

No. 611,092.

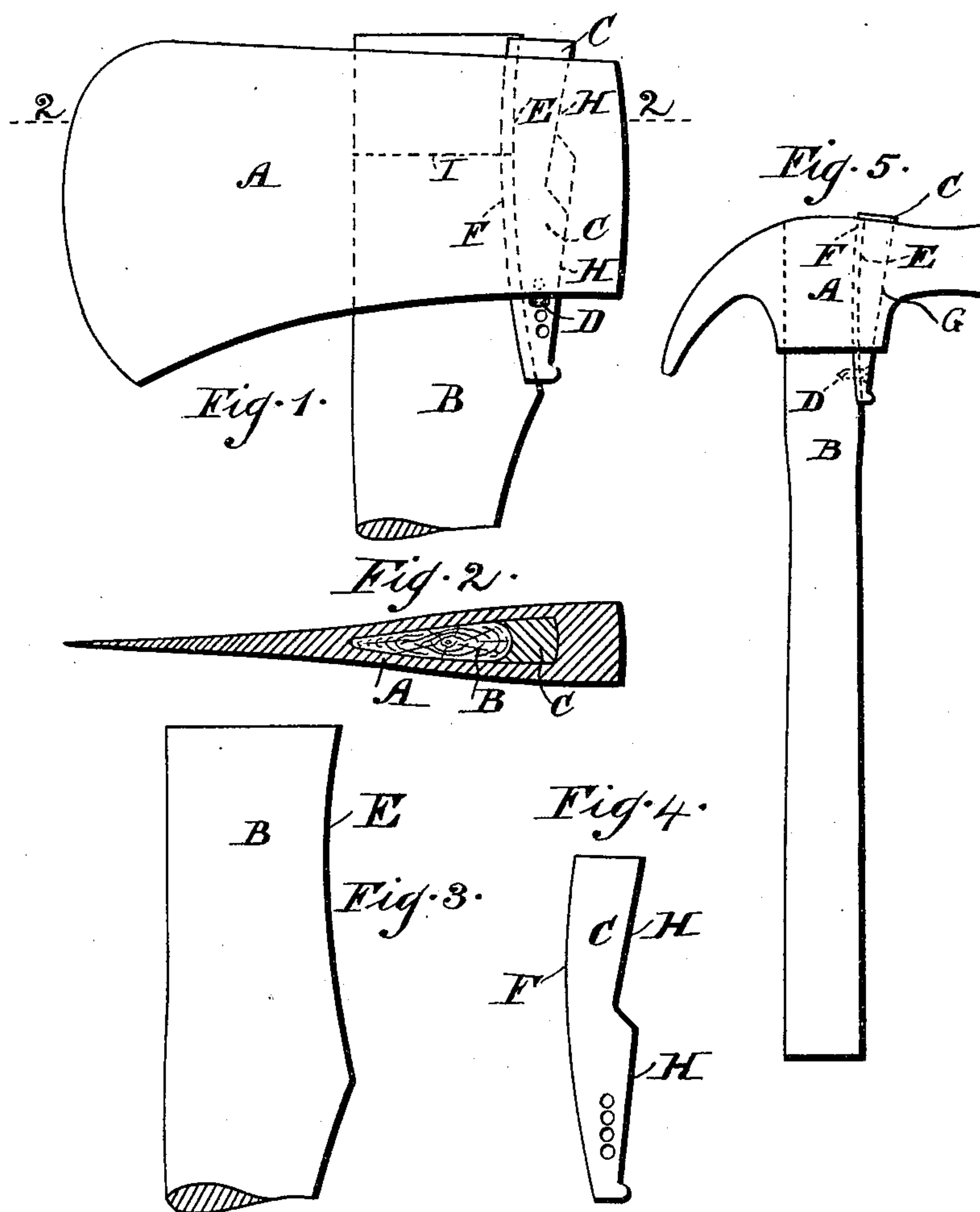
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F. BAKER.

MEANS FOR SECURING HEADS OF AXES, HAMMERS, &c., TO THEIR HANDLES.

(Application filed Feb. 7, 1898.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

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MEANS FOR SECURING HEADS OF AXES, HAMMERS, &c., TO THEIR HANDLES.

SPECIFICATION forming part of Letters Patent No. 611,092, dated September 20, 1898.

Application filed February 7, 1898. Serial No. 669,393. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK BAKER, builder, a subject of the Queen of Great Britain, residing at Maylands, Kambrook road, Caulfield, in the British Colony of Victoria, have invented an Improved Means for Securing Heads of Axes, Hammers, &c., to their Handles, of which the following is a specification.

10 This invention relates to the means used for securing the heads of axes, hammers, picks, and the like to their handles; and its object is to provide some simple and effective means which while securely holding or fastening the
15 heads of such tools will yet admit of a broken, a worn-out, or a damaged handle being quickly removed and replaced with a new one. It can also be applied to adzes, hoes, and other tools of a similar character. Its essential fea-
20 ture consists in the use of a curved tapering locking-piece having the face next the handle curved slightly to correspond to a similar curve on said handle, while the other face of said locking-piece is inclined and bears
25 against a correspondingly-inclined surface in the head of the tool, as illustrated in the accompanying drawings, wherein—

Figure 1 is a side elevation of an ax-head with its handle secured in position by means
30 of this invention. Fig. 2 is a transverse section on line 2 2, Fig. 1. Fig. 3 is a view of part of a handle adapted to be secured in the head of an ax by this invention. Fig. 4 is a side elevation of the tapering locking-piece
35 above referred to, and Fig. 5 is a side elevation of a claw-hammer with its head secured in position according to this invention.

The same letters of reference indicate the same or corresponding parts in all the figures.

40 A represents the head of an ax, hammer, or other tool to be secured upon a handle, such as B, while C represents the tapering locking-piece above referred to, and D a small split pin, screw, or its equivalent for securing said
45 tapering locking-piece in position after it has been driven home.

50 The end of the handle B is made of gradually-increasing width toward its extremity, as indicated at E in Figs. 1 and 3, so as to form an inclined plane sufficient to prevent the

head A, together with the locking-piece C, from flying off the handle. This gradually-increasing width may be provided by forming the edge of the handle, adjacent to the locking-piece C, of a curved form, the corresponding side of the locking-piece being similarly curved, as indicated at F. This curve is preferably so formed that its lowest part comes to about the center of the tool-head, as indicated by the dotted line I in Fig. 1. This construction materially assists in locking the head on the handle.

The usual eye on the head of the tool is formed with an inclined plane, as indicated at G, to correspond to the taper of the locking-piece C, so that when this latter is driven home the handle will be jammed in the eye.

In the drawings I have shown the wall G of the eye of the head of the tool as tapering in a straight line; but I do not wish to confine my invention to this form, as this wall could be tapered in a curved line without departing from my invention.

When intended for securing ax-heads, the tapering locking-piece C is preferably constructed with a double incline or two inclined surfaces, as indicated at H H in Figs. 1 and 4, because it is then possible to leave more metal at the back of the eye and the inclines can be made at a greater angle than
80 would be practicable if a single continuous inclined plane were used, as in Fig. 5. For hammers and other tools where there is a sufficiency of metal in the head the single incline can be used.

85 It will be evident to persons skilled in the manufacture of axes, hammers, picks, and similar tools that the requisite alterations in the heads and handles are very small and will not increase the cost, while the tapering locking-pieces C can, if made in large quantities, be produced at a nominal figure.

The advantages of the invention will readily commend themselves, it being obvious that a new handle can be substituted for a broken, a worn-out, or a damaged one by simply withdrawing the split pin or screw D and slack-
90 ing back the tapering locking-piece C, when the old handle can be removed and a new one placed in position. This new handle can then
100

be securely fastened by driving in the tapering locking-piece C and again fixing it by means of the split pin or screw D, when the tool will be again ready for use. A handle
5 fixed in a tool in this way will be forced into more intimate contact with the eye of the tool-head, because the pressure of the locking-piece will be on the edge of the handle, so as to force it into the narrow tapering
10 part of the eye, and as the pressure is exerted from front to back of the eye instead of from side to side there will be a tendency to counteract the effect of the blows spreading the eye sidewise as in the ordinary system
15 of fastening.

It will also be obvious that a tool can readily be tightened on its handle in the event, for instance, of the handle shrinking in hot weather, all that would be required in such
20 a case being for the workman to drive the locking-piece C farther home instead of forcing wedges into the end of said handle, as at present. In fact, with this invention these wedges can be entirely dispensed with, and
25 thus the end of the handle need not be split

or cut about like it has to be with the present style of fastening.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, 30
I declare that what I claim is—

The combination with a tool provided with an eye having one edge constructed with an inclined plane, of the handle B inserted through the eye of the tool and constructed 35
at the edge facing the aforesaid inclined plane with a longitudinal concaved edge E, and the locking-piece C inserted through the eye of the tool and formed at its opposite edges, respectively, with the convex face F and taper 40
H, the convex face of the locking-piece fitting the concaved edge of the handle and the taper of said locking-piece fitting the inclined plane of the eye in the tool, all substantially as described and shown.

FREDERICK BAKER.

Witnesses:

EDWARD WATERS,

EDWARD WATERS, Jr.