

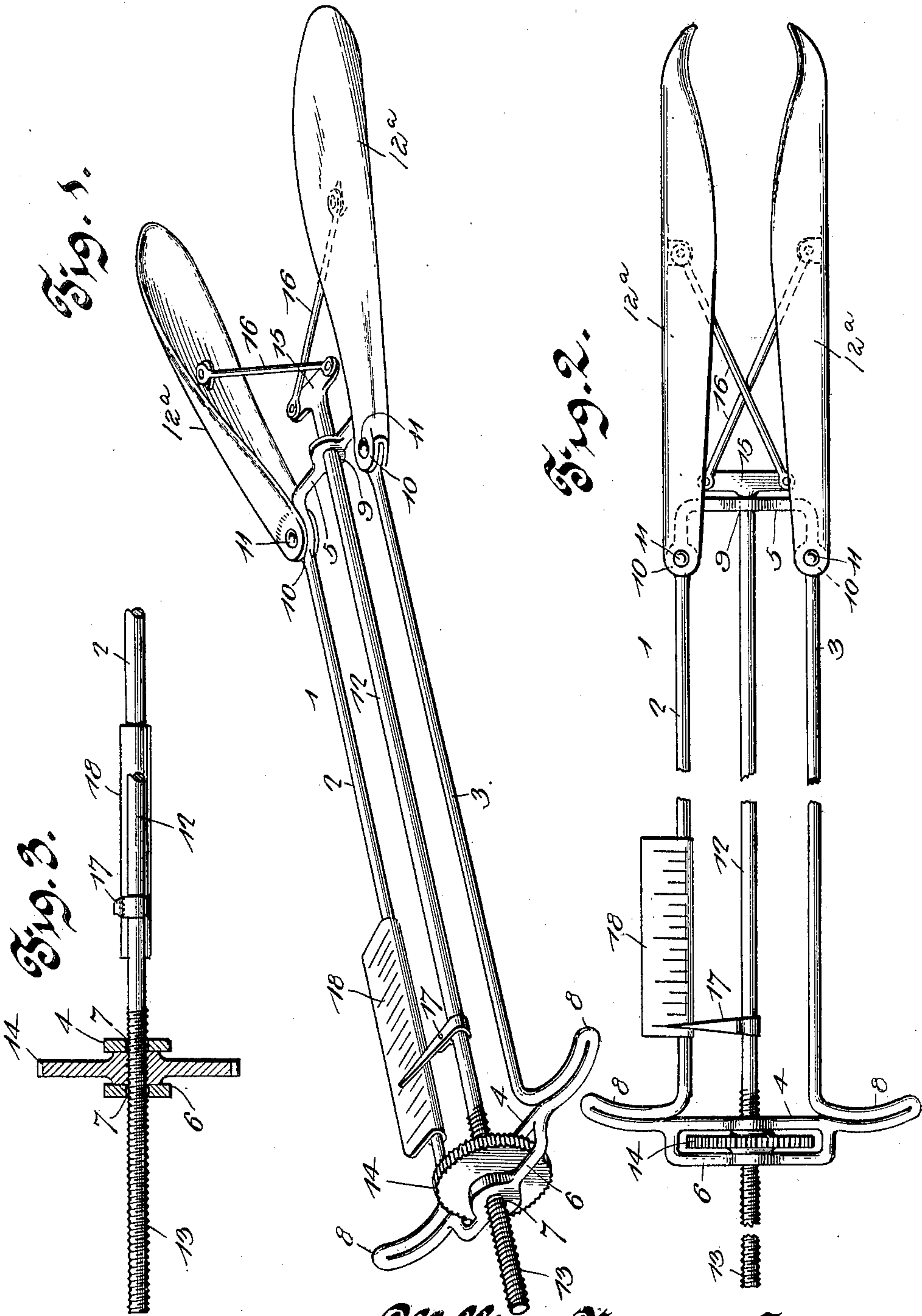
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Patented Sept. 4, 1900.

W. NEUMEIER, JR.  
VETERINARY FORCEPS.

(Application filed May 29, 1900.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

WILLIAM NEUMEIER, JR., OF MUSCATINE COUNTY, IOWA.

## VETERINARY FORCEPS.

SPECIFICATION forming part of Letters Patent No. 657,203, dated September 4, 1900.

Application filed May 29, 1900. Serial No. 18,418. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM NEUMEIER, Jr., a citizen of the United States, residing in the county of Muscatine, in the State of Iowa, have invented a new and useful Forceps, of which the following is a specification.

This invention relates to a pig-forceps; and the object of the same is to provide a simple and effective device of this character having jaws that will easily enter the vagina of the animal, positively adjustable to embrace and firmly grip the pig and facilitate delivery, strong and durable, and having means on the exterior portion for accurately ascertaining the degree of expansion of the jaws while inserted.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of forceps embodying the features of the invention and showing the jaws open. Fig. 2 is a top plan view of the same broken through in parts and showing the jaws closed. Fig. 3 is a detail sectional elevation of a portion of the improved device.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates a substantially-rectangular light wire body-frame comprising side rods or bars 2 and 3, connected by opposite end bars 4 and 5, the bar 4 having a central seat-loop 6, with aligned screw-centers 7 longitudinally disposed in relation to the center of the frame. The side rods 2 and 3 are projected laterally adjacent the end bar 4 and doubled upon portions of the latter and both parts at each side curved to form grips 8 for conveniently holding the forceps in the operation of the same. The end bar 5 has a central guide-eye 9, and the side rods, near the said latter bar, are formed with fulcrum-bearings 10, one on each, to receive the pivot pins or rivets 11, passed through the rear ends of the jaws 12<sup>a</sup>, permanently connected to and movable on the rods. The said jaws are of elongated spoon shape, being contracted at the rear to embrace the said side rods and enlarged toward their free ends, which are inwardly deflected. The outer sur-

faces of the jaws are smooth and regularly convexed, and the inner portions of the free ends of the same are so shaped as to be effective in gripping and firmly holding a pig without injury.

In the center of the frame a longitudinally-movable spreading-rod 12 is located and has free movement through the guide-eye 9 and provided with screw-threads 13 at its rear extremity, which engage the screw-centers 7 of the end bar 4, and on the said screw-threaded portion of the rod 12, between the centers, is an operating-disk 14 with a milled edge. The front end of the rod 12 is provided with a cross-head 15, and to the opposite ends of the latter the rear ends of connecting-rods 16 are movably attached and also have their front ends movably connected to the inner sides of the jaws, one rod 16 being fastened to each jaw and both rods crossed adjacent the head 15.

On the spreading-rod 12 a laterally-projecting pointer 17 is secured and has its outer end freely movable over a gage-plate 18, horizontally secured on the side rod 3 or on the left side of the frame. This gage-plate will be scaled proportionately to the movements of the jaws, and this will be initially arranged by actual measurement and computation, and thereby the jaws may be spread or contracted while inserted in the vagina of the sow with accuracy and certainty to accommodate various contingencies during the delivery without requiring the withdrawal of the forceps for such adjustments. By reference to Fig. 3 it will be seen that the screw-threaded portion of the rod 12 moves loosely through the screw-centers 7 and that the disk 14 has a central screw-threaded opening fitting said portion of the rod and is also centrally thickened to snugly, yet operatively, bear between the said centers and hold the rod 12 against longitudinal play.

When the forceps are used, the jaws are contracted their full extent by operating the disk in the proper direction to cause the rod 12 to draw rearwardly, and in their contracted condition the said jaws are inserted in the vagina of the sow, and after a full insertion has been obtained they are again expanded as desired by turning the disk 14 in the direction reverse to that for contracting the



jaws, as will be understood. The jaws are then caused to firmly embrace the pig and effect a compression, if necessary, and the forceps, firmly gripping the pig, together with the latter, can be easily drawn out. The crossed connecting-rods between the jaws and the spreading-rod provide means for more positively actuating the jaws by giving a greater leverage and also form a guard in advance of the cross-head on the said rod to prevent contact thereof with the pig when the jaws are worked in the vagina during the grasping operation, and thus injury to both the pig and the sow is avoided.

The improved device is simple and will not easily get out of order or become broken or strained, and the several parts being open can be easily reached for cleansing purposes.

It is obviously apparent that changes in the form, size, proportions, and minor details of construction may be resorted to without departing from the principle of the invention.

Having thus described the invention, what is claimed as new is—

1. In a forceps of the character set forth, the combination of a frame comprising side rods connected by end bars, the one end bar having a central eye and the proximal extremities of the side rods doubled and extended laterally to form grips and the adjacent end bar provided with a loop with a screw-center in line with a similar device on the said latter bar, a longitudinally-movable spreading-rod mounted in the said central eye and having its opposite extremity provided with screw-threads to engage the screw-centers, means confined by the said loop for operating the spreading-rod, and jaws pivoted to the said side rods and movably connected to the spreading-rod.

2. In a forceps, the combination of a frame comprising side rods spaced apart from each other in parallel relation and having opposite connecting end bars, one of the latter having an eye at the center and the other provided with a loop, jaws having contracted portions embracing and pivotally connected to the side rods in rear of the front end bar, a longitudinally-movable spreading-rod mounted in the central eye of the one end bar and having a screw-threaded extremity movable through the opposite end bar and the loop thereof, the front end of the spreading-rod having a transversely-extending head, crossed connecting-rods movably attached at opposite ends to the said head and the inner portions of the jaws, a disk engaging the spreading-rod and located between the loop and the adjacent end bar, and means for indicating the degree of expansion of the jaws.

3. In a forceps, the combination of a frame comprising side rods or bars connected by end bars, jaws movably attached to the front extremities of the side rods, a spreading-rod longitudinally movable through the said end bars and connected at its front extremity to the said jaws, a laterally-projecting pointer fixed on the spreading-rod and simultaneously movable with the latter, and a laterally-projecting gage-plate on the one side bar of the frame over which the pointer is free to move for the purposes set forth.

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

WILLIAM NEUMEIER, JR.

Witnesses:

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