

No. 644,222.

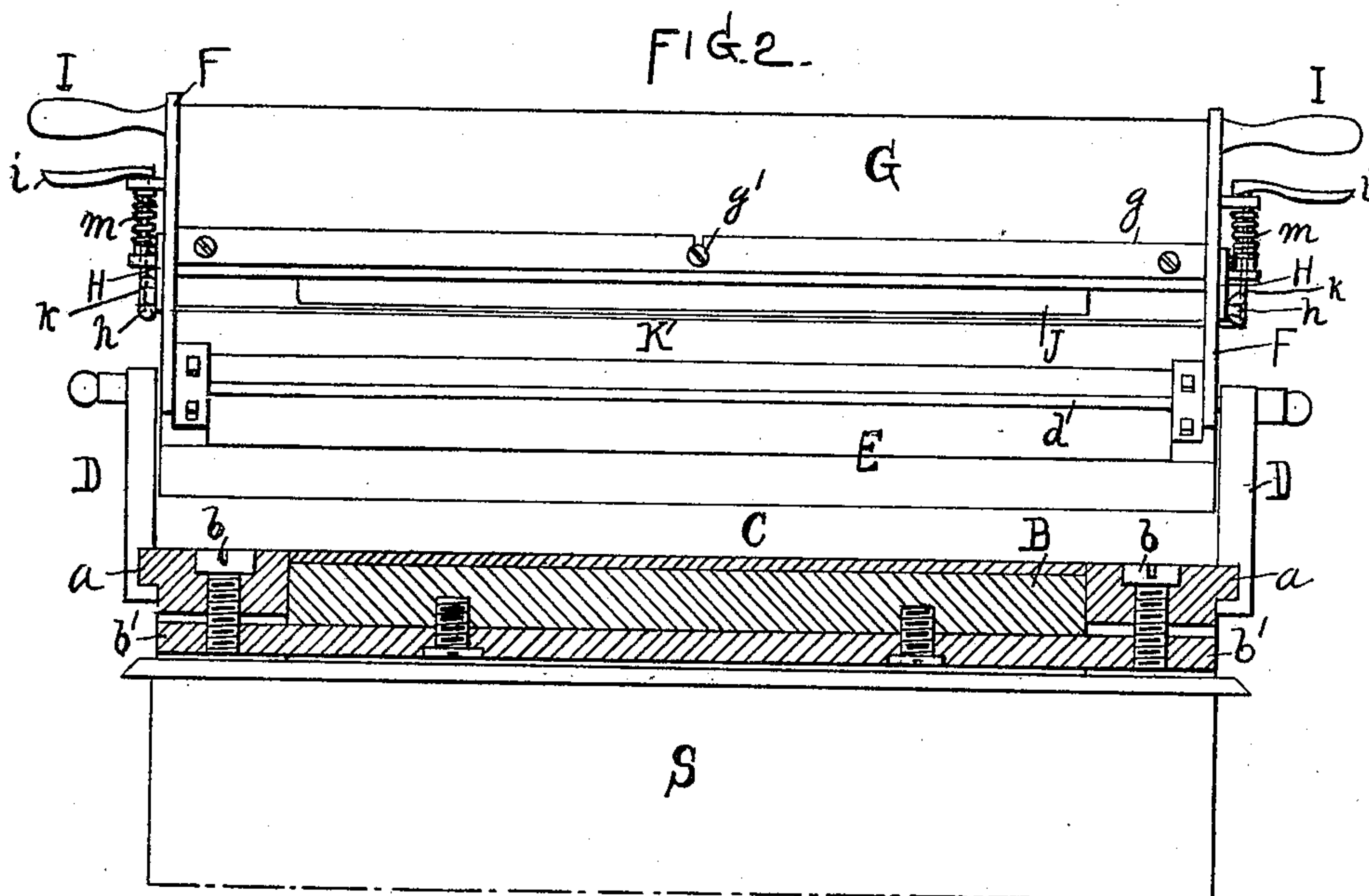
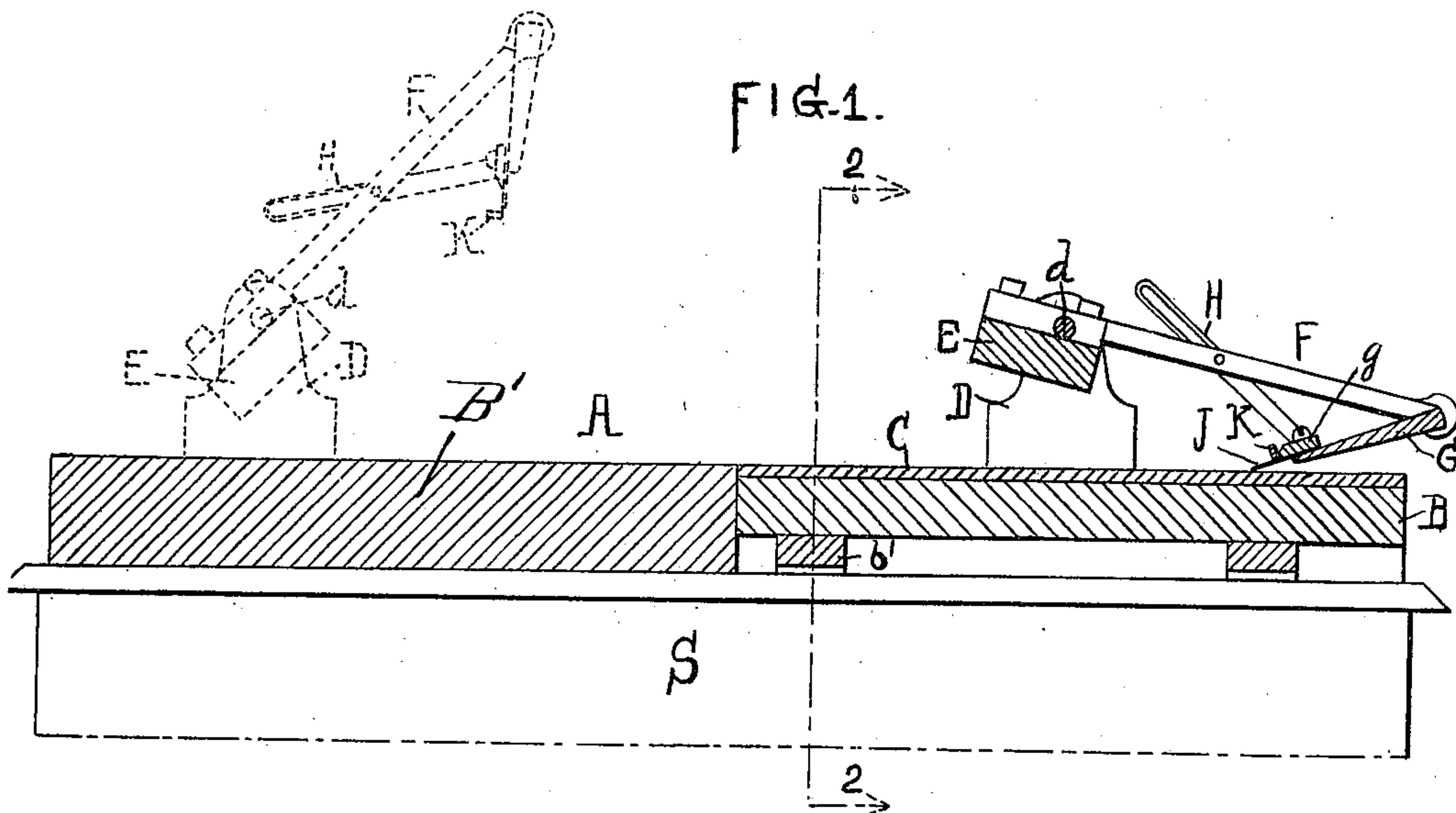
Patented Feb. 27, 1900.

J. E. BROOKES.

INKING DEVICE FOR PLATE PRINTING.

(Application filed June 21, 1899.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## INKING DEVICE FOR PLATE-PRINTING.

SPECIFICATION forming part of Letters Patent No. 644,222, dated February 27, 1900.

Application filed June 21, 1899. Serial No. 721,361. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES E. BROOKES, a citizen of the United States of America, and a resident of East Liverpool, in the county of Columbiana, State of Ohio, have invented Improvements in Inking Devices for Plate-Printing, of which the following is a specification.

My invention has reference to copper or steel plate printing, more particularly of that class which is used in glass, porcelain, or other pottery-ware factories for making the transfer-sheets, whereby designs of various kinds are put on glass, porcelain, and pottery-ware. In such printing in potteries a very thick gummy ink has to be used and the engraved printing-plates have to be kept hot. After the ink has been put on the engraved plate the surplus ink is removed and the face of the plate cleared by means of a palette-knife manipulated by hand. It is a difficult task and one requiring much skill to thus remove the surplus ink properly by means of the knife, and in the case of copper plates it is especially wearing and destructive of the engraved surface of the plate.

The main object of my invention, then, is to provide a device which can be used to quickly and efficiently remove the surplus ink or color without the need of special skill on the part of the operator and without injuring the surface of the engraved plate.

In the accompanying drawings, Figure 1 is a longitudinal section. Fig. 2 is a transverse section on the line 2 2, Fig. 1, but showing the scraper in its elevated position.

A is the ordinary metal table, which can be heated by any suitable means—as, for instance, by simply resting the table upon the top of a stove S. A part of this table is cut out to receive the vertically-adjusting part B, on which the engraved plate C is laid, preferably in such a way that the surface of the engraved plate will be flush with the surface of the remaining portion of the table. This portion B' supports the ink and may be termed the "palette." The part B is adjusted by means of set-screws b, passing freely through side pieces of the main part of the table and with their threaded portions entering the cross-pieces b'. On this table is mounted a suitable carriage in such a way

that it can be traversed over the plate and table from front to back, the front being that part of the table in which the plate C is set. In the drawings I have shown the table as provided with flanges a, entering grooves in two side plates D D, which are connected together by a cross-bar d to constitute the traveling carriage to be pushed back and forth longitudinally of the table. On this carriage is mounted a flexible blade in such a way that the blade can be traversed over the engraved plate on the table at a suitable angle as the carriage is pushed along. This blade may be mounted in various ways; but I prefer the construction shown in the drawings. On the cross-bar d is pivotally mounted a cross-piece E, at the opposite end of which are fixed arms F, having pivoted to their outer ends a clamping plate or board G, which is provided with means for setting it at varying angles—as, for instance, by slotted brace-rods H, provided with suitable thumb-screws h. To the forward edge of this plate G is clamped the flexible blade J, which is as long as the engraved plate is wide. This blade is held in place by an upper clamping-plate g, fastened by a suitable screw g', and this upper clamping-plate extends farther over the flexible blade than does the plate G, as shown in Fig. 1, in order that the flexible blade may be pressed down with better effect upon the engraved plate.

Some counterweighting means is provided to normally tend to raise the blade-carrying frame and the blade to the elevated position shown by dotted lines in Fig. 1 and by full lines in Fig. 2. For instance the cross-piece E may be of metal and set more to one side of the pivot than the other, as shown in Fig. 1.

The blade-carrying frame may be provided at its opposite sides with suitable handles I, by which it and the carriage can be manipulated.

The device rests normally in the position indicated by dotted lines in Fig. 1. When the ink or color has been applied to the surface of the engraved plate C and properly pressed into the engraving in the ordinary manner, the carriage and its blade-carrying frame and blade are drawn back to the other or front end of the table at which the operator stands and the frame and blade are



pressed down to the position shown by full lines in Fig. 1, the operator pressing down upon the handles I. He then, by means of these handles and while still pressing down upon them, pushes the carriage from the position shown by full lines toward that shown in dotted lines, Fig. 1, so as to scrape or clean off the surplus ink or color from the surface of the plate. The operator releases the downward pressure as the inclined blade J leaves the engraved plate and the frame and blade rise to the position shown by dotted lines. The most effective angle at which to incline the blade J so as to efficiently remove the surplus ink from the plate without injuring the surface of the latter will be determined by experiment in each particular device.

I prefer to provide some means whereby the ink which is collected by the blade J may be automatically removed and dropped onto the table as the blade rises from its work. A convenient construction of device for this purpose is shown in the drawings, and consists of a transverse scraper-plate K, carried by rods *k* at the opposite edges of the blade-carrying frame and acted on by springs *m*, which tend to push the rods and the scraper-plate to the position shown in Fig. 2. Handle-pieces *i* are mounted on the upper ends of the rods K adjacent to the handles I, so that when the operator grasps these handles I the scraper-plate K will be drawn up over the scraper-plate to the position shown by full lines in Fig. 1. When the operator releases his hold, the springs *m* will push the scraper-plate K over the face of the blade J to discharge the accumulated ink onto the table.

I claim as my invention—

1. A machine for use in inking plates in plate-printing, comprising a table having a plate-supporting part and a palette part, in combination with a carriage adapted to be reciprocated over the table, and a flexible blade on the carriage, and means whereby said blade may be pressed down by hand upon the plate and passed over the plate at an angle, substantially as described.

2. A machine for use in inking plates in plate-printing, comprising a table on which

the plate is mounted, in combination with a carriage adapted to be reciprocated over the table, with a pivoted frame on the carriage and a flexible blade in the frame to be passed at an angle over the plate, substantially as and for the purpose set forth.

3. A machine for use in inking plates in plate-printing, comprising a table on which the plate is mounted, in combination with a carriage adapted to be reciprocated over the table with a pivoted frame on the carriage and a flexible blade and means whereby it may be adjusted to different angles in the frame, as and for the purpose set forth.

4. A machine for use in inking plates in plate-printing, comprising a table on which the plate is mounted, in combination with a carriage adapted to be reciprocated over the table, with a counterweighted, pivoted frame on the carriage and a flexible blade in the frame to be passed at an angle over the plate, substantially as and for the purpose set forth.

5. A machine for use in inking plates in plate-printing, comprising a table on which the plate is mounted, in combination with a carriage adapted to be reciprocated over the table, and a flexible blade with clamping-plates for the blade on the carriage, the upper clamping-plate extending farther over the blade than the lower one, as and for the purpose set forth.

6. A machine for use in inking plates in plate-printing, comprising a table having a plate-supporting part and a palette part and means for heating both said parts of the table, in combination with a carriage adapted to be reciprocated over the table, and a flexible blade on the carriage and means whereby said blade may be pressed down by hand upon the plate and passed over the plate at an angle, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES E. BROOKES.

Witnesses:

ELIJAH W. HILL,  
C. C. HILL.