Dec. 13, 1938. H. W. McCALL 2,139,967

EMASCULATOME

Filed May 20, 1937

Fig. 1

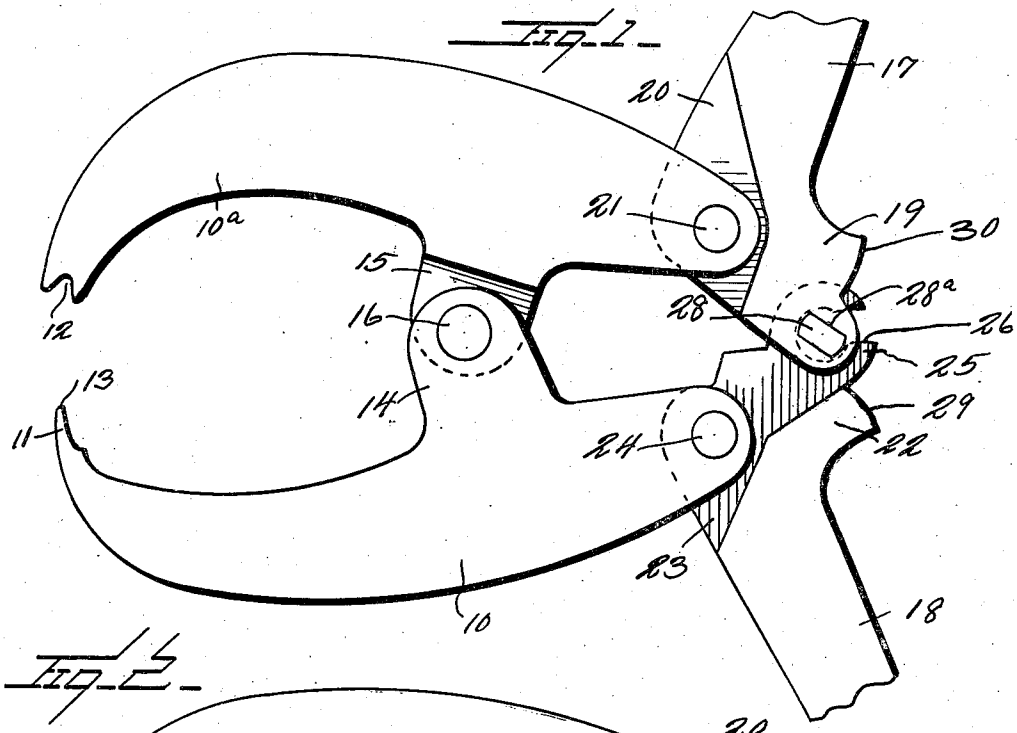


Fig. 2

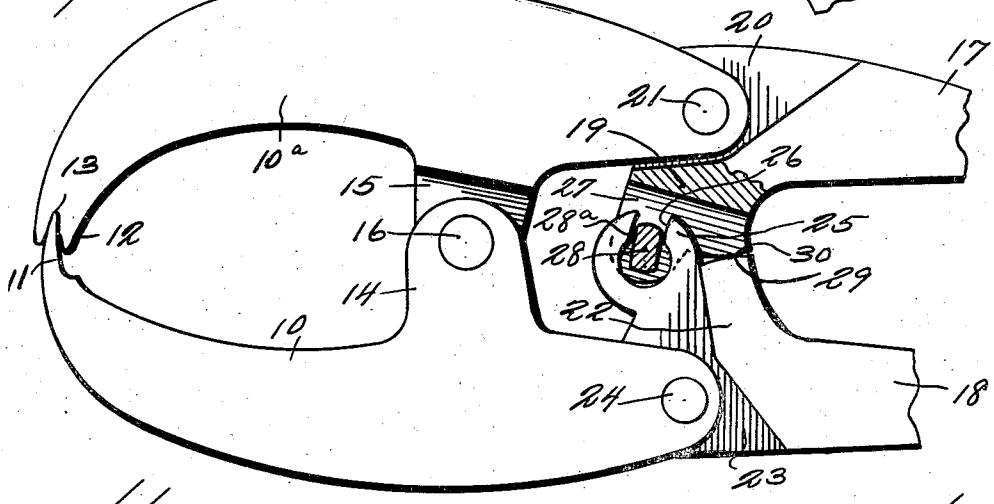


Fig. 3

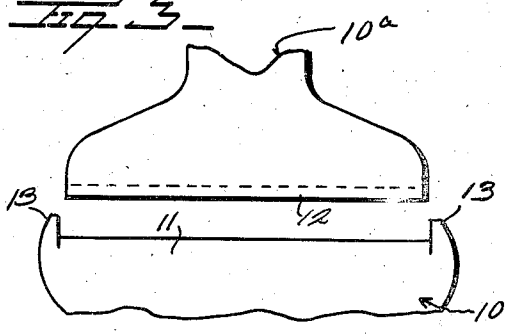
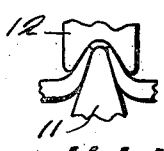


Fig. 4



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EMASCULATOME

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4 Claims. (Cl. 128—306)

This invention relates to castrating instruments and particularly to an emasculatome such as used for the bloodless castration of calves, colts, sheep, goats and other small or young animals.

An object of the invention is to provide an instrument for this purpose having jaws so formed that when they are placed on the seminal cord, just above the testicles and closed, they will sever this cord, and particularly to so form the meeting edges of the jaws that when closed to sever the cords, they will not break the skin, and to this end to form one jaw with a grooved edge and the other with a blade which will enter the groove.

Another object is to provide means at the ends of one jaw or blade to prevent the cord from slipping out between the jaws.

A further object is to secure such leverage on the jaws by the handles as will exert a powerful closing action and cause a full and complete closing of the jaws against each other.

Other objects will appear in the course of the following description.

My invention is illustrated in the accompanying drawing wherein:

Figure 1 is a side elevation of my implement in its fully opened position.

Figure 2 is a like view to Figure 1 but showing the implement closed, the head of one handle being broken away.

Figure 3 is an end view of the two jaws of the implement in opened position.

Figure 4 is a diagrammatic section of the approximating faces of the two jaws and showing diagrammatically the cord cut and pinched within the jaws.

Referring to this drawing, 10 and 10a designate the shanks of opposed jaws. These shanks are pivoted to the handles of the instrument as will be more fully explained later. The shank 10 at its free end is formed with a blade 11 which is relatively sharp-edged. The opposed shank 10a is formed at its edge with a groove 12. The shank 10 is formed at the ends of its blade 11 with the outwardly projecting lugs 13, this blade 11 being sufficiently longer than the opposed jaw as to permit these lugs to fit over the ends of the opposed jaw. The shank 10 is formed with a pair of ears 14 projecting inward and the other shank 10a with an ear 15 also projecting inward and extending between the pairs of ears 14 and being pivoted thereto by the pivot pin 16.

There are two handles designated respectively 17 and 18. The handle 17 at its inner end is formed with a head 19. At its outer end, this head is reduced in thickness at 20 and this reduced portion is inserted within the bifurcated end of the shank 10a and pivoted thereto by a pivot bolt or pin 21. The opposite handle 18 is also provided with a head 22 reduced in thickness at 23, this reduced portion at the outer end of the head being inserted within the forked end of the shank 10 and pivoted thereto by a pivot pin or bolt 24. The head 22 is formed with an angularly directed tongue 25 disposed approximately at right angles to the handle 18 projecting laterally outward from the head and longitudinally slotted at 26, the inner end of this slot being circularly enlarged.

The opposite head 19 is inwardly extended, as before stated, and is bifurcated so as to provide a slot 27 for the reception of the tongue 25 and the walls of this slot are apertured for the passage of a pivot pin 28. The pin 28 has opposed flattened faces 28a, and this pivot pin is fixed within the perforations in the walls of slot 27 so that this pivot pin cannot turn. The flat sides of the pivot pin are disposed approximately parallel with the laterally projecting head or, in other words, approximately at right angles to the handle. Just below the tongue 25, the head 22 is formed with the rounded face 29, and just below the pivot pin 28, the head 19 is formed with the rounded face 30.

In the use of this device, the jaws are placed crosswise on the seminal cord just above the testicles and when closed the two jaws sever the cord without breaking or cutting the skin. The testicle is then absorbed with no open sore exposed to infection, parasites or unfavorable climatic conditions. The projecting points or lugs 13 at the ends of the blade 11 prevent the cord from slipping out while closing the instrument.

One of the most important improvements which I have made in this instrument resides in the provision of the groove 12 in conjunction with the blade 11. It will be seen from Figure 3 that the blade 11 does not fit tightly into the groove but that there is a space between the lateral faces of the blade 11 and the lateral faces of the groove. The provision of the blade and groove not only makes the severing of the cord more certain but the broken ends of the cord are squeezed between the sides of the groove and the blade preventing bleeding on the inside of the skin and consequent swelling.

A further important improvement lies in the joint between the heads 19 and 22. This joint, as before explained, has a rivet or pin 28 which is

stationary in one handle, this rivet or pin being round on two sides and flat on two sides. The diameter of the rivet is greater across the round sides of the pin than across the flat sides. When the instrument closes to a dead center, the flat sides of the rivet are parallel with the walls of the slot 26 and as the instrument is further closed, the rounded faces 29 and 30 contact, and as the handles are still further closed, this pin 28 moving outward through the slot 26 while the rocking of the rounded surfaces 29 and 30 upon each other secures leverage on the jaws and forces the blade 11 into the groove 12. Without this particular form of joint, if an instrument is tight enough to sever the cord on a small calf, it is too tight to close on a larger calf without breaking the skin. Then after using for a while, it becomes loose and fails to completely sever the cord, causing much trouble. With the three joints at 21, 24 and 28, the instrument is made to pass dead center easily and has plenty of take-up to complete the operation, thereby preventing failures. If there was no slot 26, the parts would bind after they had reached dead center and there could be no rocking action of the surfaces 29 and 30 upon each other and thus the final movement of or final pressure on the jaws could not be secured.

The particular construction of the jaws with the blade 11 and the groove 12 on the other jaw is a particularly valuable improvement over the use of two confronting blades. The particular construction to a large extent prevents slipping of the cord and by pressing the severed ends of the cord, it seals them and prevents internal hemorrhage.

Again, in castrating horses, it oftentimes occurs that on account of a short cord, the testicle fails to descend into the scrotum and it is necessary to make an incision and pull the testicle down. Under these circumstances, it is common to use an emasculator, an instrument designed to prevent bleeding while the naked cord is being severed. My emasculatome works just as well under these circumstances, either as an emasculator or an emasculatome, whereas those instruments without the groove in one jaw and the blade in the other cannot work as an emasculator.

It may be stated that this instrument is also adapted to docking the tails of lambs and small dogs.

While I have illustrated certain details of construction and certain arrangement of parts which have been found particularly effective in practice, I do not wish to be limited thereto as obviously many changes may be made without departing from the spirit of the invention as defined in the appended claims.

What is claimed is:—

1. An emasculatome including a pair of handles, each having a head at its inner end, jaws having shanks each pivoted at its inner end to the outer corner of the head of a corresponding handle, the shanks having inwardly projecting overlapping lugs pivoted to each other, the handle heads at their confronting ends being one bifurcated and the other having a tongue entering the bifurcation, the tongue being longitudinally slotted, and a pin extending through the perforations of one head and the slot in said tongue, the heads just outward of the tongue and pin having rounded contacting portions which, when the handles are brought together, have rocking engagement with each other to shift the pin and the tongue toward the pivot of the jaws and thereby exerting a further outward pressing action on the rear ends of the shanks to cause the jaws to be forced against each other.

2. An emasculatome including a pair of handles, each having a head at its inner end, jaw carrying shanks each pivoted at its inner end to the outer corner of the head of a corresponding handle, the shanks having inwardly projecting overlapping lugs pivoted to each other, the handle heads, at their confronting ends, being formed one with a bifurcated portion and the other with a tongue entering the bifurcated portion, the tongue being longitudinally slotted, a pin passing through the bifurcated portion of one head, said pin being rigidly mounted within the head and having opposed flat sides engaging the walls of the slot in the tongue, the heads just outward of the tongue and pin having rounded contacting portions which, when the handles are brought together, have rocking engagement with each other to shift the pin and the tongue upward and exert a further outward pressing action on the lower ends of the shanks to cause the jaws to be forced against each other.

3. An emasculatome including a pair of handles, each having a head at its inner end, jaw carrying shanks each pivoted at its inner end to the outer corner of the head of a corresponding handle, the shanks having inwardly projecting overlapping lugs pivoted to each other, the handle heads at their confronting ends being formed one with a bifurcated portion and the other with a tongue entering the bifurcated portion, the tongue having a slot extending inward from the end of the tongue, the slot terminating in an enlarged circular portion, a pin passing through the bifurcated portion of one head, the pin being rigidly mounted within the head and having opposed flat sides engaging the walls of the slot in the tongue and the pin being rotatable within the enlarged circular portion of the slot, the heads just outward of the tongue and pin having rounded contacting portions which when the handles are brought together have rocking engagement with each other whereby to exert a final outward pressing action on the adjacent ends of the shanks to cause the jaws to be forced against each other.

4. An emasculatome having opposed jaws, one of the jaws having a relatively sharp-edged blade extending transversely to the plane of movement of the jaw and the other having a groove extending transversely of the plane of movement of the jaw to receive the said blade, the groove being relatively deep and having inwardly and medially inclined side walls and the blade having laterally beveled side walls and a rounded edge, the inclination of the beveled faces of the blade being less than the inclination of the lateral walls of the groove whereby after severing of the seminal cord the broken ends of the cord will be squeezed between the blade and the walls of the groove to thereby prevent bleeding.

HUGH W. McCALL.