2 Sheets—Sheet 1

O. W. STOW & H. S. GRANNIS.

Tinsmith's Shearing Device.

No. 230,905. Patented Aug. 10, 1880.

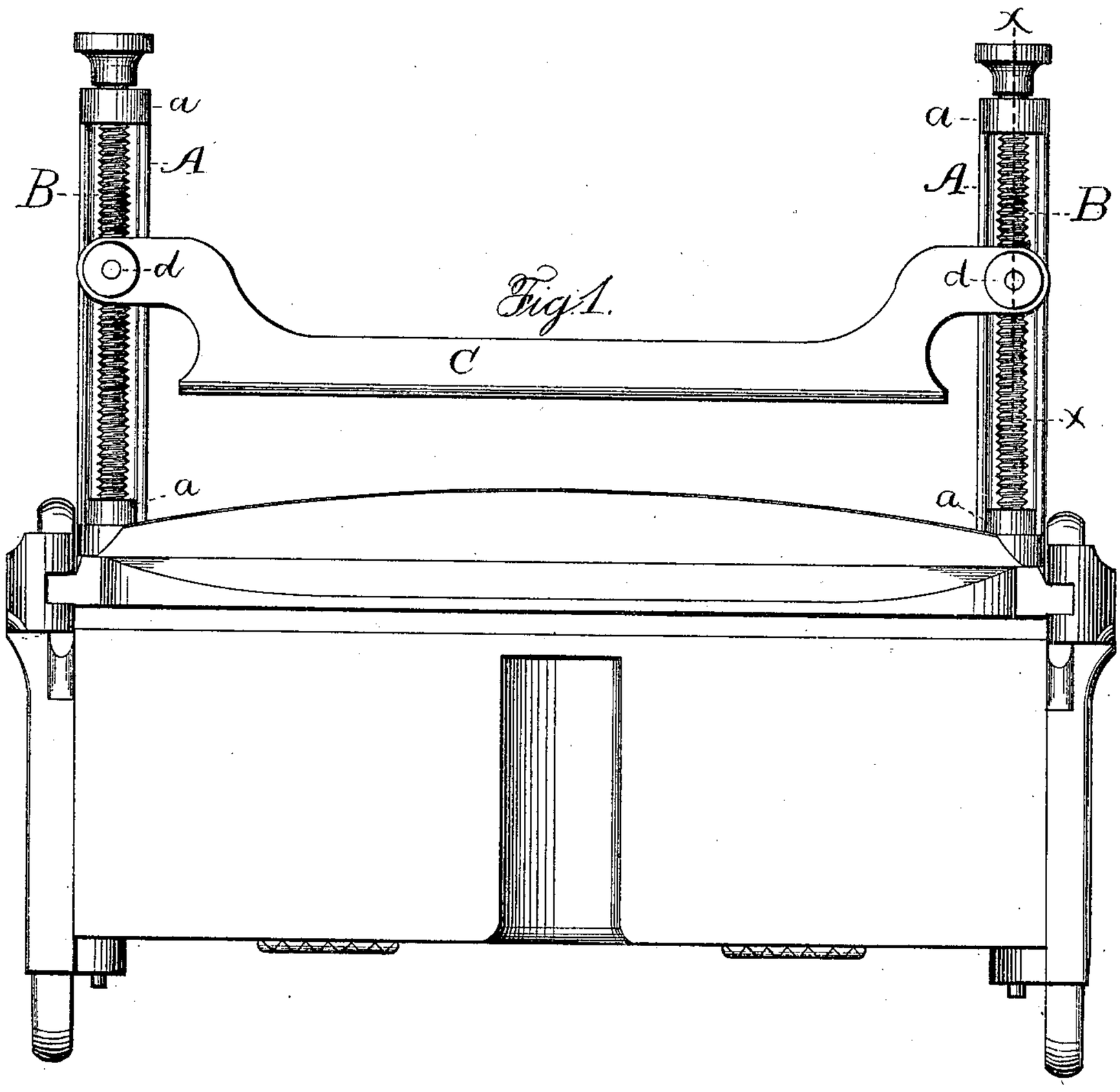

Fig. 1.

Witnesses.
John Edwards Jr.
C. E. Mitchell.

Inventors.
Orson W Stow.
Heal S. Grannis.
By James Shepard Atty

2 Sheets—Sheet 2.

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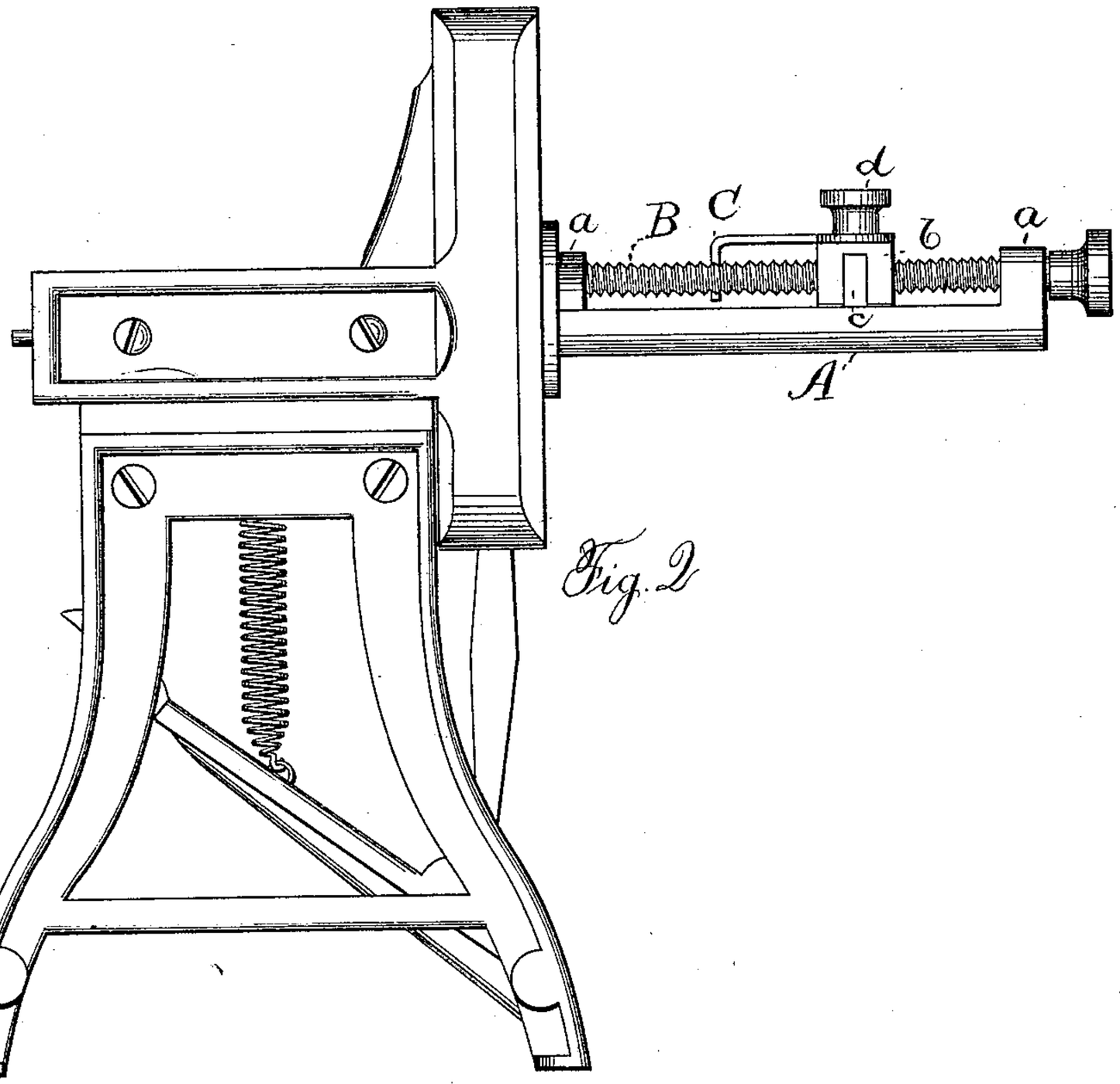

Fig. 2

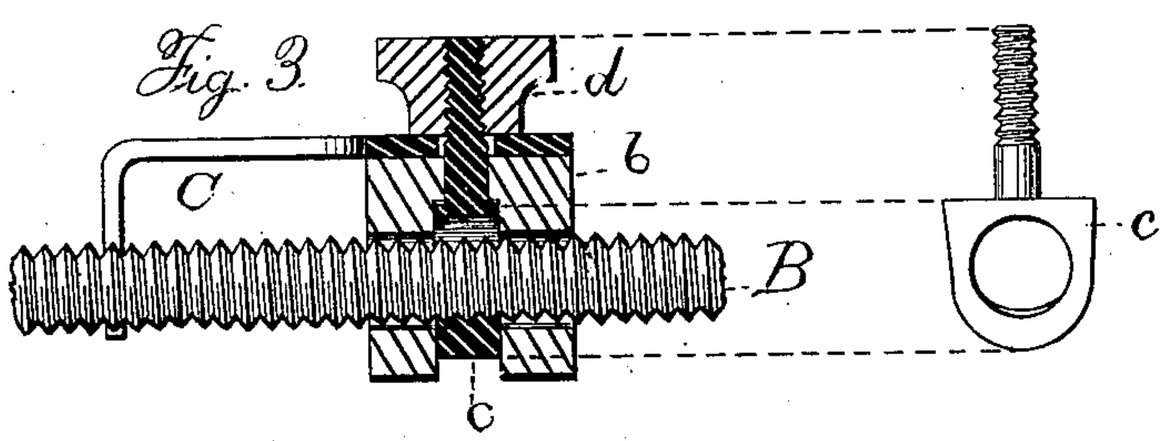

Fig. 3.

Witnesses.
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By: James Shepard Atty

UNITED STATES PATENT OFFICE.

ORSON W. STOW AND HIAL S. GRANNIS, OF PLANTSVILLE, ASSIGNORS TO THE PECK, STOW & WILCOX COMPANY, OF SOUTHINGTON, CONN.

TINSMITH'S SHEARING DEVICE.

SPECIFICATION forming part of Letters Patent No. 230,905, dated August 10, 1880.

Application filed February 18, 1880.

To all whom it may concern:

Be it known that we, ORSON W. STOW and HIAL S. GRANNIS, both of Plantsville, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Gage Attachments for Tinsmiths' Shears, of which the following is a specification.

Our invention relates to improvements in gage attachments for tinsmiths' shears, in which the ends of the gage are supported upon horizontal screw-threaded rods by means of a sliding block in which is a screw-adjusted vertical yoke having notches which may be brought into and out of engagement with the threaded rods; and the objects of our improvements are, first, a convenient means for effecting a delicate adjustment; and, second, a convenient means, in connection therewith, for quickly effecting an approximate adjustment.

We attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a top or plan view of the entire machine. Fig. 2 is a side elevation of the same, and Fig. 3 is an enlarged vertical section of a detached part thereof on line *x x* of Fig. 1.

The shears proper are the same as those in common use. Upon the back of the shears, preferably attached to the frame which carries the vertically-moving blade, we place two horizontal arms, A A, provided with lugs *a a*, within which we place an adjusting-screw, B, so mounted that it may be readily rotated without moving it endwise. Upon each of the screws B B there is a vertically-slotted block, *b*, the hole in said block through which the screw B passes being large enough to allow said block to be slipped along over the threaded body of said screw.

In the vertical slot of each block *b* there is a yoke, *c*, surrounding the threaded body of the screws B B, and provided with a threaded shank, which extends upward through the block and is provided with a thumb-nut, *d*. The hole in the yoke *c* through which the threaded body of the screws B B passes is also large enough to allow the yoke to be slipped along over said screw, and the side of the hole which is under the screw is either threaded or provided with a series of projections which match the threads on said screw, as shown in the sectional view, Fig. 3.

The ends of the gage C rest upon the block *b b*, and the threaded shank of the yoke *c* passes through them.

The operation is as follows: The nuts *d* are loosened, so as to allow the yokes to drop sufficiently to disengage them from the threads of the screw. The block, together with the gage, may then be slipped along upon the screws B B, to adjust the respective ends of the gage into approximately the desired position. The thumb-nuts are then turned down to draw up the yokes and cause them to engage the threads of the screws upon their under side. The screws B B may then be turned to move the gage slightly for any fine or delicate adjustment that may be desired. The nuts may then be tightened to bind the blocks and gage immovably in place.

If desired, instead of making the adjusting-screws also constitute the arms upon which the gage is slipped and supported, the ends of the gage might be mounted upon blocks provided with short horizontal adjusting-screws for a delicate adjustment, and such blocks, together with their adjusting-screws, slipped approximately into place and secured upon plain unthreaded arms, after which the adjusting-screws may be used.

In this modification, as well as in the first-described mechanism, there are two mechanisms or means—one for effecting the rapid and approximate adjustment of the gage, and the other in both cases consisting of a horizontal adjusting-screw for effecting the delicate adjustment.

Squaring-shears, as heretofore made, have had the ends of their back gage adjusted upon a slotted arm and secured by a bolt passing through said slotted arm and gage, but without any mechanism whatever for effecting a delicate adjustment, which, when desired, could only be accomplished by rapping the gage when it was only partially fastened in place.

We claim as our invention—

1. The gage C of squaring-shears, in com-

bination with the horizontal arms for supporting said gage, means for fastening the gage to said arms and loosening it therefrom to enable the ends of the gage to be slipped along, and screw-adjusting mechanism for effecting the final and more delicate adjustment thereof, substantially as described, and for the purpose specified.

2. The horizontal screw B, in combination with the block *b*, yoke *c*, end of gage C, and the nut *d*, substantially as described, and for the purpose specified.

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Witnesses:
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