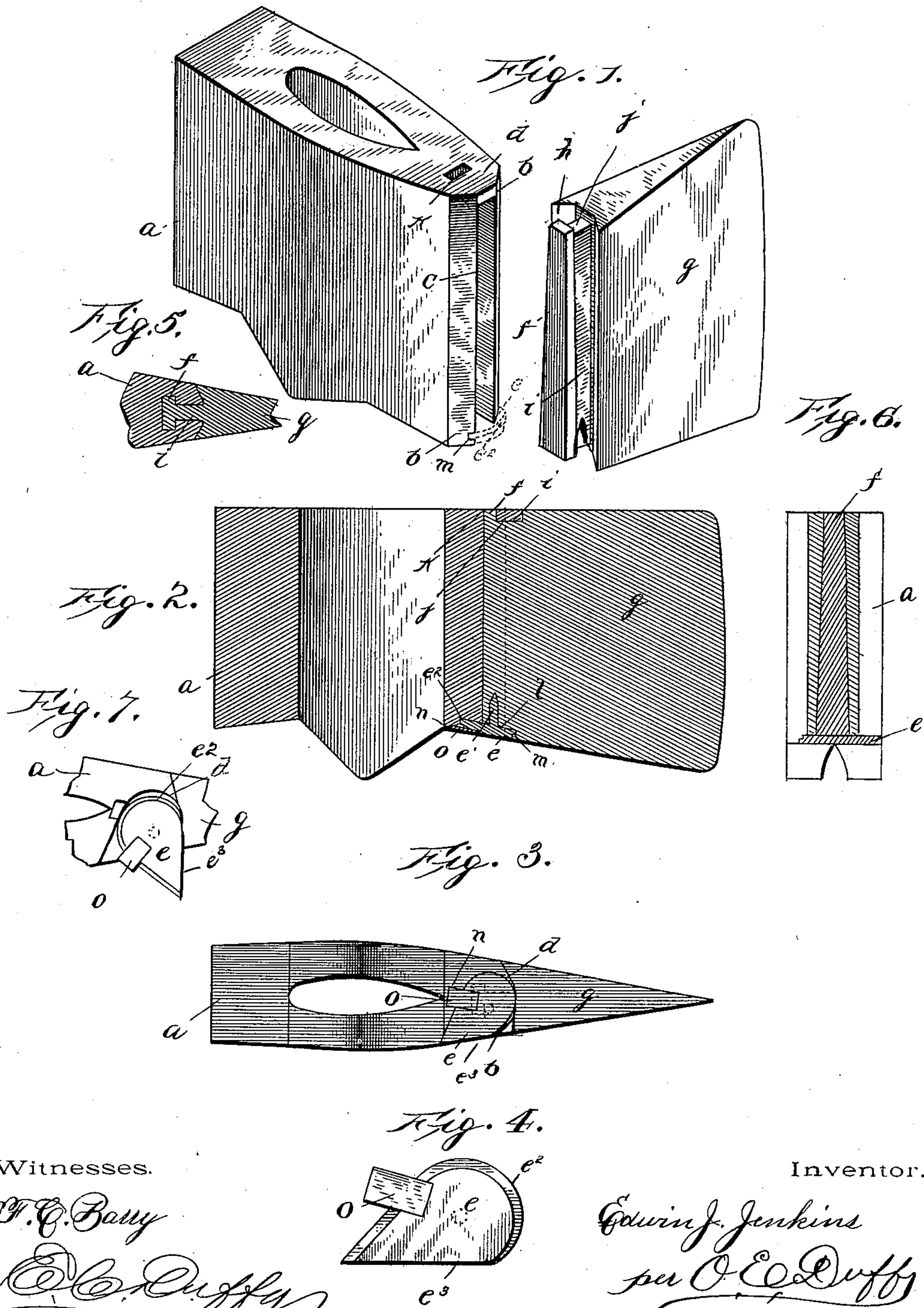


(No Model.)

E. J. JENKINS.  
AX.

No. 605,878.

Patented June 21, 1898.



Witnesses.

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# UNITED STATES PATENT OFFICE.

EDWIN J. JENKINS, OF ELLOREE, SOUTH CAROLINA.

AX.

SPECIFICATION forming part of Letters Patent No. 605,878, dated June 21, 1898.

Application filed September 13, 1897. Serial No. 651,517. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN J. JENKINS, of Elloree, in the county of Orangeburg and State of South Carolina, have invented certain new and useful Improvements in Axes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 letters of reference marked thereon, which form part of this specification.

This invention relates to certain new and useful improvements in axes or hatchets, and has for its objects simplicity and durability, quickness of adjustment, and fewness of parts.

A further object of the invention is to provide an ax with a removable bit or blade which can be easily and quickly replaced when worn, dull, or broken.

A further object of the invention is to provide a cam pivotally secured in the head of the ax having flanges which register and fit in corresponding grooves or ways in the head and blade, thus holding the said head and blade securely together.

The invention consists in certain novel features of construction and in combinations of parts, more fully described hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my improved ax, showing the head and bit or blade separated. Fig. 2 is a central longitudinal section. Fig. 3 is a rear edge view. Fig. 4 is a detail view of the locking-cam. Fig. 5 shows a vertical cross-section closely showing the bevel-surfaces and the T-shaped projection and groove when the two sections of the ax are in position. Fig. 6 is a horizontal section taken through the T-groove and T-projection when in position. Fig. 7 is an end view of the locking-cam partly turned ready for removal.

Referring to the drawings by letter, *a* is the head of an ax, beveled at *b* and provided with a groove *c*, preferably T-shaped, formed longitudinally of the head and tapering the entire length toward the closed face of the ax-head at *d*.

*e* is a locking-cam having on its inner face

a tapering pin *e'*, adapted to enter the T-shaped slot *c* and wedge itself therein between the walls of said slot and the head of the T-shaped tapering projection *f*, which is adapted to enter and snugly fit in said T-shaped slot *c*. This T-shaped projection *f* is carried by the bit or blade *g* and is formed longitudinally of the blade and tapering its entire length toward the front face to correspond with the groove *c* in the head *a*.

Around the projection *f* is a recess *h*, formed to fit the beveled portion *b* of the ax-head, and the stem *i* of the said projection is cut away at *j*, leaving a continuation of the T or cross head to enter and tightly fit the opening *k* left in the closed face of the ax-head, by which the blade may be started backward when it is to be removed.

In the rear face of the ax, at the intersection of the head and the blade and partly in each, is a recess *l*, having an undercut groove *m* in the wall thereof for the reception of the flange *e'* of the cam *e*, which has the flat side *e'*, which is flush with the flat side of the ax when the cam is set and locked.

In the head *a* of the ax, just above the cam *e* and recess *l*, is a depression *n* to receive and hold a flat spring *o*, carried by the cam *e* and adapted to hold it in the desired position when the head and blade of the ax are locked together.

The operation of this device is very simple and is as follows: When an old blade is to be removed, the flat spring *o* is raised from the depression *n* and the cam turned outwardly on its tapering pin-pivot *e'*, releasing the flange *e'* of the cam *e* from the undercut groove *m* in the wall of the recess *l*, when the said cam *e* can easily be removed, withdrawing the tapering pin *e'*, which forms a wedge, from between the T-shaped projection *f* and the wall of the T-shaped groove *c*. The T-shaped groove and projection *c* and *f* now being free of the wedge *e'* become looser and are easily separated by sliding the tapering T-shaped projection *f* rearwardly from the tapering T-shaped groove *c*, thus leaving the head *a* ready to receive another bit or blade; but should the blade fit very tight it can be loosened by knocking the projection in the opening *k* in front of the ax.

The operation of replacing a blade is just



the reverse of removing. The smaller end of the tapering T-shaped projection *f* is inserted in the rear larger end of the tapering T-shaped groove *c* of the head *e* and is pressed forward to the face of the ax-head, where the continuation of the cross-head of the T-shaped projection *f* enters the slot *k* in the closed face *d* of the ax-head. The blade now being in its proper adjustment, the cam is set in place, the tapering pivot *e'* thereof being wedged between the T-shaped groove and projection *c* and *f*, holding the blade and head of the ax securely together. Then to prevent the wedge *e'* from leaving its seat the cam is turned until its flat face *e<sup>3</sup>* is flush with the flat face of the ax, when the flange *e<sup>2</sup>* is snugly fitted in the grooves in the wall of the recess *l* of both the head *a* and blade *g*.

It will be readily seen that when a blade is set and locked by my improved device it cannot by any accidental means become loose or disengaged from the head of the ax; but by reason of the taper of the groove *c* and the projection *f* converging toward the front face of the ax the centrifugal motion described in using the ax will wedge the blade on tighter.

Slight changes might be made in the construction without departing from the spirit of the invention. Hence I do not wish to be limited to the exact construction herein set forth.

What I claim is—

1. In an ax having a detachable blade the combination of the head having a groove therein, the blade having a projection adapted to enter said groove, a recess in the said head and blade at their intersection, an undercut groove in the wall of said recess and a cam

adapted to be pivotally held between the wall of said groove and the projection, of the head and blade, and enter the undercut groove in the recess in the said head and blade, locking them together substantially as shown and described.

2. A detachable ax and blade comprising the head having a groove therein, a blade having a projection corresponding to said groove an incline bearing or double bevel on blade and head and adapted to snugly fit, a recess in the head and blade at their intersection, an undercut groove in the wall of said recess, a cam having a pivotal tapering pin adapted to wedge between the projection of the blade and the wall of the groove of the head and a flange on said cam adapted to enter the undercut groove in the wall of the recess in the head and blade and a spring adapted to hold said cam in place, substantially as described.

3. An ax having a detachable blade comprising the head and blade having tongue-and-groove connections, a recess in said head and blade, an undercut groove in the wall of said recess, a cam adapted to enter the undercut groove in the wall of said recess, a tapering pin formed integral with said cam forming a pivot on which said cam turns when locking and unlocking and a spring adapted to hold said cam in position, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

EDWIN J. JENKINS.

Witnesses:

O. E. DUFFY,  
F. C. BARRY.