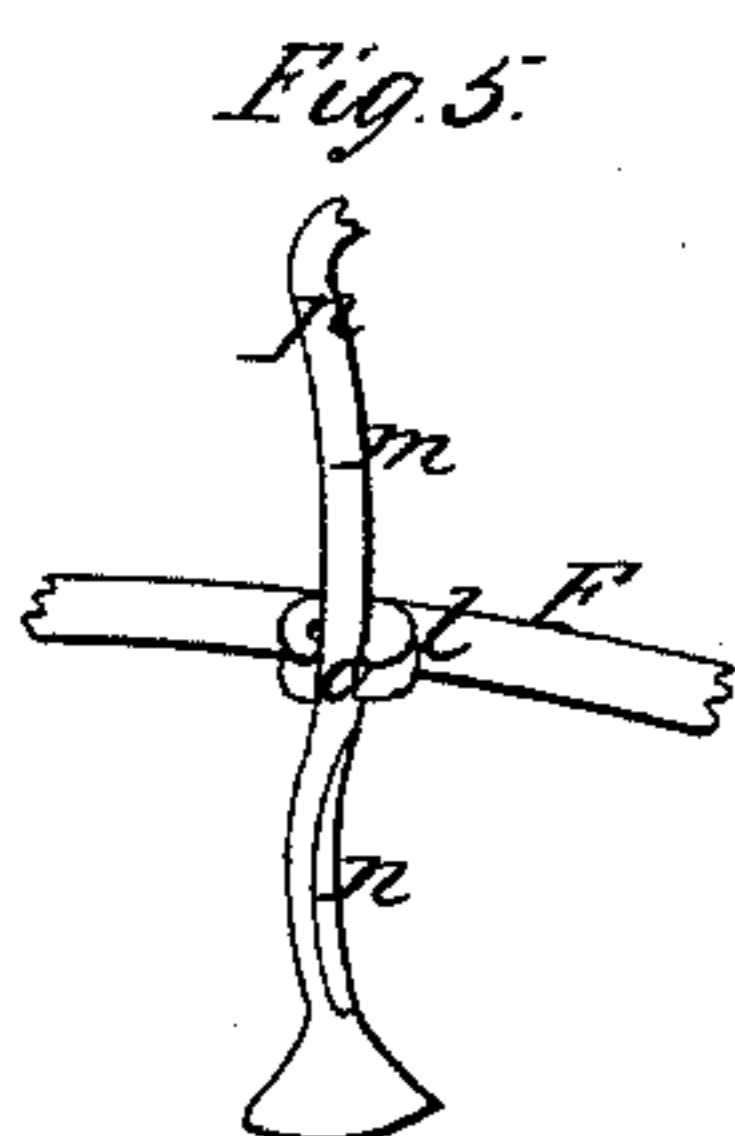
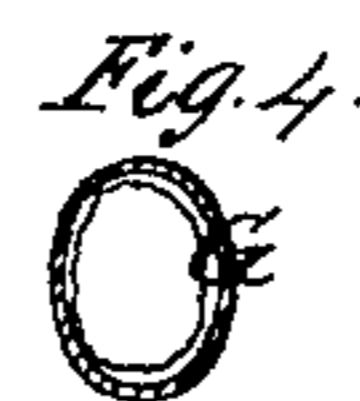
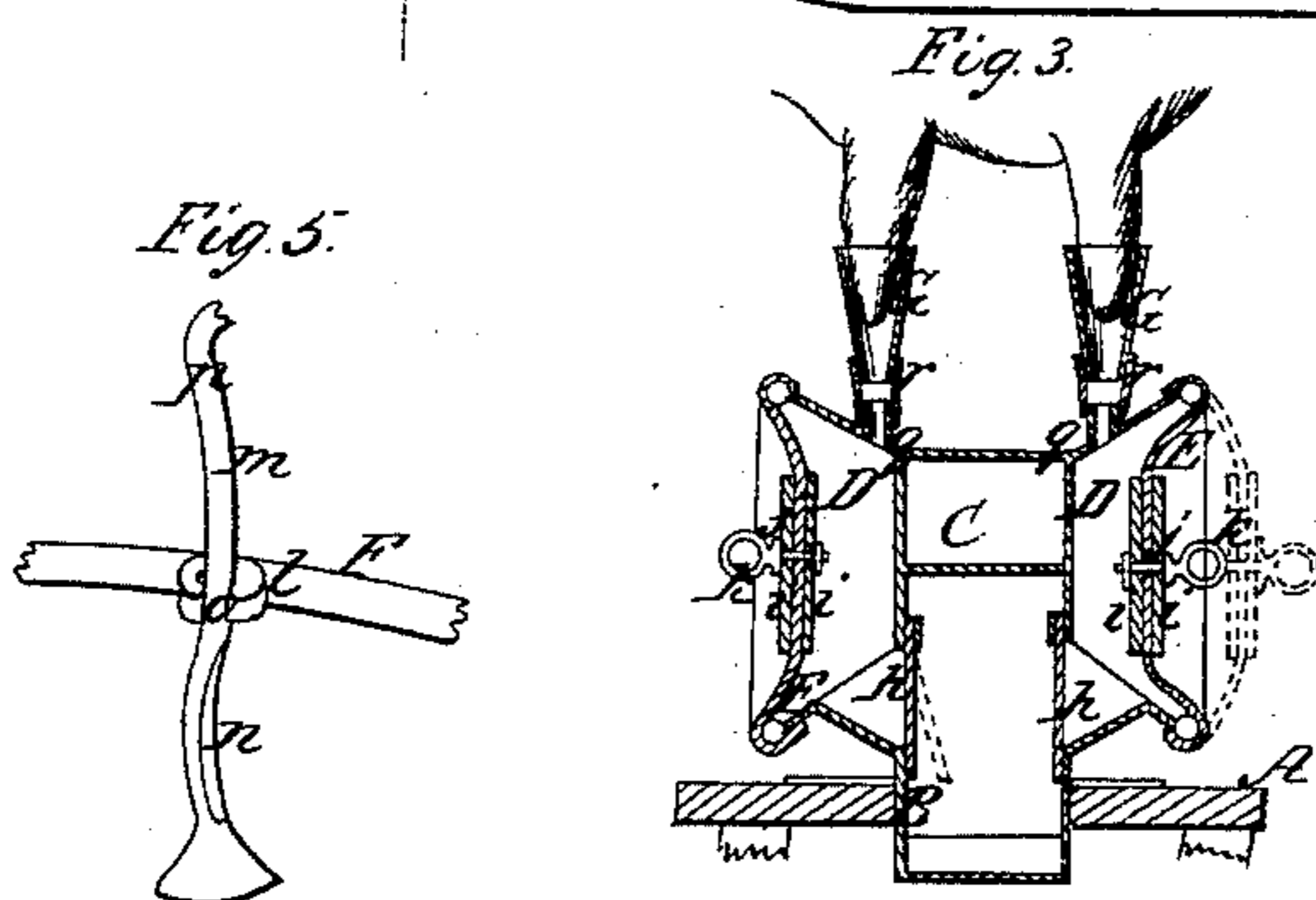
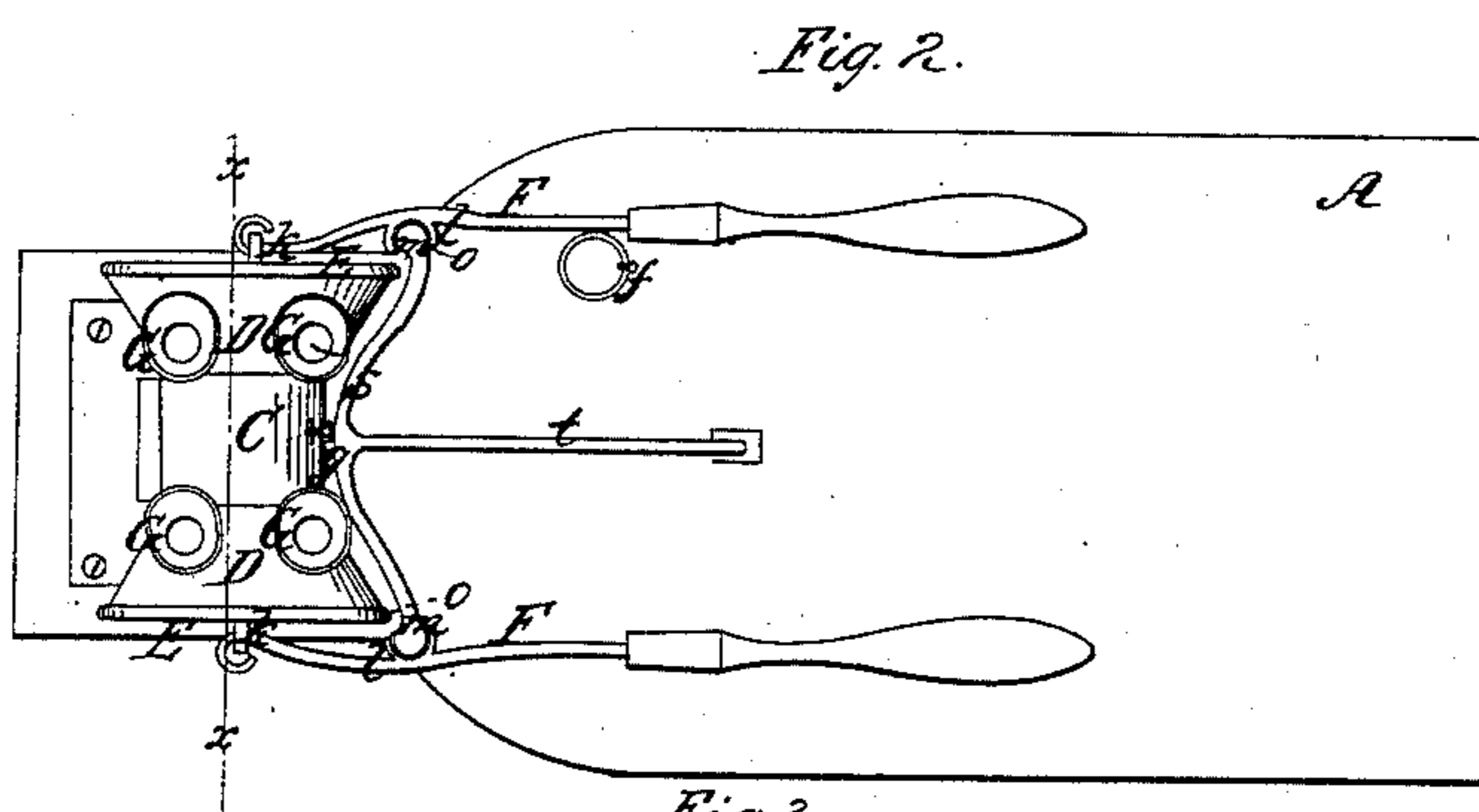
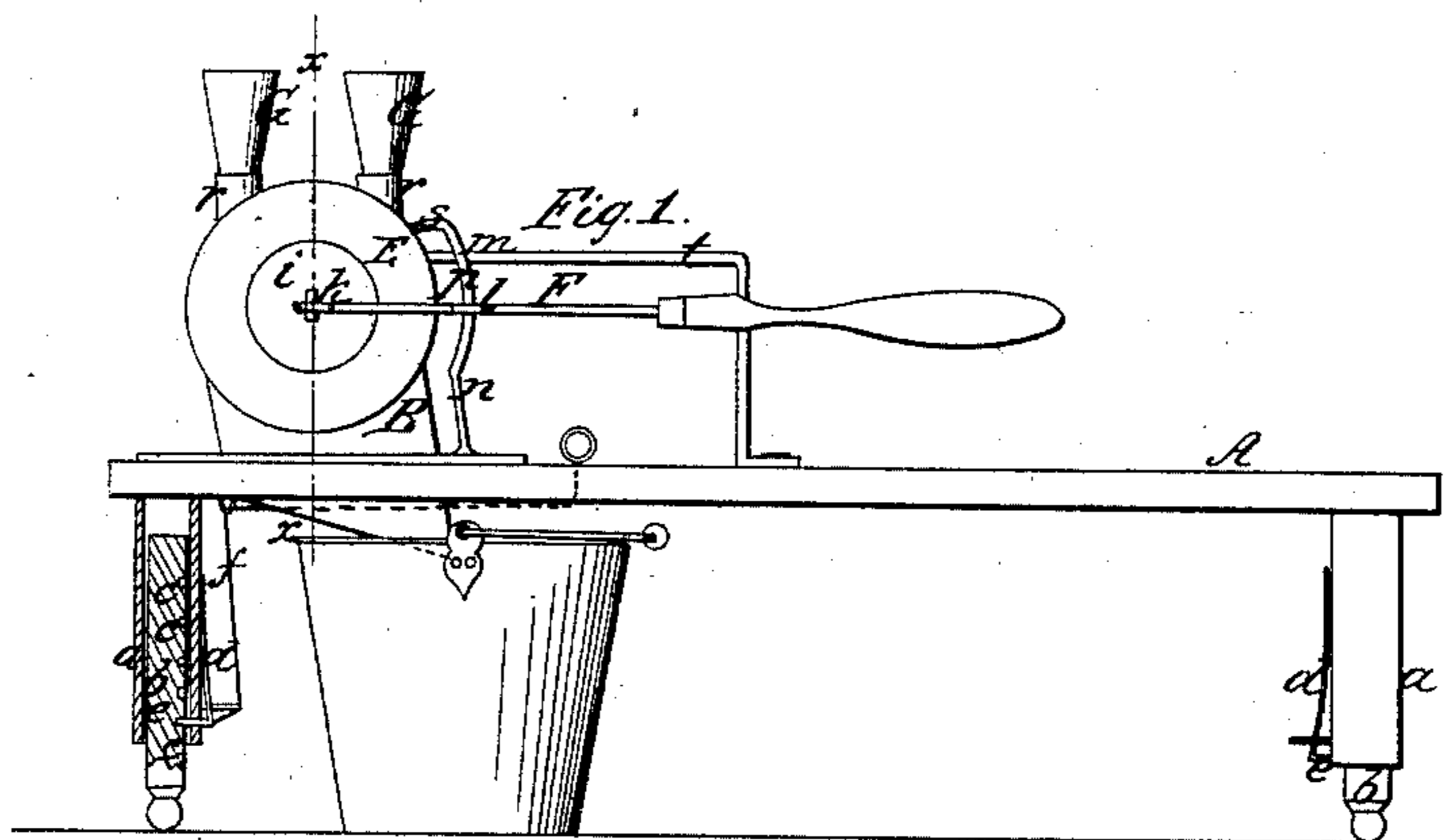


L. O. COLVIN.
COW MILKING DEVICE.

No. 28,455.

Patented May 29, 1860.



Witnesses;
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UNITED STATES PATENT OFFICE.

L. O. COLVIN, OF CINCINNATUS, NEW YORK.

COW-MILKER.

Specification of Letters Patent No. 28,455, dated May 29, 1860.

To all whom it may concern:

Be it known that I, L. O. COLVIN, of Cincinnati, in the county of Cortland and State of New York, have invented a new and Improved Device for Milking Cows; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a side view of my invention. Fig. 2 a plan or top view of the same. Fig. 3 a vertical section of the same taken in the line *x, x*, Figs. 1 and 2. Fig. 4, a horizontal section of one of the teat tubes. Fig. 5, a detached perspective view of the fulcrum connection of the levers.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain improvements in that class of cow-milking devices in which pumps are employed for extracting the milk. The object of the invention is to obtain a device which will have all its parts very accessible for the purpose of cleansing the implement permitted to be readily adjusted to cows of varying heights, and the device as a whole rendered extremely simple in construction and efficient in its operation.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents a bench which is supported by three legs *a, a, a*, one in front and two behind. These legs *a*, are hollow and each is provided with a slide *b*, the slides being fitted loosely in the legs *a*. Each slide *b*, has a series of holes *c*, made in it in a vertical line and to the outer side of each leg *a*, a spring *d*, is secured, the lower ends of the springs having pins *e*, attached which pass through the legs and fit into either of the holes *c*, in the slides. By withdrawing the pins *e*, the slides *b*, may be raised or lowered and the pins *e*, made to fit in either of the holes *c*, and the legs consequently shortened or lengthened as occasion may require. The front leg of the bench will require to be varied in height oftener than the other two and to facilitate the adjustment of said leg its spring *d*, may have a cord *f*, attached, the cord passing up through the seat of the bench so that it may be readily grasped by the occupant and the leg aforesaid adjusted without difficulty and without rising from

the seat. It will be understood that the springs *d*, have a tendency to keep the pins *e*, in the holes *c*, of the slides. This arrangement of the extension legs is fully shown in Fig. 1. It will be seen that by this arrangement the bench may be readily raised or lowered to the required height.

In the front part of the bench A, there is placed a socket B. This socket may be of sheet metal and is hollowed out at its upper end to receive a semi-cylinder C, which is secured in proper position by a hook *g*. To each end of the semi-cylinder C, a conical chamber D, is attached. The semi-cylinder C, is intended merely as a support for the conical chambers, the latter projecting beyond the sides of the socket as shown clearly in Fig. 3. Each chamber D, communicates with the socket B, by means of a valve *h*, opening into the socket as shown in Fig. 3. The outer end of each chamber D, has an india-rubber head E, fitted to it and to the center of each head E, metal plates *i*, are attached a plate being at each side of the head and the two plates connected by a screw *j*. At the outer ends of the screw *j*, eyes *k*, are formed, in which the front ends of levers F, are hooked as shown clearly in Fig. 2.

Each lever F, has an eye *l*, formed on it of circular form with a section or portion removed in order that they may be fitted on uprights *m, m*, on the bench. The uprights *m, m*, are of cylindrical form and at their lower parts they are reduced in thickness as shown at *n*, so as to admit of the eyes *l*, of the levers being readily fitted on them; the break or cut *o*, in the eyes being sufficiently wide to allow the narrow parts *n*, of the uprights to pass through; the levers are then raised up on the thicker parts *p*, of the uprights from which the levers cannot be laterally removed. This will be fully understood by referring to Fig. 5.

To each conical chamber D, two upright tubes *q, q*, are attached, said tubes being at the upper parts of the chambers, and each having a conical tube G, attached by a flexible band *r*, to admit of the free movement of the tubes G, on the tubes *q*. The conical tubes G, are of elliptical form in their transverse section as shown in Fig. 4, and their inner surfaces are slightly corrugated or roughened in any proper way. The tubes G, receive the cow teats and said tubes are made rather less taper or conical than the teats of a cow so that the former will at their up-

per parts fit snugly to the latter, see Fig. 3, in which the teats are shown in red.

The upper parts of the uprights *m, m*, are connected by a traverse rod *s*, and a handle *t*, is attached one end directly to the bench *A*, and the other to the traverse rod *s*.

The operation is as follows: The operator carries the bench and its attachments by grasping the handle *t*, and the bench being placed in suitable position underneath the bag of the cow. The bench is adjusted to the required height to suit the cow by withdrawing the pins *e*, as previously explained and the operator places the pail underneath the bench and below the socket *B*, and adjusts the teats in the tubes *G*. The operator then works the levers *F*, back and forth laterally and the india-rubber heads *E*, operate as pistons drawing the milk from the bag of the cow. The milk is drawn from the bag within the chamber *D*, during the outward movement of the heads *E*, and is forced from said chambers as the heads are pressed inward as will be fully understood by referring to Fig. 3. The milk passing down from the socket *B*, into the pail.

By having the tubes *G*, of a less conical or taper form than the teats, the teats fit snugly in the tubes, at the upper part of the latter, and the lower parts of the teats will be quite loose in the tubes; by this arrangement the lower parts of the teats and their orifices are expanded at each draw or suction and the milk is allowed to flow more readily therefrom than it otherwise would. This result is also favored by the elliptical form of the tubes *G*. By having the tubes *G*, conical they may be made to fit different sized teats and by having their inner surfaces corrugated or roughened the teats are retained or prevented from slipping down within the tubes. By having the levers *F*, connected to the uprights *m*, as shown, the

levers may be readily attached to and detached from the uprights and adjusted and worked at any desired point on the uprights to suit the operator. By having the chambers *D*, of conical form the heads are allowed to move freely in and out and the device operated with facility, and by having the semi-cylinder *C*, attached to or fitted on the socket *B*, as described, the chambers may be readily detached therefrom, and the valves *h*, rendered accessible. The heads *E*, it will be seen may be readily detached from the ends of the chambers *D*, and all the parts composing the implement are rendered perfectly accessible and can be kept perfectly clean without difficulty.

I do not claim the flexible or india-rubber heads *E*, for they have been previously used, but:

I do claim as new and desire to secure by Letters Patent—

1. The extension legs formed of the tubes or hollow legs *a*, containing the slides *b*, in connection with the pins *e*, attached to the springs *d*, which are secured to the tubes *a*, when the above parts thus arranged are applied to a bench *A*, of the milking device herein described for the purpose set forth.

2. The teat tubes *G*, when made of conical form, or taper form longitudinally and of an elliptical form in their transverse section, to operate as specified.

3. The combination of the teat tubes *G*, levers *F*, and the pump, the latter being constructed of the conical chambers *D*, provided with valves *h*, and the semi cylinder *C*, fitted on the socket *B*, all being arranged as and for the purpose specified.

L. O. COLVIN.

Witnesses:

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