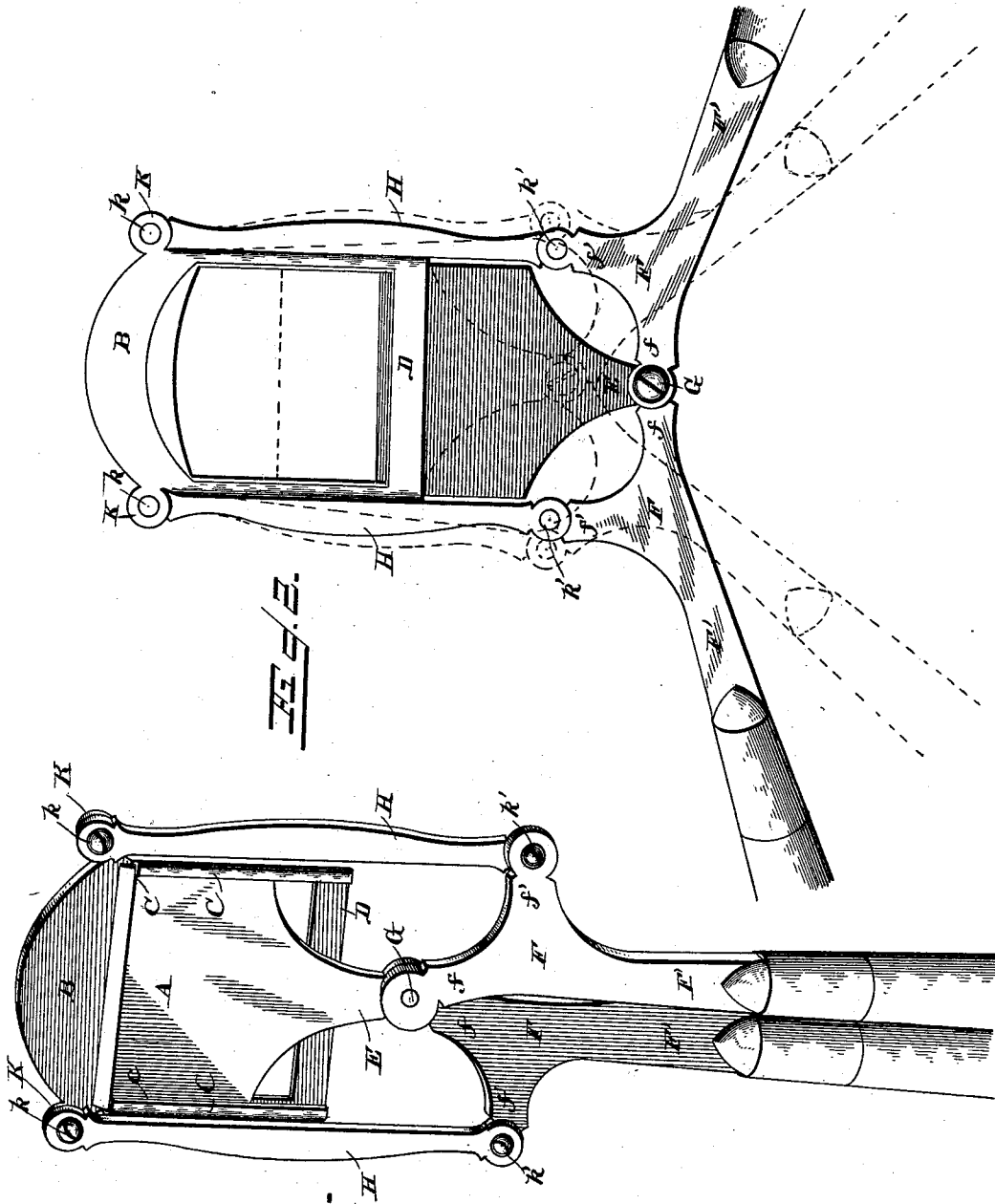


(No Model.)

J. MILLER.
CATTLE DEHORNER.

No. 508,178.

Patented Nov. 7, 1893.



Witnesses

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CATTLE-DEHORNER.

SPECIFICATION forming part of Letters Patent No. 508,178, dated November 7, 1893.

Application filed December 24, 1892. Serial No. 456,247. (No model.)

To all whom it may concern:

Be it known that I, JEFFERSON MILLER, a citizen of the United States, residing at Vancouver, in the county of Clarke and State of Washington, have invented a new and useful Dehorner for Cattle, of which the following is a specification.

The invention relates to improvements in dehorning devices, the objects in view being to provide a device in which the cutters or blades are mutually slidable, or slide upon each other, whereby either blade may slide upon the other or both will move, simultaneously, toward the object to be severed; to provide a device in which the cutters or blades may be opened or separated to their maximum width without necessitating the disposition of the handles beyond the points at which the maximum power may be applied thereto; to provide a dehorner comprising a minimum number of members free from complications of construction; and to provide a simple, cheap and effective machine capable of being manipulated by a single operator without assistance.

Further objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claim.

In the drawings: Figure 1 is a perspective of a dehorner embodying the invention. Fig. 2 is a rear view of the same with the handles spread and the cutters or blades open or separated.

A and B represent, respectively, the relatively slidable cutters or blades, which are arranged in juxtaposition with their opposing surfaces in contact. The cutting edges of the cutters or blades are chisel-edged, with their plane sides in opposition. The cutter or blade A is mounted loosely in twin parallel guide-arms, C C, integral with the cutter and connected at their lower or inner terminals by a transverse connecting-bar D thus forming an open frame. These guide-arms are provided in their inner or facing sides with grooves c, the rear sides or walls of which are flush with the front surface of the cutter or blade A. The cutter or blade A is flat and, as before stated fits, slidably, at its side edges in the grooves c in the guide-arms C, and is

provided at the end opposite to its cutting-edge with a reduced tongue E.

F F represent bell-crank operating levers or handles, having the inner arms *f* which are approximately in alignment with the shanks, F', of the levers or handles, respectively, and the outer arms *f'* which are arranged at substantially right-angles with the shanks F'. The inner arms *f* are inclined inward slightly so as to form an obtuse angle between the inner arms *f* and the outer arms *f'*, as clearly shown in the drawings. The terminals of the inner arms of the bell-crank levers or handles are pivotally connected, by means of a bolt G, to the extremity of the tongue E, and the terminals of the outer arms of said levers or handles are connected by means of links H H, to the outer or remote end of the cutter or blade B. The latter is provided with perforated ears K K which extend laterally beyond the lines of the outer sides of the guide-arms C, and the ends of the connecting links H are pivoted thereto by means of pivot-bolts *k k*, and to the ends of the outer arms *f'* by means of pivot-bolts *k' k'*.

When the cutters or blades are closed, as shown in Fig. 1, the operating levers or handles are parallel and in juxtaposition. The outer arms *f'*, which are disposed at right angles to the shanks of the operating levers or handles, extend laterally and are in transverse alignment, and the connecting-links H are drawn close to and are substantially parallel with the outer sides of the guide-arms C, whereby the parts of the machine are compactly arranged.

When the cutters or blades are open or separated, as shown in Fig. 2, (in which they are shown spread to their widest extent,) the operating levers or handles are disposed at an obtuse angle to each other, whereby power may be applied thereto without overcoming a dead center but by simply pressing them toward each other, the inner arms *f* are in transverse alignment and are disposed at right angles to the length or direction of movement of the cutters or blades, and the connecting-links are arranged substantially parallel with the outer sides of the guide-arms C.

In Fig. 2 is shown in dotted lines the intermediate positions of the operating levers or

handles, cutters and connecting-links, and by reference thereto it will be noted that at the point in the operation of the parts of the dehorner when the pivotal points of the outer arms f' and inner arms f are in alignment, (as shown in said dotted position in Fig. 2,) and when, obviously, the connecting-links are deflected as far as possible from the lines of the outer sides of the guide-arms C, their divergence is but slight, amounting to less than a tenth of the total "throw" or movement of the cutters or blades, and hence the draft of the operating levers or handles (through said links) upon the blade A is almost directly parallel, at all points, with the direction of movement of the cutters. The thrust of the inner arms f is directly parallel with the direction of movement of the cutters at all points, and is in alignment with the center of that cutter A to which the arms f are connected.

The above described construction by which the draft and thrust of the operating levers or handles upon the cutters or blades are made parallel, or nearly so, with the direction of movement of said cutters or blades at all points, enables the machine to be operated with a minimum expenditure of power, and insures the positive action of the cutters. Furthermore, such construction prevents even occasional locking or cramping of the moving parts, and enables the device to be operated rapidly and effectively.

Changes in the form, proportion and minor

details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention, what I claim, and desire to secure by Letters Patent, is—

In a dehorning device, the combination with the blade B having the concaved cutting edge and laterally disposed perforated ears, and at the inner sides thereof and opposite ends of its cutting edge provided with the parallel guide-arms C, integrally formed therewith and having their inner edges bent to one side to form the guide-grooves $c c$, and the transverse connecting-bar between the inner ends of said arms, of the flat blade A mounted loosely for reciprocation in the grooves $c c$ and reduced at its inner end forming a stem, the opposite side links H H pivoted at k to the lateral ears of the blade B, and the levers F having the handles F' and branches f and f' , the former inner branches f being pivoted at G to the stem of blade A and the outer branches f' being pivoted to the lower ends of the links H as at k' , 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.

JEFFERSON MILLER.

Witnesses:

HENRY VAN-ATTA,
L. P. BAGLEY.