

J. T. ROBERTSON.
Plate Printing Machinery.
No: 123,933.

Patented Feb. 20, 1872.

FIG. 1.

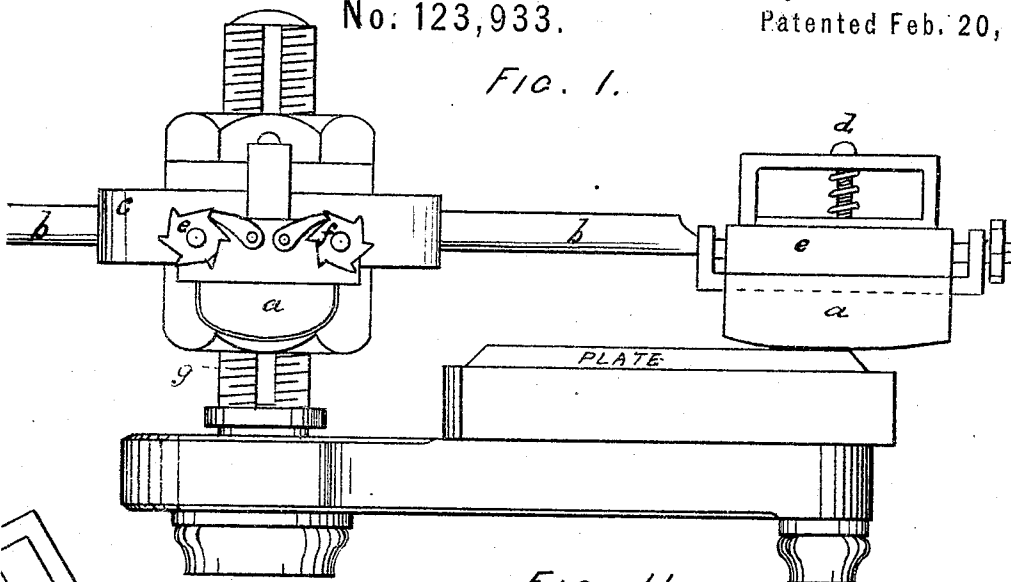
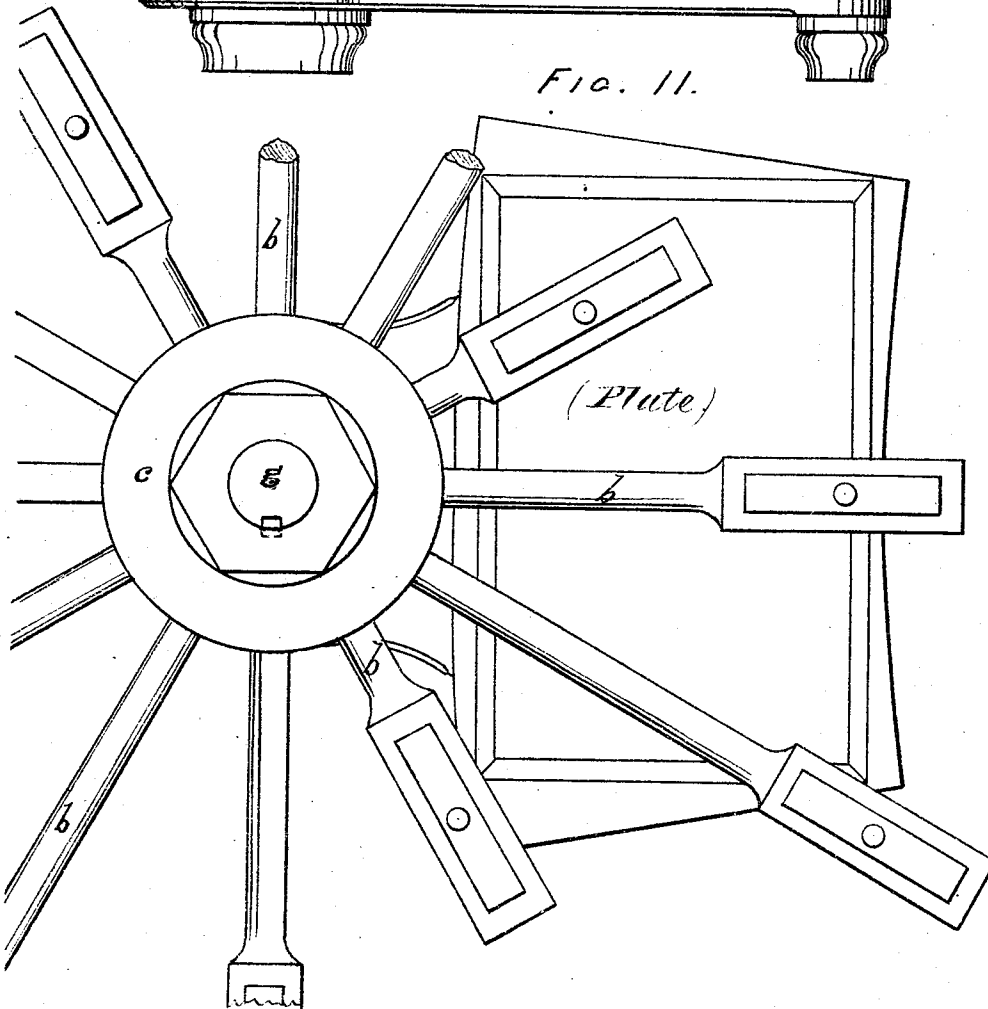


FIG. 11.



WITNESSES.

Nathan Lewis
Minkemee Hall

INVENTOR.

Judah T. Robertson

UNITED STATES PATENT OFFICE

JUDAH TOURO ROBERTSON, OF NEW YORK, N. Y.

IMPROVEMENT IN PLATE-PRINTING MACHINERY.

Specification forming part of Letters Patent No. 123,933, dated February 20, 1872.

I, JUDAH TOURO ROBERTSON, of New York, in the county and State of New York, have invented certain new and useful Improvements in Apparatus for Cleaning and Polishing Plates in Plate-Printing, of which the following is a specification:

The said improvements relate to plate-printing presses, in which, as usually operated hitherto, the ink is distributed over the plate, and is then wiped with a cloth, which removes the larger portion of the superfluous ink from the surface, leaving it to be subsequently polished by the naked hand of the printer. There have been various attempts to perform this manipulation by machinery, by which the ink may be left undisturbed in the engraved marks or cuts of the plate, from which it is transferred in the operation of printing. Rollers, belts, and buffers have been employed for the purpose, but they have either failed to clean the surface of the plate perfectly or the ink has been scooped up from the engraving.

Nature and Objects of the Invention.

The object of my invention is to imitate, as far as may be possible, the nature and movements of the hands in wiping and polishing; and it is accomplished by means of a series of elastic pads placed on arms radiating from a revolving shaft at right angles with the plane of the plate, so that the working-surface of the pads is in a rectilinear plane parallel and nearly coincident with that of the plate. The line of the revolving shaft should be placed beyond the plate, because if it were over it there would be little or no action on the part of the plate directly under the shaft. I prefer to use as the material for the body of the pad the article of manufacture known in the trades as sponge India rubber. That the soiled covering of the pads may be readily removed, each pad is mounted with a pair of rollers that may be rotated with a key, and held by pawls and ratchets. The clean cloth for the covering is wound on one of these rollers, and the end passes under the pad to the other roller, to which it is

secured, and upon which it may be wound when too much soiled for further use. Each pad is furnished with a spring and adjusting-screw, and the hub that carries the set of pads is mounted on the shaft with a screw-nut on each side, so that the pads may be regulated to a uniform pressure by the screw on each of them, and the entire set may then be adjusted on the shaft to the pressure required. The edges of the plate should be beveled that the pads may not be unduly worn. After the pads have left the plate in their rotation, they may pass over a cleansing roller and scraper, or over a stationary wiping-pad furnished with a movable covering-cloth in a manner similar to the revolving pads described. A press should be mounted with two sets of apparatus, of which one, to wipe the ink, should have the pads covered with twilled muslin or cloth, and the other, to be used as a polisher, should have chamois or other similar covering, and be provided with means to dust the pads with whiting in any of the convenient ways that suggest themselves to a mechanic; and, in addition, the polishing-pads may themselves be advantageously polished, after receiving the whiting and before reaching the plate, by passing over a smooth surface, as of polished metal.

Description of the Drawing.

To enable others skilled in the arts to which it appertains to make and use my invention, I will proceed to describe its construction and operation with reference to the drawing.

Figure 1 is a side elevation with an end view and a side view of a pad, and Fig. 2 is a plan of the series of arms that carry a set of pads.

The pads *a* are adjusted on radial arms *b* of a revolving hub, *c*, in such a way that they are divided into sets that break joints with each other, as the several members of each set break joint with themselves. The pads are made of sponge-rubber on a metal back secured on the arms by a screw, *d*, by which they may be adjusted in opposition to the pressure of the

spiral spring around the screw, as may be required. A permanent cloth covering is stitched over the elastic cushion and the metal back, and two rollers, *e* and *f*, are carried in suitable journals on the frame of the pad, and fitted with ratchets and pawls so that the soiled covering may be rolled up on one side after passing from the pad as clean cloth is unrolled from the other, which can be effected, if desired, by the automatic action of the machinery. The hub into which the arms that carry the pads are secured is fitted to the revolving shaft *g* with a key that works in a slot in the shaft. Threads are cut on the shaft, and there are nuts above and below the hub to adjust its height, the slot and key insuring its rotation

at any point, while the several elastic pads are free to conform to the inequalities that are present in all transferred plates.

Claim.

I claim as my invention—

A series of adjustable pads constructed and arranged, in the manner described, to revolve around a center placed beyond the plate and in a plane nearly coincident with the face of the plate.

JUDAH TOURO ROBERTSON.

Witnesses:

NATHAN LEWIS,
WM. KEMBLE HALL.