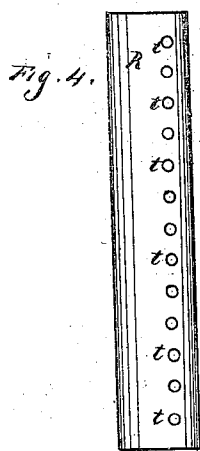
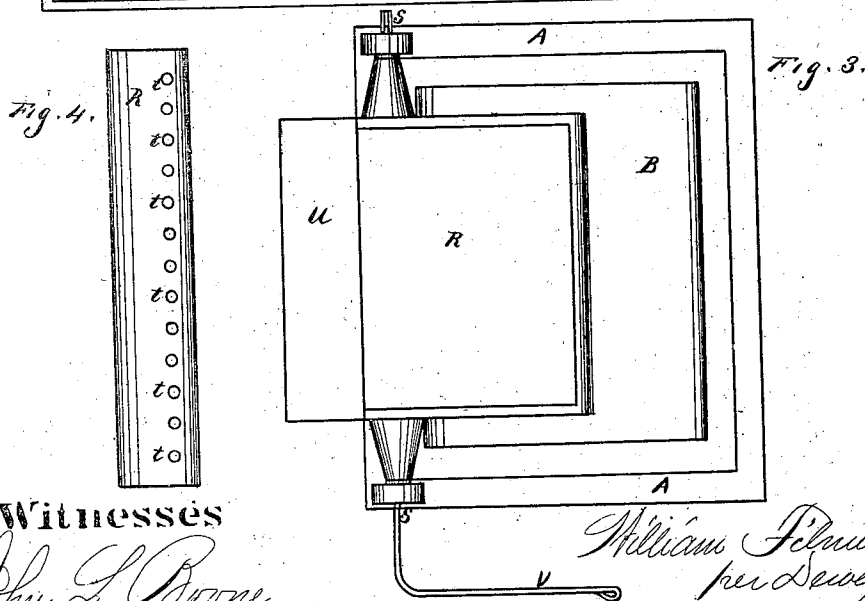
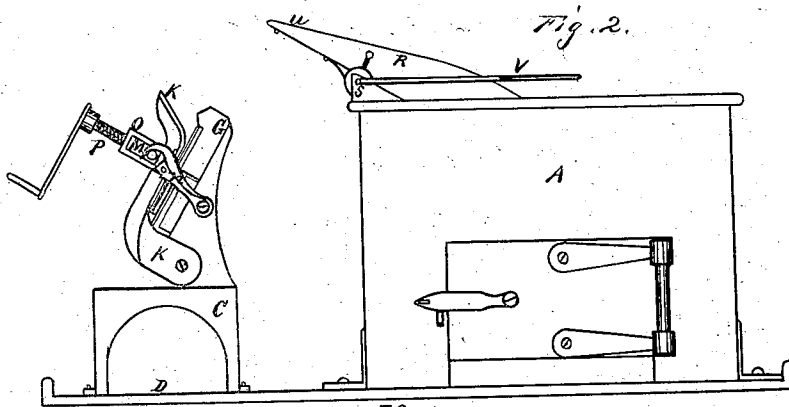
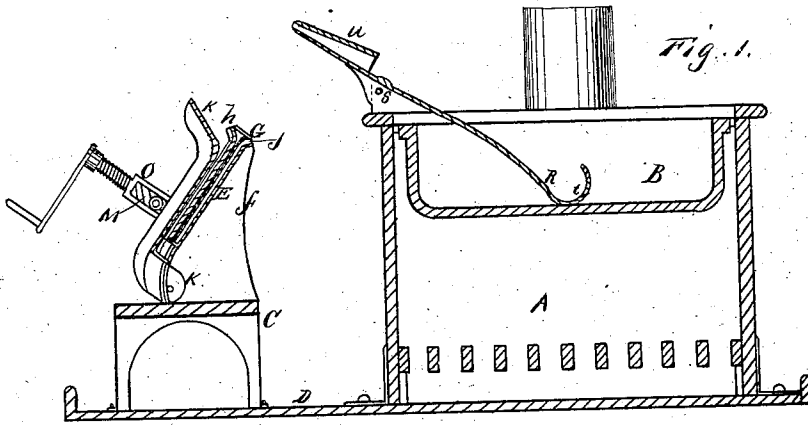


W. FILMER.

Apparatus for Casting Printers' Leads.

No. 142,783.

Patented September 16, 1873.



Witnesses

John L. Boone
O. Richardson

William Filmer
per Seweryn
Atty.

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Fig. 5.

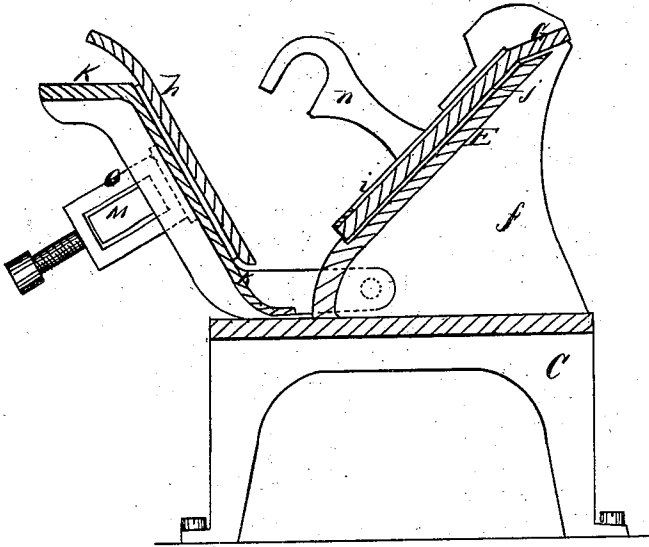


Fig. 6.

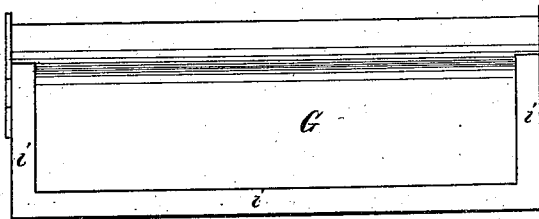
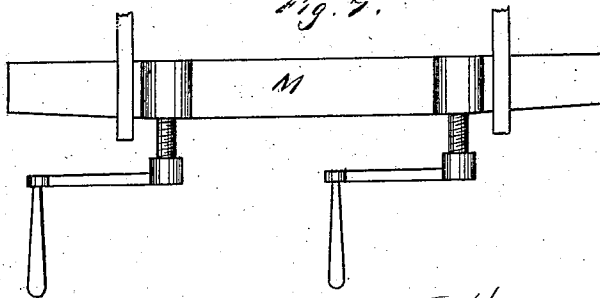


Fig. 7.



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UNITED STATES PATENT OFFICE.

WILLIAM FILMER, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN APPARATUS FOR CASTING PRINTERS' LEADS.

Specification forming part of Letters Patent No. **142,783**, dated September 16, 1873; application filed April 17, 1873.

To all whom it may concern:

Be it known that I, WILLIAM FILMER, of San Francisco city and county, State of California, have invented an Improved Machine for Casting Printers' Leads; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvements without further invention or experiment.

Heretofore printers' leads have been cast longitudinally in hand-molds by a slow and tedious process, the metal being poured into the end of the mold, thus rendering it impossible to cast them more than eight or nine inches in length on account of the metal becoming cool in the mold, and even then they are seldom uniform.

My invention consists in combining a furnace, metal-tank, dipper, and mold, in such a manner that the leads can be cast in a uniform manner any desired length and with great facility.

In order to more fully illustrate and explain my invention, reference is had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a sectional elevation of my machine. Fig. 2 is a side elevation. Fig. 3 is a plan view. Fig. 4 is an enlarged back view of the dipper. Fig. 5 is an enlarged section of the mold opened. Fig. 6 is an enlarged front view of the plate G. Fig. 7 is an enlarged view of the bar M.

A represents a furnace, and B a metal pot or tank, which is placed over it, and in which the type-metal is placed to be melted. C is the mold-stand, which is conveniently secured to the base or platform D, so as to support the mold in the proper position with reference to the pot or tank B. E is an inclined bed-plate, which is supported upon the stand C by the triangular supports *f f* at the desired angle. This bed-plate serves as a support for the mold. The mold consists of two parts, G *h*, the part G being simply a metal plate having a ledge, *i*, extending around its lower edge and two side edges, while its upper edge is turned outward. The ledge *i* is intended to

be of the same thickness as the leads to be cast. A layer, *j*, of paper, or some other non-conducting substance, is interposed between the back of the plate G and the bed-plate, so as to prevent the heat from passing through to the bed-plate. K is the movable part of the mold, and consists of a plate which is hinged to the triangular supports *f f*, so that it can be closed down upon the part G of the mold. The plate *h* is placed against the inner face of the hinged plate K, so that when the plate K is turned down upon the part G of the mold it will rest upon the ledge *i* and form a tight joint, while the space between these two plates forms the lead-mold. The upper edge of the plate *h* is turned outward in an opposite direction from the edge of the plate G, the two edges thus brought together forming a flaring mouth, into which the metal is poured. M is a brace, rod, or bar, which is secured longitudinally, in staples *o*, to the outside of the hinged part of the mold. A hook, *n*, is secured to the triangular supports *f*, at each end of the mold, which can be hooked over the ends of the bar M, and set-screws *p p* pass through the bar, so as to press the parts of the mold firmly together while the metal is being poured. R is what I call a dipper, and it consists of a broad plate having shallow sides and slightly convex bottom, Fig. 4. This dipper is hung upon a shaft, S, over the edge of the tank B, being suspended so that a greater portion of the dipper is inside of the tank. The inside end of the dipper is curved upward, and holes *t t* are made between the edge and curve, through which the molten metal will pass into the dipper, when the upward-turned end has been lowered into the metal sufficiently, thus taking the metal into the dipper from below the surface without disturbing or drawing off the scum which always floats on top of the metal. The opposite side or edge of the dipper is covered by a plate, *u*, which extends a short distance back from its edge, so as to form a long slotted opening, through which the metal is poured.

The mold is located in such a position that by tipping the dipper outward, after it has been charged with metal, by means of a lever, *v*, secured to the ends of the shaft S, the slot-

ted opening will be brought directly over the flaring mouth of the mold, so that the metal can pass in between the plates *G h*, where the lead is cast.

By constructing the mold in the manner above described, the leads can be cast of any desired length, and with perfect uniformity.

Sheets or plates can be cast nine or ten inches in width and of the desired length, and afterward be cut into strips to form the leads.

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

1. The furnace *A* and pot *B*, with its tilting dipper *R*, in combination with a lead-mold, when arranged in relation to each other substantially as above described.

2. The dipper *R*, provided with the filling-holes *t t*, when suspended upon a shaft, *S*, and operated by the lever *v*, substantially as and for the purpose above described.

3. The frame consisting of the inclined bed-plate *E*, hinged side *K*, brace-bar *M*, hooks *u*, and set-screws *p p*, in combination with the removable mold-plates *G h*, with their flaring outer edges and the tilting dipper *R*, all combined and arranged to operate substantially as and for the purpose above described.

In witness whereof I hereunto set my hand and seal.

WILLIAM FILMER. [L. S.]

Witnesses:

JOHN L. BOONE.

C. M. RICHARDSON.