

B. F. ENNIS & J. N. SCISM.
 HOLDER FOR BORING TOOLS.
 APPLICATION FILED AUG. 24, 1908.

932,378.

Patented Aug. 24, 1909.

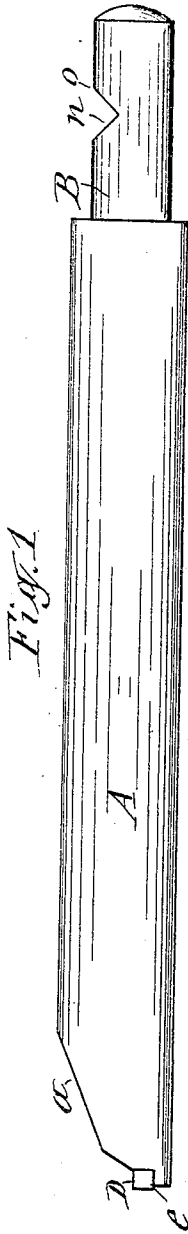


Fig. 1

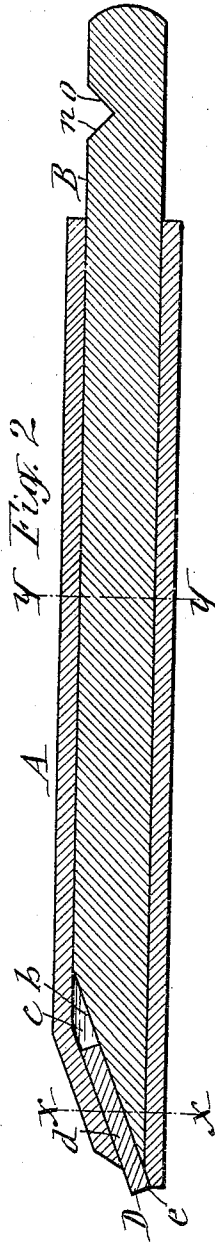


Fig. 2



Fig. 7

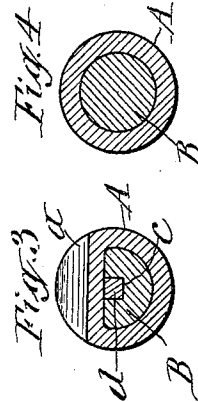


Fig. 4

Fig. 3

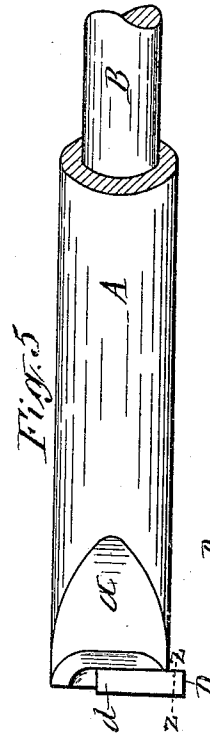


Fig. 5

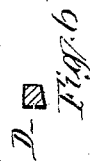


Fig. 6

WITNESSES:

Orville Lewis
J. J. Laess

INVENTORS:
Benjamin F. Ennis
 BY *and John N. Scism*
E. Laess, their ATTORNEY.

UNITED STATES PATENT OFFICE.

BENJAMIN F. ENNIS AND JOHN N. SCISM, OF SYRACUSE, NEW YORK; SAID ENNIS ASSIGNOR TO SAID SCISM.

HOLDER FOR BORING-TOOLS.

932,378.

Specification of Letters Patent.

Patented Aug. 24, 1909.

Continuation of application, Serial No. 362,153, filed March 13, 1907. This application filed August 24, 1908. Serial No. 449,905.

To all whom it may concern:

Be it known that we, BENJAMIN F. ENNIS and JOHN N. SCISM, citizens of the United States, and residents of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Holders for Boring-Tools, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of tool-holders which are designed to be clamped to a tool post of a lathe and other metal-working machine, and the invention is more particularly designed for holding boring-tools.

The present application is a continuation of the abandoned application, Ser. No. 362,153, filed March 13, 1907.

The object of the invention is to provide a boring-tool holder which shall be simple and inexpensive in construction and convenient and efficient in its operation, and capable of securely holding the tool so as to prevent it from turning and slipping endwise in the holder. And to that end the invention consists in the improved construction and combination of the component parts of the tool-holder herein presently described.

In the accompanying drawings Figure 1 is a side view of a tool-holder embodying our invention: Fig. 2 is a longitudinal section of the same: Figs. 3 and 4 are transverse sections respectively on the lines —X—X— and —Y—Y— in Fig. 2: Fig. 5 is a plan view of the front end portion of the tool-holder: Fig. 6 is a transverse section on the line —Z—Z— in Fig. 5. And Fig. 7 is a perspective view of the cutter.

—A— represents a straight cylindrical tube of suitable wrought metal, preferably of steel, and formed with imperforate walls of uniform thickness and adapted to be compressed circumferentially. The front end portion of said tube is compressed on one side and the compressed portion is flattened and inclined to the front end of the tube as shown at —a—.

—B— denotes a round steel bar which extends longitudinally through the tube —A— and is fitted sufficiently tight therein to cause it to be gripped by frictional contact with the interior of the tube, which gripping is increased by compression of the tube caused by the tool-post to which it is clamped

in the usual and well known manner. The rear end of said bar protrudes and is formed with a transverse notch —n— the rear side of which serves as a shoulder —o— for receiving the blows of a hammer to drive said bar rearward when desired to withdraw it from the tube —A—.

The front end portion of the bar —B— is beveled and flattened on one side as shown at —b— corresponding to the compressed end portion —a— of the tube —A—. The engagement of said beveled side of the bar —B— is formed with a longitudinal groove —c— which is square in cross-section and inclined parallel with the bevel —b—.

—D— represents the tool which is provided with a shank —d—, shaped square in cross-section and fitted to the groove —c— so as to prevent the shank from turning the holder. The tool is securely retained in the holder by applying blows to the rear end of the bar —B— to force said bar forward in the tube and thereby wedging the tool shank between the bottom of the groove —c— and inner side of the compressed portion —a— of the tube as shown in Fig. 2.

To allow the tool-shank to be inserted into the groove —c— the bar —B— is to be moved rearward sufficiently to increase the depth from the beveled inner side of the tube to the bottom of the groove —c— so as to admit the tool-shank, which is subsequently clamped therein in the manner aforesaid.

The cutter proper extends at right angles from the end of the shank —d— and is of a length to project at the periphery of the tube —A— and is thus capable of operating upon the entire bottom of a socket to be bored by the tool. The front end of the tube is formed with a forwardly projecting shoulder —e—, upon which the cutting end of the tool rests and is thus supported.

It will readily be observed that the described tool-holder is very simple and inexpensive in its construction, inasmuch as the tube —A— can be cut from steel tubing readily obtained in the market and is subsequently easily compressed at one of its end portions in the shape shown at —a— in the accompanying drawings. The bar —B— is also easily beveled as represented at —b— and by the tight fitting of said bar to the interior of the tube, the bar is securely retained in its required operative position and

dispenses with extra expensive means for adjusting and retaining the bar in the tube.

What we claim as our invention is:

1. A boring-tool holder consisting of a
5 straight compressible tube of uniform thickness having a cylindrical wall on one side of its front end portion inclining to the end of the tube, a tightly fitting bar extending longitudinally through said tube and having
10 one side of its front end portion beveled and flattened correspondingly to the inclined end portion of the tube and formed with a correspondingly inclined longitudinal groove in said beveled side for the reception of the tool-
15 shank.

2. A boring-tool holder consisting of a straight tube of uniform thickness having one side of its front end portion inclining to the end of the tube, and provided on the said
20 end with a forwardly projecting shoulder for supporting a transversely extending cutter, a tightly fitting bar extending longitudinally through said tube and having its front end

portion beveled correspondingly to the inclined end portion of the tube and formed
25 with a correspondingly inclined longitudinal groove in the beveled side and square cross-section for reception of a square tool-shank.

3. A boring-tool holder consisting of a
30 straight tube of uniform thickness having one side of its front end portion inclining to the end of the tube, and a tightly fitting bar extending longitudinally through said tube and protruding at the rear end thereof and
35 formed with a shoulder on said protruding portion and having one side of its front end portion beveled correspondingly to the inclined end portion of the tube and formed
40 with a correspondingly longitudinal groove in said beveled side for reception of the tool-shank as set forth.

BENJAMIN F. ENNIS.
JOHN N. SCISM.

Witnesses:

NETTIE LEWIS,
J. J. LAASS.