(No Model.)

E. L. HARTMANN.

TOOL HOLDER.

No. 296,332. Patented Apr. 8, 1884.

Fig. 1

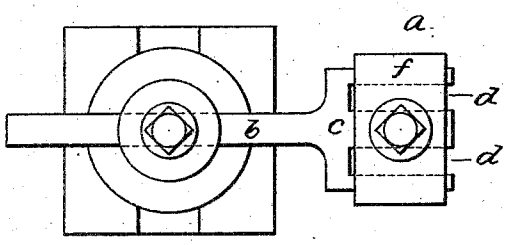


Fig. 3

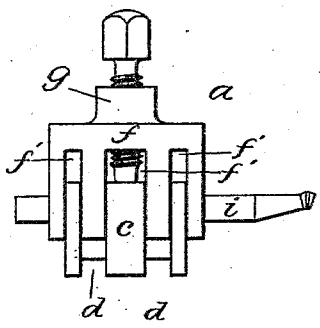


Fig. 2

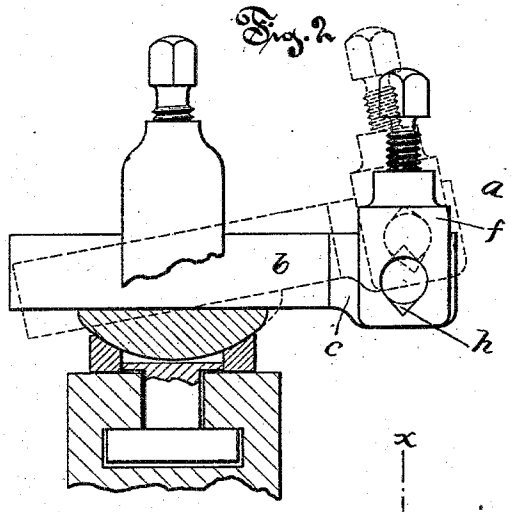


Fig. 4

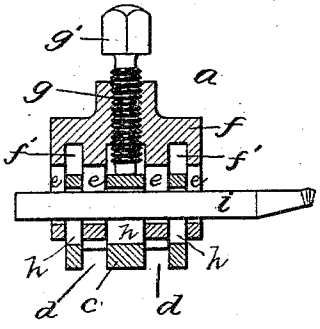
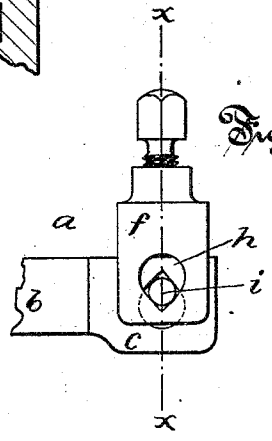


Fig. 5



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UNITED STATES PATENT OFFICE.

ERNEST L. HARTMANN, OF HARTFORD, CONNECTICUT.

TOOL-HOLDER.

SPECIFICATION forming part of Letters Patent No. 296,332, dated April 8, 1884.

Application filed August 11, 1883. (No model.)

To all whom it may concern:

Be it known that I, ERNEST LOUIS HARTMANN, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Tool-Holders; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

Figure 1 is a top view of my improved device, shown as held in a tool-post. Fig. 2 is a side view of same. Fig. 3 is an end view of same removed from post and holding a tool. Fig. 4 is a view in cross-section on plane denoted by line *x x* of Fig. 5. Fig. 5 is a side view of the device holding a tool.

My invention relates to the class of devices used for holding boring, turning, and the like tools of various outline in cross-section, and this without reference to the tool-post, in which the shank of the device as a whole may be held.

It consists in the intermeshing body parts, in the arrangement and outline of the tool-sockets in the parts, and in the several features more particularly hereinafter described.

In the accompanying drawings, the letter *a* denotes the tool-holder as a whole; *b*, the shank, integral with which is body part *c*, having the vertical mortises *d* and the tool-socket *e* of irregular outline formed in the solid parts between the mortises from side to side. The body part *f* has the threaded socket *g* for the clamp-screw *g'*, and is cut by mortises *f'* in such manner that the solid portions of the body parts will intermesh, as seen in Figs. 1, 3, and 4 of the drawings. In body part *c* the tool-socket *e* narrows toward its upper side; but in body part *f* the socket *h*, which is so placed that when the parts are in mesh the opening from side to side is continuous, narrows toward its lower side. The result is that when tools of any desired or ordinary shape as to cross-section of their shanks, whether round, square, or triangular, and of various sizes, may be used in my improved holder, for by means of the clamp-screw the intermeshing body parts are moved by each other until the tool is firmly grasped. (See Figs. 3, 4, and 5.) The tool *i* is held in a line at right angles to the plane of the slot in the tool-post, so that when the tool is raised, as in boring out a cylinder, (as shown in dotted lines in Fig. 2,) it will enter the latter in a line parallel to the axis of the cylinder. In cases where the boring-tool is held immediately in the tool-post, and the cutting-point is raised, as by tilting the tool, when held in a post having an oscillating base, (see Fig. 2,) it throws the tool out of line with the axis of the hole being bored and jams diagonally across the opening. This difficulty cannot arise when my improved tool is used.

The operation of the tool is as follows: The body parts being in mesh, the tool is placed in the tool-socket and the clamp-screw turned until the tool is firmly held by the pressure of the opposite faces of the sockets in the alternating intermeshing body parts. The shank of the holder may then be secured in the tool-post in the ordinary way.

Instead of the screw-clamp, I may use a wedge, cam-lever, or any other equivalent device for clamping the parts together.

I claim as my invention—

1. In combination, the shank *b*, having the body part *c*, with mortises *d* and tool-socket *e*, body part *f*, having corresponding intermeshing parts, and clamp-screw *g'* or its equivalent, all substantially as described.

2. The combination, in a tool-holder, of the body part having a shank and a forked extremity with a V-shaped tool-socket, the body part with projections bearing a tool-socket and fitting between the forks of the main body part and the clamp device, whereby a tool is held in a line at right angles with the axis of the shank, all substantially as described.

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