

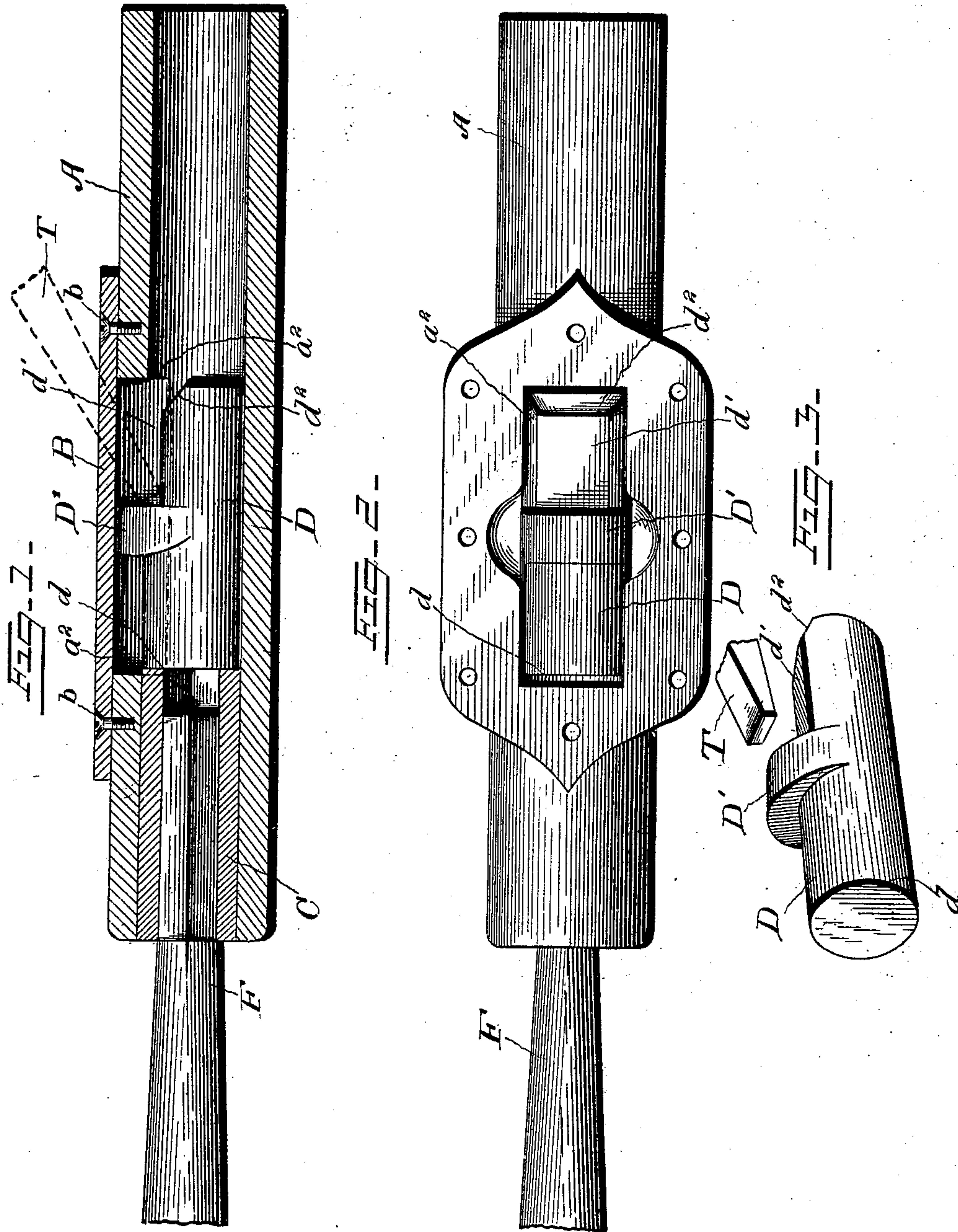
No. 693,049.

Patented Feb. 11, 1902.

F. MUENGER.  
DRIFT PIN FOR DRILLING MACHINES.

(Application filed Oct. 18, 1901.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## DRIFT-PIN FOR DRILLING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 693,049, dated February 11, 1902.

Application filed October 16, 1901. Serial No. 78,887. (No model.)

*To all whom it may concern:*

Be it known that I, FREDRICK MUENGER, of Hill City, in the county of Pennington and State of South Dakota, have invented certain  
5 new and useful Improvements in Drift-Pins for Drilling-Machines; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part  
10 of this specification.

This invention is an improved "drift-pin" or "drift-block" for drilling-machines. Drift-pins are used to facilitate the removal of the steel bushings from the spindles or sockets of  
15 the drilling-machine and avoid battering of the drills and of the ends of the bushing.

The invention therefore consists in the novel construction of the drift-pin, as hereinafter described with reference to the accompanying drawings and summarized in the  
20 claims following such description.

In said drawings, Figure 1 is a transverse longitudinal section through the socket or spindle head of a drilling-machine, illustrating the construction and arrangement of the  
25 drift-pin for use therein. Fig. 2 is a top plan view of Fig. 1 with the covering-plate removed. Fig. 3 is a detail perspective view of the drift-pin and its casing detached from the  
30 socket.

In said drawings, A represents an ordinary spindle or socket of a drilling-machine of any suitable construction, which is attached to the operating mechanism and is provided  
35 with an opening *a*, preferably covered by a removable plate B, which may be secured by screws *b*.

C is a cylindrical bushing which is tightly fitted in the drill-holding end of the spindle.  
40 This bushing is adapted to receive and hold the shank of the drill-tool F. This bushing holds the drill properly in place and connects it to the spindle; but when the bushing wears so that the drill does not act properly it becomes  
45 necessary to remove it, and my present invention provides a drift pin or block which is used to remove the worn bushing.

The drift-pin D is substantially cylindrical, but is provided with an enlarged semicircular rib D' on its upper side about midway of  
50 its length. The part *d* of the drift-pin, which

is adapted to engage the bushing, is cylindrical. The opposite part of the drift-pin is flattened on top, as at *d'*, so as to facilitate the introduction of a tool T against the rib  
55 D' to force the drift-pin outward after it has been inserted in the spindle through the opening *a*<sup>2</sup>. When the drift-pin is driven outwardly, it ejects the bushing, which is tightly fitted in the casing, as indicated in  
60 Fig. 1. The extremity of part *d'* of the drift-pin is preferably beveled on its upper edge, as indicated at *d*<sup>2</sup>, to facilitate the insertion of the drift-pin in the casing or its removal  
65 therefrom.

The bushing C is driven into the socket or spindle A, and the drill F is engaged therewith. The bushing wears rapidly, so it has to be frequently renewed; but it becomes very  
70 tightly wedged in the spindle. When it is desired to remove a worn bushing, the plate B is removed and the drift-pin D placed in the spindle, as shown in Fig. 1. A tool T can be placed against the collar D' of the pusher  
75 and the latter driven down so as to force the bushing C out of the casing and permit a new bushing to be placed therein without hammering or battering the ends of the bushing or the casing or socket.

Having thus described my invention, what  
80 I therefore claim as new, and desire to secure by Letters Patent thereon, is—

1. The herein-described drift-pin for removing bushings from drill spindles or sockets, having one end portion cylindrical and  
85 adapted to engage the bushing when inserted in the spindle and its other end portion flattened, and provided with a projecting transverse rib on its side intermediate its end portions by which it can be driven, for the purpose and substantially as described.  
90

2. The combination of the spindle having a slot, and a removable bushing in the spindle; with a removable drift-pin adapted to be inserted in the spindle through the slot  
95 having a projecting transverse rib or flange on one side, and one end adapted to engage the bushing and its other end beveled on its upper side, for the purpose and substantially as described.  
100

3. The combination of the drill spindle or socket having an opening, and a removable

bushing in said socket; with a drift-pin adapted to be placed in said spindle having a central projecting rib on one side, and having one end part cylindrical and its other  
5 end part flattened, substantially as described.

4. The combination of the drill spindle or socket having an opening, and a removable cylindrical bushing in said socket; with a cylindrical drift-pin having a central parti-cylindrical rib projecting through the opening  
10

of the spindle and having one end beveled, and a cover for the opening in the socket, all substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two  
15 witnesses.

FREDRICK MUENGER.

Witnesses:

ALBERT CARR,  
C. C. GRIM.