



# United States Patent Office.

WILLIAM H. LEACH, OF UXBRIDGE, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND BRADFORD STETSON, OF SAME PLACE.

Letters Patent No. 77,742, dated May 12, 1868.

## IMPROVEMENT IN TOOL-POST FOR LATHE OR PLANING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

Be it known that I, WILLIAM H. LEACH, of Uxbridge, in the county of Worcester, and State of Massachusetts, have invented a new and improved Tool-Post for Lathes, Planing-Machines, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a vertical section of a tool-post embodying my invention.

Figure 2 is a perspective view of the same on a reduced scale.

The object of my invention is to construct a tool-post for lathes, planing-machines, &c., in such a manner as to enable the point of the cutting-tool to be readily adjusted in any desired position relatively to the material to be operated upon; and the invention consists in attaching the tool-post to the base-plate by means of a ball-and-socket joint, in combination with a collar, fitting upon the outer surface of the socket portion, thus forming a double bearing. Upon the collar is supported the cutting-tool, which passes through a slot in the upper portion of the post, and is held in position by means of a screw passing through the top of the post in the usual manner.

Referring to the drawings, A represents the base-plate, provided with a hole, *a*, for the reception of a bolt, by which it is secured to the frame of the machine. At one end of the base-plate is a hemispherical casing or socket, A', provided with an opening at the top.

Within this socket is fitted the lower portion of the tool-post, forming a half ball-socket joint. On the outer upper portion of the socket A' is supported the collar C, its contact surface being curved to correspond with the curved surface of the said socket. The portion A' serves the double purpose of a ball and socket, constituting a socket to the portion B' of the tool-post, and as a ball to the collar C, the latter being then the socket, thus forming a double or compound ball-and-socket joint.

D is the cutting-tool, which passes through a slot in the tool-post, and rests upon the upper surface of the collar C. F is the screw, which passes down through the upper portion of the tool-post, and, bearing upon the cutting-tool, secures all the parts in position.

It will thus be seen that the tool-post B may be turned and inclined in any direction, so as to adapt the point of the cutting-tool to any position that may be required, by simply loosening the screw F; and upon tightening the screw, it will be firmly held in position.

It will be observed that the tool-post is held by a double frictional bearing, the action of the screw serving to draw the portion B' against the inner side of the socket A', and at the same time pressing the collar C upon the outer surface of the socket, which holds the post firmly in any desired position against any force that may be exerted upon the cutting-tool.

The device is applicable to iron and wood-turning lathes, iron-planers, and shaping-machines.

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

The construction of a tool-post, for a lathe or other machine, with the joint A' B', in combination with the collar C and set-screw F, substantially as and for the purpose set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

WM. H. LEACH.

Witnesses:

GEO. W. HOBBS,  
BRADFORD STETSON.