

(No Model.)

C. H. PERRY.
MANUFACTURE OF TYPE PLATES.

No. 407,962.

Patented July 30, 1889.

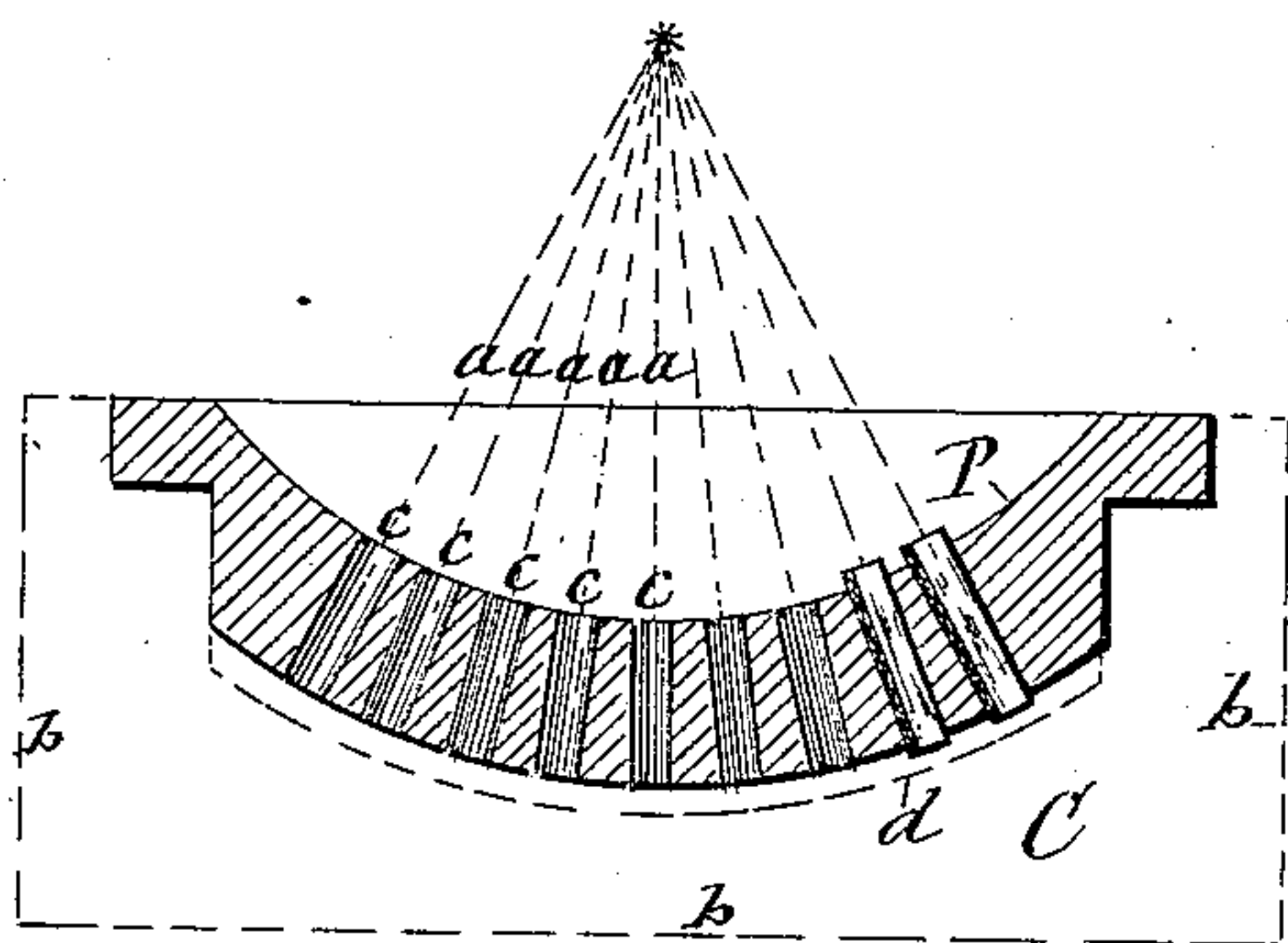


Fig. 1

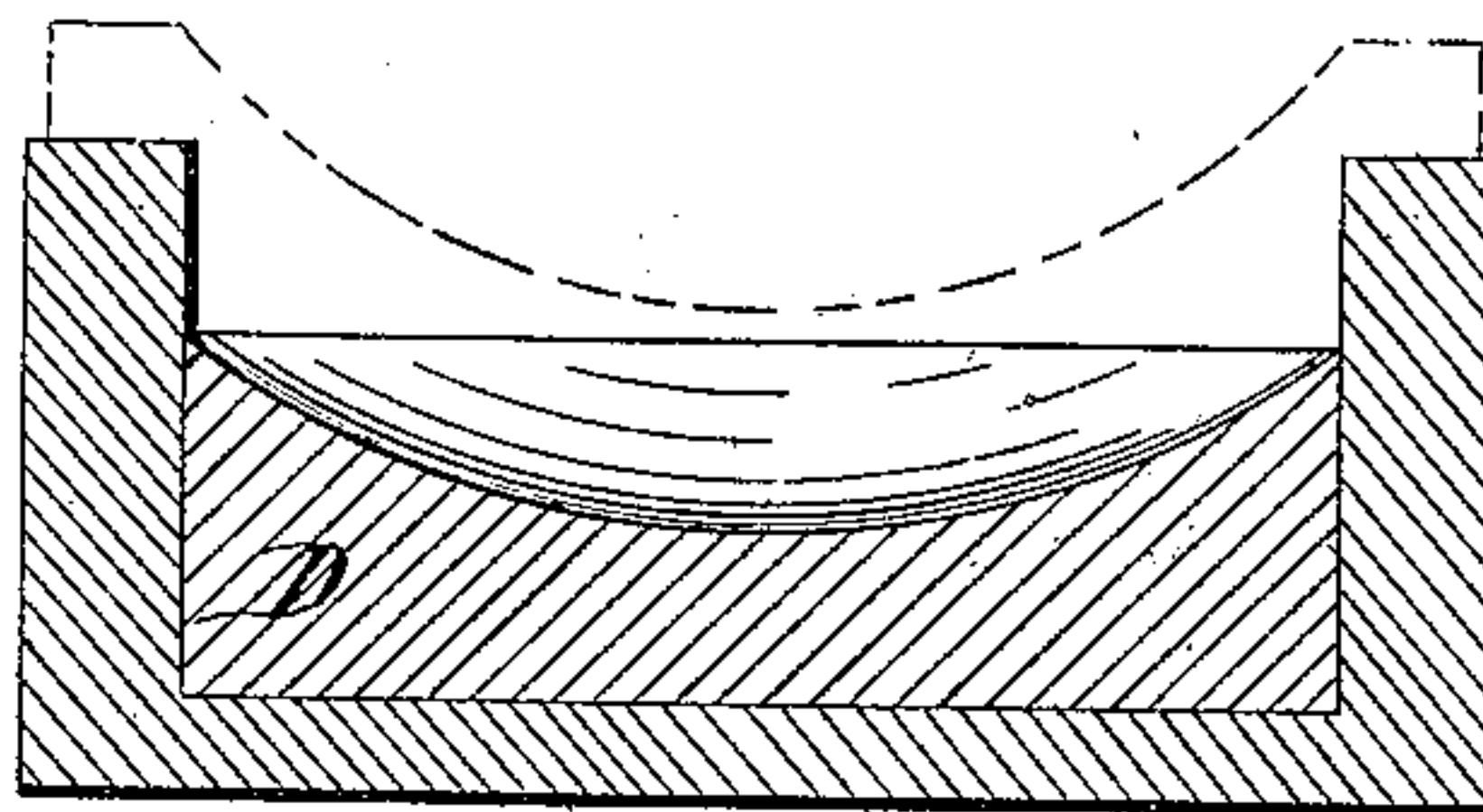


Fig. 2

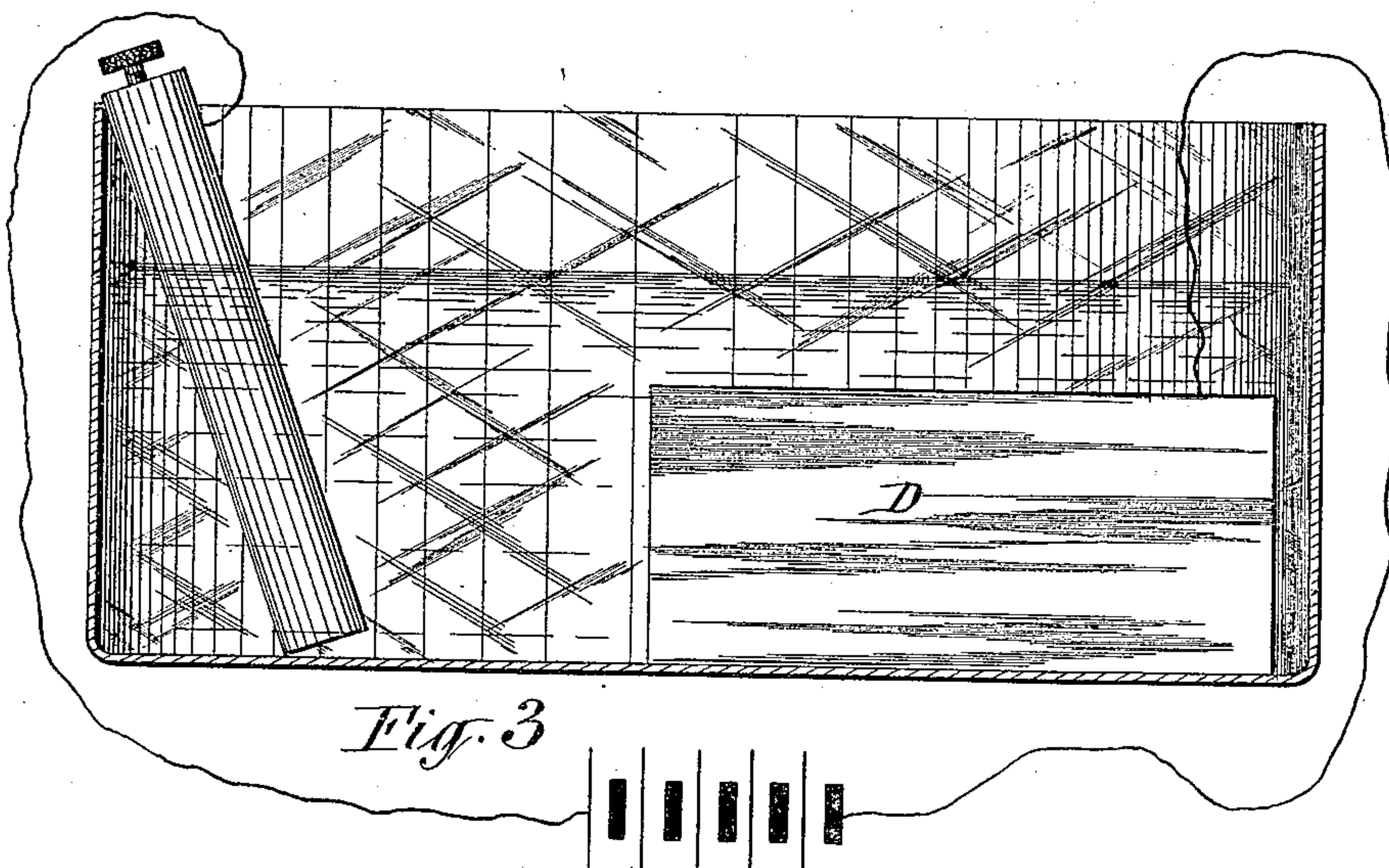


Fig. 3

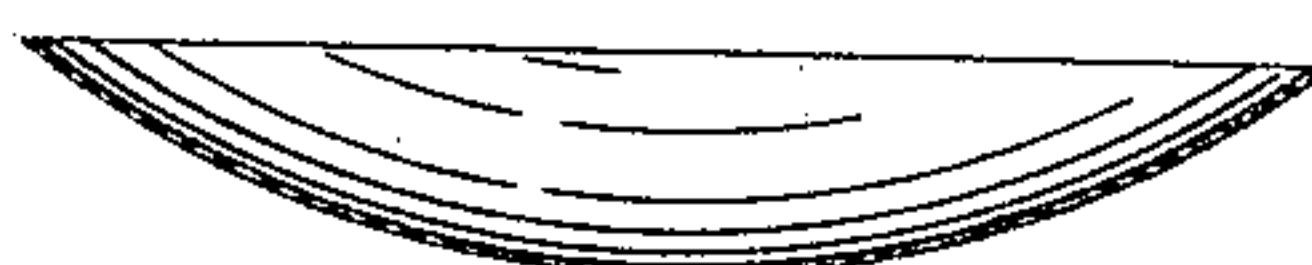


Fig. 4

WITNESSES:

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CHARLES H. PERRY, OF ONEIDA, ASSIGNOR OF ONE-HALF TO THOMAS R. PROCTOR, OF UTICA, NEW YORK.

MANUFACTURE OF TYPE-PLATES.

SPECIFICATION forming part of Letters Patent No. 407,962, dated July 30, 1889.

Application filed March 25, 1889. Serial No. 304,671. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. PERRY, of Oneida, in the county of Madison, in the State of New York, have invented new and useful
5 Improvements in the Manufacture of Type-Plates, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the construction
10 of type-plates designed to be mounted on the printing-plungers of a certain class of type-writing machines in which the entire field or fields of types are carried on one and the same face of the printing-plunger; and the invention
15 consists in an improved method of producing the aforesaid type-plate in an expeditious, inexpensive, and most accurate manner, as hereinafter fully described, and specifically set forth in the claims.

20 The annexed drawings illustrate the various appliances employed in carrying out my invention in constructing a concavo-convex type-plate, such as is shown in the type-writing machine for which I have obtained
25 Letters Patent of the United States No. 393,259, dated November 20, 1888.

Figure 1 illustrates the method of preparing the pattern of the type-plate and represents a transverse section of said pattern.
30 Fig. 2 is a vertical transverse section of the mold in which the type-plate is formed, with the pattern impressed in said mold and indicated by dotted lines. Fig. 3 is a vertical transverse section of the jar containing the
35 electric bath in which the electroplating is deposited on the mold, and Fig. 4 is a transverse section of the type-plate complete.

In carrying on my invention I proceed as follows: I first form a pattern of a plate or
40 block P of suitable material and of a thickness nearly or quite equal to the length of common printers' type. I preferably cast said plate of brass or white metal or other suitable metal and of concavo-convex shape,
45 and of the same diameter and contour on the convex side as that of the type-plate to be formed. Through this cast plate I drill holes *c c c* on lines radiating from the center of the sphere of which the plate is a section, as in-

50 dicated by dotted lines *a a a* in Fig. 1 of the drawings. The ends of said holes at the convex side of the plate are in the position in which the types are to be presented in the completed type-plate. I then place the plate P with its convex face down in a holder C, as
55 represented by dotted lines *b b* in Fig. 1 of the drawings, which holder is formed with a concave bed *d*, concentric with the convex face of the plate P, and supports the said plate above the bed *d*, so as to leave between them a
60 space the depth of which is equal to the projection of the letters or characters from the bodies of the types. I then insert into the holes *c c c* common printers' types in the order in which the types are required on the
65 completed type-plate. In introducing the types as aforesaid, each type is made to rest on the bed *b* of the holder, and thus all the types are caused to project the required distance from the plate P. After the types are
70 thus properly adjusted in the said plate I fasten them therein, preferably by means of solder.

In case the radius of the curvature of the plate P is so short as to cause the converging
75 upper ends of the types to interfere with each other, I cut off said ends of the types. I next prepare a mold D of wax or other analogous and suitable substance held in a suitable case, as represented in Fig. 2 of the drawings, and
80 in this mold I make an impression of the convex face of the plate P, with the types projecting therefrom, as aforesaid, said plate being indicated by dotted lines in said figure of the drawings. After the impression is per-
85 fected I remove the plate P from the mold, and after brushing over the impression a coating of plumbago or black-lead I place the mold in an electric or galvanic bath in a jar,
90 as represented in Fig. 3 of the drawings, in which bath I deposit copper or other suitable metal upon the impression in the mold by means of electrolysis, in the usual and well-known manner.

Inasmuch as the pattern P can be used a
95 great number of times and the subsequent steps of the process are simple and easily effected, it is obvious that by said process I am

enabled to supply the trade with type-plates of the described class at a very small expense.

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

1. The method of forming a pattern for a type-plate, consisting in preparing a block of the same diameter and contour as that of the type-plate to be made, then drilling through said block holes in the same relative position as the types are to be disposed on the type-plate, then supporting the said block over a suitable bed with a space between them equal in depth to the projection of letters or characters from the body of printers' types, then inserting printers' types in the holes in the block and causing the faces of said types to rest on the aforesaid bed, and finally, while holding the types in their requisite positions in the aforesaid block, fastening the types therein, substantially as set forth.

2. The method of forming a pattern for a concavo-convex spherical type-plate, consisting in preparing a concavo-convex block of the same diameter and contour on its convex side as that of the type-plate to be made, and of a thickness approximately equal to the length of printers' types, then drilling through the block holes in lines radiating from the center of the sphere of which the block is a segment, then supporting the said block over a bed with a space between them equal in depth to the projection of the letters or characters from the body of printers' types, then

inserting printers' types in the holes in the block and causing the faces of said types to rest upon the aforesaid bed, and then, while holding the types in their requisite positions in the block, fastening the types therein, substantially as described.

3. The method of constructing type-plates, consisting in first forming a pattern by preparing a block of the same diameter and contour as that of the type-plate to be made, then drilling through said block holes in the same relative positions as the types are to be disposed on the type-plate, then supporting the said block over a suitable bed with a space between them equal in depth to the projection of letters or characters from the body of printers' types, then inserting printers' types in the holes in the block and causing the faces of said types to rest on the aforesaid bed, then, while holding the types in their requisite positions in the said block, soldering the types therein, then impressing the face of said pattern in a mold of wax or analogous suitable material, and then removing the pattern from the mold, applying to the face of the mold a coating of plumbago or black-lead, and then depositing the said mold in an electric bath and depositing thereon the metal by electrolysis, substantially as set forth.

In testimony whereof I have hereunto signed my name this 22d day of March, 1889.

CHARLES H. PERRY. [L. S.]

Witnesses:

CHRISTINE HIMROD,
E. C. STARK.