No. 711,722. Patented Oct. 21, 1902.

B. M. W. HANSON.

WORK SUPPORT.

(Application filed Mar. 6, 1902.)

(No Model.)

Fig. 1

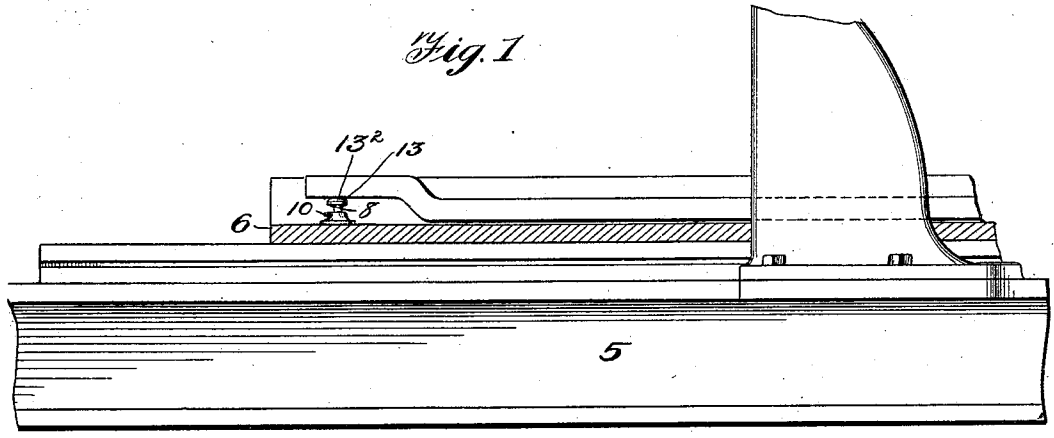


Fig. 2

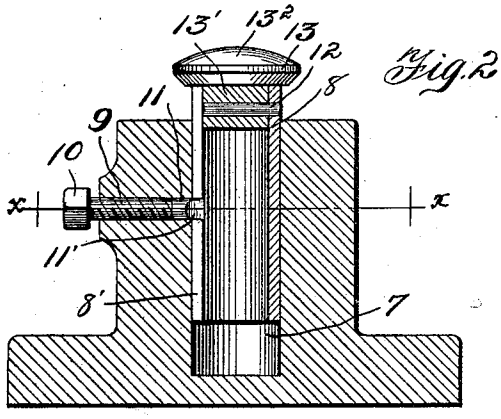


Fig. 3.

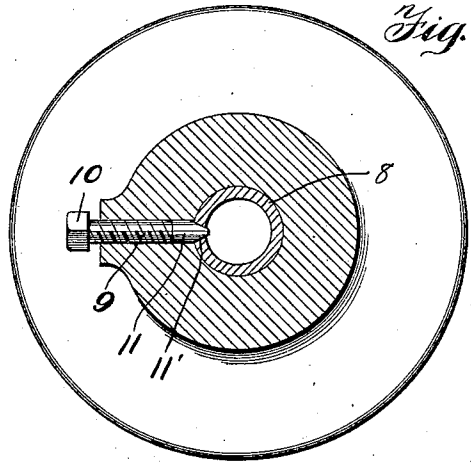


Fig. 4.

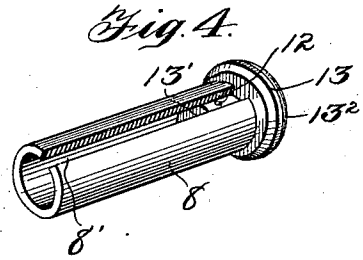
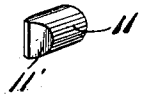


Fig. 5.



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By his Attorneys.
F. Blodgett and Peck

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UNITED STATES PATENT OFFICE.

BENGT M. W. HANSON, OF HARTFORD, CONNECTICUT, ASSIGNOR TO PRATT & WHITNEY COMPANY, OF HARTFORD, CONNECTICUT, A CORPORATION OF NEW JERSEY.

WORK-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 711,722, dated October 21, 1902.

Application filed March 6, 1902. Serial No. 96,895. (No model.)

To all whom it may concern:

Be it known that I, BENGT M. W. HANSON, a subject of the King of Sweden and Norway, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Work-Supports, of which the following is a specification.

My invention relates to machinists' work-supports generally, and more particularly to that class of those devices employed for this purpose in planers, jigs, and tools of various kinds, drilling-machines, &c.

Heretofore screws have been employed for supporting the work, and said screws when adjusted by hand or otherwise frequently cause more pressure to be used than is necessary and the work to be so sprung that the hole being drilled or the cut being made will not be true. Furthermore, under the constant jar of the shop or machinery the screws, unless locked after adjustment by jam-nuts or otherwise, frequently turn backward and release the work, thereby causing constant care and watchfulness with attendant vexatious loss of time and inaccuracy of results. My invention is intended to overcome these disadvantages by the provision of a device of simple construction which may be readily adjusted and firmly secured in position and which when once set cannot give way under pressure.

A further object of the invention is the provision of a work-support which may be readily adjusted to "feel" the pressure against the work, so that all liability of springing the same may be avoided, and which after the adjustment has been effected may be set firmly in position.

A further object of the invention is the provision of a split work-support movable in a socket for its reception, and in connection therewith a device with a point entering the slot and serving to expand said work-support and cause it firmly to engage the wall of said socket.

A further object of the invention is the provision of a split work-support having a head of peculiar construction adapted to bear against the work.

In the accompanying drawings, Figure 1 is a side elevation of a planer, showing my invention applied to the bed thereof. Fig. 2 is a transverse vertical section of said planer-bed and of my improved work-support in position thereon. Fig. 3 is a horizontal section on line $x\,x$ of Fig. 2 looking downward. Fig. 4 is a perspective view of the improved work-support, and Fig. 5 is a perspective view of a plug employed to expand the same.

Like characters designate similar parts throughout the several views.

Referring to the drawings, the numeral 5 designates a planer of ordinary construction, to the platen 6 of which my invention may be applied, and the numeral 7 a socket in the platen, in which the improved work-support, hereinafter described, is located. This illustration is merely given as a conventional one, for my improvement is neither limited to any particular machine nor to any specific art in which said machine may or may not be employed.

Designated by the numeral 8 is the improved work-support, shown as a tube or barrel with a smooth periphery and having a longitudinal slot 8′, said work-support being fitted in the socket 7 and the body in which said socket is formed having a bore 9, the wall of which is threaded to receive a screw 10, as shown in Figs. 2 and 3. Located in this bore and bearing against the end of said screw 10 is a plug 11, having a beveled or wedge-shaped point 11′, flattened at its end to prevent turning when it enters slot 8′, (said plug being known in shop parlance as the "dutchman,") and adapted when the screw is adjusted to enter the slot 8′ of the split work-support and to expand said support and cause it firmly to engage the wall of the socket in which it is fitted. Secured to one end of the split work-support by pin 12 or otherwise is a head 13, having a shank 13′, through which and a wall of the work-support the pin 12 passes, as shown in Fig. 2, and this head is preferably provided with a convex or rounded top 13^2, which bears against one side of the work. As illustrated in the figure just mentioned, the pin 12 passes through but one wall of the split work-support and enters the shank 13′,

whereby the barrel 8 may be expanded by the plug 11 throughout its length to cause its entire surface to be forced against the inner wall of the socket.

In the operation of my improved work-support (and, as before stated, it is limited to no specific use) the split tube or barrel 8 is inserted in a socket 7 of the machine with which it is employed and is adjusted by hand against the work, and after this adjustment has been effected the screw 10 is turned and causes the plug 11 to expand the tube and lock it firmly in position. When free in its socket, this tube may be readily adjusted against the work with a feasibility of operation which will be apparent, and the operator can readily determine by the feel or touch when it is properly placed in position without danger of springing the work, displacing it, or throwing it out of line, as is common with the screw and other forms of common work-supports usually employed.

My invention is not limited to the precise details of construction shown and described nor is it limited to any specific device for expanding the work-support, and thereby locking it in place.

Having thus described my invention, what I claim is—

1. An expansible work-support comprising a barrel having a slot extending through one end; a head for said barrel; and means for securing the head to the barrel at such a point in said slotted end that it will not interfere with the expansion of said barrel.

2. A work-support comprising a barrel slotted throughout its entire length; a head having a shank fitted in one end of said barrel; and a pin passing through the wall of the barrel opposite the slot and entering said head.

3. A work-support comprising a body having a socket; a longitudinally-slotted barrel fitted in said socket; a head having a shank secured to one side of the barrel; and means for expanding said barrel against the walls of the socket.

4. In a machinist's work-support, the combination, with a body having a socket, of a longitudinally-slotted barrel having a smooth external surface freely movable within said socket to adjust it against the work; a head secured to the barrel at a point opposite the slot; and an adjustable device mounted in a bore of the body and adapted to enter the slot of said barrel, to expand the same and lock it against movement.

5. In a machinist's work-support, the combination, with a bed having a socket, of a slotted barrel freely movable in said socket; an independent plug mounted in a bore of the bed and having an end shaped to enter the slot of the barrel; and means for adjusting the plug.

6. In a machinist's work-support, the combination, with a bed having a socket and a passage, of a longitudinally-slotted barrel mounted for free movement in said socket, said barrel having a head; an independent plug mounted in the passage of the bed, and having an end shaped to enter the slot of the barrel; and means for adjusting the plug.

7. In a machinist's work-support, the combination, with a bed having a socket and a passage at an angle to said socket, of a longitudinally-slotted barrel mounted in said socket; a plug having a beveled end with a flattened point, said plug being fitted in the passage of the bed; and a screw for adjusting the plug.

8. A work-support comprising a longitudinally-slotted barrel; a head secured to said barrel; means for securing said head in place in such a way that it will not interfere with the expansion of the barrel; a plug having a wedge-shaped, flattened end; and means for forcing said plug into the slot of the barrel.

9. A work-support comprising a bed having a socket and a threaded bore; a longitudinally-slotted barrel; a head secured to one end of said barrel; a plug fitted in the bore and having a wedge-shaped, flattened point; and a screw threaded in the bore and bearing at one end against the plug.

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

BENGT M. W. HANSON.

Witnesses:
J. J. MASON,
H. E. BAILEY.