J. C. COBURN.

Soft-Metal Hammers.

No. 156,014. Patented Oct. 20, 1874.

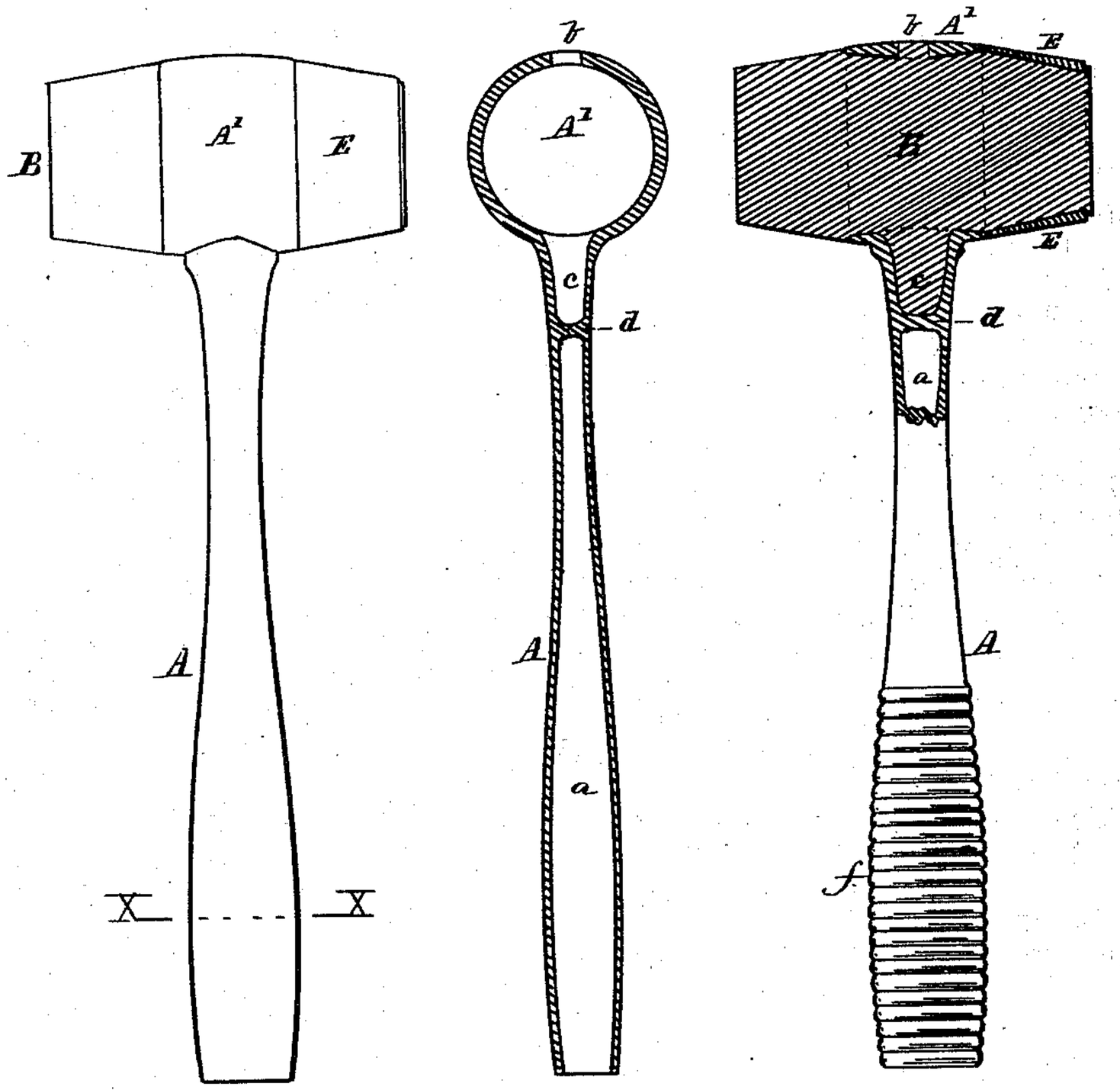

Fig. 1

Fig. 3

Fig. 2

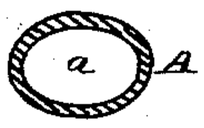

Fig. 4

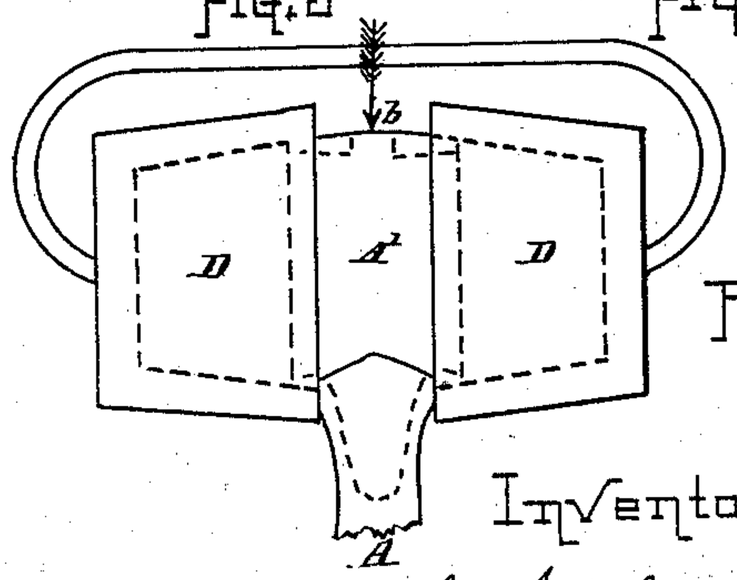

Fig. 5

Witnesses

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JEHIEL C. COBURN, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN SOFT-METAL HAMMERS.

Specification forming part of Letters Patent No. **156,014**, dated October 20, 1874; application filed June 27, 1874.

To all whom it may concern:

Be it known that I, JEHIEL C. COBURN, of the city and county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Soft-Metal Hammers; and I do hereby declare that the following is a full, clear, and exact description of my said invention, sufficient to enable others skilled in the art to which it belongs to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 represents a side view of my improved soft-metal hammer. Fig. 2 represents a central section longitudinally through the head, the handle being shown as made corrugated. Fig. 3 represents a section lengthwise through the handle before the soft metal of the head is cast in; Fig. 4, a transverse section of the handle at *x x*, Fig. 1; and Fig. 5 illustrates the manner of arranging the molds when casting the heads.

This invention relates to an improved method of constructiug soft-metal hammers, with the view to the production of a compact, neat, and serviceable tool; and consists, first, in a peculiarly-constructed metallic handle, provided with a ring, through which the soft metal of the head is cast, by the aid of cups or molds properly fitted to the said ring; and, second, in a hammer, the soft-metal head of which is supported by a ring attached to the end of the handle, and re-enforced by copper ferrules, as herein described.

In the drawings, A denotes the handle, and B the head of the hammer. The handle A is composed of metal, preferably malleable iron, and is cored or chambered at its interior *a*, so as to form a thin light shell of the proper form and size. The upper end thereof is made in the form of a ring, A′, beveled toward the center on its inner surface, and cored through its upper part, as at *b*, also having a core cavity, *c*, extending for a short distance into the small part of the handle, and separated from the cavity or chamber *a* by a thin partition, *d*. The exterior of the handle may be made smooth for the hand, or be corrugated, as at *f*, Fig. 2. The soft-metal head B is cast through the ring A′ of the handle, by the aid of cup-shaped molds D D, which are arranged upon each side of said ring A′, as illustrated in Fig. 5, the melted metal being poured through the opening *b*, as indicated by arrow. By this method of construction the metal of the head B and handle are formed, as it were, in a single piece, the handle being very strong and no liability of any looseness between the parts, as the metal which flows into the space *c* and the beveled surface of the ring A′, serve to lock the two metals firmly to each other. The ends of the head may be re-enforced with copper ferrules, as shown at E, said ferrules being placed in the molds before casting the babbitt-metal heads. These copper ferrules serve to prevent too rapid flattening of the softer babbitt-metal, and yet expand and flatten as the hammer wears, so that a babbitt-metal face is exposed to the work at all times. The ring A′ supports the central part of the head and forms a base on which the copper ferrules rest, so the spread and batter will take place wholly at the faces.

For some classes of work the hammers are preferable without the coppers, and for such purposes are made with simply the babbitt cast into the handle, but for ordinary hard service they are preferable with the re-enforces E on.

The hammers, when constructed as herein described, are cheap, strong, and durable, and can readily be renewed, as it is only necessary to place the head in a ladle and melt out the soft metal, then apply the molds to the handle and recast the head, adding, of course, a sufficient quantity of soft metal to equal that lost by the wear of the faces.

Having thus described my improved soft-metal hammmers, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

1. The improved handle herein described for soft-metal hammers, consisting of the hollow metallic stem A, and head-ring A′, cored or chambered at *a b c*, substantially as and for the purpose set forth.

2. The soft-metal hammer herein described, consisting of the handle A A′, soft-metal head B, and copper re-enforce E, all constructed and combined substantially as shown and described.

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Witnesses:

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