(No Model.)

W. W. PIPES & A. L. KELLY.

TOOL FOR LATHES AND PLANERS.

No. 396,764. Patented Jan. 29, 1889.

Fig. 1.

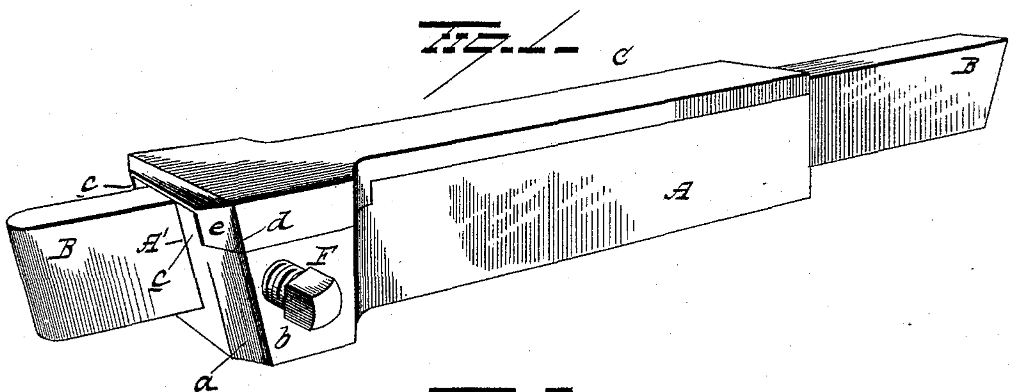


Fig. 2.

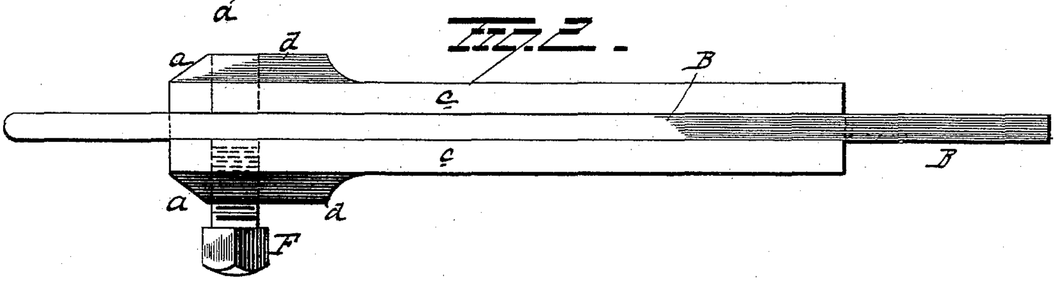


Fig. 3.

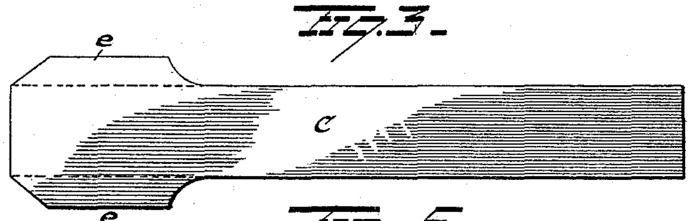
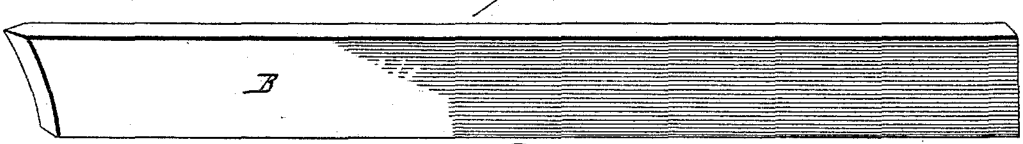


Fig. 5.



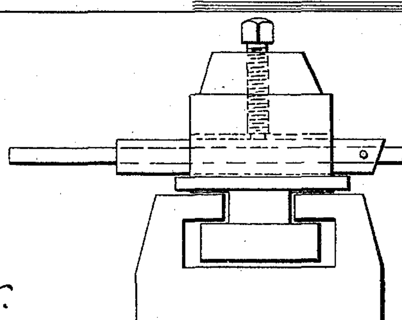


Fig. 4.

Witnesses,
[signature]
G. F. Downing

Inventor,
Wm W Pipes.
Adam L. Kelly.
By their Attorney
Leggett & Leggett.

UNITED STATES PATENT OFFICE.

WILLIAM W. PIPES AND ADAM L. KELLY, OF WHEELING, WEST VIRGINIA.

TOOL FOR LATHES AND PLANERS.

SPECIFICATION forming part of Letters Patent No. 396,764, dated January 29, 1889.

Application filed April 10, 1888. Serial No. 270,215. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM W. PIPES and ADAM L. KELLY, of Wheeling, in the county of Ohio and State of West Virginia, have invented certain new and useful Improvements in Tool Stocks or Holders for Metal-Cutting Engines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to an improvement in adjustable tool-holders for use on iron-cutting engines, such as lathes, planers, shapers, and slotters.

The object of this invention is to provide a simple and efficient stock or holder which will admit and hold firmly a comparatively-thin piece or bar of steel that is the cutting-tool proper, and allow this cutting-tool to be removed at will from the stock without requiring a change of position of said stock or tool-holder with regard to the tool-post on a lathe, planer, or other metal-working tool on which it is affixed.

A further object is to produce a tool-holder that will hold a thin strip or bar of hardened steel as a cutter, and support the same by clamping action applied on its top edge as well as upon the side of the cutting-bar, and also permit the cutter-bar to be readily removed from the stock or adjusted longitudinally within it.

With these objects in view our invention consists in certain features of construction and combinations of parts, which will be hereinafter described, and pointed out in the claims.

Referring to the drawings making a part of this specification, Figure 1 is a view in perspective of the "tool stock" or holder with a cutter-bar in position within it. Fig. 2 is a view of the stock or holder with the loose cap-plate removed. Fig. 3 represents the cap-plate of the tool-holder. Fig. 4 is a view in perspective of the tool stock or holder in position for use on a lathe, it being held in the tool-post by the usual set-screw of such a tool-post. Fig. 5 represents one of the cutter-bars or edged-nose tools that is used with and held in the tool-stock.

A represents the body of the tool-stock. It may be forged to shape from wrought-iron, but is preferably made of malleable iron or soft steel cast into form. As will be seen, it consists of a rectangular bar of metal which has a central groove, A′, made through its length, so as to afford a recess for the reception of a comparatively-thin bar of steel, B, which latter is the cutting-tool. The forward end, *a*, of the stock A is widened for a short distance, this lateral enlargement producing thickened side walls at the forward end of the tool-stock, as shown at *b*.

The thickened portions *b* of the parallel walls *c c*, produced by the formation of a central groove or channel in the stock A, are cut away on the edges from the top downwardly to produce shoulders *d d* on opposite sides of the stock, said reductions of the stock-body rendering the side walls, *c c*, of the same parallel and of equal thickness throughout the length of the stock-body above the shoulders *d*, as shown in Fig. 2.

Upon the top of the grooved stock A the cap-plate C is placed. This is shown detached in Fig. 3, and consists, essentially, of a rectangular plate of metal which corresponds in length to that of the stock-body A, and in width conforms to the shape of the stock, so as to fit thereon. Two depending parallel flanges, *e e*, are formed integral with the front end of the plate, that are adapted to snugly embrace the walls *c* of the stock-body above the shoulders *d d*.

The lower edges of the depending flanges *e e* bear upon the shoulders *d d* when the lower face of the cap-plate is in contact with the upper surface of the walls *c c* of the stock A, so that when the cap and stock are placed together the assembled parts form a box, with an orifice extending from end to end of the same, which orifice is of proper form in cross-section to fit a cutter-bar, B, on all of its sides without looseness.

In some cases the cutter-bar B may be made of such proportionate width from the bottom to the top edge of the same as to cause the cap-plate C to rest on this cutting-tool and be pressed upon it by the set-screw of a tool-post when the tool-stock A is in fixed position for use on a lathe or other metal-working engine, such as a planer, shaper, &c.

The cutting-nose of the bar B may be shaped

as the work requires—as, for instance, to produce a diamond point, a round nose, or a side cutter—and it is apparent that when the cutter-bar is in place it, with the stock A, may be adjusted to cause the cutting-edge to bear upon the piece operated upon at any required angle, the same as if a solid tool were used.

The cutter-bar B is securely held in place within the box or stock A by a set-screw, F, which is inserted into a tapped hole made in the forward end of the tool-stock, or, to be more exact, through the thickened walls *b* of said stock, a threaded perforation being made at opposite points through each of these thickened side walls, so that the screw may be changed from one hole to the other, if necessary, to facilitate its insertion or to avoid striking the moving piece of work operated upon.

By the use of this tool-stock a number of similar or different shaped tools may be supplied at a reduced cost, as there is no waste material, such as usually results in cutting-tools of ordinary construction, the "stub ends" of which when too short becoming useless. This is avoided by the employment of our improved tool-stock, as the comparatively-thin cutter-bars used with it may be evenly tempered throughout their length, and thus afford a tool the cutting-edge of which may be continuously renewed by grinding it until nearly the entire cutter-bar is used up, or at least with a waste of but an inch or two of the material.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A tool-stock having an open channel throughout its length, in combination with a set-screw which penetrates its side and a detachable cap-plate, substantially as set forth.

2. The combination, with a tool-stock having an open channel or groove made downwardly in its body to receive a cutter-bar and a set-screw inserted in the side of the tool-stock, of a removable cap-plate adapted to fit the top surface of the tool-stock and permit a tool to slide therein when it is not engaged by the set-screw, substantially as set forth.

3. The combination, with a tool-stock which has a longitudinal groove made throughout its length, thickened side walls formed at one end, and a set-screw or bolt adapted to fit threaded perforations made through these thickened side walls, of a tool or cutter bar made to slidingly fit in the longitudinal groove of the stock, said cutter-bar being of the same width as the depth of the groove in which it sets, and a removable cap-plate which is held in place by the set-screw of a tool post or rest in which the tool-stock is inserted and clamped, substantially as set forth.

4. The combination, with a tool-stock having a rectangular cross-section, a longitudinal slotted body, two thickened side walls at one end, and shoulders produced at this end of the stock by a reduction of each thickened side wall, of a cap-plate adapted to embrace the side walls of the tool-stock and have contact with the shoulders and top surface of this tool-stock, substantially as set forth.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

WM. W. PIPES.
ADAM L. KELLY.

Witnesses:
W. P. MEYER,
F. BISCHOFF.