

No. 706,531.

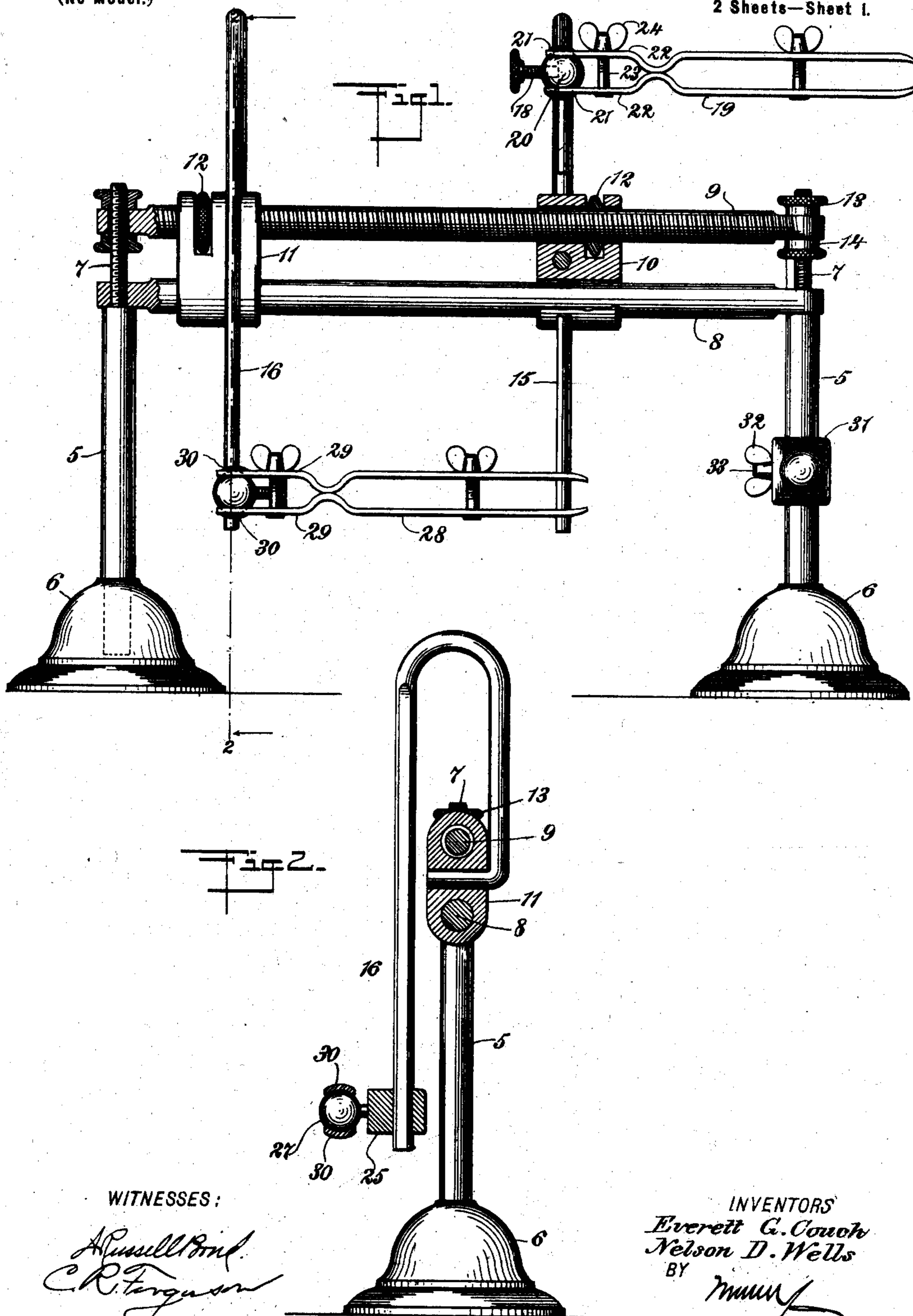
Patented Aug. 12, 1902.

E. G. COUCH & N. D. WELLS.
WORK HOLDER.

(Application filed Nov. 4, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

A Russell Bond
C. R. Ferguson

INVENTORS

Everett G. Couch
Nelson D. Wells

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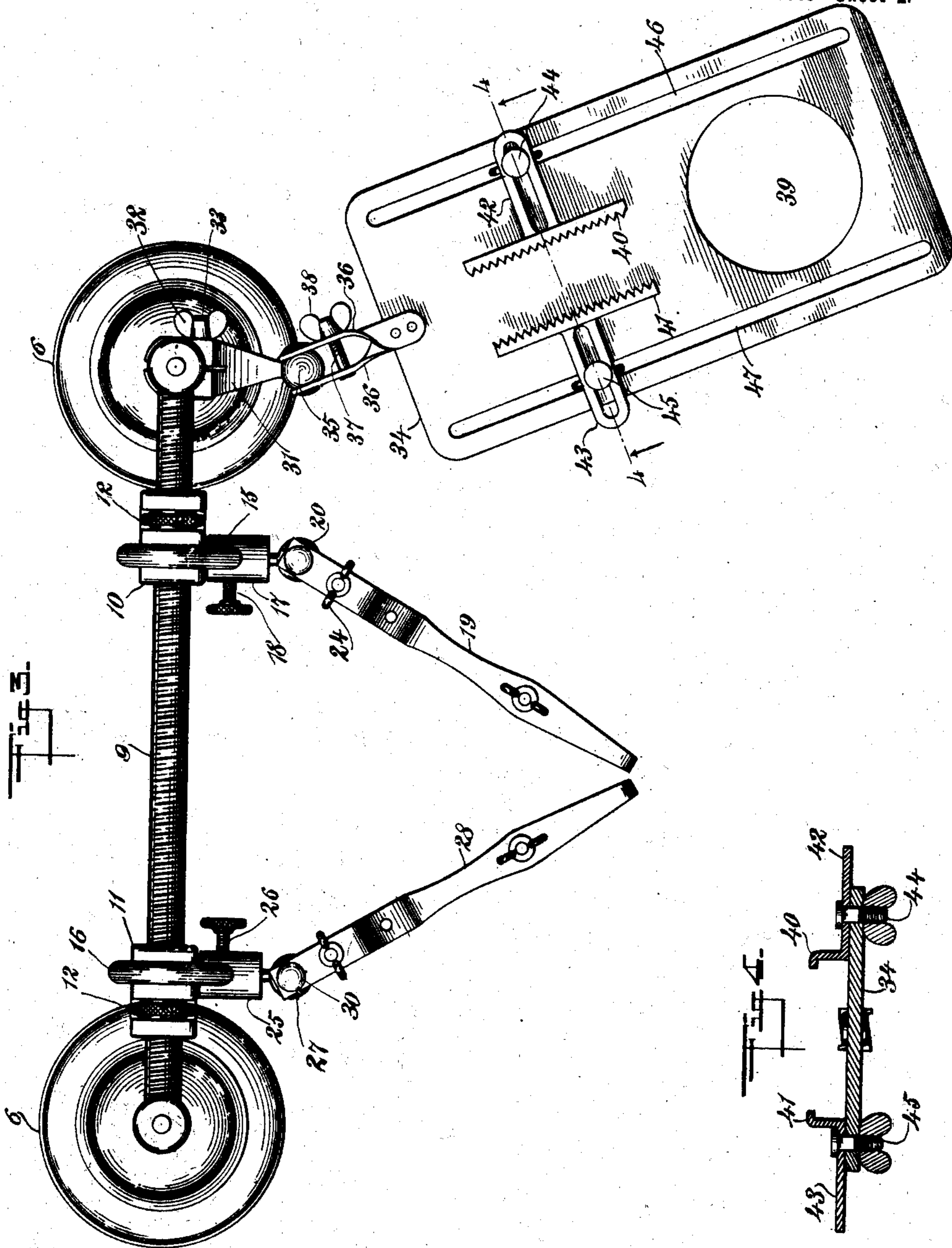
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UNITED STATES PATENT OFFICE.

EVERETT G. COUCH AND NELSON D. WELLS, OF SOUTHERN PINES, NORTH CAROLINA.

WORK-HOLDER.

SPECIFICATION forming part of Letters Patent No. 706,531, dated August 12, 1902.

Application filed November 4, 1901. Serial No. 81,120. (No model.)

To all whom it may concern:

Be it known that we, EVERETT G. COUCH and NELSON D. WELLS, citizens of the United States, and residents of Southern Pines, in the county of Moore and State of North Carolina, have invented a new and Improved Work-Holder, of which the following is a full, clear, and exact description.

This invention relates to improvements in work-holders, particularly adapted for the use of jewelers, model-makers, machinists, and the like for holding material to be soldered, heated, or otherwise operated upon, a main object being to provide a device of this character of simple and durable construction and so arranged that the work may be securely held at any desired and convenient angle or the parts to be united held in proper relation to each other.

We will describe a work-holder embodying our invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation, partly in section, of a work-holder embodying our invention. Fig. 2 is a section on the line 2 2 of Fig. 1. Fig. 3 is a plan view, and Fig. 4 is a section on the line 4 4 of Fig. 3.

The work-holder comprises standards 5, extended from base portions 6, that may be weighted, if desired, to hold the instrument firmly on a table or the like. The upper ends of the standards are reduced in diameter and screw-threaded, as indicated at 7, and removably placed on these reduced portions are the parallel bars or rods 8 9, one of said rods (here shown as the upper one 9) being screw-threaded throughout its length between the standards. Movable on these rods 8 and 9 are carrier-blocks 10 11. It may be here stated that while we have shown two carrier-blocks the invention is not limited to any particular number—that is, one may be used or a greater number than two may be used. The carrier-blocks are provided with openings through which the rods 8 and 9 pass, and the object in providing two rods is to prevent any swinging movement of the blocks. Each block is

provided in its upper portion with a recess, in which is arranged an adjusting-nut 12, operating on the rod 9 and moving the blocks by engaging with the walls of the recesses. To take up any possible wear between the rods and the carrier-blocks, the rod 9 is made adjustable and is held as adjusted by jam-nuts 13 14, engaging, respectively, the reduced threaded portions 7 of the standards respectively above and below said rod, as clearly indicated in Fig. 1.

Extended upward from the carrier-block 10 at its rear side and then downward at its front side is an arm 15, consisting of wire, and a similar arm 16 is supported by the carrier-block 11. Adjustable vertically on the arm 15 is a joint-member block 17, which is held as adjusted by means of a set-screw 18, engaging in a tapped hole in said block 17 and bearing against a flattened side of the arm 15, so as to prevent turning of said block on the arm.

Tweezers 19 have universal-joint connection with the joint-block 17. As here shown, a ball member 20 is carried on the block 17 and is engaged in depressions 21, formed in jaw portions 22 of the tweezers. A clamping-bolt 23 passes through said jaw members and engages with a thumb-nut 24. By this construction it is obvious that the tweezers may be turned at any angle relatively to the arm 15 and held as adjusted by means of the bolt 23 and nut 24. A similar block 25 is adjustable on the arm 16 and is held as adjusted by means of a set-screw 26. This block 25 is also provided with a ball member 27, on which tweezers 28 are adjustable. The jaw portions 29 of these tweezers are provided with depressions 30 to receive the ball, as in the first instance. It may be here stated that while only two joint-blocks 17 25 are here shown the invention is not limited to any particular number. Two or more may be mounted on each of the arms 15 16.

Adjustable on one of the standards 5 is a clamping-jaw 31, held as adjusted by means of a thumb-nut 32, engaging with a bolt 33, passing through the jaw members. This clamping device is designed to support a plate 34 at any convenient position and at any desired angle. Therefore the said plate 34 has

a universal connection with said clamp. As here shown, the clamp is provided with a ball member 35, engaged in depressions formed in jaws 36, attached to said plate and clamped against the ball by means of a bolt 37 and a thumb-nut 38. Near its outer end the plate 34 is provided with an opening 39, in which a small dish may be placed for heating water or the like, a lamp being placed underneath the same. Also connected to the plate 34 is a means for holding asbestos or charcoal in any desired position relatively to the plate. This means comprises toothed plates 40 41, having slotted shank portions 42 43, extended outward, and clamping-bolts 44 45 pass through the slots in said members 42 43 and also through slots 46 47 near the opposite edges of the plate. By this means the plates 40 and 41 may be turned at any desired angle or moved to any desired position on the plate and also moved toward or from each other. This plate 34 will be found useful for holding charcoal, against which the work held by the tweezers may be placed while soldering.

The operation of the device is quite evident from the above description. It is obvious that the tweezers 19 and 28 may be turned to any desired angle toward each other as the work may require.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. A work-holder, comprising standards, a screw-rod connection between the upper ends of the standards, a carrier-block movable on said rod, a nut engaging with the rod and with the block for moving the block along the rod, an arm attached to the block, and tweezers having universal-joint connection with said arm, substantially as specified.

2. A work-holder, comprising standards, a screw-rod connecting the upper ends of said standards, a block movable along said rod,

means for causing movements of said block, an arm extended upward and then downward from said block, a ball-joint member adjustable vertically on said arm, and tweezers having jaw members provided with depressions for receiving said ball member, substantially as specified.

3. A work-holder, comprising standards, two rods connecting the upper portions of said standards, one of said rods being screw-threaded, blocks movable along said rods, nuts on the screw-rod and engaging with said blocks, arms carried by the blocks, and tweezers having universal-joint connection with said arms, substantially as specified.

4. A work-holder, comprising standards having reduced screw-threaded upper portions, parallel rods removably placed on said reduced portions, one of said rods being screw-threaded, jam-nuts for holding the screw-rod as adjusted on said reduced portions, carrier-blocks engaging with and movable along said rods, means engaging with the screw-rod for causing the movements of said blocks, arms carried by the blocks, and tweezers having universal-joint connection with said arms, substantially as specified.

5. A work-holder, comprising standards, a rod connection between the upper ends of said standards, work-holding devices adjustable along said rod, a plate adjustable on one of the standards, and clamping-plates adjustable on said first-named plate, substantially as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

EVERETT G. COUCH.
NELSON D. WELLS.

Witnesses:

E. D. OSLIN,
G. H. SADELSON.