

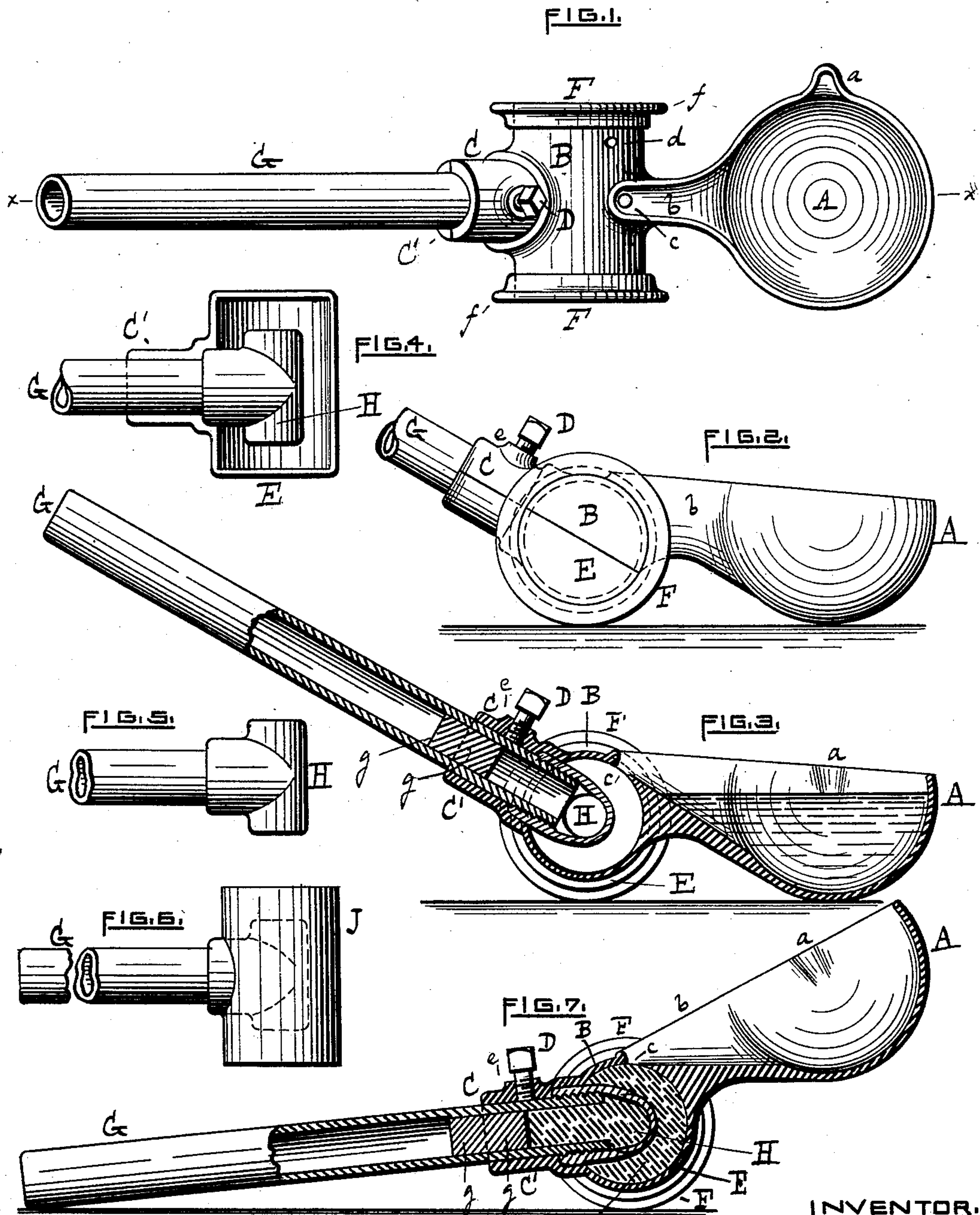
(No Model.)

C. H. FIELD, Jr.

COMBINED LADLE AND MOLD FOR LEAD HAMMERS.

No. 428,558.

Patented May 20, 1890.



WITNESSES.

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COMBINED LADLE AND MOLD FOR LEAD HAMMERS.

SPECIFICATION forming part of Letters Patent No. 428,558, dated May 20, 1890.

Application filed August 26, 1889. Serial No. 322,021. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. FIELD, JR., of the city and county of Providence, in the State of Rhode Island, have invented a certain new and useful Improvement in Combined Ladles and Molds for Lead Hammers; and I declare the following to be a specification thereof, reference being had to the accompanying drawings.

10 Like letters indicate like parts.

Figure 1 is a top plan of my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a view, partly in side elevation and partly in section, on line $x x$ of Fig. 1, showing the ladle depressed with the melted metal therein, but the mold empty. Fig. 4 shows in top plan the lower half of the mold with the handle and cross-piece of the hammer in position therein to receive the melted metal. Fig. 5 shows in side elevation said handle and cross-piece of the hammer. Fig. 6 is a side elevation of the hammer made by said combined ladle and mold. Fig. 7 is the same as Fig. 3, except that the ladle is elevated and empty and the metal is shown in the mold.

My invention relates to molds for the lead hammers used in machine-shops.

The hammer consists of a tubular metallic handle and a tubular cross-piece at the end of the handle, around which a leaden hammer-head is formed by casting. My improved combination mold and ladle is intended for the manufacture of such hammers; and it consists of a ladle combined with a mold, the latter being made in two sections, with the upper of which the said ladle communicates, and having a tubular handle, also in two sections, and flanged rings at both ends, fitting snugly upon the sections of the mold to hold them together, as hereinafter more fully specified.

In the drawings, A represents the ladle, having the lip a and the spout b . It is cast in one piece with the upper section B of the mold, and a hole c opens into and through the section B from the ladle-spout b . An air-vent d is also made in the section B. (See Fig. 1.) Extending from the section B of the mold is the semi-tubular mold-handle C, integral therewith and having a boss e , through which the set-screw D passes. The lower section E of the mold has the integrally-formed

semi-tubular mold-handle C'. The two mold-sections B E, when fitted together, make a hollow cylinder with closed ends. A ring F, having a flange f , fits snugly over each end of the mold B E, and these rings lock the mold securely together.

The handle of the hammer which is to be cast in this mold is a metallic pipe or tube, (shown at G,) and it has a tubular or hollow T-shaped piece H screwed thereon. Plugs $g g$ are placed in the tube G, as shown in Figs. 3 and 7.

The handle G of the hammer fits closely in the tubular handle C C' of the mold, as seen in Fig. 4.

When the cross-headed handle G H has been placed within the lower section E of the mold, as illustrated in Fig. 4, the sections B E of the mold are placed together, and said sections are locked in position by the rings F F. The hammer-handle G is so adjusted in the mold that the axis of its cross-head H is coincident with the axis of the mold B E, and it is held in that position by the set-screw D. Now, using the handle G so adjusted and fastened as the handle of the whole combination, the ladle A is filled with the melted lead by dipping or otherwise. Then by rocking the mold upon the flanges of the rings F F until the ladle is elevated, as in Fig. 7, the melted lead flows from the ladle A into the spout or channel b , and through the hole c into the matrix of the mold B E. The melted lead not only fills the mold, but flows into the tubular cross-piece H and the tubular handle G as far as the plugs $g g$ permit. The broken diagonal lines in Fig. 7 show in cross-section the position assumed by the metal which has been so poured in the mold.

Any superfluous metal not received by the mold can be poured out of the ladle into the crucible from the lip or spout a .

The product of this process is the leaden-headed hammer shown in side elevation in Fig. 6. In said figure, J indicates the leaden head, and the cross-piece H is shown in dotted lines within the same. The hammer is taken out of the mold by simply removing the rings F F, whereupon the sections B E are separated and release the mass of metal which has been cast within them.

Lead hammers have heretofore been con-

5 constructed by boring a socket in a cylinder of lead and inserting a handle in such socket; but repeated use of such a hammer soon loosens the head from the handle and destroys its usefulness.

10 My improved hammer is firmly united to the handle, as the lead flows into the tubular openings of the cross-head and handle and forms one entire mass, embedding the cross-head, so that it is immovable therein.

It is evident that a serviceable hammer can be made in the same manner with a solid metallic handle and cross-head; but such a construction would be within my invention.

15 I claim as a novel and useful invention and desire to secure by Letters Patent—

20 1. A mold for casting metallic hammers, consisting of hollowed sections having closed ends and provided with an opening for the entrance of molten metal therein, in combination with suitable locking means adapted to hold said sections together, and a tubular handle opening into said mold and adapted to receive and hold the metallic handle of the hammer to be cast in said mold, substantially as shown.

30 2. A mold for casting metallic hammers, consisting of two semi-tubular matrices having closed ends, in combination with the ladle integral with the upper of said matrices, and provided with an opening for the flow of

the melted metal from the ladle to the mold, the rings surrounding the ends of the mold, and the semi-tubular handles integral with the upper and lower matrices, respectively, and opening into said mold, substantially as specified.

3. A combined ladle and mold for casting metallic hammers, consisting of a mold or matrix having suitable locking means, a ladle with a channel therefrom opening into said mold, and a tubular handle extending from said mold and opening therein, substantially as specified.

4. The improved combined ladle and mold for casting metallic hammers herein described, consisting of the ladle A, having the lip *a*, the spout *b*, and hole *c*, the mold-section B, having closed ends and cast integral with said ladle, and having an air-vent *d* and a semi-tubular handle C, the boss *e*, and set-screw D, passing through said handle and boss and adapted to hold the handle of the metallic hammer firmly in position, the mold-section E, having closed ends and provided with the semi-tubular handle C', and the flanged rings F F, all arranged substantially as and for the purpose specified.

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Witnesses:

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