(No Model.)

W. B. HOWELL.

CATTLE DEHORNER.

No. 483,557. Patented Oct. 4, 1892.

Fig. 1.

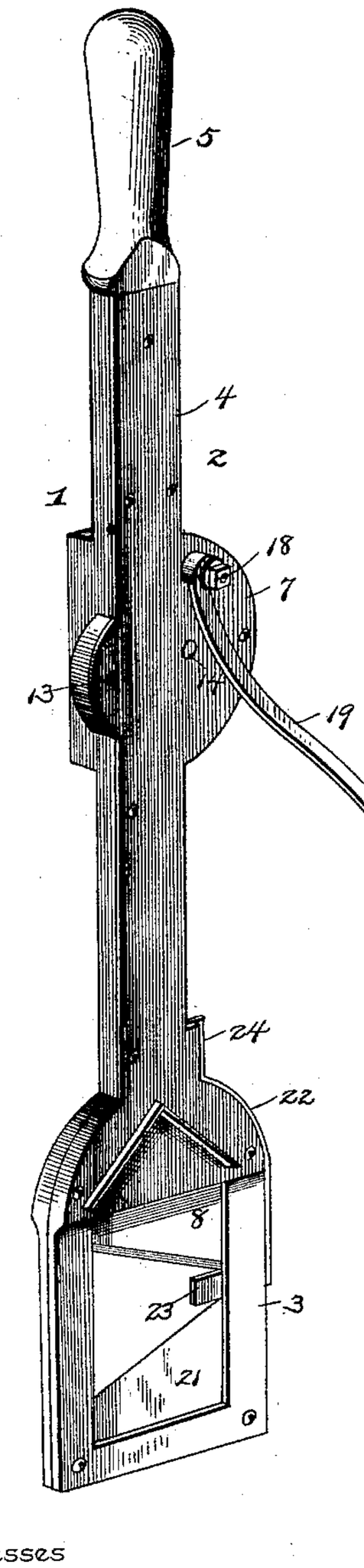


Fig. 3.

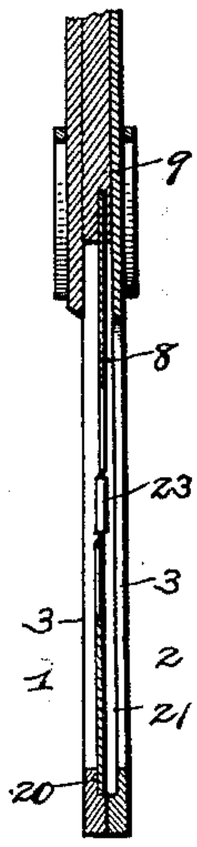


Fig. 4.

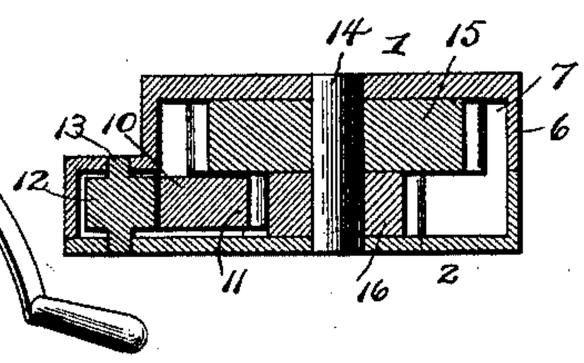


Fig. 5.

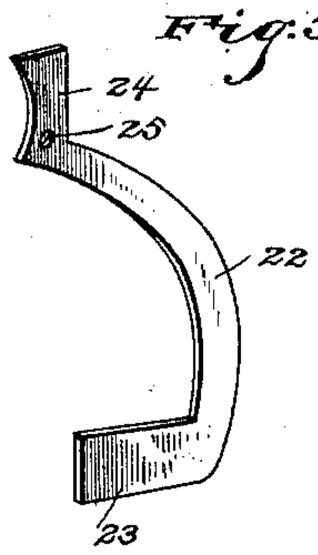
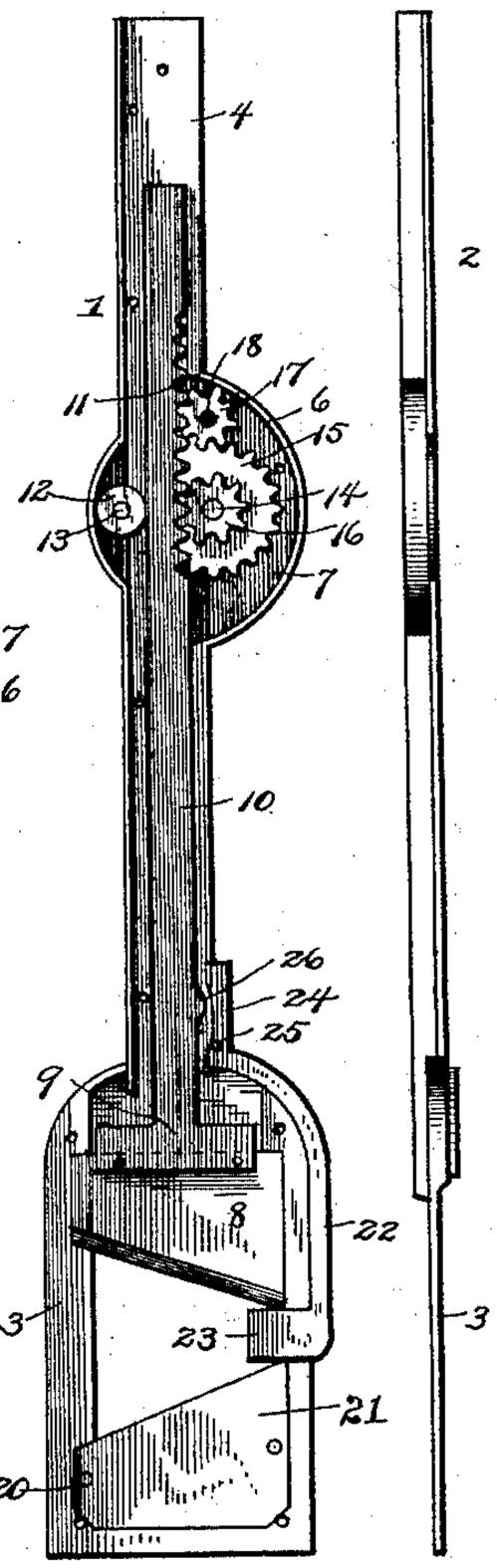


Fig. 2.



Witnesses
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CATTLE-DEHORNER.

SPECIFICATION forming part of Letters Patent No. 483,557, dated October 4, 1892.

Application filed June 4, 1892. Serial No. 435,538. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. HOWELL, a citizen of the United States, residing at Albany, in the county of Gentry and State of Missouri, have invented a new and useful Cattle-Dehorner, of which the following is a specification.

My invention relates to instruments for dehorning cattle, the objects in view being to provide a simple instrument capable of being readily operated by one person and of manipulation with one hand of the operator, leaving the other hand free to support the instrument in a proper position; to provide means for accurately determining the point of cut upon the horn, and to so construct and arrange the knives that a clean smooth cut will be effected and no injury to the head-bone take place.

With these general objects in view the invention consists in certain novel features of detail, which will be hereinafter described, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a dehorning-instrument constructed in accordance with my invention. Fig. 2 is an internal view in elevation, the two members being removed. Fig. 3 is a longitudinal section through the head-frame and knives. Fig. 4 is a transverse section through the plunger or rack-bar, the case, and the gears. Fig. 5 is a detail in perspective of the gage.

Like numerals of reference indicate like parts in all the figures of the drawings.

In practicing my invention I employ a metal casing, forming the same in opposite sections, (designated as 1 and 2.) Each section terminates at its lower or outer end in a rectangular frame 3 and in rear of the same is made narrower to form a handle 4, the handle of the section 2 having a grip 5 bolted to its rear or inner extremity. The handle portion 4 of the section 1 is provided with a surrounding flange 6 at a right angle to the remainder of the handle and extending from the inner end of the handle to the frame 3. Between their ends both handles 4 are widened, the flange 6 following the widened portion of the handle 4 of the section 1, and therefore constituting a pocket or cavity 7. The inner face of the frame 3 of the section 4 is reduced to form opposite ways, and in the same is mounted for sliding a knife 8, having an inclined cutting-edge. This knife is firmly secured to the head 9, in which the outer end of the reciprocating plunger or rack-bar 10 terminates. The rack-bar or plunger 10 takes between the flanges 6 of the section 1 and opposite the pocket or cavity 7 has one of its faces or edges provided with rack-teeth 11. The plunger 10 has its outer edge embraced by an antifriction-roller 12, the same being mounted upon a pin 13, passing through the two sections 1 and 2.

At that side of the plunger or rack-bar having the teeth there is journaled in section 1 and in the pocket a shaft 14, and the same has mounted upon it a gear-wheel 15 and a small pinion 16, both moving with the shaft. The gear-wheel passes to one side of the rack-bar or plunger, while the pinion engages with the teeth of and operates the rack-bar. The shaft 14 receives motion from a small pinion 17, which is mounted upon a shaft 18 at one side of the shaft 14, the same being journaled in the sections 1 and 2 and provided at one of its external ends with a crank 19, by which the shaft 18 is operated.

In a recess 20, formed in the frame 3 of the section 1, there is seated a stationary knife 21, having an inclined blade, the disposition of which is opposite to that of the movable knife 8, and against the edge of the knife 21 the knife 8 cuts.

22 designates a knife-gage, and the same comprises a curved body portion terminating at its front end in an inwardly-disposed head 23 and at its rear end in a curved tail 24. At the juncture of the tail with the body portion the gage is pivoted at 25 between the two sections, the curved portion or tail extending to opposite sides of the pivot and the head 23 passing through an opening formed between the two frames 3 and taking between the two knives directly in the path of the same. A lug 26 is formed on the bar 10 and moves within the recess or curved portion of the gage 22, striking the gage in front and in rear of its pivot in accordance with the direction of movement of the rack-bar. By this means it will be obvious that if the rack-bar moves forward the lug, striking the gage in front of the pivot, will withdraw the head 23 from the path of the knife 8, and by a rear-

ward movement of the rack-bar, the lug being brought against the rear end of the gage, will serve to throw the front or free end of the gage into the path of the knife. At intervals the two sections are bolted together in a manner shown and as will be well understood.

In operation the crank 19 is revolved until the rack-bar is drawn rearward and the gage is swung into the path of the movable knife. The frame is now slipped over the horn to be severed, and by the gage the operator can see at what point the cut will come, and hence determine the proper point. After having observed this point it simply remains to rotate the crank, communicating motion from the shaft of the same to the pinion 17, to the gear 15, the shaft 14, and through the small pinion 15 to the plunger 10, thus making the cut in a manner that will be understood. The employment of the gears serves to reduce the power required to a minimum, so that the cut can be made with ease.

Having described my invention, what I claim is—

1. In a dehorning-instrument, the combination, with the hollow handle terminating at its front end in a horn-receiving frame and provided at its outer end with a fixed knife, of a movable knife mounted in the frame, a plunger mounted in the hollow handle and secured at its front end to the fixed knife, means for operating the plunger, and a pivoted knife-gaging lever mounted on the handle and having its free end adapted to take into the path of the movable knife, and means for advancing the gage into the path of the knife when the latter is withdrawn and withdrawing the gage from said path when the knife is advanced, substantially as specified.

2. In a dehorning-instrument, the combination, with the hollow handle terminating at its front end in a frame carrying a fixed knife and provided in rear of the same with an opening, of a knife-gaging lever 22, having its front end 23 inwardly extended and in rear of its pivot 25 provided with a tail having a curved recess extending each side of the pivot, a plunger mounted in the handle, a knife carried by the plunger, means for operating the plunger, and a lug mounted on the plunger and operating in the curved recess at opposite sides of the pivot 25, substantially as specified.

3. In a dehorning-instrument, the section 1, comprising a handle 2, frame 3, and widened portion 7, the whole surrounded by the flange 6, the frame being provided with a recess 20, in which is seated a fixed knife 21, combined with the correspondingly-shaped section 2, having the grip 5 and bolted to the section 1, the plunger 10, having teeth 11, the movable knife 8, secured to the front end of the plunger, the antifriction-roller 12, mounted on the shaft 13 in rear of the plunger, the transverse shaft 14, the gear 15 and pinion 16 thereon, the latter engaging the teeth 11, the shaft 18, the crank-handle 19 for operating the same, the pinion 17, mounted on the shaft and engaging the gear 15, the lug 26 on the plunger, and the pivoted gage-lever 22, having the inwardly-disposed head 23 and curved tail or extension 24 in the path of the lug, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM B. HOWELL.

Witnesses:
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WM. F. GREENLEE.