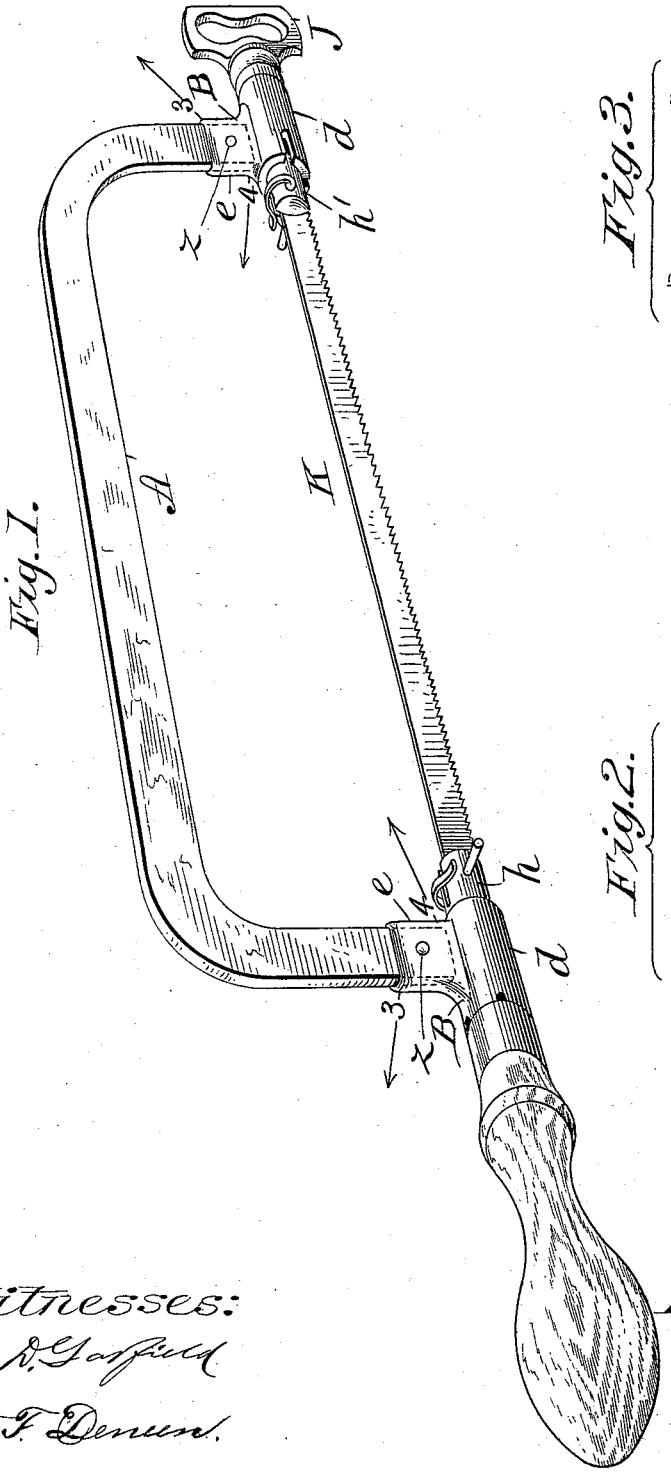
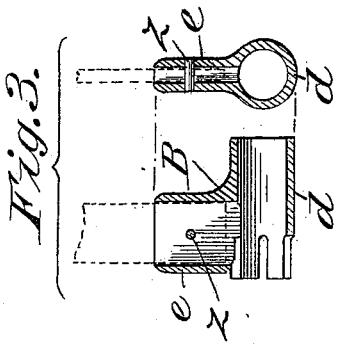
(No Model.)

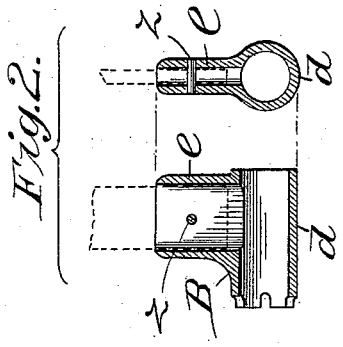
L. L. DAVIS.

HACK SAW.

No. 492,937. Patented Mar. 7, 1893.







Witnesses:
J. R. Garfield
T. F. Demeur.

Inventor:
Leonard L. Davis,
per
Chapin & Co
attys.

UNITED STATES PATENT OFFICE.

LEONARD L. DAVIS, OF SPRINGFIELD, MASSACHUSETTS.

HACK-SAW.

SPECIFICATION forming part of Letters Patent No. 492,937, dated March 7, 1893.

Application filed March 31, 1892. Serial No. 427,199. (No model.)

To all whom it may concern:

Be it known that I, LEONARD L. DAVIS, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Hack-Saws, of which the following is a specification.

This invention relates to hack saws, the object being to provide improvements in the details of construction thereof whereby the saw-frame is more strongly and durably secured to the saw-holding parts proper of the implement than heretofore, and the invention consists in the details of construction having for their end the above referred to purpose, all as hereinafter fully described, and more particularly pointed out in the claim.

In the drawings forming part of this specification, Figure 1, is a perspective view of a hack saw embodying my improvements. Figs. 2 and 3, illustrate details of construction hereinafter described.

In the drawings, A, indicates the usual metallic frame of the saw.

B, indicates the metallic connections at the ends of the frame, A, which contain, each, a sleeve, *d*, and a frame-receiving socket-post, *e*, on the side of said sleeve, the open passage in said socket part extending, preferably, from its outer extremity entirely through it and communicating with the interior of said sleeve, *d*. The usual swivel bars, *h*, *h'*, are provided, one for each of said sleeves, *d*, between the inner ends of which the saw, *k*, is secured as shown. A thumb-screw, J, has the usual screw-connection with the swivel-bar, *h'*, and serves to impart the proper tension to the saw. Figs. 2 and 3 each show in longitudinal and in cross section, the said frame-connections, B. By reference to said last named figures, in connection with the perspective views of said connections in Fig. 1, the constitution of the said socket-post, *e*, on each of said connections, and the means employed for connecting the ends of the saw-frame, A, thereto are clearly illustrated.

Heretofore it has been the practice, in making hack saws, to provide a post, to which each end of the saw-frame is secured, in which post is formed a slot extending in the line of the saw-blade, to receive one end of the saw-frame, and the latter is therein secured by one or two pins passing through the sides of the post and the end of the frame. Said pins, in such construction, constitute the sole element of resistance to the movement of the ends of the saw-frame, which movement may be termed a species of shear-movement against the said pins which tends to cut them off when great strain is put upon the saw-blade. All of said inconveniences are obviated by the within described improvements in connecting the ends of the frame, A, with the sleeves, *d*, by means of the said socket-posts, *e*. These posts have the sockets therein made to conform to the shape of the end of the frame which it is to receive, preferably by means of a drifting-punch which is forced through said socket inwardly, which punch, in form, conforms to the shape of said frame-ends. Thus said ends are so closely fitted in said posts that no strain that may be put upon the saw, can produce any movement of the end of the saw-frame in its socket, for said end is so firmly braced at the points, 3, and 4, (Fig. 1) that it can have no movement whatever in the directions of the arrows there shown.

The pin, *z*, through the post, *e*, serves simply to prevent the end of the frame from being pulled out of the socket.

What I claim as my invention is—

In a hack-saw, a connection, B, to which the end of the saw-frame is secured, consisting of a hollow sleeve, *d*, having thereon between its extremities, a hollow, laterally extending post, *e*, having a passage therethrough inclosed on all sides from its outward extremity to the interior of said sleeve, to receive the end of the saw-frame, said post being integral with said sleeve, combined with said frame and one or more transverse pins passing through said post and frame-end, substantially as set forth.

LEONARD L. DAVIS.

Witnesses:
H. A. CHAPIN,
WM. S. BELLOWS.