(No Model.)

J. B. SARGENT

TOOL HANDLE.

No. 303,887. Patented Aug. 19, 1884.

Fig. 2

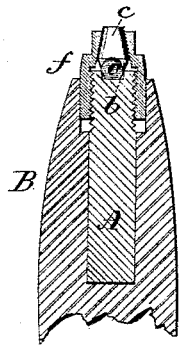


Fig. 1

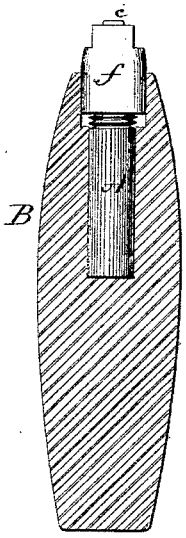


Fig. 3

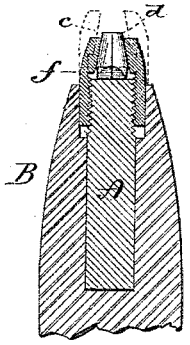


Fig. 4

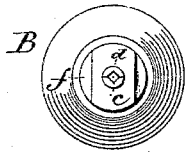


Fig. 5

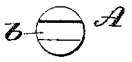


Fig. 6

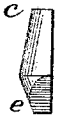


Fig. 7

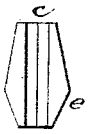
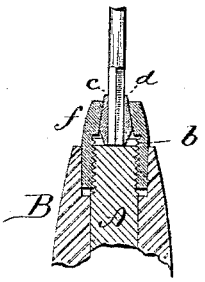


Fig. 8

Fig. 9



Witnesses
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UNITED STATES PATENT OFFICE.

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TOOL-HANDLE.

SPECIFICATION forming part of Letters Patent No. 303,887, dated August 19, 1884.

Application filed June 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH B. SARGENT, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Tool-Handles; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of the socket and sleeve, showing the handle in vertical section; Fig. 2, a vertical section through the sleeve, showing the jaws and screw-threaded portion of the socket; Fig. 3, a vertical section through the sleeve, at right angles to Fig. 2; Fig. 4, an end view of the holder and handle; Fig. 5, an end view of the socket, to show the groove *b;* Fig. 6, a side view of one of the jaws; Fig. 7, a face view of the same; Fig. 8, a back view of the same, these three figures enlarged; Fig. 9, a vertical section showing the tool as held in place.

This invention relates to an improvement in that class of tool-handles in which a pair of jaws are arranged to move toward or from each other, closed by the action of a surrounding sleeve, the outer surface of the jaws of frustum-of-cone shape, and the internal or bearing surface of the sleeve of corresponding shape, and with special reference to pegging-awl handles, but applicable to other uses, and is an improvement upon the handle for which Letters Patent were granted to Chamberlain, February 7, 1854. In that patent the socket upon which the jaws rest is constructed with a cavity of substantially concave shape, and the jaws depend upon frictional contact of their one end in said cavity and their other end against the sleeve, to prevent their rotation. If, however, the handle be rotated, and if the resistance to the rotation of the tool by the handle be greater than that of the frictional bearing on the ends of the jaws, the jaws will readily slip in the socket and prevent the tool from partaking of the rotation of the handle; and if such rotation be in the reverse direction of the screw-thread, then the turning of the handle while the jaws remain stationary will cause the sleeve to be unscrewed from the socket, and thereby loosen the handle from the tool. My object is to overcome these difficulties; and the invention consists in the construction as hereinafter described, and particularly recited in the claim.

A represents the socket, which is fitted into the handle B in the usual manner of fitting sockets to such handles, the end of the handle recessed about the socket, as at *a*. That portion of the socket which extends into the recess is screw-threaded, as shown. Diametrically across the end of the socket is a groove, *b*. Into this groove the two jaws *c d* are set. These two jaws together are of frustum-of-cone shape. They are divided in a vertical central plane. In their adjacent faces a vertical groove is cut of angular shape, as seen in Fig. 7, and so that when the two are set together they form a recess for the shank of the tool. On opposite sides, at right angles to the face, the lower or larger end of the jaw is reduced, as at *e*, to set into the groove *b* in the socket.

f is the clamping-sleeve, internally screw-threaded, corresponding to the threaded portion of the socket A. Toward its outer end the inner surface of the sleeve is contracted, corresponding to the shape of the exterior surface of the jaws, and so as to close thereon, as seen in Figs. 2 and 3, in the usual manner of closing jaws in this class of tools. The groove *b* across the end of the socket permits the jaws to be moved toward or from each other, and prevents the possibility of their rotating with the handle. The recess in the socket also forms a seat against which the end of the tool will rest as a solid bearing.

To introduce the tool, the sleeve is run off from the socket, as seen in broken lines, Fig. 3, until the jaws may be opened sufficiently to permit the introduction of the shank of the tool to a bearing in the groove *b*. Then the sleeve is run down onto the jaws, its inclined inner surface forcing them toward each other against the shank of the tool, as seen in Fig. 9. The groove *b* being in a horizontal plane—that is, a plane at right angles to the axis of the jaws—the jaws move directly toward and from each other without endwise movement, and the tool is permitted to come to a firm bearing

in the groove—a great advantage in the use of the handle, as for pegging-awls.

From the foregoing it will be evident that I am aware that tool-handles having a pair of jaws arranged to be forced toward each other by a sleeve screwed onto a socket over the jaws have been made, and therefore do not claim such construction.

I claim—

The combination of the socket A, threaded at its outer end and constructed with a diametrical groove, *b*, across its outer end, the jaws *c d*, constructed with frustum-of-cone-shaped outer surface, their faces constructed with an angular-shaped longitudinal groove, their sides at right angles to their face reduced to correspond to the groove *b* in the socket, and the sleeve *f* screw-threaded upon its inner side to correspond to the screw-thread on the socket, and near its outer end the inner surface contracted to correspond to the exterior surface of the jaws, substantially as described.

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