

(No Model.)

C. POTTER.

FRISKET PLACING APPARATUS FOR PRINTING MACHINES.

No. 433,214.

Patented July 29, 1890.

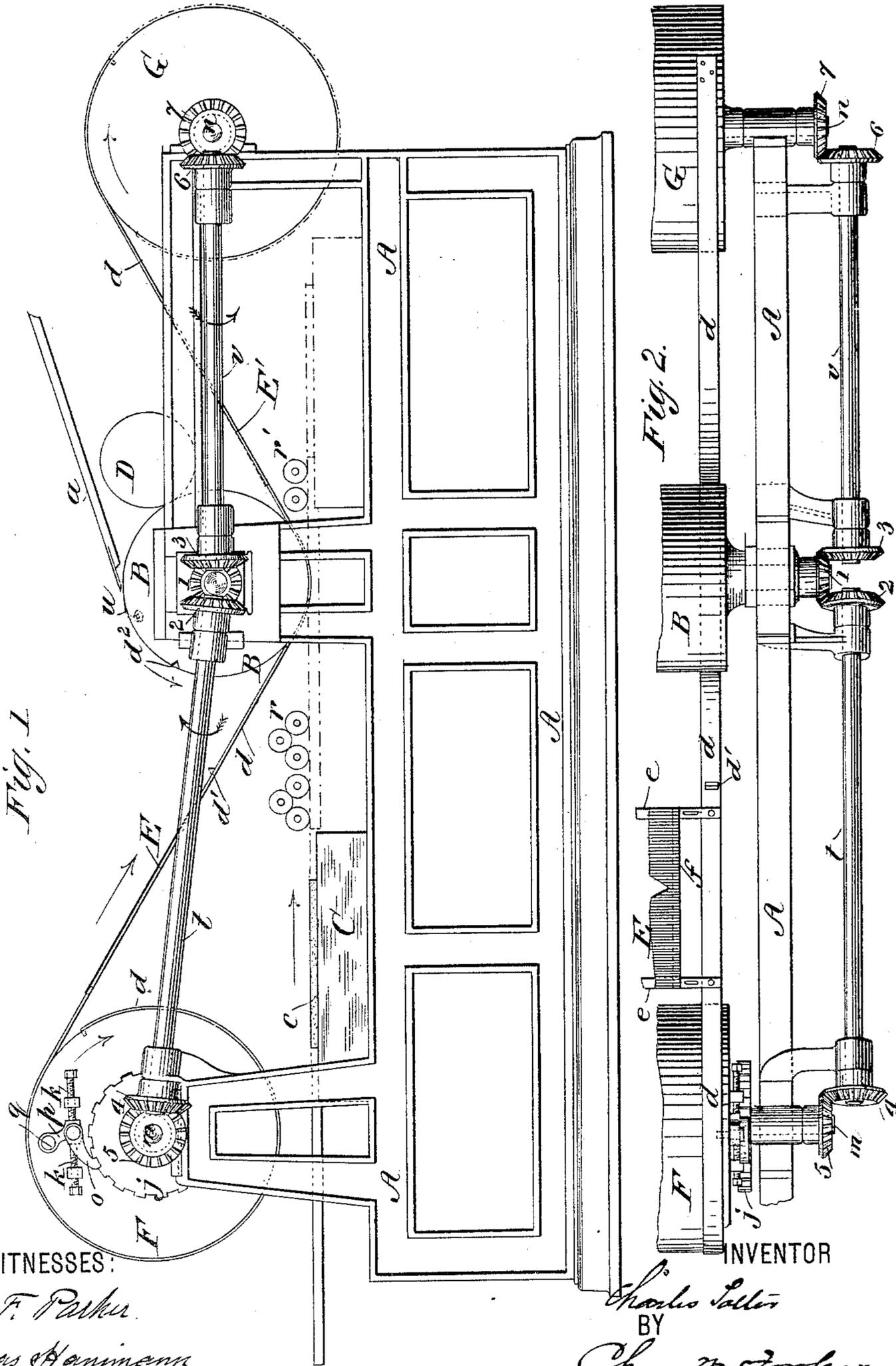


Fig. 1

Fig. 2

WITNESSES:

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FRISKET-PLACING APPARATUS FOR PRINTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 433,214, dated July 29, 1890.

Application filed October 3, 1889. Serial No. 325,906. (No model.)

To all whom it may concern:

Be it known that I, CHARLES POTTER, a citizen of the United States, residing at Plainfield, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Frisket-Placing Apparatus for Printing-Machines, of which the following is a specification.

My invention relates to cylinder-presses for lithographic or photo-gravure printing, in which the sheets of paper are printed from the etched surface of glass or other substance; and my said invention relates to improvements in apparatus for automatically placing and removing the frisket or mask sheet at each operation of printing to and from interposition between the surface of the form and the surface of the paper to be printed, whereby the successive colors or shades of a picture or other impression are properly placed at the different stages of printing.

My invention consists of two oscillating drums geared in positive relation to each other in conjunction with an oscillating impression-cylinder, to which drums the ends of the bands carrying the frisket or mask are connected, and their fastening-points maintained at a given surface distance apart.

My invention also consists in mechanism for adjusting the surface distance between the fastening-points of the bands on the drums thus geared in positive relation, whereby the tension of the bands may be regulated.

Referring to the accompanying drawings, Figure 1 is a side elevation, and Fig. 2 a partial plan view, of a printing-machine embodying my improvement.

A A represent the side frames of the machine, B the impression-cylinder, and C the form-bed, which is driven by suitable gearing and with which the cylinder B moves with proper relation, receiving an oscillating motion to seize the sheets from the feed-table *a* and to deliver them to a suitable delivering-cylinder, such as indicated at D.

r r' are the inking-rollers, which may be located at one or both sides of the impression-cylinder B.

c represents a form of glass or other substance.

d are transporting-bands of flexible steel strips or other material bearing the frisket or

mask E in definite relation of travel to that of the form *c*. In order to obtain this definite relation of travel, I employ drums F G, geared to oscillate at the same surface speed as that of the impression-cylinder B, and to which drums the respective ends of the bands *d* are connected, being held taut and reciprocated under the cylinder B. The drums F and G are geared in fixed relation to the movements of the impression-cylinder B and to one another by means of the system of miter-gears 1 2 3 4 5 6 7 and the counter-shafts *t v*, the operation of which will be readily understood by an inspection of the drawings.

In order to maintain the proper tension of the bands *d*, the drum F is adjustable upon its shaft *m*, while the drum G is fixed to its shaft *n*. I have illustrated one form of mechanism for effecting the adjustment of the drum F upon its shaft *m*, which consists of a notched disk *j*, fixed to said shaft with which disk a pawl *o* upon the drum engages. The pawl *o* is fulcrumed upon the movable end of an arm *p*, fulcrumed at *q*, while the said end of the arm *p* is embraced between the ends of tightening-screws *k*, rendering the pawl-fulcrum adjustable. In tightening the bands the drum F is first turned upon its shaft until the slack of the bands is taken up and the pawl then engaged with one of the notches in the disk *j*. The tension is subsequently obtained by turning the screws *k* to the desired point.

The frisket E is rendered adjustable in proper relation to the form by means of cross-bands *e* and longitudinal bands *f*, connecting between the cross-bands by slotted attachments similar to those described in the aforesaid application.

d' represents a tooth or stud which may be employed upon the bands *d* to engage with the notch *d'* on the impression-cylinder and insure the proper register of the frisket with the sheet to be printed and the form.

In the operation of the machine the frisket or mask sheet E occupies the position shown at E in Fig. 1, when the paper which has been registered upon the feed-table *a* is seized by the grippers *u* of the impression-cylinder. The frisket E having been properly adjusted will move at the surface speed of the cylinder B, closing upon and leaving

the paper on the cylinder as said frisket advances and passes the point of impression to the position E', (indicated by dotted lines,) the paper being carried around the cylinder B and transferred to the delivering-cylinder D. As the frisket is returned in opposite direction, the cylinder B is lifted slightly by the usual or suitable mechanism to avoid contact with the form at other times than that of printing.

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

1. The combination, in a cylinder printing-press, of an oscillating impression-cylinder, a frisket or mask sheet in contact with the impression-cylinder at its point of impression, drums to which opposite ends of the said sheet or bands forming extensions thereof are fast-

ened, and gearing, substantially as described, connecting the two drums, maintaining a fixed surface distance between the fastening-points of the said sheet or bands.

2. The combination, in a cylinder printing-press, of an oscillating impression-cylinder, transporting-bands for the frisket distended thereon at the point of impression, drums to which the ends of the bands are connected geared to oscillate at the surface speed of the impression-cylinder, and adjusting mechanism whereby the surface distance between the fastening-points of the bands upon the drum is made variable, for the purpose specified.

CHARLES POTTER.

Witnesses:

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