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H. E. DENISON & H. H. BLAKE.

WEDGE.

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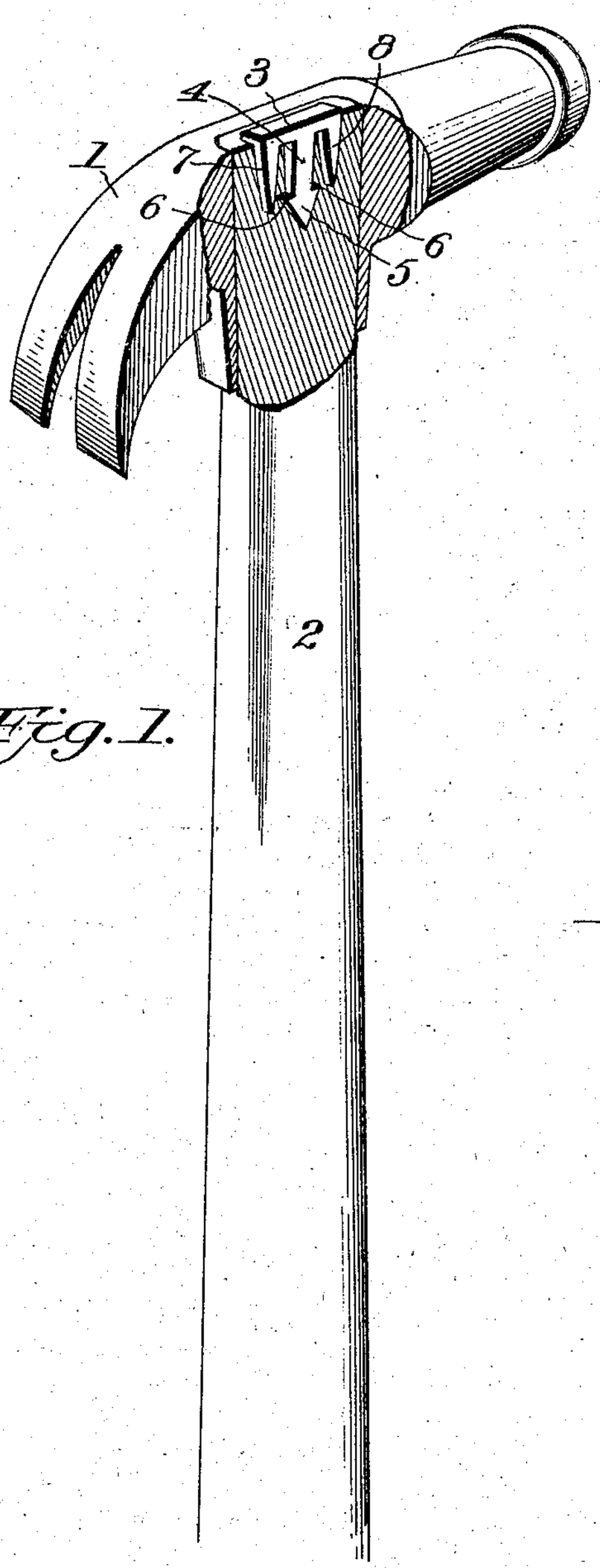


Fig. 1.

Fig. 2.

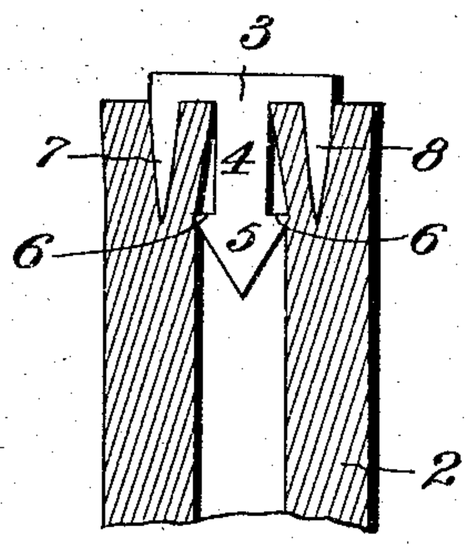
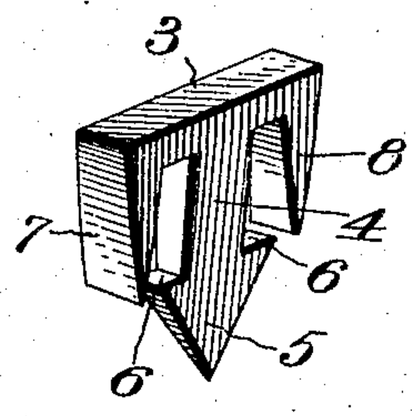


Fig. 3.



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UNITED STATES PATENT OFFICE.

HARRY E. DENISON AND HENRY H. BLAKE, OF AUBURN, NEW YORK.

WEDGE.

SPECIFICATION forming part of Letters Patent No. 781,274, dated January 31, 1905.

Application filed March 29, 1904. Serial No. 200,569.

To all whom it may concern:

Be it known that we, HARRY E. DENISON and HENRY H. BLAKE, citizens of the United States, residing at Auburn, in the county of Cayuga and State of New York, have invented certain new and useful Improvements in Wedges; and we do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to self-anchoring wedges, and has for one of its objects to provide an exceedingly simple, economical, and efficient means for wedging wood solidly within surrounding surfaces, and is especially applicable to securing the handles of tools in such manner as to obviate accidental separation from each other.

Another object of the invention resides in the provision of a peculiarly-shaped wedge designed to be driven into the end of a tool-handle under such peculiar wedging action as to force or spread the fibers of the handle in different directions or planes, thereby insuring a positive fastening of the tool with relation to its handle.

It will be understood that although the invention is peculiarly applicable to the fastening of tool-handles it will be found that it is equally capable of use in all lines of manufacture where it is desirable to force the wood outwardly against surrounding surfaces and at the same time to firmly secure within the wood the wedge which performs that function, so that while the description herein refers particularly to the application of the invention to the class of articles to which it is peculiarly applicable it must be understood that this application is meant to cover the use of the invention in any way that it may be useful.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit of the invention or sacrificing any of the advantages thereof.

The invention consists, essentially, of a T-shaped wedge comprising a head-piece having a shank portion directed centrally therefrom and provided at its free extremity with an arrow-point, there being depending wedge-shaped prongs disposed at the ends of the head-piece and arranged substantially parallel with the shank portion, the latter being formed, preferably, of greater length than the former, the whole being formed, preferably, of metal.

In the drawings, Figure 1 is a detail perspective view of a hammer, partly in section, illustrating the anchorage of the improved wedge in its working position as applied to a hammer. Fig. 2 is a sectional view of the wedge driven into a piece of wood, illustrating the peculiar binding effect of the prongs of the present wedge and the manner in which such binding effect coöperates with the peculiar formation of shank to provide for a positive anchorage of the wedge when driven into its designed position; and Fig. 3 is a detail perspective view of the wedge.

Referring now more particularly to the accompanying drawings, the reference characters 1 and 2 designate, respectively, a handle and hammer, it being understood, however, that while a hammer-tool is herein illustrated it is not intended to limit the field of use of the improved wedge to tools or devices of any particular character, for it is obvious that it is expedient to positively secure ax-heads, hatchet-heads, and other tool-heads to their handles and to fasten wood within surrounding material in other articles of manufacture and that the present invention is one capable of efficiently fulfilling such office in various articles.

Inasmuch as in the use of the present invention it is found unnecessary to bore or otherwise mutilate the tool-handle or other article before the insertion of the improved wedge, it is essential to provide the head portion 3 of such form as to permit a pounding there-

upon in the driving of the wedge to anchorage. This head portion 3 has a shank portion 4 leading centrally therefrom and provided with an arrow-point 5 at its free end, the formation of the arrow point or head forming oppositely-disposed shoulders 6, for a purpose presently explained. It will be seen that the shank portion 4 has parallel sides from the shoulders 6 to the head-piece 3 and that the front and rear faces of the same taper all the way from the top to the arrow-point. Depending from the opposite ends of the head-piece are arranged prongs 7 and 8, the sides of each being tapered, as shown, to produce a wedging effect and being somewhat wider at their points than at their tops.

It will thus be seen that by reason of the dart-shaped point 5 of the shank 4 the fiber of the wooden handle or other article is spread as the wedge enters the same and that the tapering prongs 7 and 8 tend to not only force the fiber of the wood inwardly above the dart-shaped point, but also forces the fibers of the wood outwardly, so that outer side faces of the handle or other article are forced or wedged tightly against or within the inner faces of the surrounding material, such as the handle-receiving bore of the hammer, hatchet, ax, or other tool, the shoulders 6, formed by the dart-shaped point, serving to bite into that portion of the handle which is spread inwardly toward the shank 4 to positively anchor the improved wedging device, as clearly shown in Fig. 2 of the accompanying drawings.

As shown in the drawings, the head-piece of the wedge projects from the end of the handle; but it is obvious and is to be understood that, if desired, the end of the wood may be recessed, so that the outer upper face of the head-piece may lie flush with the wood. This seems too obvious for illustration, and therefore is not shown in any of the views of the drawings accompanying this specification.

What is claimed is—

1. As an article of manufacture, a wedge comprising a head portion having prongs depending from the ends thereof and a shank portion arranged intermediate said prongs, the shank portion being of greater length than the prongs and provided with an arrow-shaped extremity.

2. As an article of manufacture, a wedge comprising a head portion having prongs depending from the ends thereof, said prongs being tapered downwardly, and a shank portion formed integral with the head portion and arranged intermediate said prongs, said shank being enlarged at its lower end and tapering into a sharp edge at its extremity.

3. As an article of manufacture, the T-shaped wedge, the shank of said wedge being enlarged at its lower end and terminating into a sharp edge at its extremity.

4. In a tool-handle fastening, the combination with a tool-head having an opening therein and a handle fitted in the opening of the tool-head, of a wedge fitted into the wooden handle, said wedge comprising a head portion having depending tapering prongs arranged at its free ends, said prongs being widest at their lower extremity, and a shank portion depending from the said head portion and arranged intermediate the prongs, said shank being enlarged at its lower end and terminating at its extremity into a sharp edge, thereby forming shoulders intermediate the ends of the shank, the tapering prongs and said shoulders coöperating to spread the fiber of the wooden handle in different directions.

5. As an article of manufacture, a wedge, comprising a head portion having prongs depending from the ends thereof and a shank portion arranged intermediate the prongs, said shank being of greater length than the prongs.

6. As an article of manufacture, a wedge comprising a head portion having prongs depending from the ends thereof, said prongs being tapered downwardly, and a shank arranged intermediate said prongs and of greater length than the latter, said shank being provided with an enlargement at its lower end, the enlargement tapering into a sharp edge at its extremity.

7. As an article of manufacture, a wedge, comprising a head portion, having prongs depending from the ends thereof, and a shank portion arranged intermediate the prongs, said shank having an arrow-shaped free end, the sides of the shank above the arrow-shaped end being parallel, with the front and rear walls of the same tapering downwardly from the head portion to the extremity of the arrow-shaped end.

8. As an article of manufacture, a wedge, comprising a head portion having a prong depending therefrom, and a shank portion laterally of and longer than said prong having connection with said head, said shank being provided with an enlargement at its free end, the enlargement tapering into a sharp edge at its extremity.

In testimony whereof we affix our signatures in presence of two witnesses.

HARRY E. DENISON.
HENRY H. BLAKE.

Witnesses:
CHARLES T. WHELAN,
E. A. HARMON.