

(No Model.)

2 Sheets—Sheet 1.

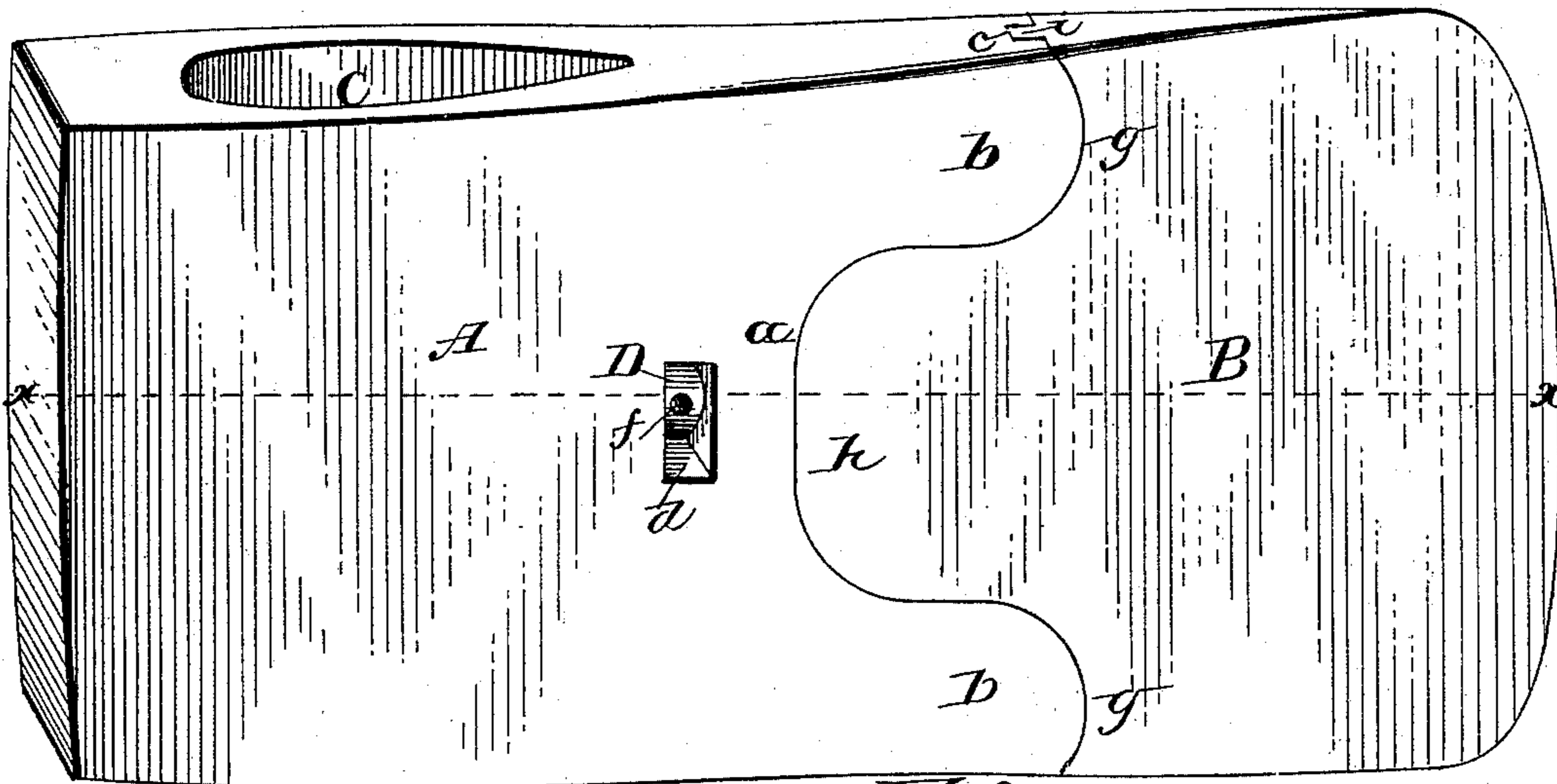
J. BALLARD.

AX.

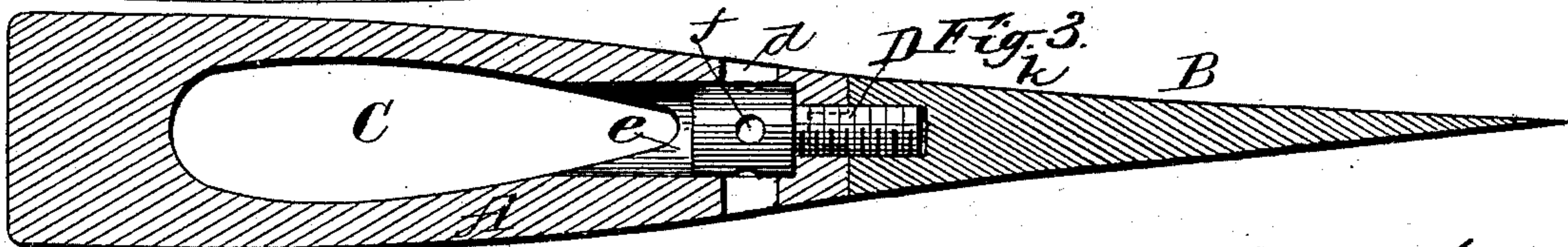
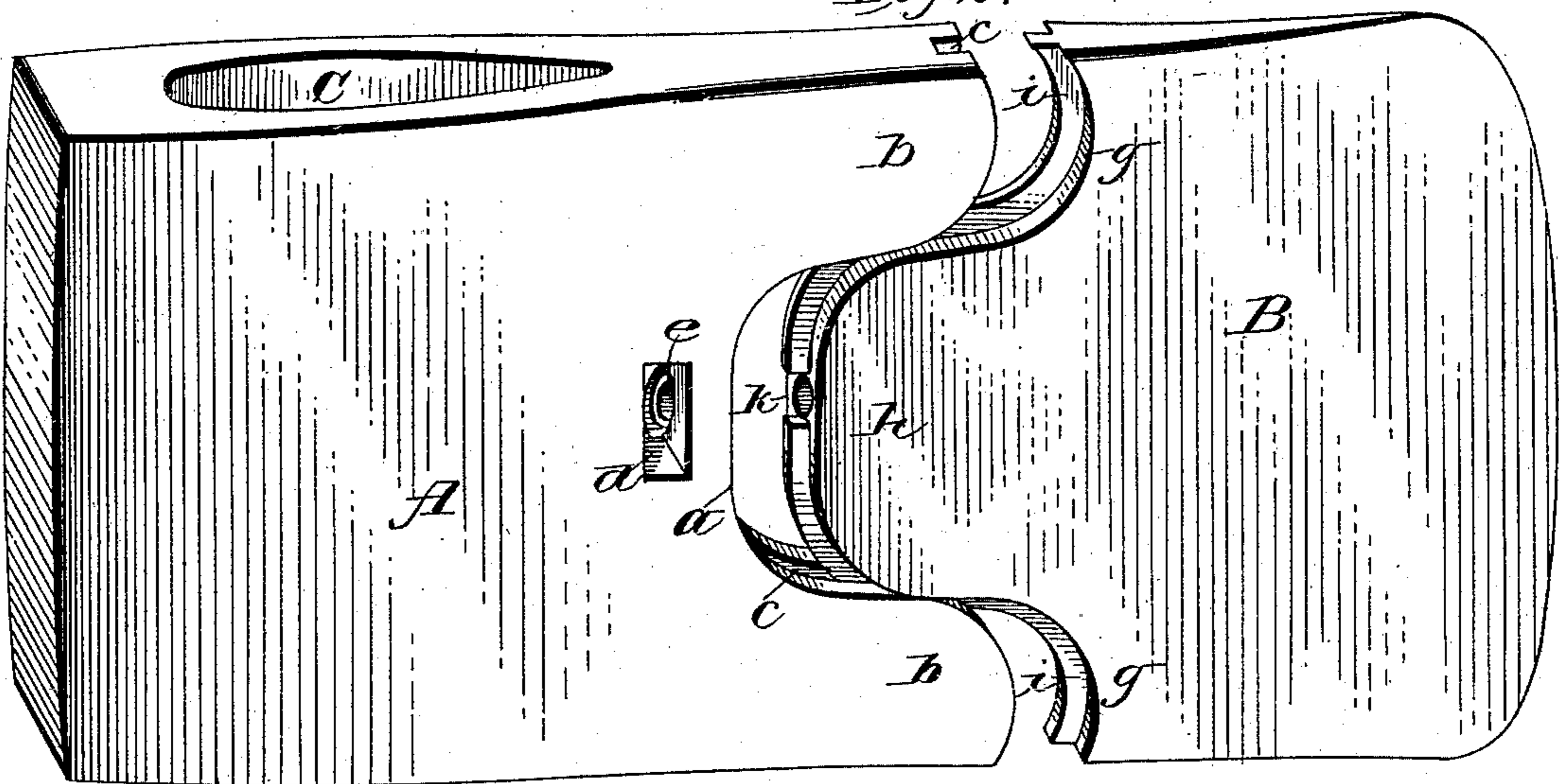
No. 370,596.

Patented Sept. 27, 1887.

*Fig. 1.*



*Fig. 2.*



Witnesses:

E. G. Forman  
N. E. Oliphant

Inventor:

James Ballard  
By J. H. Underwood  
Attorneys.

(No Model.)

2 Sheets—Sheet 2.

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AX.

No. 370,596.

Patented Sept. 27, 1887.



Witnesses  
E. G. Somers  
N. E. Oliphant.)

*Inventor*  
*James Ballard*  
*By Jont Woodinwood*  
*Attorneys.*

# UNITED STATES PATENT OFFICE.

JAMES BALLARD, OF WAUSAU, ASSIGNOR OF TWO-THIRDS TO FRANK FELLOWS AND THEODORE BEST, BOTH OF MOSINEE, WISCONSIN.

AX.

SPECIFICATION forming part of Letters Patent No. 370,596, dated September 27, 1887.

Application filed August 10, 1886. Serial No. 210,523. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES BALLARD, of Wausau, in the county of Marathon, and in the State of Wisconsin, have invented certain new and useful Improvements in Axes; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to axes, and has for its object to detachably unite the bit or bits and poll of such implements, so that in case said bit or bits be worn out or broken new ones can be readily substituted. This object I attain by the construction substantially as shown in the accompanying drawings, in which—

Figure 1 represents my invention in the form of a single-bitted ax. Fig. 2 shows the parts detached. Fig. 3 is a horizontal section on line *x x*, Fig. 1; and Fig. 4, my invention in the form of a double-bitted ax.

Referring by letter to the drawings, A represents the poll of an ax, and B the bit or bits thereof. The former part is centrally recessed, as shown at *a*, and thus provided with top and bottom flanges, *b*, said recess and flanges each having a groove, *c*. The solid part of the poll between its eye C and the recessed end thereof is centrally provided with a countersunk and screw-threaded perforation, *e*, and a transverse slot, *d*. Operative in the perforation *e* is a screw-bolt, D, the head of which registers with the slot *d*, and is provided with a series of recesses, *f*, to engage a suitable pin, by means of which said bolt is intended to be operated.

The bit B is cut away at *g* to correspond with the flanges *b* of the poll and at the same time leave a central projection, *h*, the latter and said cut-away portion being provided with a tongue, *i*, designed to engage the groove *c* on the poll A, and thus secure a clean joint between the two parts in their united position. The bit B is provided with a central screw-threaded recess, *k*, that engages the screw-bolt D, and by operating the latter said bit is drawn snug against the poll, thereby firmly uniting the parts and forming a complete ax-head.

The above description applies more particularly to a single-bitted ax, as shown by Figs. 1, 2, and 3; but, if desired, I may make both ends of the poll alike and secure a bit to each,

thereby producing a double-bitted implement of the character named, as shown by Fig. 4.

It is obvious that while I have shown and described the poll as having the central recess, *a*, flanges *b*, and groove *c*, and the bit as cut away at *g* to leave the central projection, *h*, and provided with the tongue *i*, this construction may be reversed, if found more desirable.

I am aware that heretofore axes have been made having the bit or bits thereof detachably united to the poll, and such therefore I do not claim, broadly; but I am not aware that heretofore the bit and poll of an ax have been provided with longitudinally-central screw-threaded openings registering with each other and united by a screw-bolt whose threads engage the continuous threads of the registering openings in said bit and poll.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An ax having its poll recessed and grooved at one or both ends, its bit or bits provided with a projection and tongue to engage said end or ends of the poll, the adjacent ends of said poll and bit being provided with longitudinally-central screw-threaded openings registering with each other and united by a screw-bolt whose threads engage the continuous threads of the registering openings in said bit and poll for retaining the parts in their united position, substantially as set forth.

2. A sectional ax having one section thereof provided with a central recess and adjacent flanges and the other section provided with a central projection and cut-away portions that register with the recess and flanges of the first-named section, one section having a tongue and the other a groove to engage the tongue, the adjacent ends of said sections being provided with longitudinally-central screw-threaded openings registering with each other, the said screw-threads being continuous from the beginning of one opening to the end of the other, and a screw-bolt whose threads engage therewith for retaining said sections snugly together, substantially as set forth.

3. An ax having its poll provided with a grooved central recess and top and bottom

flanges, a countersunk screw-threaded perforation and transverse slot, the bit provided with a tongued central projection and cut-away portions that engage the recess and flanges  
5 of the poll, and a screw-threaded recess whose threads register continuously with the threads in the perforation in the poll, and a screw-bolt having its head provided with pin-holes and arranged to retain said poll and bit in  
10 their united position, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Wausau, in the county of Marathon and State of Wisconsin, in the presence of two witnesses.

JAMES BALLARD.

Witnesses:

CHAS. V. BARDEEN,  
LOUIS K. WRIGHT.