

(No Model.)

H. H. TRENOR.

TOOL HEAD EYE.

No. 306,191.

Patented Oct. 7, 1884.

Fig. 1.

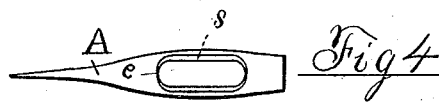
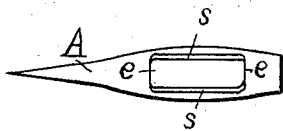


Fig. 2.

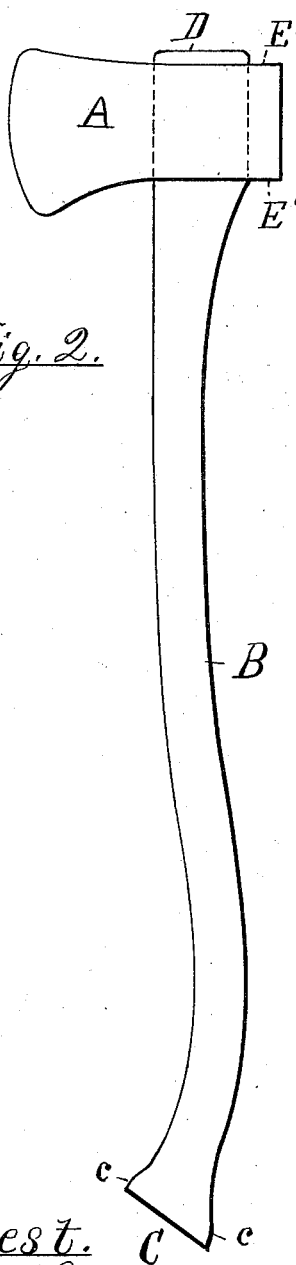
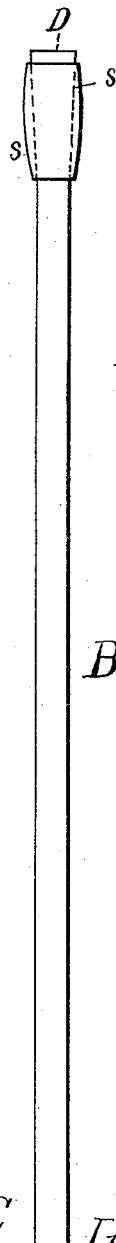


Fig. 3.



Attest.

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UNITED STATES PATENT OFFICE.

HENRY H. TRENOR, OF NEW YORK, N. Y.

TOOL-HEAD EYE.

SPECIFICATION forming part of Letters Patent No. 306,191, dated October 7, 1884.

Application filed March 1, 1884. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. TRENOR, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Tool-Head Eyes, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

10 This invention consists in the combination, with an ax-head, of an eye having parallel ends and tapering sides.

15 The nature of the invention is shown in the drawings, in which Figure 1 is a plan of an ax-head provided with the improved eye. Fig. 2 is a side view of an ax-head combined with my special handle. Fig. 3 is an edge view of the same; and Fig. 4 is a plan of an ax-head, showing an alternative form for the eye.

20 This invention, although adapted for use with any kind of handle, is particularly intended for combination with the handle illustrated herein, and for which I have filed a separate patent application. Such handle is provided with an enlargement at the butt, and the eye of the tool is constructed large enough to permit such butt to pass through it, so that the head may wedge fast in the taper eye and be retained therein without fastenings of any kind. The enlargement of the butt being made only in the direction of its width, the eye in the ax-head is correspondingly widened, and the head of the handle necessarily requires to be made as wide as the butt.

25 The object of my present invention is to avoid any further widening of the handle's head, to secure a shape more easily formed to a given standard pattern, and to simplify and cheapen the formation of the punches used in drifting the eye in the tool-head itself.

30 In the drawings, A is the tool-head; B, the shank of the handle; C, its butt, and D the head of the handle. The ends of the eye are lettered *e* in Figs. 1 and 4, and are parallel with one another, while the sides *s* slope toward one another from the outer side of the head (marked E in Fig. 2) to the inner side, 35 (marked E'). By this construction the head of

the handle is made no wider than the butt, and the use of wider stuff than has heretofore been used in the manufacture of handles is thus avoided. It is also well known that it requires much more skill to form a punch for a tool-eye or a pattern for the shaping of the handles in a machine when the same is tapered in two directions, as the base of the punch in such case cannot be gaged at right angles with any of the four sides, nor the sides of the handle-pattern made at any point of the head parallel with the axis of the same. The use of the eye described therefore simplifies the process of manufacture at many points, and economizes the material used in the formation of the handles.

40 In Fig. 1 the ends of the eye are shown joined to the sides with a curve of small radius, thus forming four nearly sharp corners; but this plan of construction is not desirable in practice, although it illustrates the principle of the invention most forcibly.

45 In Fig. 4 is shown a more suitable form, the four corners being filled by larger curves, without, however, affecting the parallelism of the ends *e e*.

50 It is obvious that any punch used for drifting a tool-eye must be filed slightly toward the point to make it draw out of the eye when forced into the heated metal blank; but such taper would have no appreciable effect either in holding the handle in the tool-head or in widening the handle-head in the objectionable manner my invention is intended to avoid.

55 I have not made herein any general claim to an eye having two parallel and two converging sides, for the reason that I have made another specific claim to such an eye having sloping ends and parallel sides in an application, No. 125,692, pending simultaneously herewith. Neither have I claimed herein a handle adapted for use with the eye having parallel ends and sloping sides, nor the combination of such handle with a head having such an eye, but have filed claims therefor in a separate application, No. 130,228, pending simultaneously herewith.

60 I therefore claim the eye I have herein shown and described, as follows:

The combination, with a tool-head, of an ob-
long eye having two parallel ends, as *e e*, and
two converging sides, as *s s*, and the width be-
tween the sides being greatest at the outer side
5 of the head, as at *E*, so as to form a socket
with parallel ends and sides tapered from the
outside inward, as and for the purpose set
forth.

In testimony whereof I have hereunto set
my hand in the presence of two subscribing
witnesses.

HENRY H. TRENOR.

Witnesses:

HENRY F. GÖKEN,
THOS. S. CRANE.