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VETERINARY APPLIANCE FOR FACILITATING THE PARTURITION OF COWS IN CALF

Filed March 30, 1931

Fig. 1.

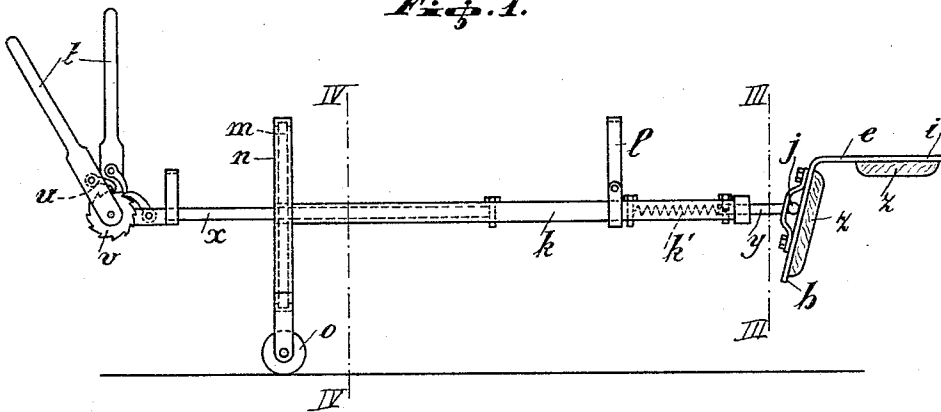


Fig. 2.

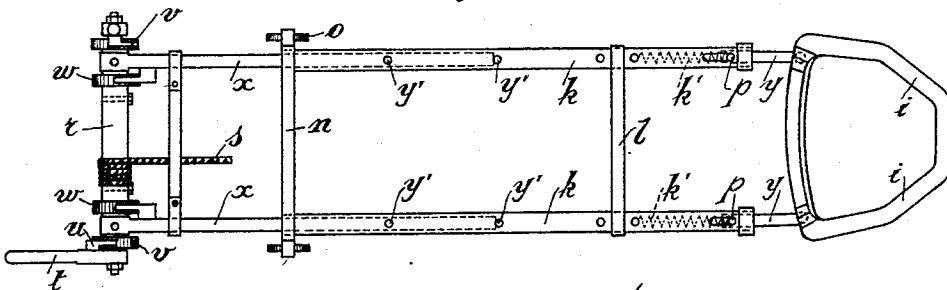


Fig. 4.

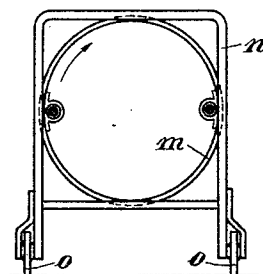


Fig. 3.

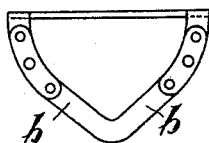
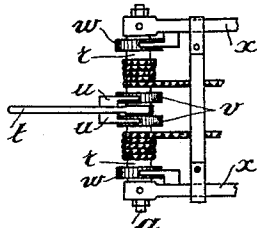


Fig. 5.



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UNITED STATES PATENT OFFICE

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VETERINARY APPLIANCE FOR FACILITATING THE PARTURITION OF COWS IN CALF

Application filed March 30, 1931, Serial No. 526,467, and in Belgium April 4, 1930.

The present invention has for its object a veterinary apparatus useful for drawing the calf from the body of the cow, in case when the delivery is particularly laborious.

The machine in conformity with the invention comprises three distinctive parts, namely the head portion, which takes rest on the animal, the body or frame of the machine, and a traction mechanism. These three portions are connected in such a manner that the apparatus can be adapted for any position of the cow and will secure, therefore, a fixed position of the resting portions upon the animal when the apparatus is working.

The machine in conformity with the invention will be described hereafter with reference to the accompanying drawing illustrating a preferred form of embodiment.

Fig. 1 is a side elevation;

Fig. 2 is a plan view of the machine;

Fig. 3 is a section on line 3—3 of Fig. 1;

Fig. 4 is a section on line 4—4 of Fig. 1;

Fig. 5 is a plan view of a modified form of embodiment of the traction mechanism.

The head *e* of the machine is made from a flat shaped iron in a very particular form, so determined that the machine will find a perfect support on the hind quarters of the cow, thus completely clearing the passage and only exerting pressure on such parts of the body capable of supporting it, without harm to the constitution of the animal and to the good prosecution of the delivery.

The arms *h*, Fig. 3, of the lower portion of the head rest on the buttocks of the cow clearing the passage. The branches *i* of the upper portion of the head, Fig. 2, bear on both sides of the sacrum. This particular form of the head will secure a fixed rest of the machine in front of the passage during the traction efforts, and will avoid sliding down of the apparatus along the legs, as it is the case for other known machines having a head portion in the shape of a semi-circle or complete movable circle. The tail of the animal can be easily lifted, and in order to avoid injuries to the animal, cushions *z* are fixed to the branches *h* and *i*.

The head portion of the machine is connected to the frame by means of two rod

irons *y* engaging the tubes *k* forming the body or frame of the machine. The knuckle at the other end of the rods *y* is engaged in an element *j* forming shell. Those two shell-shaped elements are fixed on the depending branches *h* of the head portion *e*. In this construction, the head *e* can swing with respect to the plane formed by the tubes *k*.

The frame of the machine is constituted with two steel tubes *k* connected to each other, on the one hand by means of a flat iron *l*, and fixed, on the other hand, to a flat iron hoop *m* (Fig. 4); this hoop is retained in a frame *n* formed with U-irons. This frame constitutes the support for the complete machine and ends with two wheels or castors *o* allowing an easy manipulation and placement of the machine.

The hoop *m* rotates freely about its center in the frame *n*.

This particular connection of the body of the machine with its support will allow said machine to be rotated about its main longitudinal axis. Consequently, whatever be the position of the hind quarters of the cow lying down, it will be always possible to bring the machine exactly in that place which it wants to occupy, although the support remains fixed.

Within the tubes *k* are lodged springs *k'*, upon which abut the rod irons *y* supporting the head portion of the machine. The springs are intended to absorb the shocks and eventually to compensate the pressures in the case when the head will exert a more considerable pressure on one side than on the other. In this case, one of the springs will be further compressed. Slots *p* are provided in the tubes *k*, to act as guide-ways for the rod irons supporting the head portion; these rods are each provided with a pin *q* engaging in the corresponding slot *p*.

The traction mechanism is formed with a drum *r*, upon which the traction cable *s* is engaged. The rotary movement is imparted to the drum by means of one of the levers *t*, which are provided with a ratchet *u* adapted for driving a ratchet wheel *v*. The drum *r* is furthermore provided with two ratchet wheels with catches *w*. The traction mech-

anism is supported by two rod irons x , which engage in the two steel tubes k of the machine body. Perforations y' in the tubes allow the introduction of pins forming abutments for the rod irons supporting the traction mechanism. By this structure, the machine becomes extensible.

When the cow is lying down, the machine is brought in position so that the head portion e is adapted on the hind quarters of the animal, the main longitudinal axis of the machine being more or less in line with the chine of the animal. The end of the cable wound on the drum of the traction mechanism is fixed to the string joining the hoofs of the calf, which at this moment protrude from the body of the mother. From this moment, on each expulsive effort made by the cow, a certain traction will be operated on the cable by rotating the drum r upon which the cable is wound. After a number of operations of this kind, the calf will be finally drawn out of the body of the mother.

The advantageous character of the traction mechanism as described resides in the fact that, whatever the position of the machine may be, it remains very easy to act on one of the levers t which is best at hand. Moreover, said mechanism allows the tractions on the calf to be exactly synchronized with the expulsive efforts of the mother, and to closely survey all the movements of the latter.

In the modification of Fig. 5, the traction mechanism is substantially doubled; it is adapted to allow a separate traction on each of the members of the calf. In laborious deliveries, where the calf is very big, it is useful to draw on one member to make it progress separately, and then to operate on the other, while holding the former in place.

A central shaft a connects the two rod irons x . In the middle portion of this central shaft rotates a single lever t provided with two ratchets u , each acting on a ratchet wheel v . As in the model described heretofore, each of the two small drums r is furthermore provided with a second ratchet wheel w with catch. The two ratchets fixed to the lever t being movable, it is possible to make the lever act at will on the left hand drum only or on the right hand drum only, or on both drums together.

I claim:

1. A veterinary appliance for facilitating the parturition of cows, comprising in combination: a shaped head portion made of flat irons, having a substantially horizontal part to rest on the hind quarters and a substantially depending part engaging the buttocks and clearing the passage, cushioning devices on said head portion, a longitudinal framework comprising two parallel and interconnected tubes, knuckle-joint connections between the head portion and the tube

ends, a movable support for said framework, and a traction mechanism at the end of the framework opposite to the head portion.

2. A veterinary appliance for facilitating the parturition of cows, comprising a shaped head portion engaging the hind quarters of the animal, two parallel and interconnected tubes forming a frame, knuckle-joint connected rod ends adapted to the head portion and engaging the frame tubes, cushioning means inside the tubes for said rod ends, a movable support for the frame, and a traction mechanism at the end of the frame opposite to the head portion.

3. In the appliance of the type described, a head portion, a tubular frame pivotally adapted to the head portion, a hoop enclosing and supporting the tubular frame, means for rotatably supporting the hoop, and a traction mechanism at the end of the frame opposite to the head portion.

4. In an appliance of the type described, a head portion, a tubular frame pivotally adapted to the head portion, a hoop enclosing and supporting the tubular frame, a substantially vertical supporting frame of channel section iron, the hoop rotatably engaging the channel of said support, and a traction mechanism at the end of the frame opposite to the head portion.

5. In the appliance of the type described, a head portion, a tubular frame pivotally adapted to the head portion, a hoop enclosing and supporting the tubular frame, means for rotatably supporting the hoop, a transverse shaft connecting the tube ends of the frame opposite to the head portion, a drum on said shaft, a traction cable engaging the drum, a ratchet-drive for the drum on said shaft, and a catch for said drum.

6. In the appliance of the type described, a head portion, a tubular frame pivotally adapted to the head portion, a hoop enclosing and supporting the tubular frame, means for rotatably supporting the hoop, a transverse shaft connecting the tube ends of the frame opposite to the head portion, two drums on said shaft, a traction cable engaging each drum, a ratchet-drive on said shaft intermediate the two drums adapted to alternately drive each drum, and a catch for each drum.

In testimony whereof I have signed hereunto my name.

U. RANSY.