

(No Model.)

J. HOPE.
TOOL HOLDER.

No. 502,039.

Patented July 25, 1893.

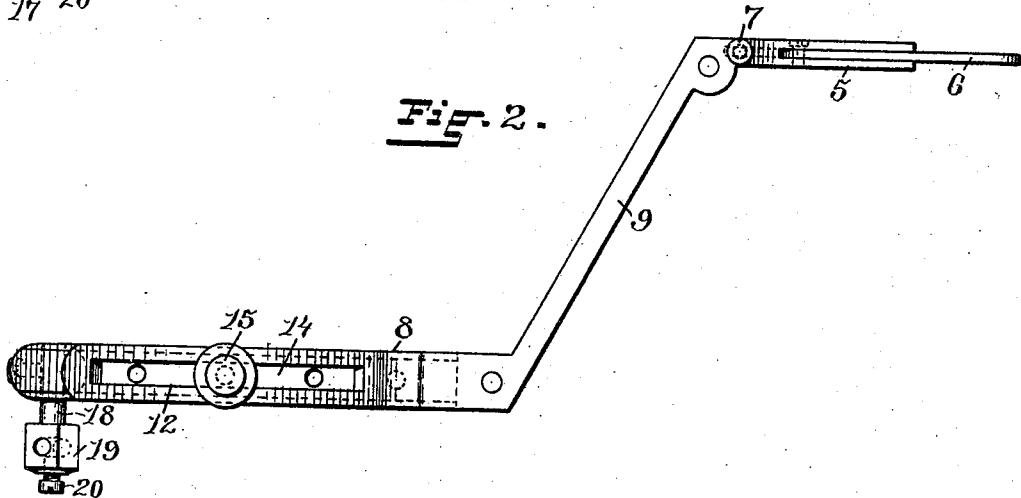
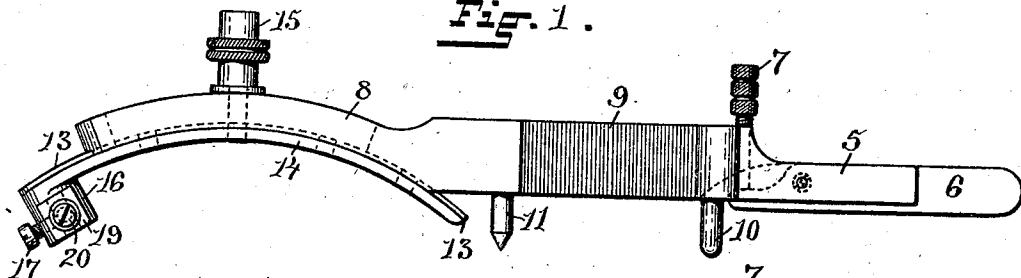


Fig. 3.

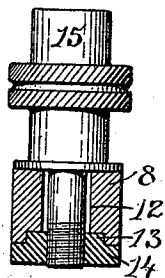
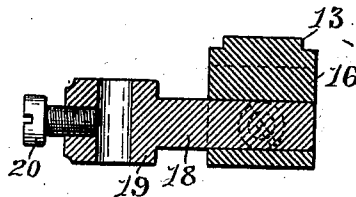


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN HOPE, OF PROVIDENCE, RHODE ISLAND.

TOOL-HOLDER.

SPECIFICATION forming part of Letters Patent No. 502,039, dated July 25, 1893.

Application filed October 18, 1892, Serial No. 449,226. (No model.)

To all whom it may concern:

Be it known that I, JOHN HOPE, of the city of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Tool-Holders; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to improvements in tool-holders which are especially adapted for use on pantograph engraving-machines.

The object of the invention is to produce a tool-holder which will be extensible in a circular direction.

The further object of the invention is to produce a tool-holder for pantograph engraving-machines which will have an offset pivoted tool-support.

The invention consists in the peculiar construction of the extensible tool-holder and the combination therewith of the novel features of construction and combination of parts which will hereinafter be more fully described and pointed out in the claims.

Figure 1 represents a side view of the improved tool-holder. Fig. 2 represents a plan view of the same. Fig. 3 represents an enlarged cross-sectional view through the holder and extensible-arm, the securing-screw being shown in full. Fig. 4 represents a similar view through the end of the extensible-arm and the pivoted tool-support.

Similar numbers of reference designate corresponding parts throughout.

The term "tool," as herein used, is supposed to be the engraving-device or diamond-point carried, by means of which a pattern is traced through the varnished or coated surface of a printing-cylinder held in a pantographic engraving-machine.

In the drawings 5 indicates the rear extension of the tool-holder furnished with the pivoted-plates 6 on the upper rear edge of which the depressor-bar of the pantograph engraving-machine works to depress this portion of the tool-holder and to elevate the forward end thereof carrying the engraving-tool, the plate 6 being adjusted by means of the thumb-screw 7 which is engaged in a threaded per-

foration in the extension 5 and bears against the forward end of the plate 6.

The extension 5 is connected with the main-arm 8 by the diagonal-member 9. At the junction of this member with the extension is located the fulcrum-pin 10 having a rounded end which, when in use, rests in a V-shaped slot in the supporter-rail of the engraving-machine, and at the junction of the member 9 and the arm 8 is located the fulcrum-pin 11 having a conical end which is adapted to rest in a depression of an adjustable-plate carried by the supporter-rail.

The main-arm 8, curved as shown in Fig. 1 of the drawings, has a vertical longitudinal-slot 12, and in its lower surface is formed a longitudinal-guide in which the rib 13 of the extensible-arm 14 is held by the clamping-screw 15, the threaded portion of which engages with threaded perforations in the arm 14.

The forward end of the extensible-arm 14 is furnished with the enlargement 16 which is transversely perforated and provided with the set-screw 17 by means of which the shank 18 of the offset tool-clamp 19 is secured at any desired angle with the copper roll to be operated upon; the clamp is perforated to receive the upper end of the engraving-tool and has a set-screw 20 for securing the same in place.

It will be apparent by reference to the drawings that, by the use of the offset tool-clamp, the engraving-tool may be supported in a position in front of and in a line with a second tool carried by an ordinary tool-support located beside that herein described, so that two similar patterns may be engraved on different segments of the roll which will be on the same circumferential line.

By the use of the thumb-screw 7 the plate 6 may be adjusted from the front of the engraving-machine so that the engraving-tool will be lifted a greater or less distance from the surface of the roll which is being engraved.

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

1. A tool-support, for pantograph engraving-machines, having a laterally offset tool-clamp.

2. A tool-support, for pantograph engraving-

ing-machines, having an arm extensible on the radius of a circle and carrying a laterally offset tool-holder.

3. The combination with a tool-holder, for
5 engraving machines, of the extension 5, the plate 6 pivoted to said extension, and the thumb-screw 7 carried by said extension and adapted to bear on the forward end of the plate 6.
- 10 4. The combination with a tool-holder having a curved-arm 8 and an extensible-arm 14 carried thereby, of an offset tool-support carried on the end of the arm 14 and adjustable laterally and radially.
- 15 5. In a tool-holder, for pantograph engraving-machines, the combination with a curved supporting-arm, of a tool-clamp carried thereby and adjustable laterally and radially.

6. The combination, in a tool-holder, with the extension 5 and the slotted-arm 8 connected by the diagonal-member 9, the plate 6 pivoted to the extension, and the screw 7 for adjusting the same, of the extensible-arm 14 secured to the arm by the clamping-screw 15, the transverse perforated-enlargement 16
25 provided with the set-screw 17 on the end of the arm 14, and the clamp 19 having the shank 18 adapted to be secured in the transverse perforation of the enlargement 16, as and for the purpose described. 30

In witness whereof I have hereunto set my hand.

JOHN HOPE.

Witnesses:

M. F. BLIGH,
H. J. MILLER.