

No. 632,843.

Patented Sept. 12, 1899.

N. B. MCGHEE.  
DENTAL FORCEPS.

(Application filed May 10, 1899.)

(No Model.)

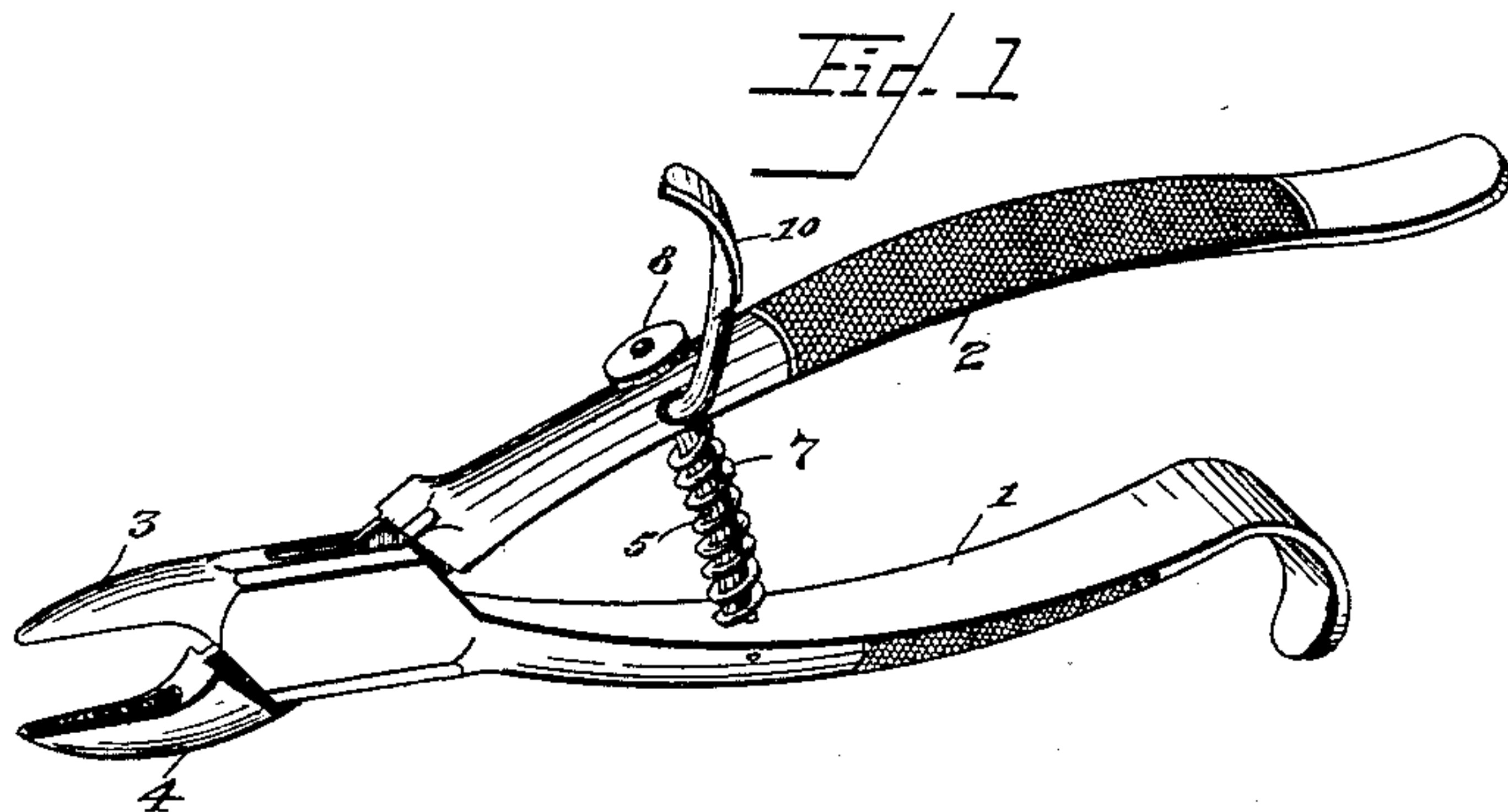


Fig. 2

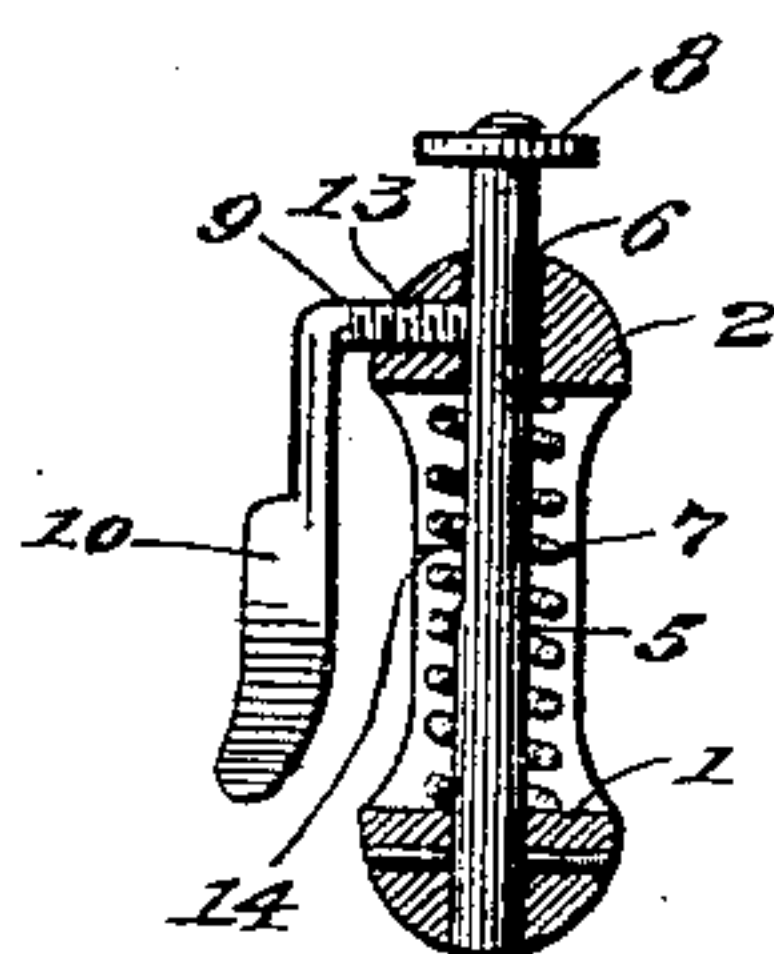


Fig. 3

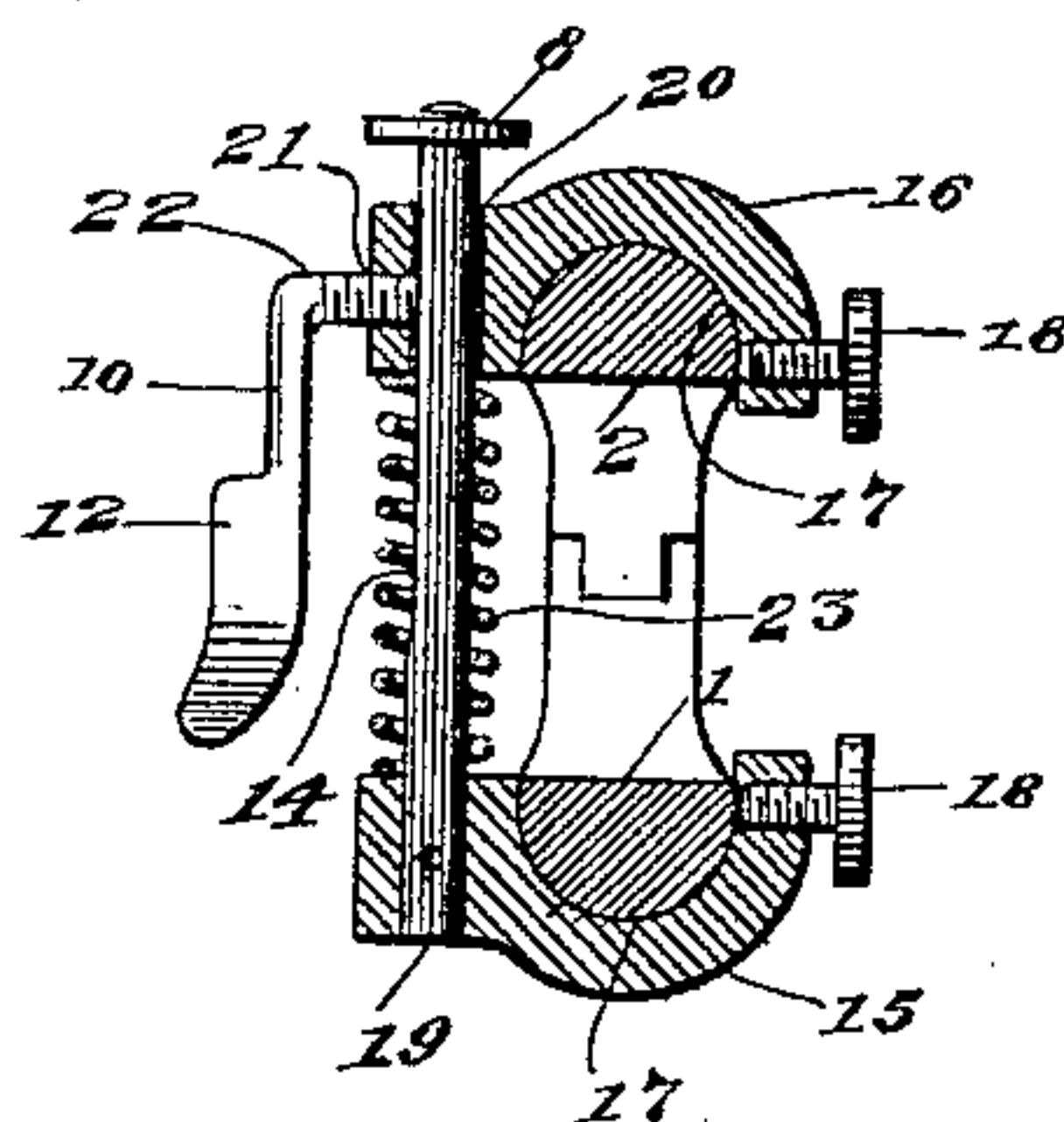
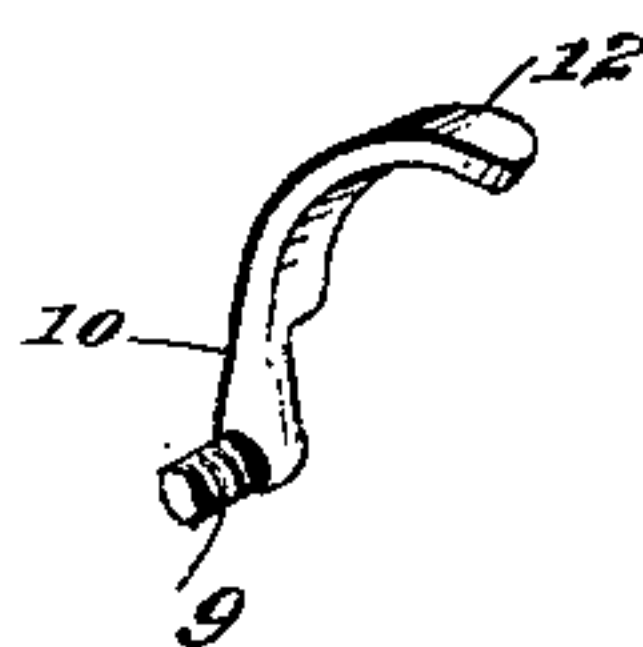


Fig. 4



Witnesses

*A. D. Ammen*

By *his* Attorneys.

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# UNITED STATES PATENT OFFICE.

NICHOLAS BOIS MCGHEE, OF ORANGE, CALIFORNIA, ASSIGNOR OF ONE-HALF TO MYRON LASH, OF SAME PLACE.

## DENTAL FORCEPS.

SPECIFICATION forming part of Letters Patent No. 632,843, dated September 12, 1899.

Application filed May 10, 1899. Serial No. 716,274. (No model.)

*To all whom it may concern:*

Be it known that I, NICHOLAS BOIS MCGHEE, a citizen of the United States, residing at Orange, in the county of Orange and State of California, have invented a new and useful Improvement in Dental Forceps, Pliers, and Like Implements, of which the following is a specification.

This invention relates to dental forceps, pliers, and like implements.

It is a well-known fact that in extracting teeth the same are frequently crushed due to the increased pressure exerted upon the teeth during the extracting operation; and in view of this difficulty the present invention has for its object to provide improved means whereby the jaws of the implement may be locked against further closing after the same have been set or fitted to a tooth or other article, so as to prevent an increased pressure and also slipping of the jaws thereupon.

To this end 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.

In the drawings, Figure 1 is a perspective view of a pair of dental forceps having the present invention applied thereto. Fig. 2 is a sectional view taken transversely through the handles or levers of the implement and showing the same locked against movement. Fig. 3 is a similar view showing a detachable locking device adapted to be applied to different implements. Fig. 4 is a detail perspective view of the locking set-screw.

Corresponding parts are designated by like reference characters in all the figures of the drawings.

Referring to the accompanying drawings, 1 and 2 designate, respectively, the opposite handles or levers of the implement carrying the respective clamping-jaws 3 and 4, and these parts may be constructed in any preferred manner, and they are shown in the drawings to more fully illustrate the application and operation of the present invention. One of the hand-levers, preferably that one designated by the numeral 1 and which is adapted to be grasped by the fingers of the

operator, is provided with an arcuate bar 5, projecting laterally from the inner face of said jaw and extending loosely through a transverse opening 6, formed in the opposite hand-lever 2. Encircling the bar and located between the two hand-levers is a coiled spring 7, adapted to normally force the levers apart, whereby the jaws are also held open. Provided at the free extremity of the arcuate bar 5 is a stop-shoulder 8, preferably in the form of a thumb-nut, as shown in the drawings, and adapted to engage the outer face of the lever 2, so as to prevent the latter from becoming disengaged from the arcuate bar 5.

The means for locking the levers against movement comprises a set-screw 9, which is shown in detail in Fig. 4. This set-screw is provided at one end with a lever 10, extending laterally at one side only of the shank of the set-screw and provided at its other end with a bowed or dished operating thumb-piece 12, and is adapted to be mounted in a threaded opening 13, provided through one edge of the hand-lever 2 and communicating with the transverse opening 6 formed through said lever. The upper face of the arcuate bar 5, over which the set-screw is adapted to pass in the operation of the levers, is flattened, as at 14, for a suitable distance, and the set-screw is adapted to be set against this flattened portion of the bar, so as to lock the levers at any predetermined position. It will be understood that the arcuate bar 5 and the locking set-screw are located at a point adjacent to the pivotal or hinged connection of the levers of the implement and in advance of the hand of the operator, the thumb-piece 12 of the set-screw being in convenient reach of the thumb of the hand which grasps the levers of the implement. When the levers have been forced together so as to properly set the jaws to the tooth or other object, the set-screw is locked against the arcuate bar 5 by pressure of the thumb of the operator forwardly against the operating thumb-piece 12, as will be understood. By this means the levers of the implement are effectively locked against inward or outward movement in a convenient manner without requiring the assistance of the other hand of the operator, and it is impossible to further compress the



jaws, whereby the tooth or article to which the implement may be applied is protected from being crushed or otherwise damaged.

In some instances it may be desirable to have a detachable locking device, so that the same may be applied to different implements not already provided with similar means. To meet this need, I have provided a detachable device, as fully illustrated in Fig. 3 of the drawings, and it comprises opposite clamping members 15 and 16, respectively, each being provided with a longitudinal bifurcation or socket 17, adapted to receive the levers of the implement, and provided with a set-screw 18, whereby the clamps may be rigidly connected to the opposite levers of the implement. One of the clamps, as 15, carries an arcuate bar 19 similar to the bar 5, and the other clamp 16 is provided with a transverse opening 20, adapted to loosely receive the bar 19. The latter clamp 16 is also provided with a screw-threaded opening 21, communicating with the transverse opening 20 and adapted to receive a locking set-screw 22 of the same form, as shown in Fig. 4, and adapted to engage the bar 19 in the manner and for the purpose described. A coiled spring 23 is also provided on the bar 19 and adapted to bear against the opposite clamping members 15 and 16 for the purpose of holding the levers apart.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What I claim is—

1. The combination with an implement of the class described, having a bar extending laterally from one of the hand-levers and passing loosely through an opening provided in the opposite hand-lever, of a set-screw car-

ried by the latter lever, adapted to engage the transverse bar and provided with a laterally-extending lever having an actuating thumb-piece located in convenient reach of the hand operating the implement, substantially as and for the purpose set forth.

2. The combination with an implement of the class described, of a pair of opposite clamps adapted to be detachably fitted to the respective hand-levers of the implement, one of the clamps being provided with a transverse bar adapted to extend loosely through an opening provided in the other clamp, and a set-screw carried by the latter clamp and provided with an operating thumb-piece, said set-screw being adapted to engage the transverse bar, whereby the hand-levers may be locked, substantially as shown and described.

3. The combination with an implement of the class described, of a pair of opposite clamping members, each being provided with a bifurcation or socket adapted to receive the respective handles of the implement, and a set-screw whereby the clamp may be detachably connected to the handle, one of the clamps having a transverse bar adapted to pass loosely through an opening provided in the other clamp, the latter clamp being provided with a set-screw having an operating thumb-piece and adapted to engage the transverse bar whereby the handles of the implement may be locked, substantially as shown and described.

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

NICHOLAS BOIS MCGHEE.

Witnesses:

MELLIE B. TOWNE,  
MORRIS TOWNE.