

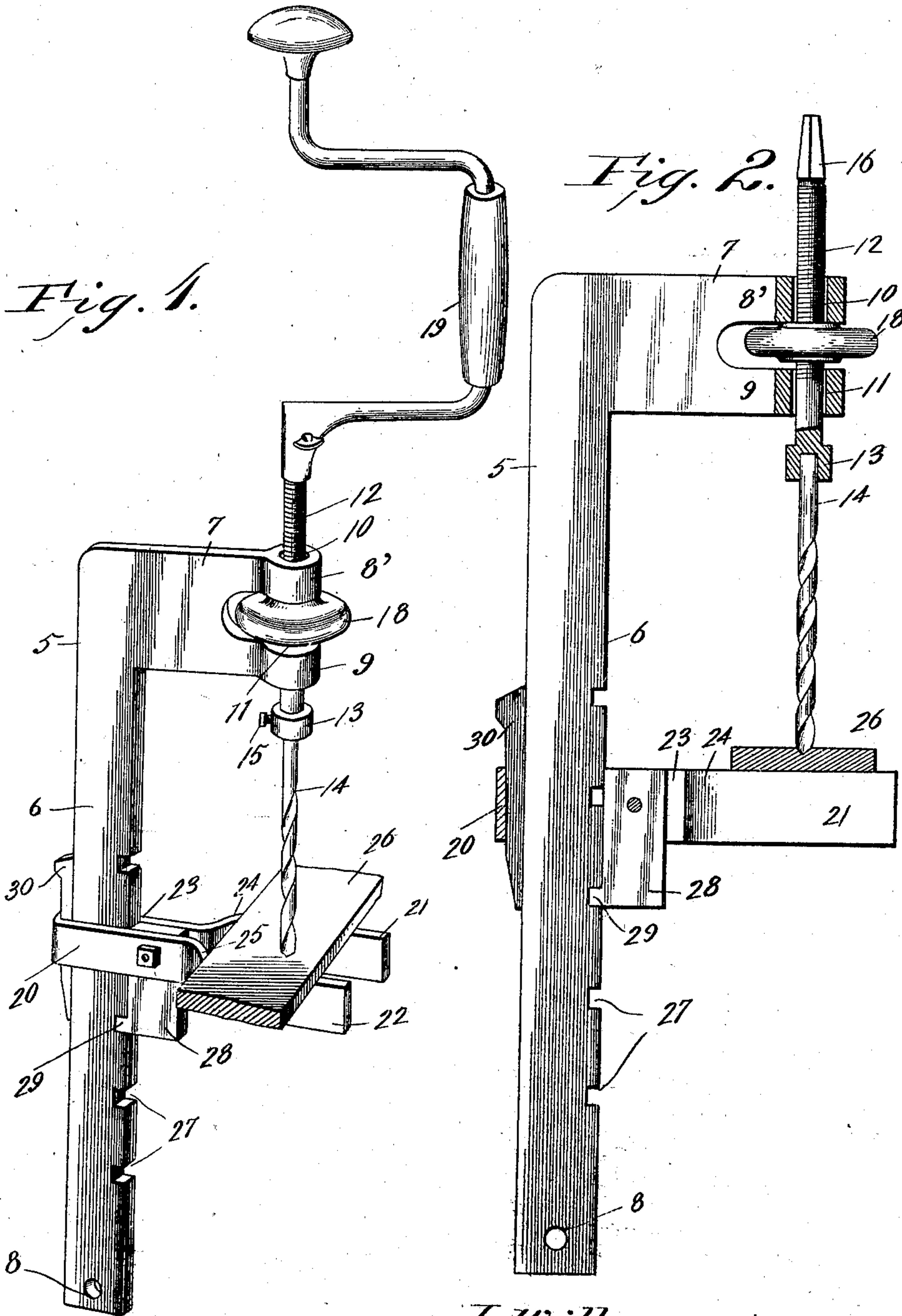
No. 671,099.

Patented Apr. 2, 1901.

J. WILLMANN.  
DRILL.

(Application filed Dec. 27, 1900.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

JOSEPH WILLMANN, OF SOLMS, TEXAS.

## DRILL.

SPECIFICATION forming part of Letters Patent No. 671,099, dated April 2, 1901.

Application filed December 27, 1900. Serial No. 41,280. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH WILLMANN, a citizen of the United States, residing at Solms, in the county of Comal and State of Texas, have invented a new and useful Drill, of which the following is a specification.

This invention relates to drills; and it has for one object to provide a simple and efficient construction of drill-press including a frame which may be readily attached to any suitable support and wherein the drill-spindle may be engaged for operation by a common form of chest-brace.

A further object of the invention is to provide a simple means for adjusting the stock-rest to proper positions to receive different thicknesses of stock.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in both views, Figure 1 is a perspective view showing the complete apparatus ready for operation. Fig. 2 is an enlarged side elevation of the apparatus with the operating-brace removed, a portion of the frame being in section to more clearly illustrate the structure.

Referring now to the drawings, the present apparatus includes a frame comprising a main supporting-plate 5, of angular form, and including a stem 6 and a laterally-projecting head 7 at the upper end thereof. In the lower portion of the stem is formed an opening 8 for engagement of an attaching-bolt to hold the frame at the bottom to a suitable support, while the upper portion of the frame may be provided with any suitable means for attachment, as will be readily understood.

The forward or outer end of the head 7 is bifurcated, as shown, to form an upper member 8 and a lower member 9, and in these upper and lower members are formed vertically-alined bearings 10 and 11, respectively, in which is disposed the shaft 12 of the drill-press. The drill-shaft, as shown, has a socket 13 at its lower end to receive the shank of a drill 14, and which shank may be held in place by means of a set-screw 15, the upper portion of the shaft being threaded and having an angular upper extremity 16 for engagement of an ordinary chest brace or auger for rotating the drill-shaft.

The drill-shaft is adapted for both longi-

tudinal and rotatable movement in its bearings, and to adjust it rotatably longitudinally a nut in the form of a hand-wheel 18 is used, this hand-wheel being engaged with the threads of the shaft between the bifurcations of the head of the frame, whereby when the wheel is backed up it will impinge against the under face of the upper bifurcation and will force the drill-shaft downwardly to carry the drill to the work, and when the wheel is rotated in an opposite direction it will rest upon the upper face of the lower bifurcation and will act to raise the shaft, and therewith the drill, from the work. Thus by rotating the brace or auger 19 the drill will be rotated, and by manipulating the hand-wheel the drill will be moved upwardly or downwardly, as may be desired.

To support the stock in proper position relatively to the drill, a stock-rest is provided. This rest consists of a metallic strap 20, which is bent into yoke shape to form two legs 21 and 22 and a connecting-web 23. The legs directly adjacent to the web are so spaced as to lie closely against the side faces of the stem of the supporting-frame, while the outer end portions of the legs are bent to lie parallel and spaced to a greater degree, as shown at 24 and 25, these latter portions forming the rest proper to directly receive the stock, which is shown at 26 in position for drilling.

In order that the stock-rest may be held adjustably to the supporting-frame, the stem of the latter has a plurality of recesses 27 formed in its front edge, so that the stem is, in effect, a rack, while a pawl in the form of a block 28 is pivoted between the close-lying portions of the legs of the rest. This block is angular in form, as shown, and at the lower end thereof is formed a lug 29, adapted for engagement with the notches or recesses 27, interchangeably to support the rest at different elevations. After the lug of the pawl or locking plate or block is engaged with a notch a wedge 30 is engaged between the web of the rest and the rear edge of the stem of the supporting-plate, and when pressed into place it draws the entire rest rearwardly, causing the rear face of the pawl or locking-block to lie snugly against the front face of the stem of the frame and holding the engaging lug of the block securely against dis-



placement. When the rest is to be raised or lowered, it is only necessary to withdraw the wedge, when the block may be swung outwardly to disengage its lug from the notch, and the rest may be then raised or lowered. The block may be then swung again into locking position and the wedge inserted.

The frame of the apparatus, with the drill-shaft and rest, may be used also as a clamp for general benchwork, the stock-rest acting as the fixed jaw and the drill-shaft acting as the movable jaw.

In practice various modifications of the specific construction shown may be made, and any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

1. A drill-press comprising a frame including a notched stem and a laterally-projecting head having its free end bifurcated and provided with alining bearings, a threaded drill-shaft disposed loosely in said bearings, a hand-wheel having threaded engagement with the shaft and disposed between the bifurcations of the head, said shaft being adapted for engagement of a brace at one end and for attachment of a bit at the opposite end, and a rest carried by the stem, said rest comprising a plate disposed slidably upon the stem, a locking-block pivoted to the plate and adapted for engagement with the notches of the stem interchangeably, said block being extended above and below its pivot to lie against the stem at both sides of its pivot and prevent pivotal movement of the block when in contact with the stem, and means for holding the block in close contact with the stem at both sides of the pivot.

2. In a drill-press, the combination with a notched stem, of a rest disposed slidably on the stem, a locking-block pivoted to the rest and adapted for engagement with the notches, said block being continued above and below the pivot thereof, and a wedge adapted to enter between the rest and the edge of the stem to draw the block against the stem and prevent pivotal movement thereof.

3. In a drill-press, the combination with a notched stem, of a rest consisting of a yoke-shaped plate disposed to inclose the stem and rest with its web against one edge of the stem, the opposite edge of the stem having notches therein, a block pivoted between the legs of the yoke-plate, said block having a lug for engagement with the notches of the stem, and a wedge for engagement between the web and the adjacent edge of the stem to hold the block thereagainst to prevent pivotal movement thereof.

4. In a device of the class described, the combination with a notched stem, of a clamp-plate slidable thereon, a block pivoted to the plate and adapted to bear against the stem at both sides of its pivot, said block being adapted for engagement with the notches of the stem to prevent slidable movement of the clamp-plate, and means for holding the block in close contact with the stem to prevent pivotal movement thereof and disengagement from the notches of the stem.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOSEPH WILLMANN.

Witnesses:

JOHN MARBACH,  
HENRY WEBER.