

No. 672,859.

Patented Apr. 23, 1901.

F. A. RINGLER.  
PLATE FOR USE IN STEREOTYPING.

(Application filed May 23, 1898.)

(No Model.)

FIG.1.

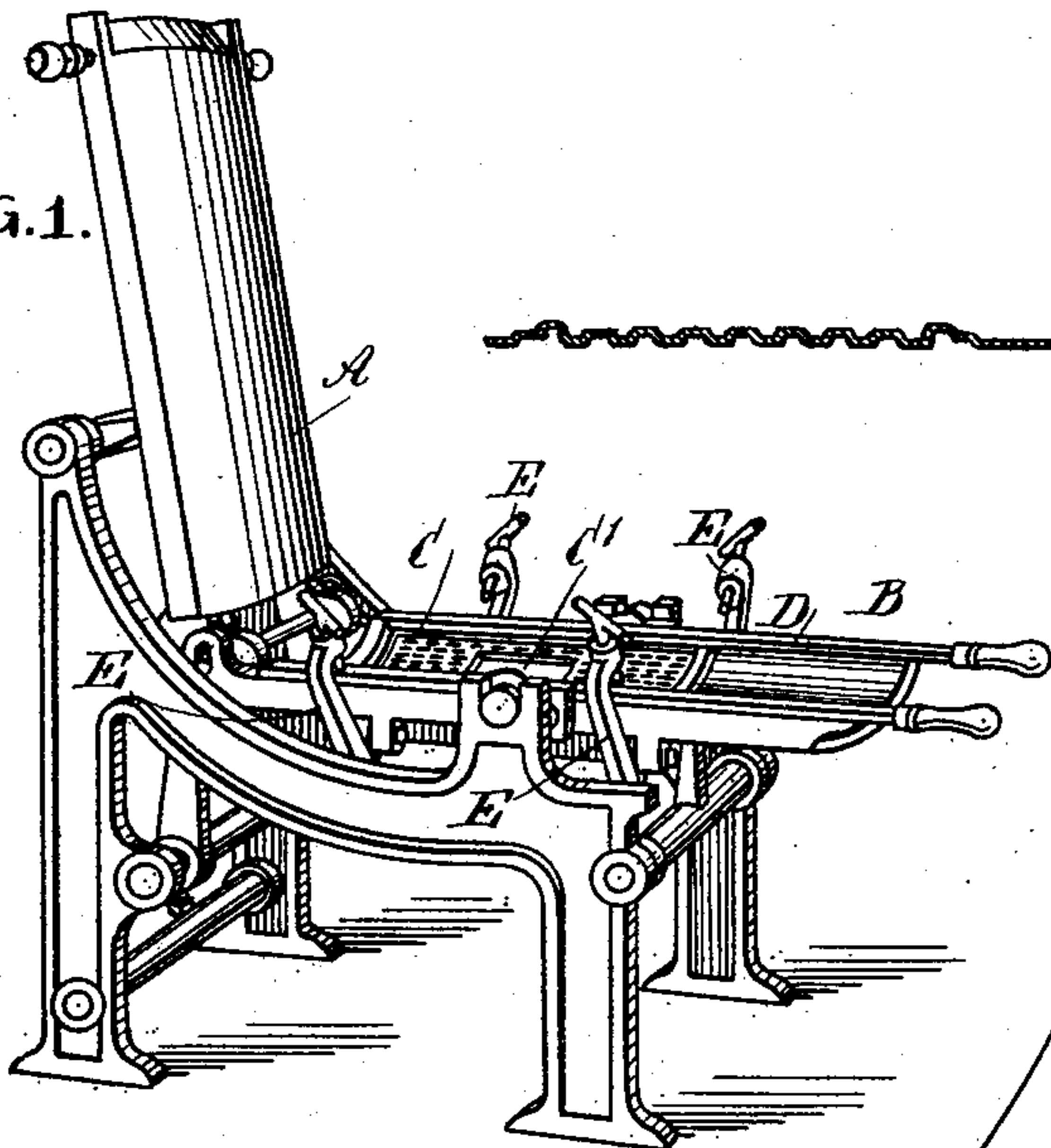


FIG.2.



FIG.3.

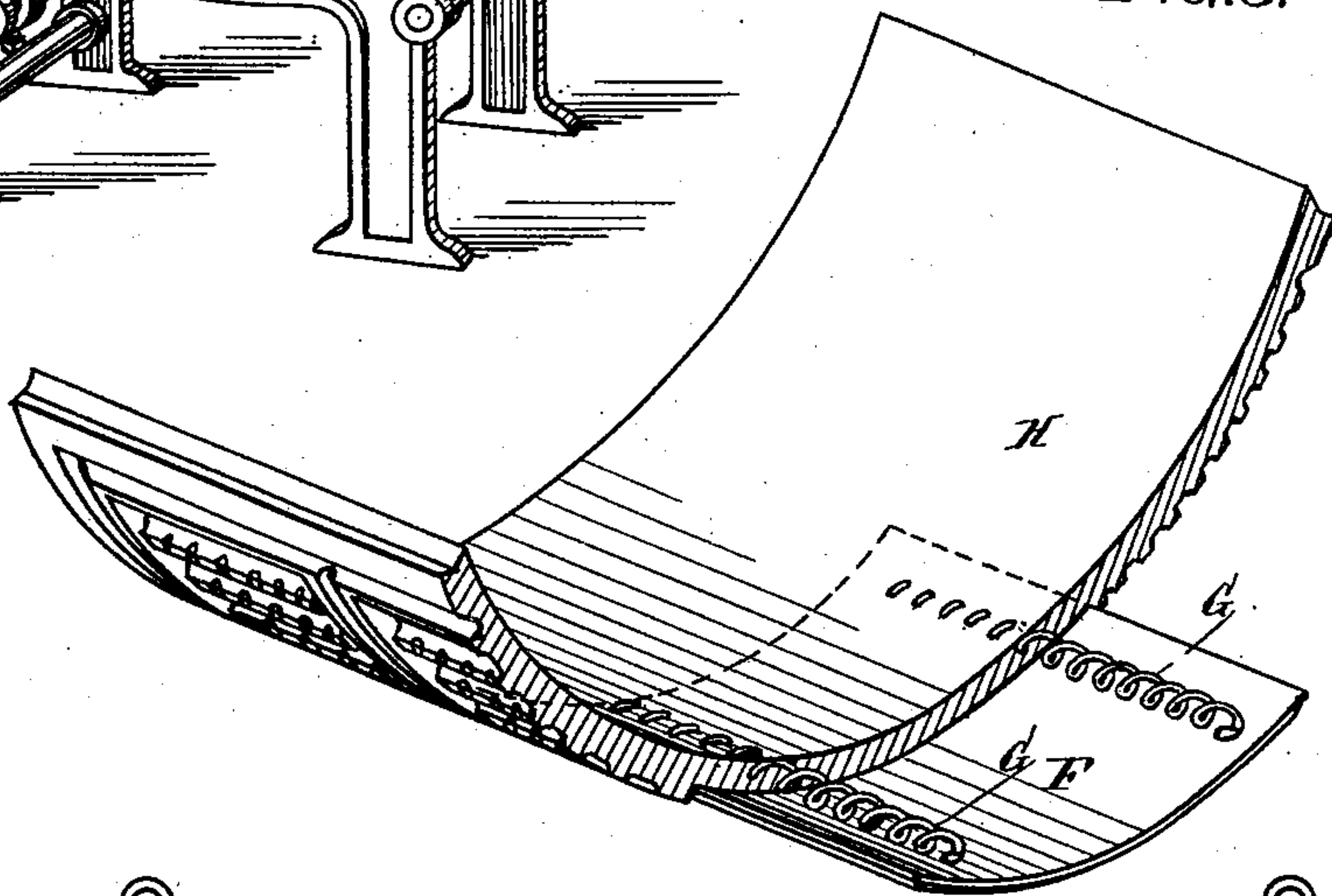
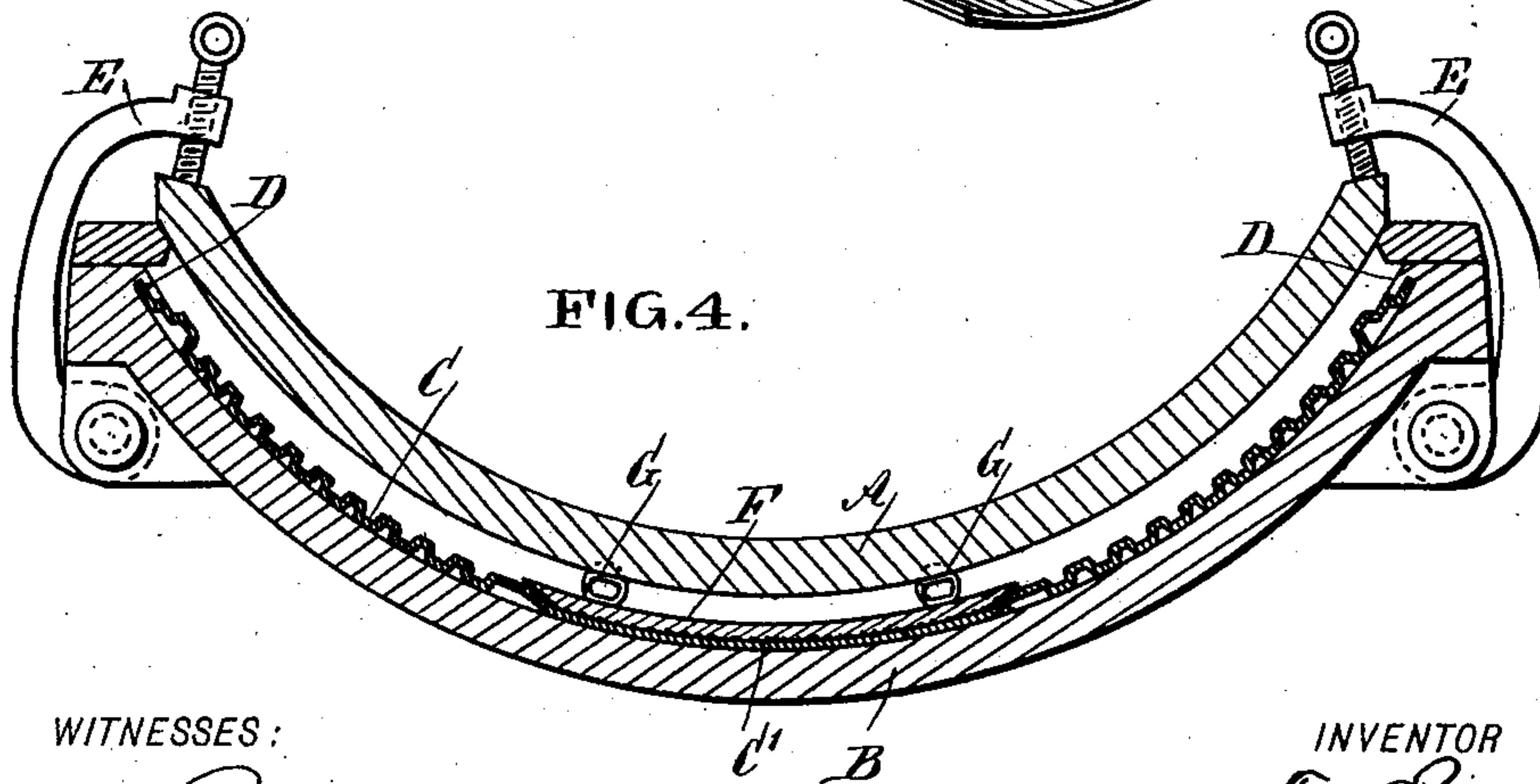


FIG.4.



WITNESSES:

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FREDERICK A. RINGLER, OF NEW YORK, N. Y.

## PLATE FOR USE IN STEREOTYPING.

SPECIFICATION forming part of Letters Patent No. 672,859, dated April 23, 1901.

Application filed May 23, 1898. Serial No. 681,487. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK A. RINGLER, of the city of New York, borough of Manhattan, in the county and State of New York, have invented certain new and useful Improvements in Plates for Use in Stereotyping, of which the following is a full, clear, and exact description.

The object of the invention is to provide certain new and useful improvements in plates for use in stereotyping, whereby half-tone line-etched engravings or duplicate electrototype-plates are securely held in position in the matrix while the metal for forming the stereotype-plate is poured into the mold and whereby the said plates are secured in their proper position in the stereotype-plate to form integral parts thereof.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the molding-machine in an open position and with the matrix in place. Fig. 2 is a longitudinal section of the matrix, showing the recess for the reception of the plate which is to be cast in the stereotype. Fig. 3 is a sectional perspective view of the stereotype paper mold with the plate in position, and Fig. 4 is an enlarged cross-section of the closed mold with the matrix and the plate that is to be cast within the stereotype in position.

The mold or casting-box, as shown in Fig. 1, is provided with the usual cope A and a drag B, mounted to turn in the usual frame, the drag being adapted to receive and support a matrix C, the side edges of which extend under side bars having lips D for holding the matrix in position while pouring the metal. The cope A is adapted to be locked in place by the usual clamps E, as illustrated in Fig. 4, with space left in the box for the metal to be poured for forming the stereotype-plate.

When making the matrix, a recess C' is formed therein to the depth of the type-face by means of a dummy-plate, so that when the ma-

trix is finished the recess C' is adapted to receive the plate F, made in the usual manner and formed on its top with yielding spacers G, in the form of springs, to be engaged by the inner face of the cope A when the latter is closed on the drag and fastened thereto by the clamps E. As shown in the drawings, the springs G are secured to the plate near opposite edges thereof. Now it is evident that when the cope A closes it engages with its inner face the said yielding spacers and presses the plate F firmly into the recess C', sufficient space being left between the back of said plate and the inner face of the cope A for the metal poured into the mold to cover the said back and embed the yielding spacers G. The diameter of said springs is somewhat more than the space between the back of the half-tone plate F and the inner face of the cope A to cause the latter to compress the springs, so as to force the plate F firmly in position in the recess C', so that none of the poured metal can pass to the printing-surface of the plate. The coiled springs are soldered or otherwise secured at their ends to the plate, and as they extend nearly the full length of the plate and present a uniform diameter to the cope A it is evident that the plate is uniformly pressed in position and held there while the metal is poured to bring the printing-face of the plate in perfect alinement with the remaining type-face. It is evident that if this does not take place the finished plate will not print properly—that is, the impression will be light in one place and heavy in another.

The form of spring employed not only serves to hold the plate in proper position during the casting, so as to insure printing of the entire face of the plate, but on account of being open it permits a ready flow of the metal, so that the plate becomes properly anchored in the metal.

It is understood that as the poured metal completely embeds the spacers G and as the latter are fastened to the back of the half-tone plate F it is evident that the half-tone plate is securely held in place in the stereotype-plate and forms an integral part thereof.

After the metal is poured and set then the mold or casting-box is opened and the plate F is found to be integrally secured in the metal forming the stereotype-plate, the print-

ing-face of the plate being in alinement with the type-face of the stereotype-plate.

As shown in the drawings, the stereotype-plate is formed segmental for use on a cylinder-press, especially in newspaper-work; but it is evident that the improvement may be applied to flat stereotype-plates, if desired. For segmental stereotype-plates the plate F is first bent to conform to the segment, as indicated in the drawings.

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

A half-tone or other plate for forming part of a stereotype-plate, the said plate being

provided on its back with coil-springs located adjacent to two opposite side edges and approximately parallel therewith, the said springs extending with their ends adjacent to the other side edges of the plate, the ends of the springs being fastened to the plate, the said springs being of such diameter as to be compressed by the cope to force the plate firmly in position in the matrix, when placed in the casting-box or mold, as set forth.

FREDERICK A. RINGLER.

Witnesses:

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