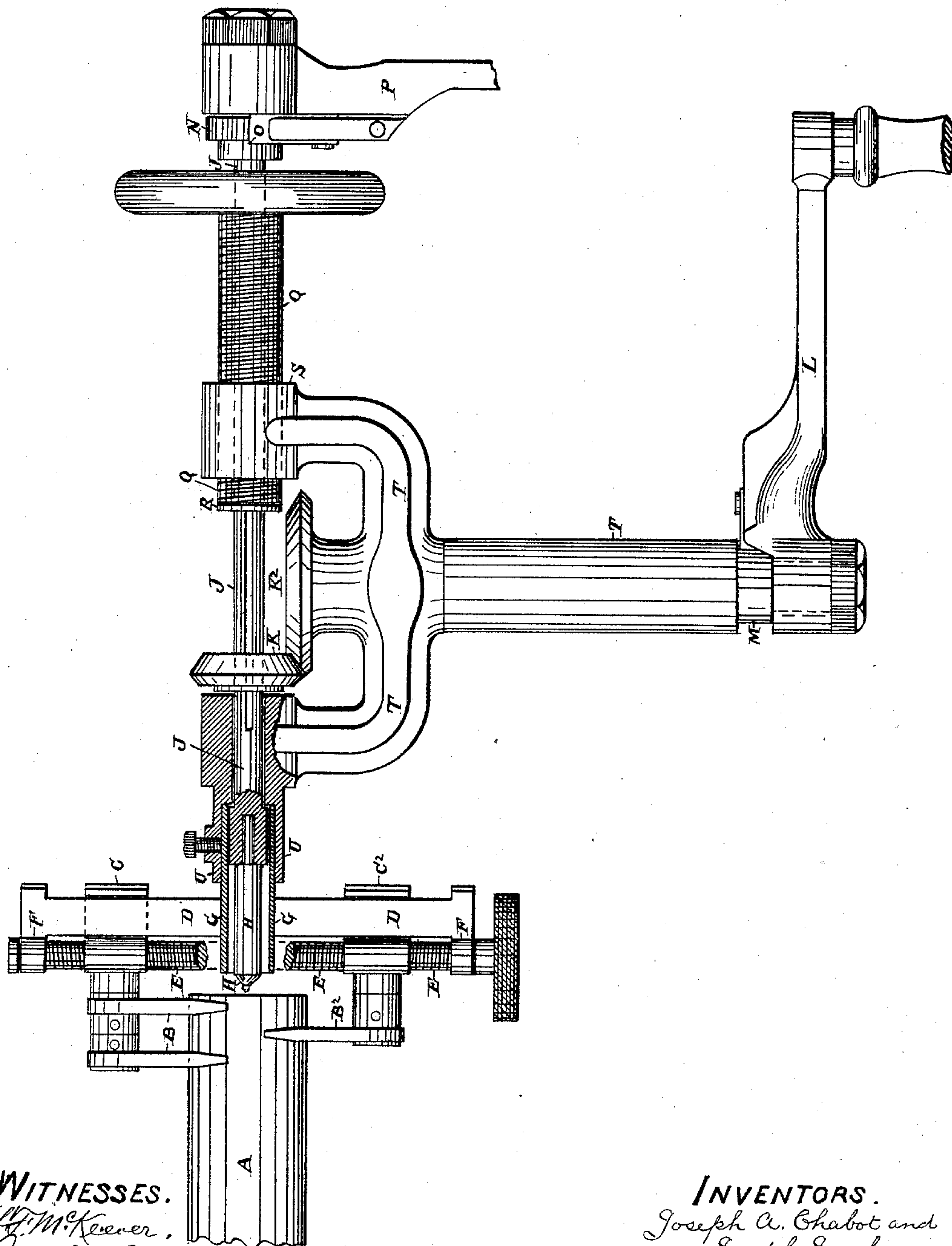


(No Model.)

J. A. CHABOT & J. JACOBS.  
COMBINED WORK HOLDER AND DRILL.

No. 475,664.

Patented May 24, 1892.



WITNESSES.  
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*Brown Bros.*



# UNITED STATES PATENT OFFICE.

JOSEPH A. CHABOT, OF SOMERVILLE, AND JOSEPH JACOBS, OF BOSTON,  
MASSACHUSETTS.

## COMBINED WORK-HOLDER AND DRILL.

SPECIFICATION forming part of Letters Patent No. 475,664, dated May 24, 1892.

Application filed June 3, 1889. Serial No. 312,953. (No model.)

*To all whom it may concern:*

Be it known that we, JOSEPH A. CHABOT, of Somerville, in the county of Middlesex, and JOSEPH JACOBS, of Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in a Combined Work-Holder and Drill, of which the following is a full, clear, and exact description.

10 This invention, in substance, consists of a portable work-holder to hold and center the work and clamp it on its opposite sides and a portable drill to drill the work held by the work-holder and having means to operate the  
15 drill, in combination with appliances in part held on the work-holder and in part on the support for the drill and constructed to be detachably secured together, and thereby to attach the work-holder and drill, and all so as  
20 to present the work and drill to each other in fixed relations and such that on then suitably operating the drill the work as centered is drilled, so that the work-holder and drill, with its operating mechanism, are readily attach-  
25 able and detachable, substantially as herein-after described.

30 In the drawing forming part of this specification a combined work-holder and drill substantially of this invention is illustrated, and the figure is a plan view with some portions in central section.

35 In the drawing, A is a piece of work held on its opposite sides between two sets of opposed jaws B and B<sup>2</sup>, each carried by separate blocks C C<sup>2</sup>, arranged to slide along a slotted bar D common to both and to be operated by a common screw-threaded rod E, which at its  
40 opposite end portions is screw-threaded in opposite directions and turns in and is held against lengthwise movement through fixed ear-pieces F at opposite ends of the bar D. Otherwise than as above particularly explained the several parts are as shown and described in Letters Patent of the United  
45 States No. 390,658, dated October 9, 1888, on improved centering-gage, to which reference is hereby had, and all so that turning the screw-rod E in one direction closes the jaws on and in the other direction opens them from  
50 the work, and at the same time in closing centering the work—that is, bringing it to a

given and determined position relative to the axis of a tubular nose-piece G, fixed by rivets or other suitable fastening devices (not shown) or otherwise suitably on the slotted bar D and  
55 across at right angles to the axis of the operating screw-rod E.

H is a drill secured in any suitable manner at the end of operating rod or shaft J, arranged to be rotated by bevel gear-wheels K  
60 K<sup>2</sup>, driven through a winch-handle L, attached to the shaft M of the gear-wheel K<sup>2</sup>, or directly through a ratchet-wheel N, secured to the shaft J, and a pawl O, engaging said ratchet and carried by a winch-handle P, ful-  
65 crumed on the shaft J, and while being so rotated to be fed forward as desired by suitably turning a feed-screw shaft Q, which surrounds and abuts against a shoulder R of the drill-shaft J and engages a screw-threaded nut S  
70 of the supporting-frame T for the mechanism described. Otherwise than as above particularly explained the several parts are all as shown and described in Letters Patent of the United States No. 68,827, dated September 10,  
75 1867, on improved drill, to which reference is hereby had.

Neither the work-holder nor the drill described forms of itself any part of this invention, and the invention is in no manner to be  
80 limited to either or to both, as it consists neither in the work-holder nor in the drill of itself, but only in means held in part on the one and in part on the other, whereby the drilling mechanism is made attachable to and detach-  
85 able from the mechanism of the work-holder, and when attached allows the work held and centered by the work-holder to be drilled by the drilling-tool of the drilling mechanism, suitably operated therefor. As particularly shown,  
90 these means consist of the tubular nose-piece G of the work-holder and of a tubular nose-piece U, which concentrically surrounds the drill and its operating-shaft and is immovably held on the carrier or support T for the drill-oper-  
95 ating mechanism and has a bore suitable to receive the nose-piece G of the work-holder, which in turn has a bore suitable for the working of the drill and its shaft, as has been particularly described. The nose-piece G of  
100 work-holder being inserted in nose-piece U of drill mechanism, the nose-pieces are fastened



together by a set-screw V or other means suitable therefor, and thus, as is plain, the work-holder and drill are attached, and all in a manner for the work to be drilled by the drill  
5 and for the holder and drill to be readily detached from each other.

The combined work-holder and drill of this invention and which has been described is most particularly useful for centering and  
10 drilling work at its opposite ends and so preparing it to be subsequently secured and centered to be turned, and considering the invention in this relation the work-holder and drill particularly shown and described are  
15 most serviceable and advantageous.

The nose of the drill and nose of the work-holder may be adapted to be screwed one to the other and the work-holder and drill so attached; or they may be adapted to be joined  
20 by what is known as a "union coupling or connection," or otherwise, in any well-known manner, and the invention, broadly considered, is not to be limited in this relation.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is— 25

A combined work-holder and drill composed of opposed jaws B B<sup>2</sup>, slide-blocks C C<sup>2</sup>, carrying said jaws, a slotted bar D, on which said blocks slide, a screw-threaded rod E, suitably  
30 held on said bar and adapted to operate said blocks in opposite directions, and a tubular nose-piece G, held on said bar, in combination with a drill H, turning in suitable bearings, one of which is adapted to be entered into  
35 and fastened on said nose-piece, and means adapted to rotate said drill, all as described, for the purposes specified.

In testimony whereof we have hereunto set our hands in the presence of two subscribing  
40 witnesses.

JOSEPH A. CHABOT.  
JOSEPH JACOBS.

Witnesses:

ALBERT W. BROWN,  
HENRY F. MCKEEVER.