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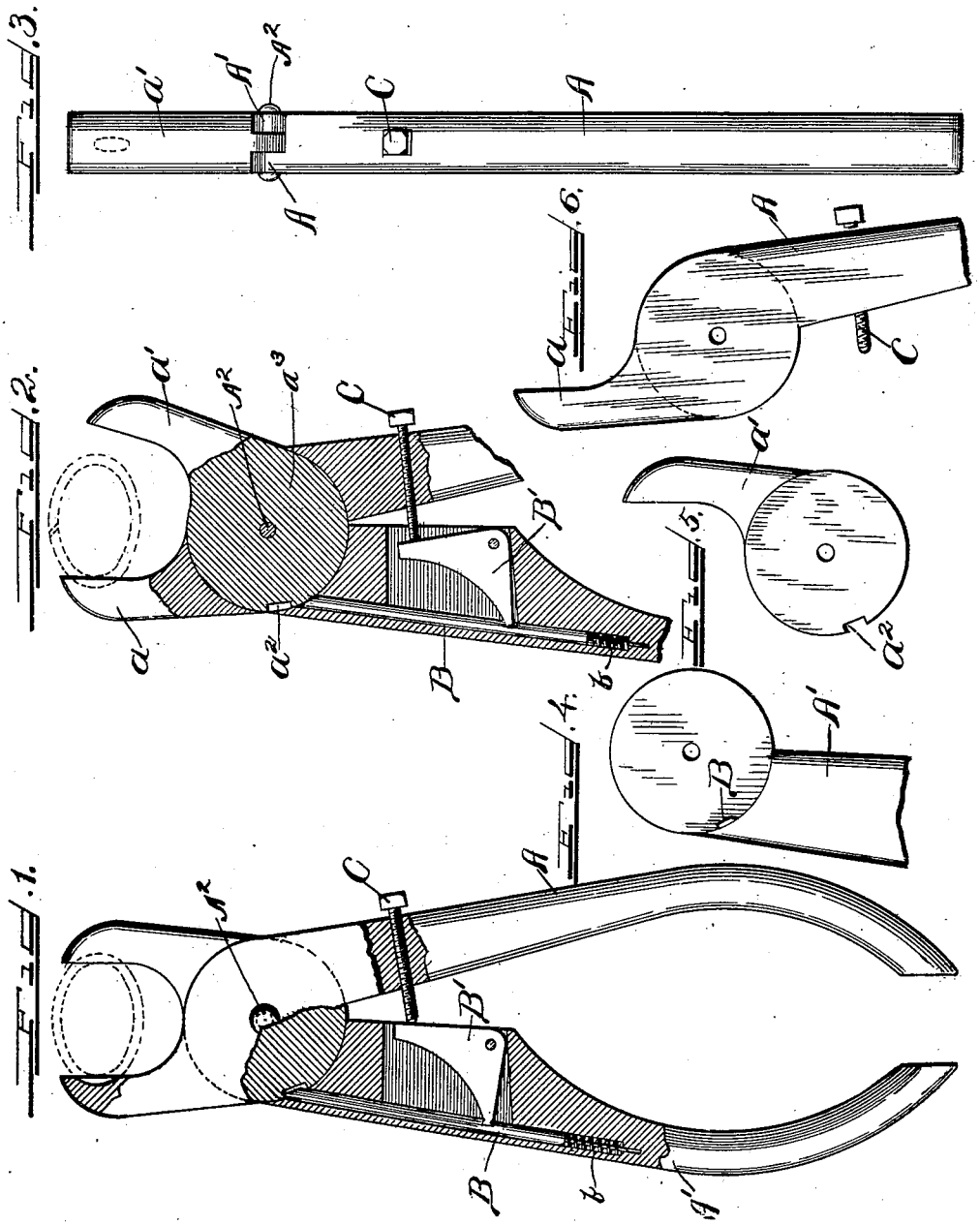
J. C. DE PUY.

PINCERS.

(Application filed Oct. 11, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JACOB C. DE PUY, OF DIXON, ILLINOIS.

PINCERS.

SPECIFICATION forming part of Letters Patent No. 676,490, dated June 18, 1901.

Application filed October 11, 1900. Serial No. 32,666. (No model.)

To all whom it may concern:

Be it known that I, JACOB C. DE PUY, a citizen of the United States, and a resident of Dixon, in the county of Lee and State of Illinois, have invented certain new and useful Improvements in Pincers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in pincers or forceps, and more particularly a pair of pincers of that class designed for ringing hogs and adapted to rigidly engage a ring during the process of closing the same and provided with means for automatically releasing the ring when the same is completely closed. Heretofore in devices of this class injury has been frequently done to the animal operated on owing to its struggles during the ringing operation, causing the ring to be partly torn out of the snout. My invention provides means for closing the ring and means for automatically releasing the jaws of the pincers from the ring when the latter is fully closed.

The invention consists of the matters hereinafter described, and more fully pointed out and defined in the appended claims.

In the drawings, Figure 1 is a side elevation, partly in section, of a device embodying my invention. Fig. 2 is a similar view showing the positions the jaws assume when released from the ring. Fig. 3 is a top plan view of the same. Figs. 4, 5, and 6 are details of the same.

As shown in the drawings, said device comprises a pair of pincers or forceps, one of the jaws of which is adapted to move independent of the handles, but is rigidly secured to one of the same during the operation thereof.

Referring to features of construction, A indicates one of the handles of the pincers, provided at one end with an integral jaw in a familiar manner. A′ indicates the other handle, rounded at its pivot end, as indicated in Fig. 4, and adapted to fit into a corresponding recess in the lever A, adjacent to the pivot A^2.

a' indicates a movable jaw provided at its inner end with an integral circular plate a^3, which is centrally apertured, as shown in Figs. 1, 2, and 5, and adapted to be secured on the pivot A^2 between said levers A and A′, as indicated in Fig. 3. Said plate a^3 is provided on its inner edge with an angular notch, (indicated by a^2.) B indicates a locking bar or plunger seated and longitudinally movable in the lever A and provided at its inner end with a spring b, which acts to force its outer end, which is angular and complemental with said notch a^2, into engagement in said notch. Said movable jaw a' is normally rigidly secured to and moves with said lever A′ by means of said plunger. The lever A′, as shown, is slotted longitudinally on its inner side to said plunger, and a bell-crank trip-lever B′ is pivoted in said slot, as indicated in Figs. 1 and 2, in position to engage at its inner end in a notch in said plunger. The other end of said lever extends forwardly in alinement with the inner surface of said lever in position to be engaged by the inner end of a set-screw C, which passes transversely through the lever A. Each of the jaws is provided on its inner side near its extremity with a notch in a familiar manner adapted to receive and hold a ring.

The operation of my device is as follows: The set-screw having been first adjusted so that the inner end of the same comes in contact with the lever B′, as indicated in Fig. 1, when the ring is fully closed, an open ring is placed between the jaws of the pincers when the levers A A′ are separated. The opening in the ring is applied to the animal in the usual manner and pressure brought to bear upon said levers, thereby forcing the jaws together, as indicated in Fig. 1, and closing the ring and bringing the end of the set-screw C into contact with the end of the lever B′, thereby pressing the same downwardly with the effect of retracting the plunger from the notch, as indicated in Fig. 3. The resiliency of the ring causes said movable jaw to fly up, instantly releasing the pincers from the ring.

Inasmuch as the retraction of the plunger is produced by means of contact of the set-screw C with the bell-crank lever B′ it is clear that pincers embodying my invention may be adjusted to trip the movable jaw at any desired point, thereby permitting my de-

vice to be used with rings of any desired size.

Obviously pincers for many other purposes may be constructed in accordance with my invention, and I have only shown one of many forms in which my invention might be embodied.

Obviously many details of construction may be modified without departing from the principle of my invention.

I claim as my invention—

1. A pair of pincers comprising a fixed jaw, a movable jaw, a lever acting to operate the movable jaw, a longitudinally-movable locking-bar acting normally to rigidly connect said lever and movable jaw and means for automatically releasing said movable jaw from said lever.

2. A pair of compressing-pincers comprising a fixed jaw, a movable jaw, a lever, a locking-bar longitudinally movable of the lever and acting to lock the movable jaw and lever rigidly together, means for automatically disconnecting said movable jaw from said lever when the compression is complete.

3. In a pair of pincers the combination with a fixed jaw provided with an integral handle, of a movable jaw pivoted thereon, a lever also pivoted thereon, reciprocating means supported on said lever acting to lock said movable jaw thereto, and means acting automatically to disconnect said lever from said movable jaw at a point in the movement thereof.

4. In a pair of pincers the combination with a handle provided at one end with a fixed jaw and a lever pivoted thereon, a movable jaw pivoted between the handle and the lever adapted to coöperate with the fixed jaw, reciprocating means for locking said jaw to said lever during the operation thereof and an adjustable part on said handle acting to automatically release the movable jaw from said lever when the compressing operation is complete.

5. In a pair of compressing-pincers the combination with a fixed jaw provided with an integral handle, a movable jaw pivoted thereon, a lever also pivoted thereon and provided with longitudinally-movable locking means for engaging said movable jaw, coacting parts on said handle and lever adapted to engage at a predetermined point in the movement of the jaws and acting to retract said locking means.

6. In a pair of compressing-pincers the combination with a fixed jaw provided with an integral handle, of a movable jaw pivoted thereon, a lever supported on the same pivot with the movable jaw, a plunger carried by said lever and adapted to engage said movable jaw, and a part supported on said handle and acting to force said plunger out of engagement with said movable jaw.

7. The combination with a fixed jaw provided with an integral handle, of a movable jaw pivoted thereon and provided at one of its edges with a notch, a lever supported on the same pivot with said movable jaw, a plunger seated in said lever and acting normally to engage in said notch, a trip-lever engaging said plunger and a part on said handle adapted to engage said trip-lever and retract the plunger at a predetermined point in the movement of said jaw.

8. The combination with a fixed jaw provided with an integral handle, of a movable jaw provided at its rear end with a flattened plate provided at its rear margin with a notch and pivoted centrally of said plate to the fixed jaw, a lever supported on the same pivot therewith and provided with a longitudinally-movable spring-pressed plunger adapted normally to engage in said notch, a bell-crank lever pivoted on said lever and engaging with one end said plunger and adapted at the other end to engage an adjustable part secured on said handle and acting to retract said plunger from said notch.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

JACOB C. DE PUY.

In presence of—

E. E. WINGERT,

WM. H. PFINGSTEN.