(No Model.)

W. B. BRADSHAW.

WORK HOLDER.

No. 411,708. Patented Sept. 24, 1889.

Fig. 1

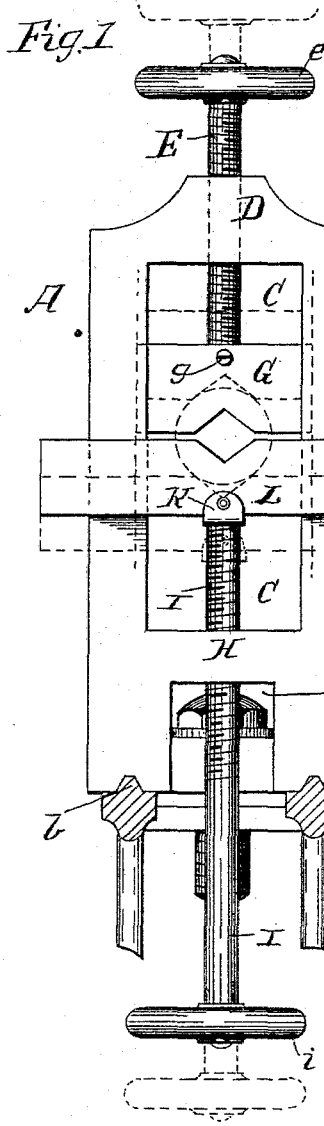

Fig. 2.

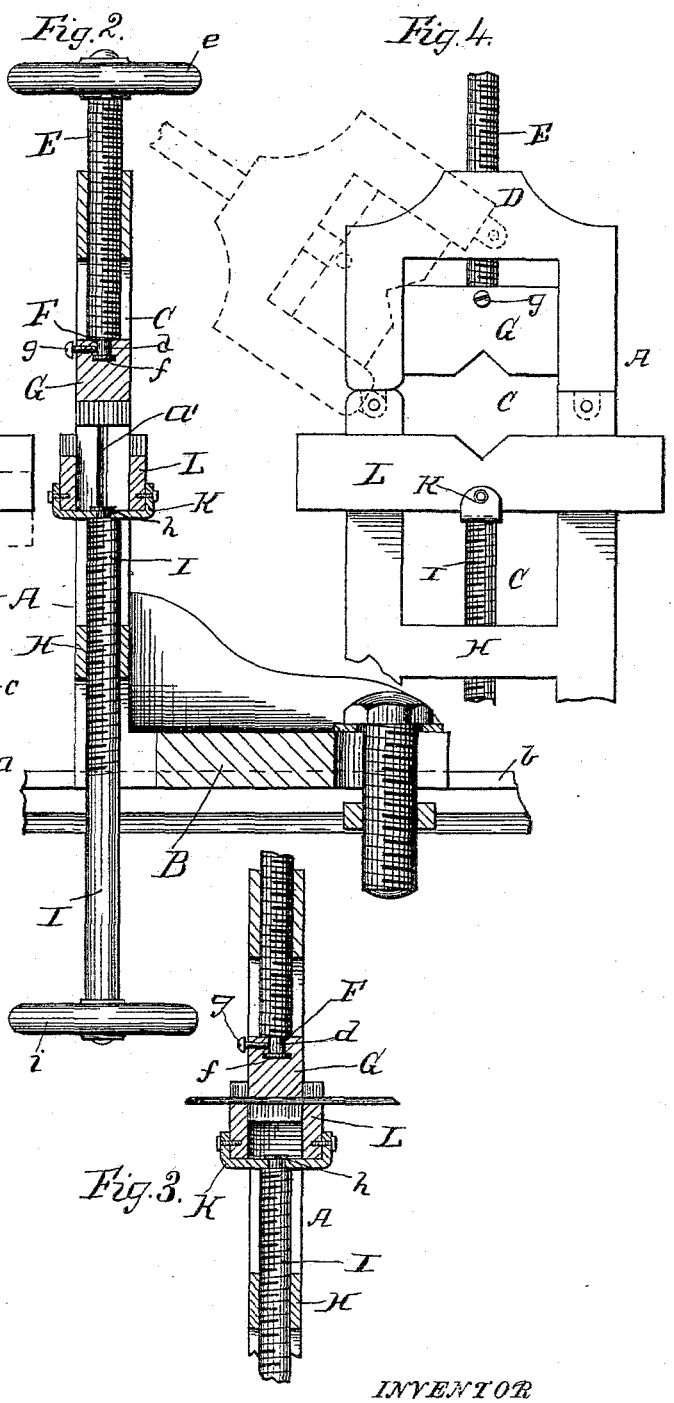

Fig. 4.

Fig. 3.

WITNESSES

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WORK-HOLDER.

SPECIFICATION forming part of Letters Patent No. 411,708, dated September 24, 1889.

Application filed May 8, 1889. Serial No. 310,043. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BIGGS BRADSHAW, a citizen of the United States, residing at Leetonia, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Work-Holders; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to work-holders; and its object is to provide a simple, cheap, and durable rest or support for any material of any size to be turned in a lathe, and which can be easily adjusted to hold the said material.

In cutting screw-threads or in turning wood or metal difficulty is experienced in preventing it from springing away from the tool, as inevitably happens when the piece of material is long and of small diameter, or when it is very hard. As the material then springs or binds, it causes the turning to be uneven, irregular, and rough, and in some cases even renders the turning impossible, as the material slips off the lathe-cutter or out of the lathe-chuck, and therefore the cutting-tool cannot be kept in contact with the work.

In the accompanying drawings, forming part of this specification, Figure 1 is a front view of my improved holder. Fig. 2 is a longitudinal section thereof. Fig. 3 is a similar view showing one jaw inside the other; and Fig. 4 is a front view showing in dotted lines the upper portion of the frame thrown back.

Like letters of reference denote like parts throughout the several figures.

The frame A has a bottom slide B, grooved at *a* to receive the ribs *b* of an ordinary lathe. The frame A has guideways *a'* formed in its sides, and is cut out at C and *c*, so as to render it of light weight, and therefore convenient to be lifted on and off a lathe. Above the cut-out portion C, and forming the head of the frame A, is an enlarged portion D, centrally screw-threaded to accommodate the adjusting-screw E, the upper end of which is provided with the hand-wheel *e*, while the lower portion is made smaller and has an enlarged head *f*. This smaller portion *d*, with its head *f*, fits into a hole F in the top of the upper sliding jaw G, having a V-shaped notch in its lower portion, and provided with a set-screw *g*, which has its bearing on the portion *d* and head *f*, and, with the sliding jaw G, forms a journal-bearing for the end of the screw E, besides keeping the end of the said screw within the said sliding jaw.

Above the cut-out portion *c*, and forming a brace for the frame A, is a cross-piece H, centrally screw-threaded to receive the adjusting-screw I, the lower end of which is provided with a hand-wheel *i*, while its upper end is made smaller and has a perforation to receive a pin *h* after the said smaller portion has been inserted, fit into a perforation in the center of a strap K, which has its ends bent up and attached to the lower sliding jaw L. This sliding jaw L is preferably made of one piece and provided with longitudinal slot to receive the frame A, or it may be made of two pieces bolted together; and it is provided, also, with a V-shaped notch in its upper face, corresponding to the V-shaped notch in the upper jaw G. The longitudinal slot is also adapted to allow the sliding jaw G to pass into it, as clearly shown in the drawings. By attaching my device to an ordinary lathe the material to be cut is inserted between the V-shaped notches and either one or both of the adjusting-screws turned until the center of the work is on a line with the apex of the V-shaped notches.

The upper part of the frame A may be made separate therefrom, and hinged or pivoted on one side, and fastened together on the opposite side by a pin. When this construction is used, the holder need not be moved off the lathe or out of place, for the sliding jaw G is carried up past the hinge J, where the whole top portion of the frame A is thrown back, carrying with it the screw E and the sliding jaw G, leaving the other jaw L in position to receive the material to be turned.

It will be observed that by the arrangement of the slot, extending clear through the jaw L, the jaw G can enter entirely into it, there being nothing to prevent this, as in the old form of work-holder.

Having thus described my invention, what I

claim as new, and therefore desire to secure by Letters Patent, is—

1. In a work-holder, the combination of the cut-out frame, as shown, a pair of independently-sliding jaws adapted to slide one above and into the other within part of the said cut-out portion, with the adjusting-screws, one of which has its bearing in one of the said jaws, and the other having its bearing in a strap secured to the other of said jaws, substantially as described, and for the purpose set forth.

2. In a work-holder, the combination of the cut-out frame, the sliding jaws having a V-shaped notch formed in their upper and lower portions, respectively, with a perforated strap having its ends bent to receive one of the said jaws, and a pair of oppositely-situated adjusting-screws, substantially as shown and described.

3. In a work-holder, the combination of the cut-out frame, a pair of sliding jaws, one of which forms a journal-bearing and the other of which is adapted to accommodate a journal-bearing strap, with the journaled adjusting-screws, substantially as shown, and for the purpose specified.

4. In a work-holder, the combination of the cut-out frame having the upper and lower portions screw-threaded, with a slotted sliding jaw and a sliding jaw having a hole in the top thereof adapted to receive the end of an adjusting-screw, substantially as and for the purpose set forth.

5. In a work-holder, the combination of the cut-out frame, of the hinged portion thereof, with the adjustable jaws having V-shaped notches formed therein, and the adjusting-screws, substantially as shown and described.

6. In combination with a work-holder, the frame A, the sliding V-shaped notched jaws G and L, located one above the other, one of which is adapted to slide into the other, the perforated strap, the adjusting-screws having journal end portions, and an enlarged head *f* on the end of one of the said adjusting-screws, substantially as shown and described, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM BIGGS BRADSHAW.

Witnesses:

EZRA STAHL,

S. SHOEMAKER.