

C. C. MAURICE.
Lithographic Presses.

No. 139,171.

Patented May 20, 1873.

Fig. 2.

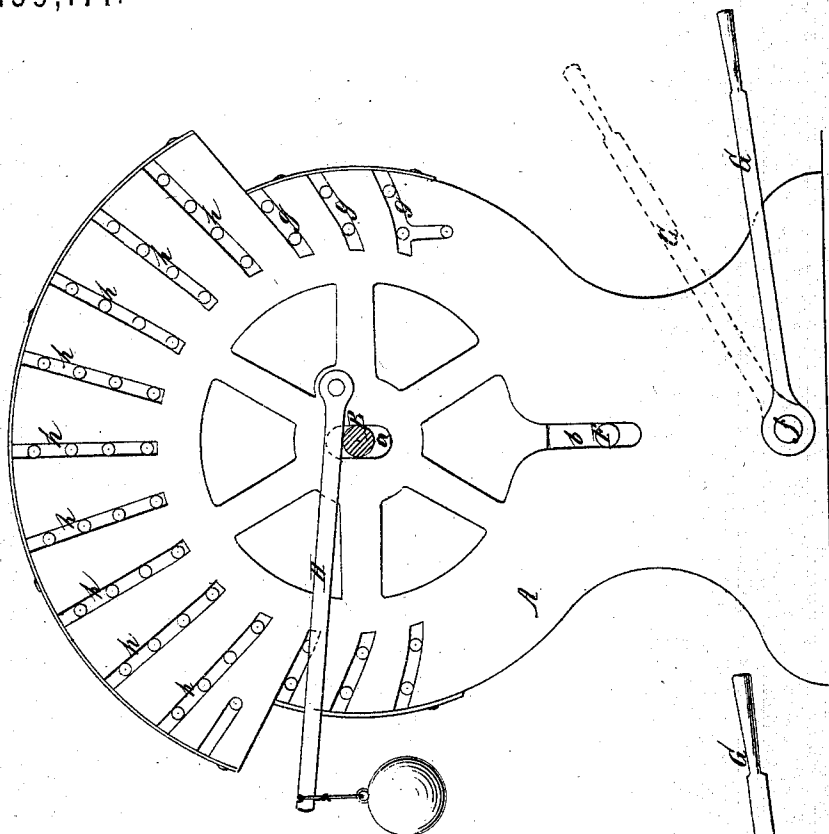
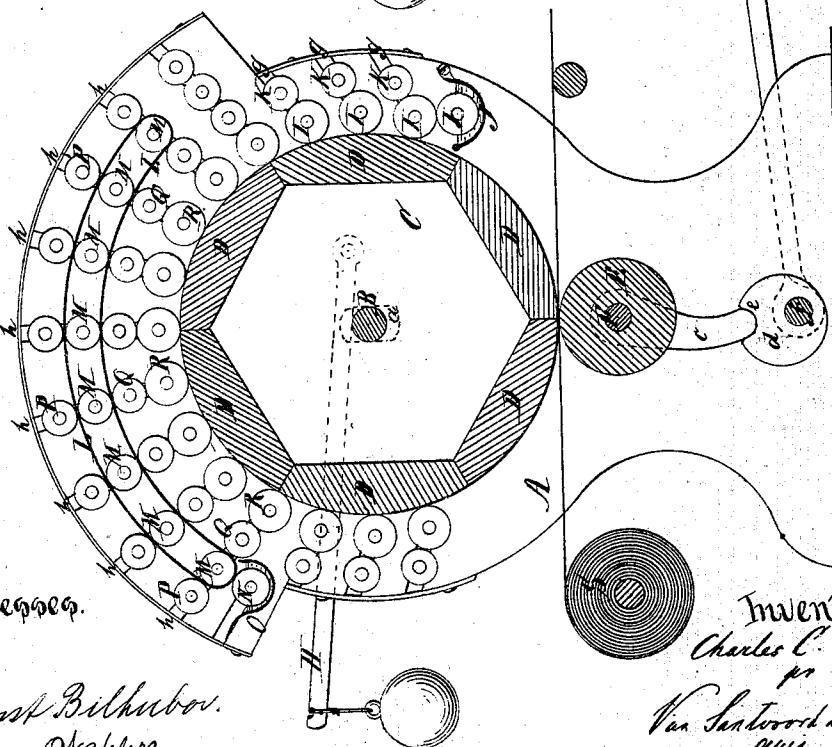


Fig. 1.



Witnesses.

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IMPROVEMENT IN LITHOGRAPHIC PRESSES.

Specification forming part of Letters Patent No. **139,171**, dated May 20, 1873; application filed March 12, 1873.

To all whom it may concern :

Be it known that I, CHARLES CAMILLE MAURICE, of the city, county, and State of New York, have invented a new and useful Improvement in Lithographic Presses; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a transverse vertical section of this invention. Fig. 2 is a side elevation of the same.

Similar letters indicate corresponding parts.

This invention relates to certain improvements in lithographic presses; and it consists in combining, with a printing-cylinder composed of a series of segmental stones arranged upon a cylinder which has its bearings in oblong slots in the frame of the machine, and which cylinder is kept in contact with an impression-cylinder by weights or springs, so that the same can accommodate itself to sheets of different thickness, and impressions can be taken without interruption upon a continuous sheet or web, the moistening and inking being accomplished by an apron, which transmits such fluid to a series of rollers, so that the stone cylinder is continuously and uniformly supplied.

In the drawing, the letter A designates a frame, which is provided with two oblong slots, *a*, to receive the axle B of a drum, C. This drum is made polygonal, or in any other desirable form or shape, and on its circumference are secured a series of segmental stones, D, fitted together, so that they form a continuous cylindrical surface, and that each of the segments can be removed and replaced by another of the same shape whenever it may be desirable. Beneath the stone cylinder D is situated a roller or cylinder, E, the shaft F of which extends through slots *b* in the side pieces of the frame A, and on this shaft are secured two toes, *c*, which engage with recesses *d* in the circumference of eccentric disks *e* that are mounted on a rock-shaft, *f*. This rock-shaft has its bearings in the lower part of the frame A, and on its ends are mounted hand-

levers G, by means of which said rock-shaft can be turned in either direction. By depressing the hand-levers the impression-cylinder E is raised against the stone cylinder D, and by applying sufficient force to the hand-levers said stone cylinder is also raised in the slots *a*, and its shaft is brought to bear against levers H, which are pivoted to the frame A, and which are depressed by weights or springs. The amount of pressure with which the stone cylinder bears down upon the impression-cylinder, therefore, depends upon the weight of said stone cylinder, and upon the pressure exerted on the shaft of said cylinder by the levers H, and I am enabled to pass sheets of paper of varying thickness through between the stone cylinder and the impression-cylinder without changing the effect, since the stone cylinder is enabled to accommodate itself to the thickness of each sheet, while the pressure exerted by the same remains unchanged. The surface of the stone cylinder D is moistened by a series of rollers, I, one of which dips into a fountain, J, while the remaining rollers have their bearings in oblique slots *g* in the frame A, so that they bear down upon the surface of the stone cylinder by their inherent gravity. The moistening-rollers I operate in connection with a series of distributing-rollers, K, so as to effect a uniform supply of moisture throughout the entire surface of the stone cylinder.

The stone cylinder operates in connection with a mechanical inking apparatus, which consists of an endless apron, L, that is stretched round a series of rollers, M, and which is in contact with a roller, N, that dips into an ink-fountain, O. With the apron L are combined three sets of rollers, P, Q, and R, which, together with the rollers M and N, have their bearings in oblique slots *h*, so that the lowest or inner set of rollers is held in contact with the surface of the stone cylinder by the inherent gravity of the various rollers. The apron L is constantly supplied with ink from the fountain O, and as the several sets of rollers, together with the apron, are caused to rotate by contact with each other and with the stone cylinder, the ink taken up by the apron is evenly distributed over the surfaces

of the various rollers, and finally transmitted to the surface of the stones.

By the means above described, I am enabled to print, on a continuous web taken from a roller, S, said web being passed through between the stone cylinder and the impression-cylinder without interruption, and the labor of feeding the paper or other material to the press is dispensed with.

What I claim as new, and desire to secure by Letters Patent, is—

In combination with the printing-cylinder

D, composed of a series of segmental stones arranged upon the cylinder C, having the bearing in oblong slots *a*, as described, the weighted lever H, impression-cylinder E, rollers P Q R, endless apron L, and the moistening and inking apparatus, substantially as described.

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Witnesses:

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