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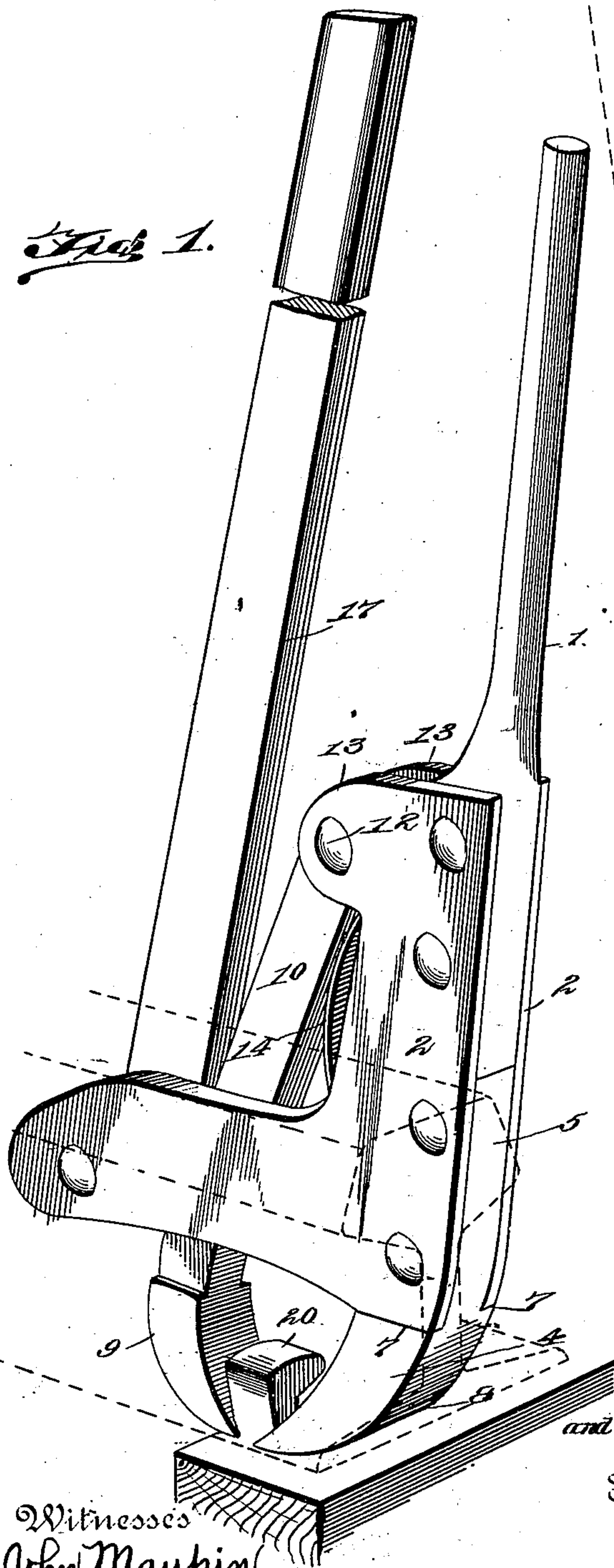
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CLAW BAR.

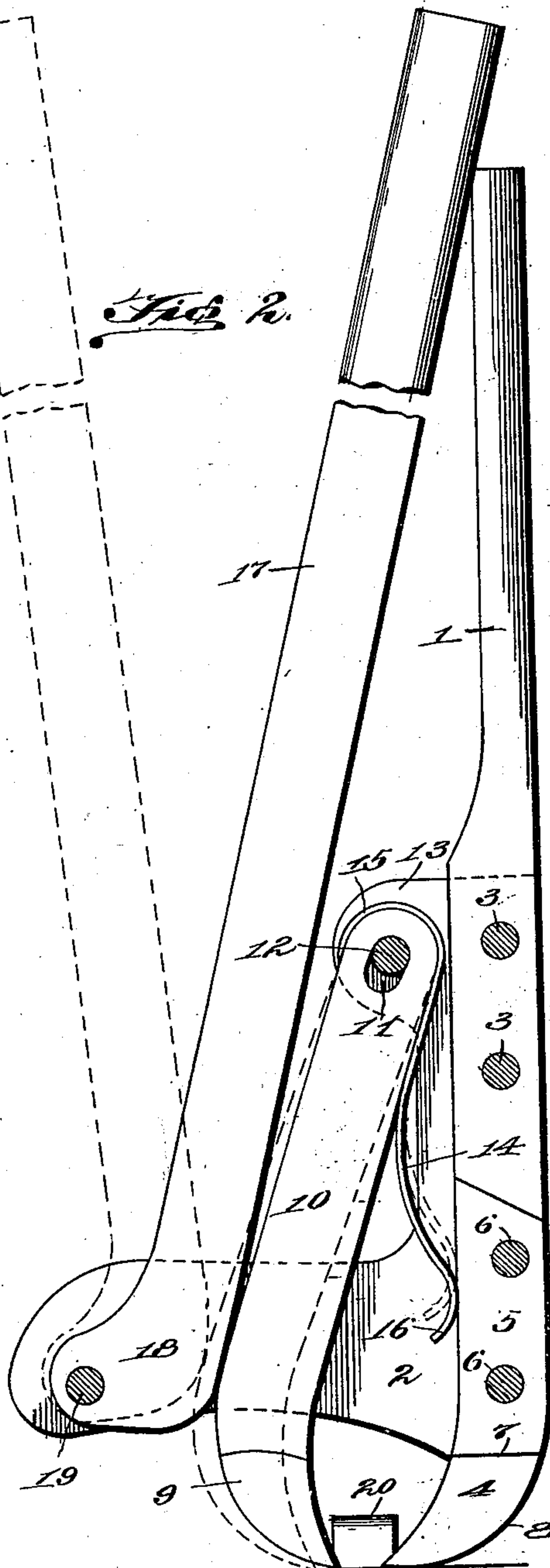
APPLICATION FILED MAY 5, 1902

NO MODEL.

*Fig. 1.*



*Fig. 2.*



Witnesses  
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# UNITED STATES PATENT OFFICE.

CALVERT WOODFORD THRELKELD AND COLIN HODGE THRELKELD, OF  
MEMPHIS, TENNESSEE.

## CLAW-BAR.

SPECIFICATION forming part of Letters Patent No. 724,523, dated April 7, 1903.

Application filed May 5, 1902. Serial No. 106,067. (No model.)

*To all whom it may concern:*

Be it known that we, CALVERT WOODFORD THRELKELD and COLIN HODGE THRELKELD, citizens of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented a new and useful Claw-Bar, of which the following is a specification.

This invention relates to claw-bars, and is designed to provide an improved device of this character which is particularly adapted for drawing spikes from the ties of railway-tracks and is also arranged to facilitate the engagement of the device with spikes at switch-rails and frogs. It is furthermore designed for facilitating the engagement of the jaws of the claw-bar with spikes, to insure a tight grip of the jaws upon the spikes, and to provide a long leverage, so as to give considerable power to the device.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a claw-bar constructed and arranged in accordance with the present invention and shown applied to a spike in readiness to extract the same. Fig. 2 is a longitudinal sectional view of the device.

Like characters of reference designate corresponding parts in both figures of the drawings.

In carrying out the invention there is provided an arm 1, which in the full-sized device is about two feet in length and has its lower end fitted in a box preferably formed by opposite duplicate substantially L-shaped plate members 2, which are connected to the lower end portion of the arm by means of bolts 3. This arm has its upper end formed into a handle, and its lower end is terminated short of the bottom of the box. A stationary hook-shaped jaw 4 has its shank portion 5

fitted between the opposite sides of the box and abutted against the lower end of the arm 1, there being suitable bolts 6 piercing the sides of the box and the shank of the jaw to rigidly connect these parts. The jaw proper is enlarged laterally, so as to form the opposite transverse shoulders 7, lying in snug engagement with the lower edges of the opposite sides of the box, and the outer or rear face or side of the jaw is rounded or curved, as at 8, and merges upwardly into the straight back edge of the rigid shank, which is also flush with the straight back edge of the arm 1, whereby the back of the implement is entirely free from projections, and the curved back and lower edge portion of the rigid jaw 7 is adapted to form a rolling fulcrum-surface for use in extracting a spike, as will be hereinafter explained.

An upstanding movable jaw 9 has its substantially straight shank portion 10 working loosely between the lower members of the box with its upper end provided with a longitudinal slot 11 for the reception of a pivot-bolt 12, which pierces the ears or extensions 13, carried by the upper ends of the members. A leaf-spring 14 is disposed between the shank 10 and the arm 1 with its upper end bowed around and snugly fitting the upper rounded end of the shank 10, the intermediate portion of the spring being bowed away from the arm 1 with its lower free end 16 slidably bearing against the inner side of the shank 5 to yieldably hold the movable jaw away from the fixed jaw.

To control and adjust the movable jaw 9, there is provided a lever 17, which is preferably about five or six feet in length, with its lower end formed into a cam or eccentric 18, located between the pair of ears formed by the outer end portions of the lower members of the box and pivotally connected thereto by a bolt 19, the eccentric surface of the cam working frictionally against the outer side of the shank of the movable jaw, whereby the latter may be forced inwardly toward the stationary jaw by swinging the lever from its dotted position shown in Fig. 2 to its full-line position, so as to grip a spike between the two jaws.



In manipulating the device to extract a spike the handle 1 is grasped in one hand and the lever 17 in the other, the latter being swung outwardly so that the movable jaw 5 may spring outwardly from the fixed jaw under the action of the spring 14, in order that the two jaws may be separated sufficiently to straddle the spike 20, the handle 1 being employed to position the device upon the spike. 10 After the jaws have been placed astraddle of the spike the lever 17 is swung inwardly, so as to force the movable jaw 9 inwardly and thereby grip the two jaws upon the spike, after which the handle 1 is released and the 15 upper end of the lever is forced rearwardly and downwardly upon the curved or rounded face 8 of the fixed jaw as a fulcrum, thereby applying a very powerful lifting action to extract the spike from the cross-tie.

20 From the foregoing description it will be observed that the box formed by the plates 2 is in a sense the body of the device, and the jaws and the lever 17 are carried by the body, while the handle 1 is employed for directing the body to place the jaws astraddle of 25 a spike. Furthermore, the lever 17 serves two purposes, first, to control the movable jaw 9, so as to grip a spike between the two jaws, and, second, to form a lever for manipulating the entire device after the jaws have 30 been gripped upon a spike. It will here be noted that when the device is being rocked upon the surface 8 as a fulcrum the cam 18 still bears against the movable jaw, so as to 35 effectually hold the same in snug engagement with the spike, and the greater the force applied to the lever the greater the pressure applied to the movable jaw. It will also be apparent that as the pivoted jaw is located between the lever and the fixed jaw and is engaged by the former at a point between the 40 pivot thereof and the fixed jaw in substantially a line at right angles to the length of the latter a partial toggle action results, and the lever is enabled to form a partial lock in 45 resisting outward movement of the pivoted jaw.

The device of the present invention is made up of very few parts, which are compactly assembled and connected in a very strong and 50 durable manner. Moreover, the device is comparatively narrow, so that it may be inserted in a frog and other places on a track which are often inaccessible to the ordinary form of claw-bar. 55

Under certain circumstances, if desired, the box may be cast with sockets at the top and bottom to receive the arm 1 and the shank 4.

What we claim is—

60 1. In a claw-bar, the combination of a relatively fixed jaw having its back rounded to form a fulcrum, a handle rigid with the jaw and forming a continuation of the fulcrum, a lever connected with the said jaw, and a pivoted jaw arranged between the fixed jaw and 65 the lever and engaged by the latter at a point between the fulcrum of the lever and the fixed

jaw in a line substantially at right angles to the length of the jaw, substantially as described. 70

2. In a claw-bar, the combination of a relatively fixed jaw, a handle rigid therewith, a pivoted lever connected with and spaced from the said jaw, and a pivoted jaw located between the lever and the fixed jaw and connected with the latter, and arranged to be engaged by the former at a point between the 75 pivot thereof and the fixed jaw in substantially a line at right angles to the length of the fixed jaw to produce a toggle action and to form a partial lock, substantially as described. 80

3. In a claw-bar, the combination with a body, of a relatively fixed jaw carried thereby and having its back rounded to form a fulcrum-bearing, a movable jaw carried by the 85 body, and a cam-lever pivoted upon the body in front of and in frictional operative relation with the front of the movable jaw and also constructed to rock the device upon the fulcrum of the fixed jaw. 90

4. In a claw-bar, the combination with a body, of a relatively fixed jaw carried thereby and having its back rounded to form a fulcrum-bearing, a rigid handle carried by and 95 rising from the body, a movable jaw mounted upon the body in front of the rigid jaw, and a cam-lever pivoted upon the body in front of and in frictional operative relation with the front of the movable jaw to rock the device upon the fulcrum of the fixed jaw. 100

5. In a claw-bar, the combination with a box or body which is open at the top and bottom, of a relatively fixed jaw projected through the bottom of the box with its back 105 rounded to form a fulcrum, a movable jaw having its upper end pivoted within the box with its lower end projected through the bottom of the box in front of the fixed jaw, and a cam-lever pivoted within the box with its cam portion in frictional coöperative relation 110 with the front side of the pivotal jaw and rising through the open top of the box.

6. In a claw-bar, the combination with a body having an upstanding handle, of a relatively fixed jaw projected below the bottom 115 of the body and having its back edge rounded to form a fulcrum, a movable jaw pivoted to the body, a spring interposed between the two jaws to force the movable jaw outward, and a cam-lever pivoted within the body in 120 front of the movable jaw with its cam portion in frictional coöperative relation with the outer side of said jaw and its upper end rising above the handle.

7. In a claw-bar, the combination with a 125 box or body, formed of a pair of opposite substantially L-shaped plates, a handle secured between and rising above the plates, a relatively fixed jaw secured between the plates in longitudinal alinement with the handle 130 and projected below the plates with its back edge rounded upwardly and merging into the back of the handle to form a fulcrum, a movable jaw located in front of the fixed jaw and



pivoted at its upper end between the plates, with its lower end projected below the plates in coöperative relation with the fixed jaw, and a cam-lever pivoted between the lower 5 outer end portions of the plates in front of the pivotal jaw with its cam in frictional coöperative relation with the outer side of said jaw and its upper end rising above the handle.

8. In a claw-bar, the combination with a 10 box or body formed of opposite plates, of a handle secured between and rising above the plates, a relatively fixed jaw secured between and projected below the plates with its back edge rounded upwardly and merged into the 15 back edges of the plates to form a fulcrum; a movable jaw in coöperative relation with the fixed jaw with its upper end provided with a longitudinal slot, a pivot-pin piercing the

plates and the slot of the movable jaw to permit endwise movement of the latter, a spring 20 embracing the upper end of the pivotal jaw and bearing against the fixed jaw to yieldably separate the jaws, and a lever having a lower cam end pivoted between the plates and in frictional coöperative relation with the outer 25 side of the pivotal jaw, with its upper end rising above the handle.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

CALVERT WOODFORD THRELKELD.  
COLIN HODGE THRELKELD.

Witnesses:

CLARENCE D. MOORE,  
C. L. BAKER.