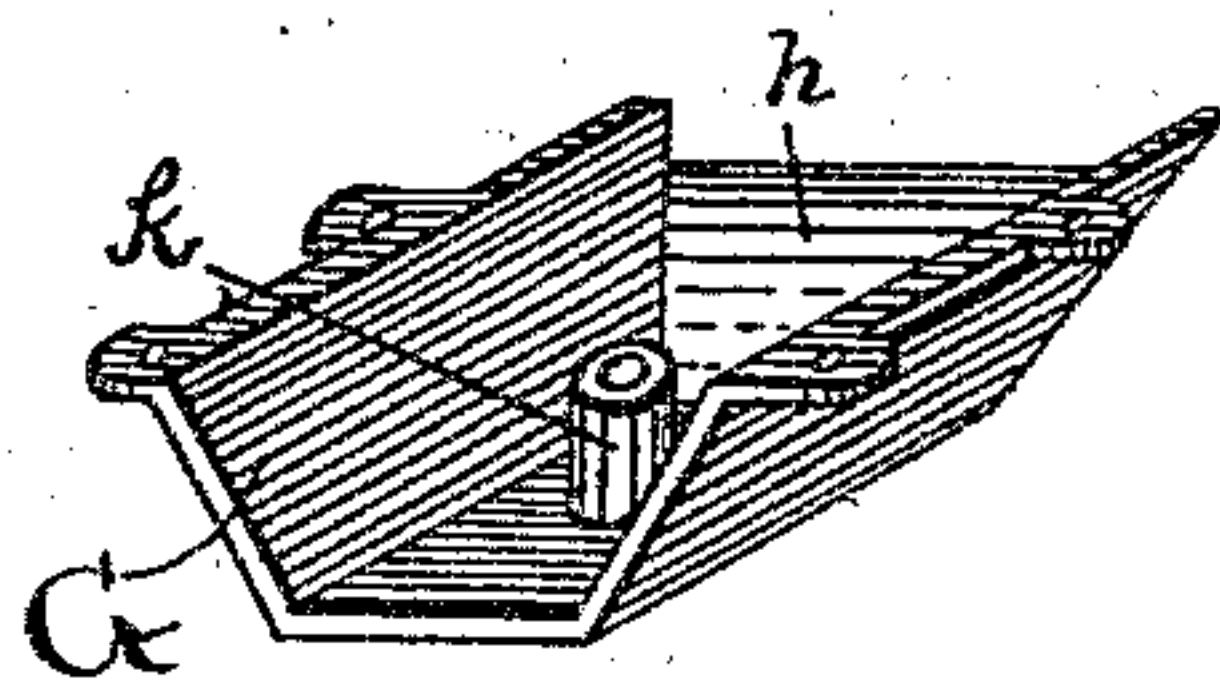
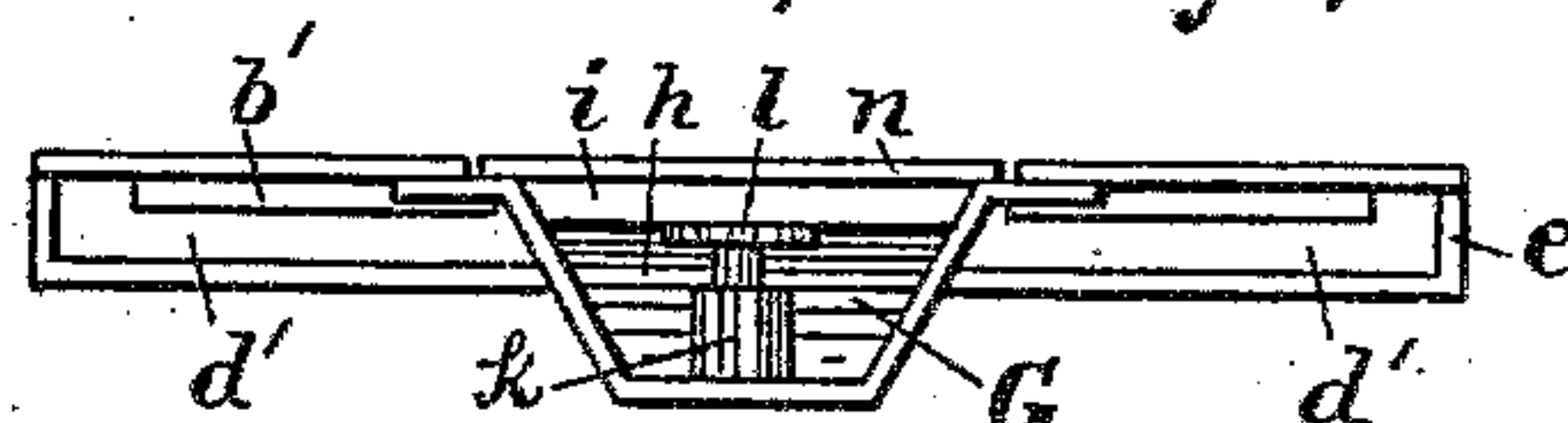
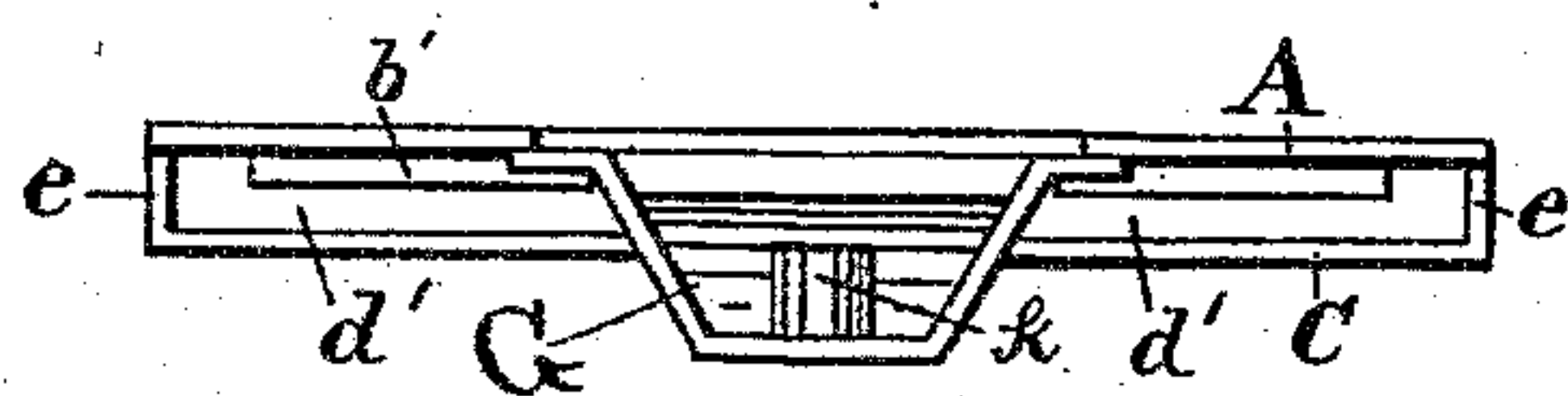
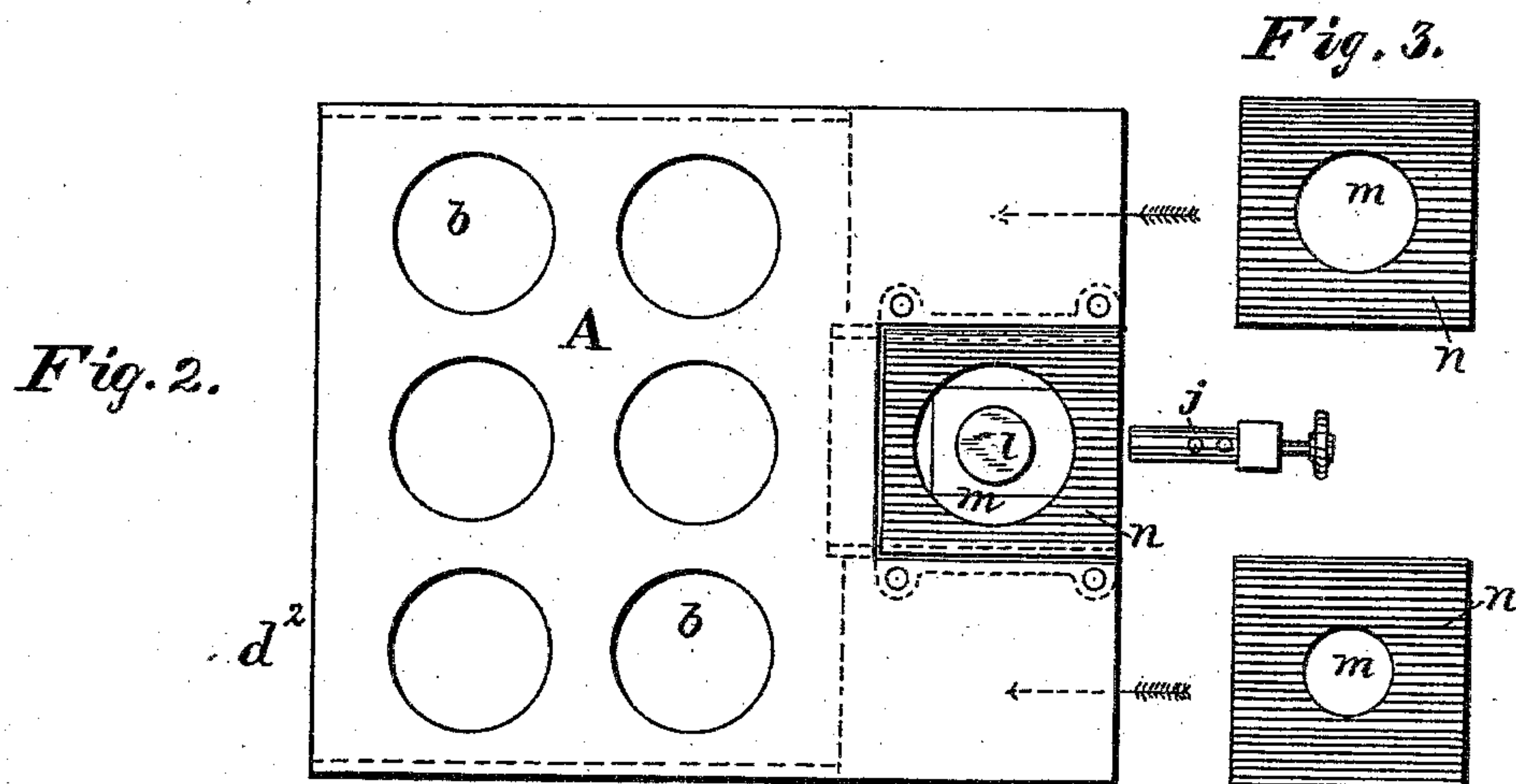
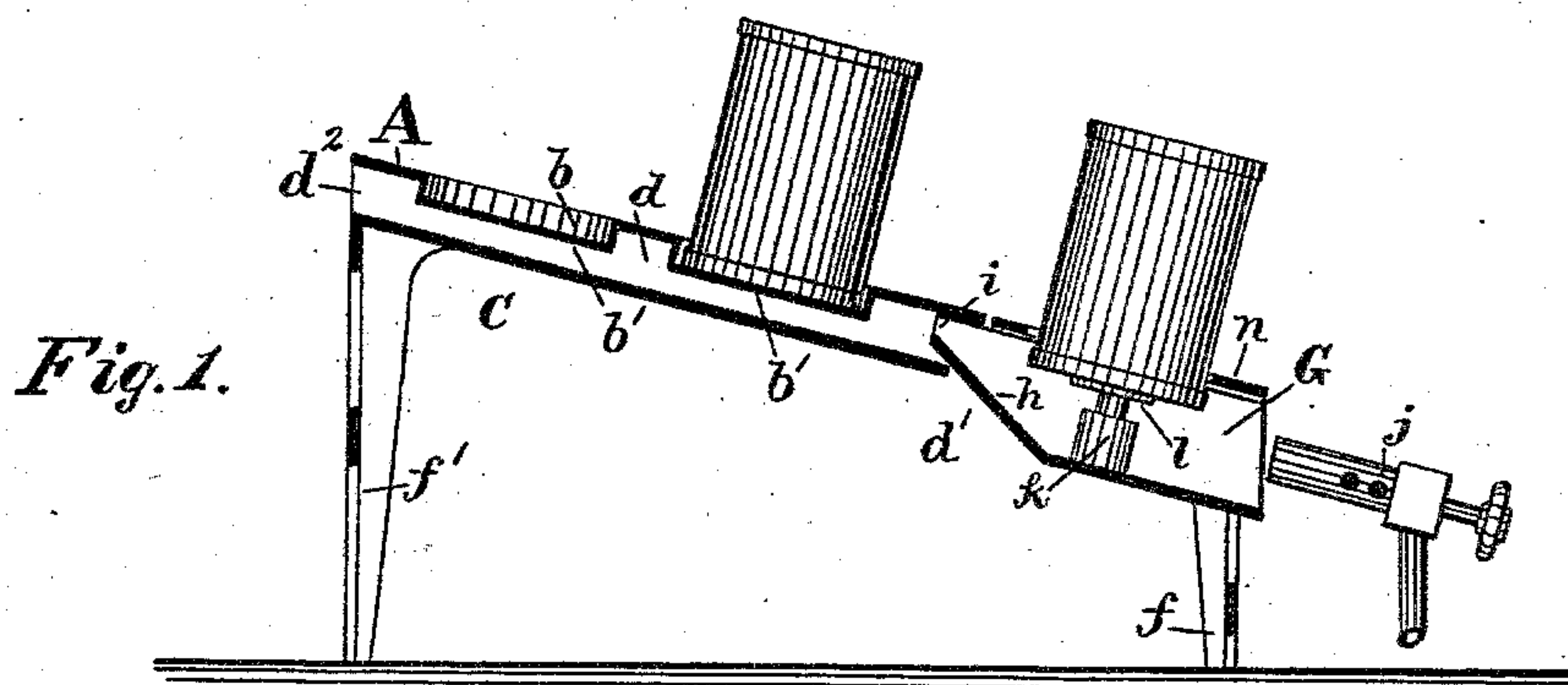


(No Model.)

J. A. TILLERY.  
CAN SOLDERING MACHINE.

No. 295,210.

Patented Mar. 18, 1884.



Witnesses:  
A C Eader  
John E Morris.

Inventor:  
John A. Tillery  
By Chas B. Mann  
Attorney.



# UNITED STATES PATENT OFFICE.

JOHN A. TILLERY, OF BALTIMORE, MARYLAND, ASSIGNOR OF TWO-THIRDS  
TO JOHN H. BRANDT AND ROBERT B. CASWELL, BOTH OF SAME PLACE.

## CAN-SOLDERING MACHINE.

SPECIFICATION forming part of Letters Patent No. 295,210, dated March 18, 1884.

Application filed August 9, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN A. TILLERY, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Can-Soldering Machines, of which the following is a specification.

My invention relates to a can-soldering machine having certain features of improved construction, as hereinafter described and claimed.

In the drawings hereto annexed, Figure 1 is a vertical section. Fig. 2 is a top view. Figs. 3 and 4 are views of the detachable covers for the flame-chamber. Figs. 5 and 6 are front end views of the machine. Fig. 7 is a view of the casting separate, which forms the flame-chamber.

The letter A designates the top plate, made preferably of cast-iron. This plate has circular recesses *b* sunk below its top surface. The lower side, *b'*, of each recess depends below the lower surface of the plate. Each recess is adapted as a seat for the end of a cylindric can. A bottom plate, C, extends below all the recesses, leaving a narrow space, *d*, between the two plates for the passage of flame, smoke, and heated air. At each of two opposite edges the top and bottom plates are connected by a strip, *e*, thereby closing the space along those edges; but the space is open at the other two edges—that is, the upper and lower edges, (indicated by *d'* and *d''*.) The two plates are supported on legs *f f'*, and have an inclined position. At the lower part of the inclined top plate a square flame-receiving chamber, G, is formed, which is independent of the space between the two plates. This chamber has an upward-sloping rear wall, *h*, and a narrow horizontal opening, *i*, at the top of the wall, which places the chamber and the flame-passage *d* in communication. The burner *j* projects its flame into the chamber G, where the greatest part of the heat is confined, and the flame strikes the upward-sloping rear wall, *h*, which favors its rising and passing the opening *i*. The bottom, sides, and upward-sloping rear wall constitute a single piece of casting, (see Fig. 7,) which, when attached to the lower side of the top plate, forms the chamber. The bottom has a stud, *k*, cast with it, which serves as a bearing for

a rotary can-seat, *l*, the plane of which is below the top plate, and on a line direct with the narrow horizontal opening *i*, leading from chamber G into the flame-passage *d*. At each side of the chamber G is an opening, *d'*, for air to enter the flame-passage *d*. This arrangement serves to intensify the heat under the sunk recesses *b*. The top plate has a circular opening, *m*, in which the end of a can is placed, the can resting on the rotary seat *l*, the top of which is below the opening. By this arrangement the circular opening centers the can on the rotary seat and sustains it in position there, while the flame in chamber G has access to the flange of the can-bottom, and the flame can pass all around the can-cylinder, being confined below the top plate, and thence passes the narrow horizontal opening *i* into the flame-passage *d*. By my arrangement no flame or smoke escapes above the top plate to soil the cans or annoy the operator, and as the sunk recesses depend into the flame-passage *d* they get the full benefit of the heat, and thereby the cans, when occupying these recesses preliminary to being soldered, are thoroughly heated. The can should have the side seam of its cylinder soldered and the top and bottom placed in position ready to be soldered. A piece of solder sufficient for one end is then placed inside of the can, which is set into one of the recesses to be heated. The can is then transferred to the rotary seat and turned thereon by the workman. The flame here applies itself to the flange of the can-bottom and the solder sweats through to the outside. Another piece of solder is then used in like manner to solder the other end of the can.

The sunk recesses may be of a size suited for the largest ordinary can—say a three-pound can—which will also receive any smaller size. To adapt the machine for the various sizes of cans, that part of the top plate above the chamber G, which has the circular opening *m*, is made detachable. This detachable cover *n* to chamber G (see Figs. 3 and 4) has a hole or opening for a can of given size. A separate cover is required for each size of can. It is simply necessary, therefore, when about to make a different-sized can, to remove the detachable cover *n* and place one in position hav-



ing an opening of proper size. A rotary seat suited for the smallest can will thus serve for all the other sizes.

Having described my invention, I claim and  
5 desire to secure by Letters Patent of the United States—

1. A can-soldering machine embracing the following construction, to wit: an inclined top and bottom plate, with a flame-passage, *d*, be-  
10 tween the two plates, a flame-receiving chamber, *G*, at the lower part of the top plate, having an upward-sloping rear wall, *h*, and a narrow horizontal opening, *i*, at the top of the wall, and a rotary seat, *l*, the plane or top of  
15 which is below the top plate and on a line direct with the narrow horizontal opening, as set forth.

2. A can-soldering machine having an inclined top and bottom plate, with a flame-pas-  
20 sage, *d*, between the two plates, a flame-receiving chamber at the lower part of the top plate, having an upward-sloping rear wall, *h*, and an opening, *i*, at the top of the wall, and a separate air-opening, *d'*, into the flame-pas-  
25 sage at each side of the flame-receiving chamber, as set forth.

3. A can-soldering machine having an inclined top plate provided with circular recesses *b*, depending below the lower surface, a bottom plate with a flame-passage, *d*, between the  
30 two plates, a flame-receiving-chamber at the lower part of the top plate, having an upward-sloping rear wall, *h*, and an opening, *i*, at the top of the wall, and a separate air-opening, *d'*, into the flame-passage at each side of the flame-  
35 receiving chamber, as set forth.

4. A can-soldering machine having an inclined top and bottom plate, with a flame-passage, *d*, between the two plates, a flame-re-  
40 ceiving chamber at the lower part of the top plate, provided with a rotary seat, *l*, and a detachable cover, *n*, for the chamber, having a circular opening, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN A. TILLERY.

Witnesses:

JNO. T. MADDOX,  
JOHN E. MORRIS.