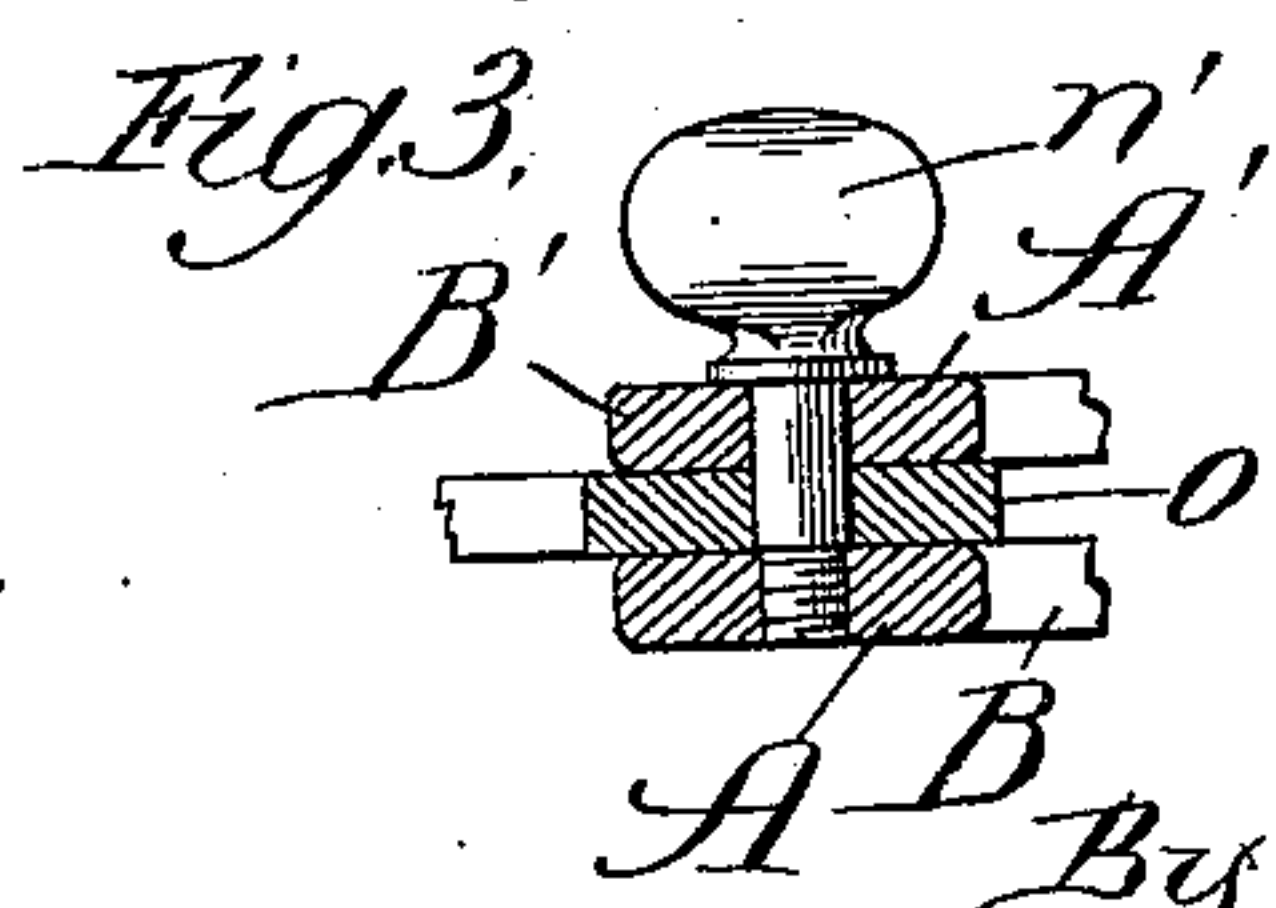
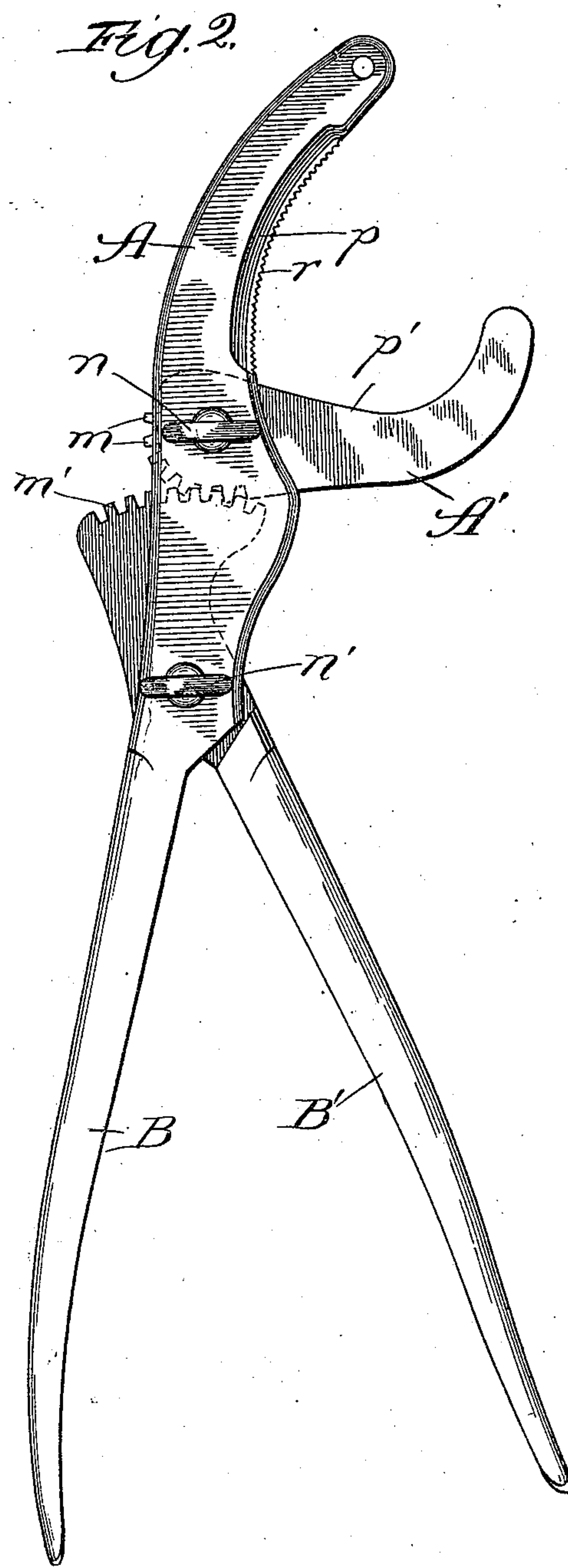
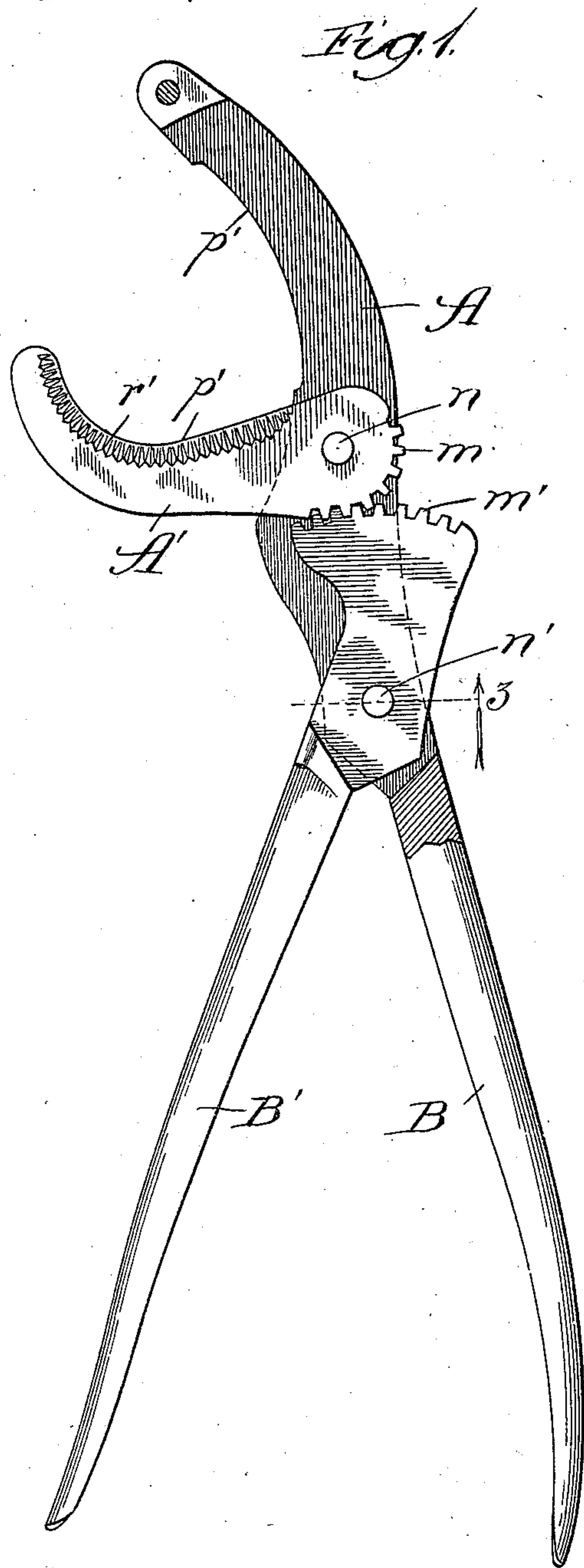


(No Model.)

P. J. WEDER.
CASTRATING INSTRUMENT.

No. 560,383.

Patented May 19, 1896.



Witnesses:
Charles Gaylord,
Lute J. Allen

Inventor:
Paul J. Weder,
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Attys.

UNITED STATES PATENT OFFICE.

PAUL J. WEDER, OF CHICAGO, ILLINOIS, ASSIGNOR TO SHARP & SMITH, OF SAME PLACE.

CASTRATING INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 560,383, dated May 19, 1896.

Application filed July 17, 1895. Serial No. 556,231. (No model.)

To all whom it may concern:

Be it known that I, PAUL J. WEDER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Castrating Instruments, of which the following is a specification.

My invention is designed to afford an improvement on a particular construction of castrating instrument known to me and which comprises two curved jaws connected together like scissors and provided with handles, one jaw being slotted to permit the other to work through it, and each jaw being provided with a cutting edge and with a serrated edge to operate like an *écraseur* for crushing the cord to prevent hemorrhage. For using the instrument thus referred to in performing the operation for which it is designed the operator, owing to the extent to which the handles require to be separated to open the jaws sufficiently to enable their application to the part to be operated on, cannot grasp the handles in one hand and exert the necessary force in closing the jaws, and he should employ one hand in holding the part to be cut. He is obliged, therefore, either to dispense with such employment of the one hand in order to enable him to use both hands in manipulating the instrument to perform the operation, or if he finds it necessary to hold the part with one hand he must manipulate the instrument with the other as best he can, as by pressing the handles together by that hand against some part of his body which he can bring into use for the purpose.

My object is to provide a construction of castrating instrument of the type of that described, whereby the jaws may be opened wide enough for their proper and convenient application to the part to be operated on without requiring to that end that the handles shall be spread apart so far as to preclude grasping them near their outer ends in one hand and with it exercising the necessary leverage on the handles to close the jaws in performing the operation, thus leaving the other hand free to hold the part being operated on during the operation. This object I accomplish by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a view in elevation, partly sectional, of my improved castrating instrument, presenting one side thereof with the jaws open; Fig. 2, a view in elevation of the same, presenting the opposite side; and Fig. 3, a section taken at the line 3 on Fig. 1 and viewed in the direction of the arrow.

A is the longitudinally-slotted jaw provided at one end with a handle B and of concavo-convex form toward its opposite end, being provided along one edge of the slot with a series *r* of teeth and along the other edge thereof with a knife-edge or cutter *p*.

A' is the companion jaw, also of concavo-convex form, and it is provided on its rear expanded end, which is in the form of an arc, with gear-teeth *m*, affording a pinion or such portion of a pinion as is required for my purpose, the jaw A' being provided on its inner concave side with a series *r'* of teeth to coöperate with the similar series of teeth on the jaw A and in advance of these teeth *r'* with a knife-edge or cutter *p'* to coöperate, like the blades of scissors, with the cutter *p*. The jaw A' is pivoted, as by a thumb-screw *n*, the thread of which is only provided, as shown of the thumb-screw in Fig. 3, on the end portion of its stem between the sides of the slot *o* in the jaw A. In the slot of the jaw A, near the rear end, is pivoted, as by a thumb-screw *n'*, like the thumb-screw *n*, the handle B' at its expanded flattened end portion, on the extremity of which is provided a series of teeth forming a segmental rack *m'* to engage the pinion, or rather pinion-section, *m* on the jaw A'. By spreading the handles B B' apart the engagement of the rack *m'* with the pinion-teeth *m* spreads the jaws to the desired extent to adapt the instrument to be applied to the part to be operated on, and the distance of separation to that end required of or permitted to the handles is not so great, owing to my improved construction, but that they may be conveniently grasped at the ends of their handles, where the greatest leverage may be exerted, in one hand of the operator and readily pressed together to close the jaws and actuate them to perform their functions, while the other hand of the operator is free to hold and steady the part being operated on. As will be seen, the jaws and handles

may, as for cleaning them, each be readily separated from the other by withdrawing the pivots n n' to disconnect the parts of the instrument.

5 What I claim as new, and desire to secure by Letters Patent, is—

1. In a castrating instrument, the combination with the slotted cutting and crushing jaw A having the handle B, of the cutting and
10 crushing companion jaw A' provided at one end with pinion-teeth m and pivoted at the center of the circle, upon which said teeth are formed, in the slot of the jaw A, and a separate handle B' pivotally connected with the
15 handle portion of the jaw A and carrying at its outer end a segmental rack m' in engagement with said pinion-teeth and formed on a circle having its center at the pivot of said handle B', said circle being of greater diameter than
20 that of the circle on which said pinion-teeth are formed, whereby, in addition to the power gained by the rack-and-pinion mechanism, the jaws may be opened to their full extent without unduly separating the handles, as
25 and for purpose set forth.

2. A castrating instrument comprising, in

combination, the slotted cutting and crushing jaw A having the handle B, the cutting and crushing companion jaw A' provided at one end with pinion-teeth m and pivoted at
30 the center of the circle, upon which said teeth are formed, in the slot of the jaw A, a thumb-screw n by which the jaw A' is pivoted, at the center of the circle upon which said teeth are formed, in the slot of the jaw A, a separable
35 handle B' carrying at its outer end a segmental rack m' in engagement with said pinion-teeth, and a thumb-screw n' by which the handle B' is pivoted to the handle B said rack being formed on a circle having its center at
40 the pivot n' and said circle being of greater diameter than that of the circle on which said pinion-teeth are formed, whereby in addition to the power gained by the rack-and-pinion mechanism, the jaws may be opened to their
45 full extent without unduly separating the handles, as and for the purpose set forth.

PAUL J. WEDER.

In presence of—
J. N. HANSON,
M. J. FROST.