

(No Model.)

J. YOCOM, Jr.
SHEARS.

No. 283,056.

Patented Aug. 14, 1883.

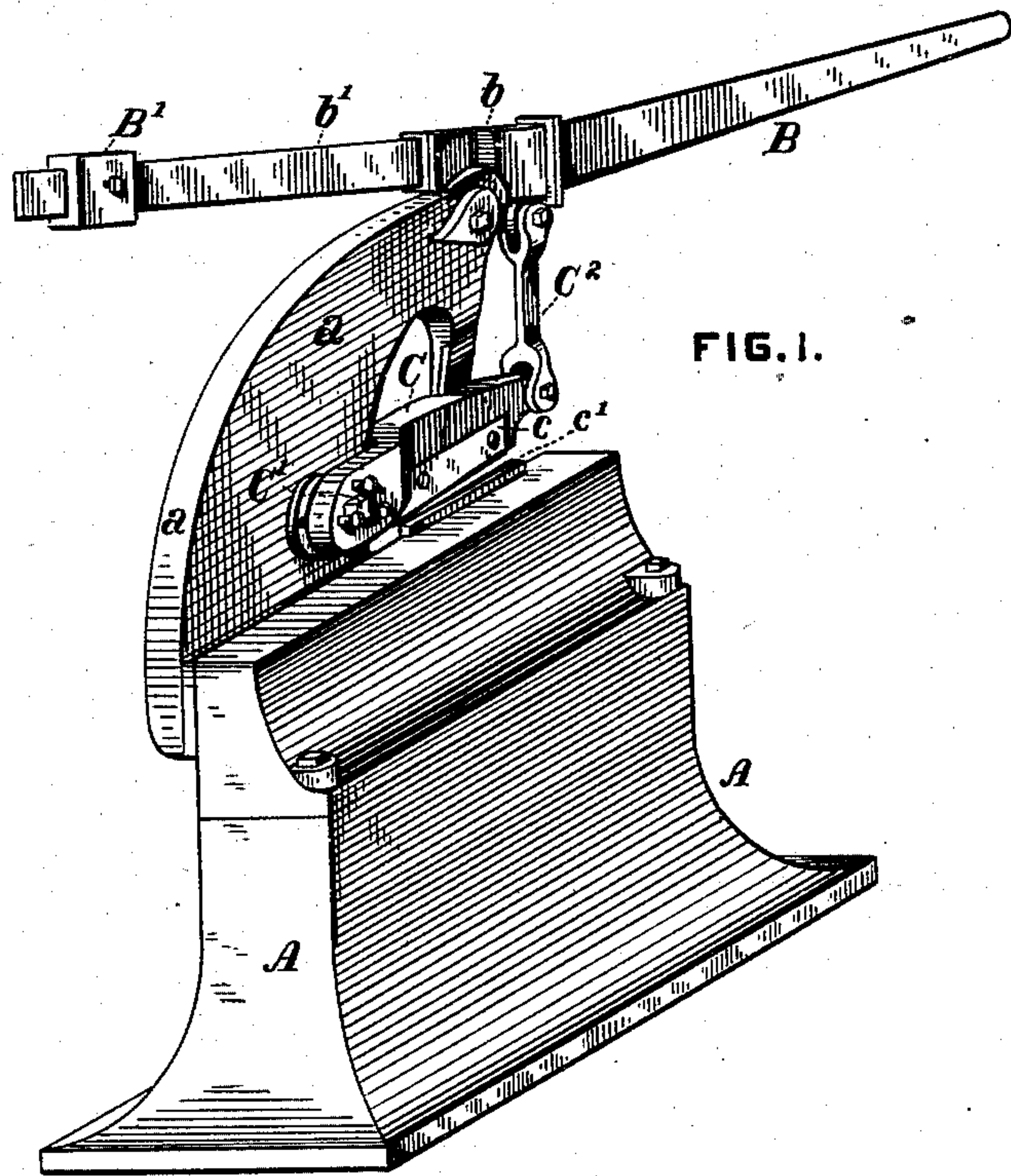


FIG. 1.

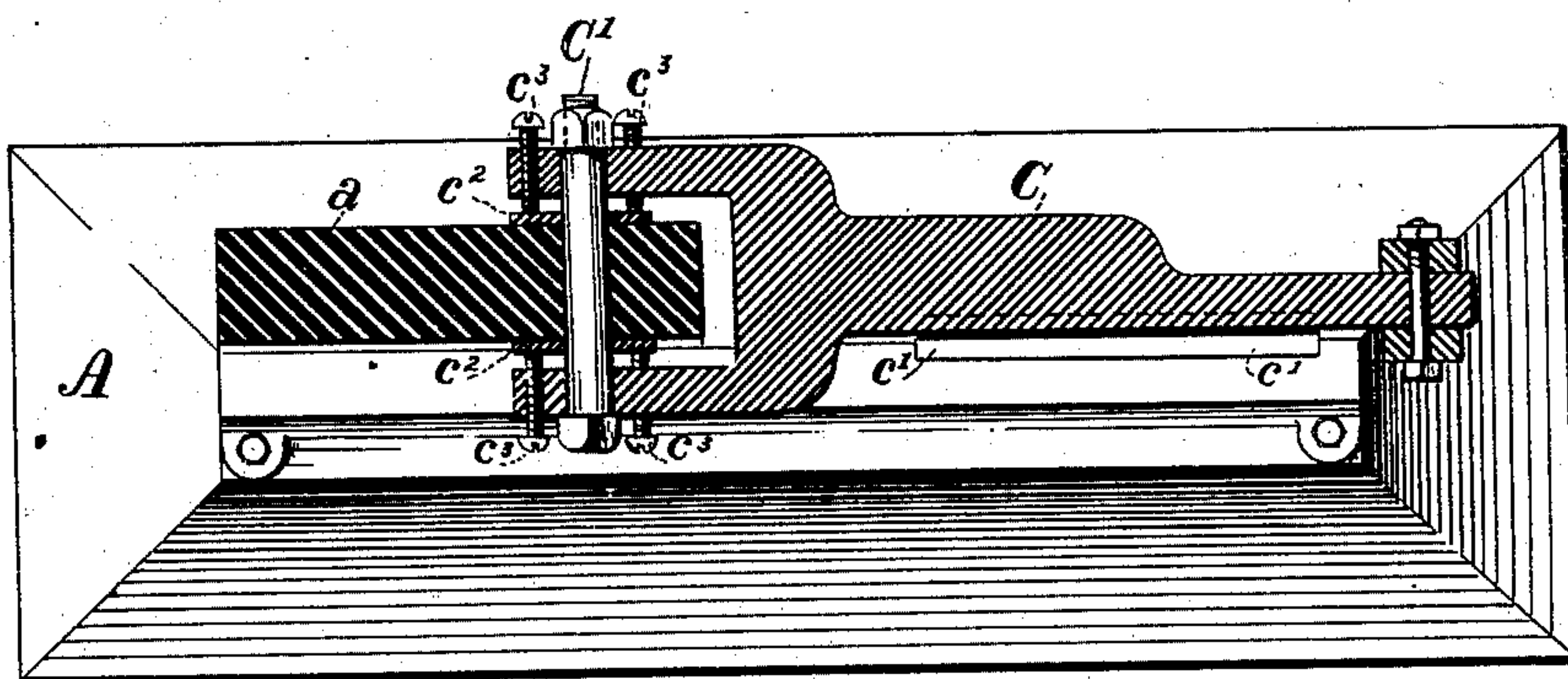


FIG. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

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SHEARS.

SPECIFICATION forming part of Letters Patent No. 283,056, dated August 14, 1883.

Application filed April 26, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES YOCOM, Jr., of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Cutting-Shears, of which improvements the following is a specification.

The object of my invention is to enable the blades of a cutting-shear to be accurately fitted and firmly held in their respective positions, and their normal relation one to the other to be maintained after grinding or sharpening without the employment of packing or liners.

To this end my improvements consist in the combination, with a cutting-shear frame and a fixed cutting-blade secured thereto, of a cutting-blade secured to a movable jaw pivoted to the frame and a device for effecting the longitudinal adjustment of said movable jaw relatively to the axis of its pivot; also, in the combination of a cutting-shear frame, a forked movable jaw pivoted thereto, and a series of set-screws engaging said jaw and bearing on the frame.

The improvements claimed are hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a view, in perspective, of a cutting-shear embodying my invention, and Fig. 2 a horizontal section through the frame and movable jaw of the same.

In the practice of my invention I form of cast metal and preferably in one piece a frame, A, having a vertical standard, *a*, at its top, to which is pivoted the socket-piece *b* of an operating-lever, B, said socket also carrying an arm, *b'*, to which is secured a counter-balance, B'. A jaw, C, is coupled at one end by a bolt, C', to the standard *a* of the frame and at the other by a link, C², to the socket-piece *b* of the operating-lever, so as to be vibrated about the axis of its pivot by the oscillation of said lever in a vertical plane. A cutting-blade, *c*, is fitted accurately to and secured firmly in a recess slotted out of the movable jaw C, and a corresponding cutting-blade, *c'*, is similarly fitted and secured in a finished recess in the frame A in such relation to the blade *c'* as to enable a shearing cut to be effected by the downward movement of the movable jaw.

In shears of the class to which my invention

relates, as heretofore constructed, it has been necessary to interpose packing or liners between the cutting-blades and the surfaces of the frame and movable jaw against which they bear, respectively, in order to effect the adjustment which is required to maintain the blades in proper relation after being ground. The employment of packing is objectionable in the particular that it prevents the attainment of absolute accuracy and solidity in the fitting and attachment of the cutting-blades, and involves inconvenience and delay in making the proper adjustments thereof. Under my invention these objections are obviated by the provision of means of adjustment wholly independent of the connection of the blades and their bearing-surfaces, the relation of which remains invariable. To this end, in the construction shown the movable jaw C is forked at the end adjacent to the frame—that is to say, widened out into two lateral extensions or bosses separated by a central recess the width of which is such as to embrace the standard *a* and a washer or facing-plate, *c*², located on each side thereof, and in addition to afford sufficient space to admit of the movement of the jaw C longitudinally upon its pivot C' toward either side of the standard *a* for such distance as may be required to compensate for the variations of thickness in the cutting-blades resultant upon grinding or sharpening the same. The movement of the jaw in either direction is by preference effected by means of set-screws *c*³, two or more of which engage threads in each of the lateral extensions of the jaw and bear at their ends upon the adjacent washer *c*². The washers are made of hard metal, and are interposed as facings to prevent wear of the frame by the set-screws. It will be seen that by slackening the set-screws on one side, and tightening those on the other to a greater or less degree, the movable jaw may be readily and accurately adjusted in any desired position necessary to maintain the normal relation of its cutting-blade *c* to the cutting-blade *c'* fixed upon the frame. Equivalently the standard *a* might be recessed in lieu of forming a forked end on the jaw C, and the set-screws *c*³ would in such case engage the portions of the standard on each side of the recess. I, however, regard the construction described and shown as the preferable one.

I claim as my invention and desire to secure by Letters Patent—

1. The combination, substantially as set forth, with a frame, a cutting-blade secured thereto, of a cutting-blade secured to a movable jaw which is pivoted to the frame and adjustable transversely upon the axial line of its pivot.

2. The combination, substantially as set

forth, with a frame, a forked movable jaw pivoted thereto, of a series of set-screws engaging threads in said jaw and adapted to bear either directly or intermediately against each side of the frame.

JAMES YOCOM, JR.

Witnesses:

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WALTER D. ROSS.