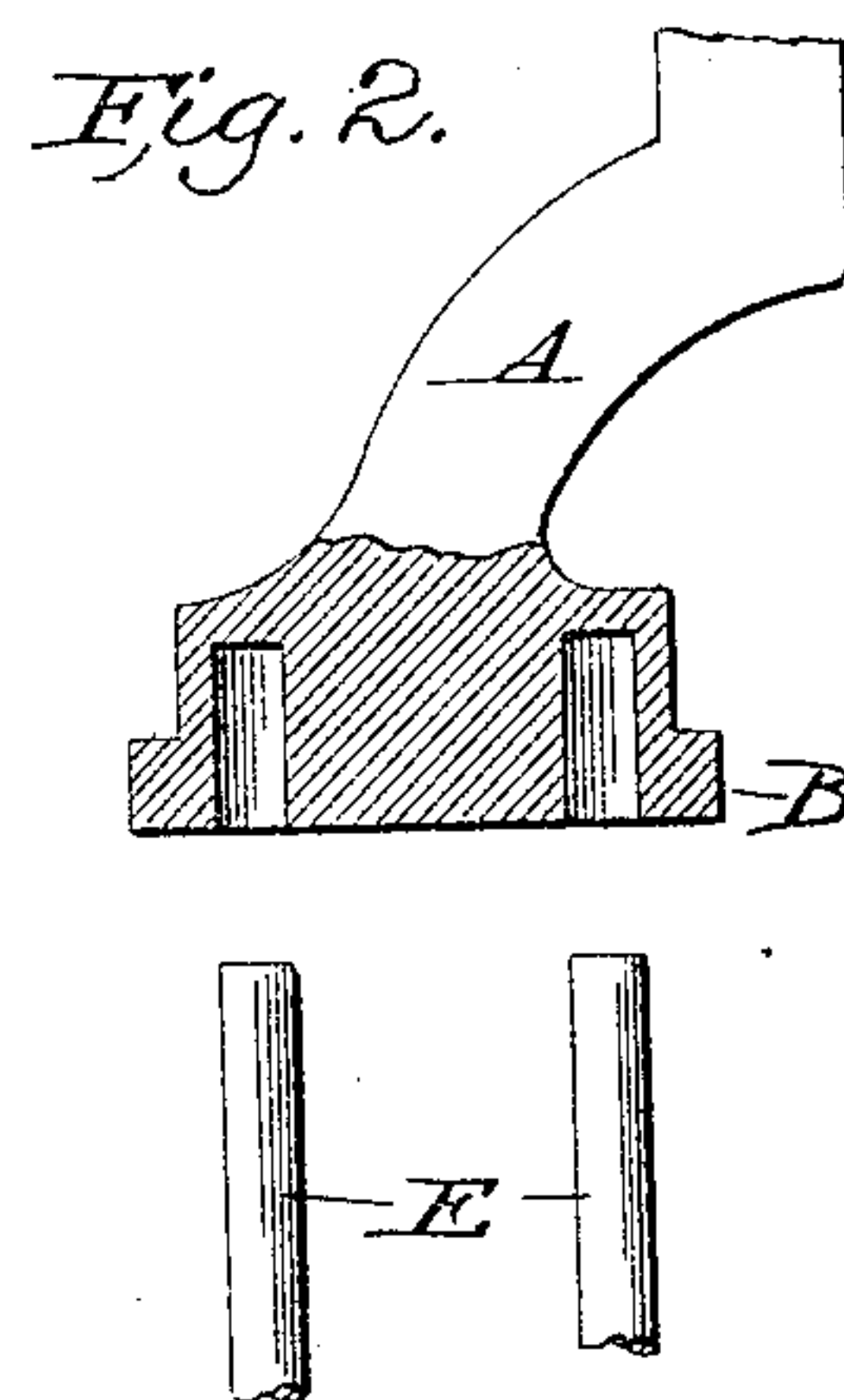
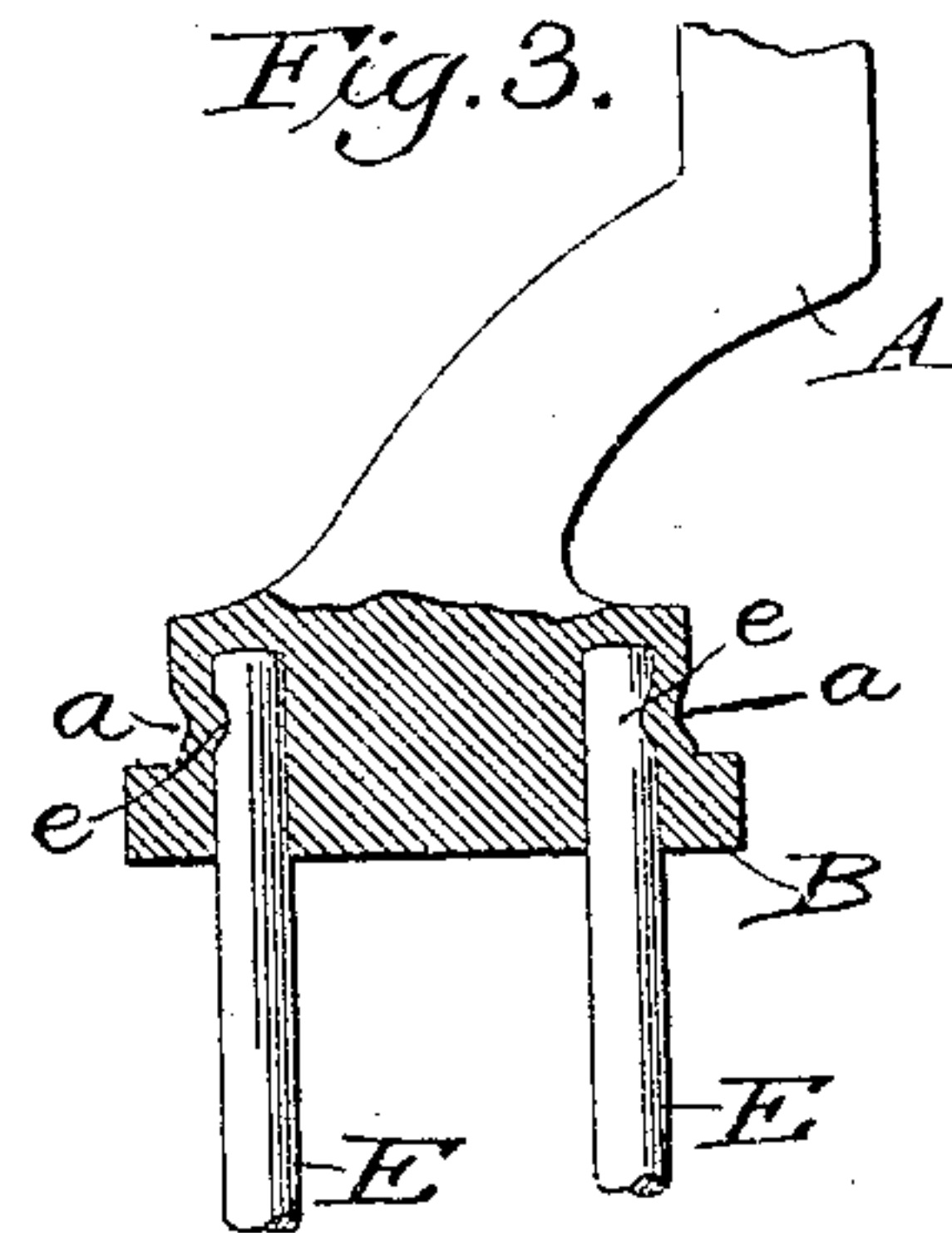
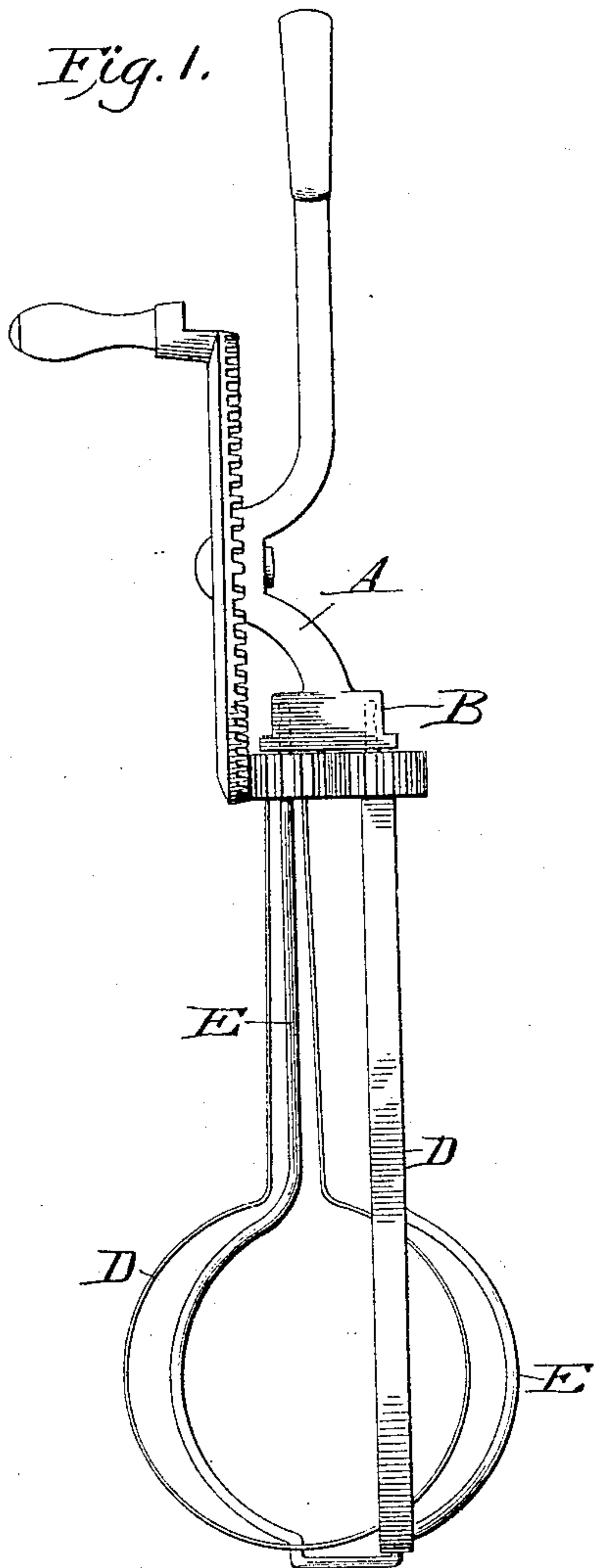


(No Model.)

E. HADLEY.
EGG BEATER.

No. 454,345.

Patented June 16, 1891.



Witnesses:

James F. Duhamel
Horace A. Dodge.

Inventor:

Ethan Hadley
by Dodge & Sons.
Atty

UNITED STATES PATENT OFFICE.

ETHAN HADLEY, OF CHICOPEE FALLS, MASSACHUSETTS, ASSIGNOR TO THE
LAMB KNITTING MACHINE MANUFACTURING COMPANY, OF SAME PLACE.

EGG-BEATER.

SPECIFICATION forming part of Letters Patent No. 454,345, dated June 16, 1891.

Application filed June 16, 1890. Serial No. 355,561. (No model.)

To all whom it may concern:

Be it known that I, ETHAN HADLEY, a citizen of the United States, residing at Chicopee Falls, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Egg-Beaters, of which the following is a specification.

My present invention relates to egg-beaters; and the invention consists in certain improvements in the construction of the frame, as hereinafter more fully described.

Figure 1 is a side elevation of egg-beater complete, and Figs. 2 and 3 are side elevations, partly in section, of a portion of the frame, shown enlarged for the purpose of more clearly illustrating my invention.

For the purpose of illustrating my improvement I have shown it applied to the well-known "Dover Egg-Beater," which has its frame made of two parts, the upper portion A in the form of a handle being made of cast-iron, and the lower portion E, which serves as journals and supports for the beaters or floats D, being made of a single piece of wire bent to the proper form; but the invention is applicable to other styles of egg-beaters also.

The present invention relates more especially to the method used for connecting the wire to the cast-iron part of the frame, and is an improvement upon the plan shown in my patent, No. 380,564. Formerly these parts had been connected by various means; but in my patent, No. 380,564, I secure the parts by drilling holes through the cross-head or enlargement made at the lower end of cast-iron part A and then upsetting the protruding ends of the wire, the handle A being enlarged at the point just above these protruding ends, so as to form a shoulder or projection, which would prevent the wire from being pushed up through the holes.

My present plan consists in drilling two holes in the enlarged portion B of the cast-iron handle, but which holes do not extend entirely through, they being, more strictly speaking, sockets or circular recesses extending about three-fourths of the way through the head B, as shown clearly in Fig. 2.

The ends of the wire E are simply cut off and left in their natural condition, as also shown in Fig. 2, and after the floats or beaters

have been slipped onto the wire the ends of the latter are inserted into the holes or sockets, and the metal on each end of the head B is then indented or forced inward, as represented at *a*, Fig. 3, by means of two pointed punches operated simultaneously by a press, they operating at points directly opposite each other, thus making the two indentations *a a* at one movement. As shown in Fig. 2, the holes or sockets are made very near the ends of the cross-head B, thus leaving but a thin wall of metal between them and the outer face of the part B at the points where the indentations *a* are to be made, and the result is that the metal is forced inward, so as to form an indentation *e* in the wire E, in which the forced-in cast metal fits and remains, as represented in Fig. 3, and thus by the simple act of subjecting the parts to the pressing action of the two punches simultaneously the parts B and E are securely and rigidly connected. When thus united, the ends of the wire E are firmly locked in place, so that there is no possibility of their coming out, nor can the ends of the wire E be shoved up through, as they abut and rest against the solid metal. The advantages of this method of uniting the parts will be readily understood when it is borne in mind that these egg-beaters are made by the million, and in order to be sold cheaply the cost of manufacture must be reduced to the minimum. Another advantage of this plan is that it avoids the notches, projections, and upset ends incident to my former plan, in and on which the beaten egg or other matter is liable to accumulate and requiring time and care for its removal, the smooth unbroken surface being much easier kept clean. It is obvious that this method of uniting or fastening the parts together is equally applicable to that style of egg-beaters in which a single wire or standard is united to the cast-iron part of the frame, and that by its use the cutting of screw-threads, the use of solder, or the upsetting or riveting down of the protruding end or ends is avoided, thus greatly expediting and cheapening the work.

I am aware that it has been proposed to fasten the wire part of egg-beater frames to the cast-iron part by means of solder, by screw-threads, and by riveting the ends of

the wire after passing them through holes drilled in the cast-iron part, and also that it is common to unite one piece of metal to another by compressing one upon the other, and
5 I do not claim any of these; but

What I do claim is—

An egg-beater frame consisting of the cast-iron handle A, provided with the cross-head or enlargement B at its lower end with sockets
10 formed therein, and the wire support or journals for the beaters or floats, having its ends

inserted in said sockets and locked therein by indenting the outer faces of the cross-head and forcing a portion of the cast-iron into the sides of the wire, substantially as shown 15 and described.

In witness whereof I hereunto set my hand in the presence of two witnesses.

ETHAN HADLEY.

Witnesses:

JAMES H. LOOMIS.

DANIEL M. KEY.