

Patented June 30, 1874.



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UNITED STATES PATENT OFFICE.

JOHN W. KELLBERG, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN PRINTING-PRESSES.

Specification forming part of Letters Patent No. **152,646**, dated June 30, 1874; application filed September 22, 1873.

To all whom it may concern:

Be it known that I, JOHN W. KELLBERG, of Philadelphia, county of Philadelphia and State of Pennsylvania, have invented certain Improvements in Printing-Presses, of which the following is a specification:

My invention is particularly applicable to self-feeding rotary printing-presses, such as that, for instance, described in the Letters Patent of the United States issued to William Bullock, bearing date the 14th day of April, 1863, for a printing-machine; and it relates to providing the male cutting-cylinder with a wide band of soft india-rubber, which extends along the entire length of the cylinder, and is fastened thereto immediately behind the slot therein, through which the knife or cutting-instrument plays when the machine is operating, to sever sheets from the roll. It has just such thickness that at the instant the sheet is severed it holds the web end of the paper securely against the female cutting-cylinder, and it has such width that it continues to hold the same end of the paper until the male cutting-cylinder shall have revolved so far around that the grippers mounted on their rod in the female cutting-cylinder will have room to rise beyond the periphery of that cylinder, and then close down upon the said forward end of the web and hold it until required to let it go.

In the accompanying drawings, Figure 1 represents a cross section of the two cylinders in the position they occupy at the instant a sheet is severed from the web, and Fig. 2 a plan view of the same.

A is the frame; E, the female cutting-cylinder; F, the male cutting-cylinder. K is the gripper-rod shaft, running lengthwise through the female cutting-cylinder E, having a short crank, with a small roller on the projecting outer end of the shaft, which roller works over the cam-guide P, attached to the frame A, by means of which the grippers are closed just as and when required. *f* is the finger or presser shaft, running lengthwise through the male cutting-cylinder F, provided with one or more arms, (as many as there may be grippers on the female cylinder), firmly secured to it, and upon the end of each of which arms is hinged a presser, N, having two fingers so

arranged as not to perforate the paper, but to project through suitable openings in the said rubber band beyond the periphery of the said male cylinder just at the proper time, and press the web end of the paper against the opposite cylinder, and so hold it, with one finger on each side of each gripper, until the grippers close down upon it. The shafts *f* and K are operated by cams, as shown, but need not be further described herein, as they form no part of this my invention. S' is the band of soft rubber, or like elastic material, before mentioned, and it may be fastened in any suitable manner upon the periphery of the cylinder. Its office is to hold with an elastic pressure the web end of the paper, with the co-operation of the other cylinder, until it is carried within the reach of the fingers and grippers before mentioned.

I am aware that Letters Patent of the United States were granted to Richard Vose, as administrator of William Bullock, deceased, bearing date the 1st day of March, 1870, No. 100,367, for a machine exactly similar to the one herein described, except that in that patent no soft-rubber band was used, having the location and performing the office that it does have and perform in the machine hereinbefore described; but the said Bullock's administrator described a spring-bar extending the length of the male cutting-cylinder, just in rear of the knife, and which was rendered elastic by metal springs seated under it, in the interior of the cylinder, and the presser-fingers were provided with openings to project through in the periphery of the cylinder just behind the spring-bar. Now, I disclaim that spring-bar constructed, embedded, and arranged upon the male cutting-cylinder.

I am also aware that Letters Patent of the United States were issued to John C. McDonald and Joseph Caverley for improvement in printing-presses, bearing date June 1, 1869, and that the said patentees described a paper-cutting apparatus consisting of a male and female cutting-cylinder, and that their male cutting-cylinder was provided with two spring-plates, one on each side of the knife, and that the object of these plates (they being provided with metal springs seated under them) was to hold the paper with an elastic pressure against

the opposite cylinder while the paper was being cut, and I therefore disclaim that construction and arrangement, and confine myself to my own.

What I claim, therefore, as my invention is—

In combination with the male and female cutting-cylinders F and E, the elastic strip S, fastened to the periphery of the male cutting-cylinder F, immediately in the rear of the cutting-instrument or knife, (having reference

to the direction of the revolution of the cylinder when the machine is in operation,) and otherwise constructed and arranged substantially as shown and described, for the purpose set forth.

JOHN W. KELLBERG.

Witnesses:

P. O'DONNELL,
FR. ROEPKE.