

A. CAMPBELL.
PRINTING PRESS.

No. 114,106.

Patented Apr. 25, 1871.

Fig. 1.

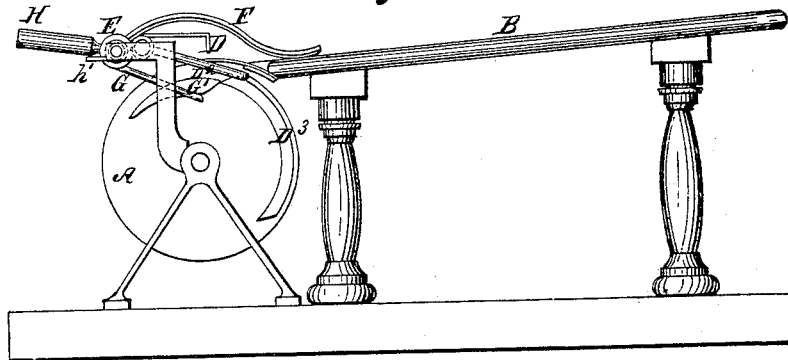


Fig 2.

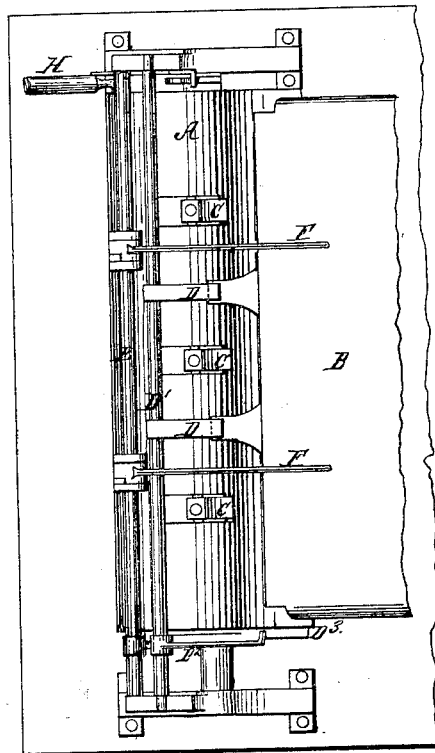
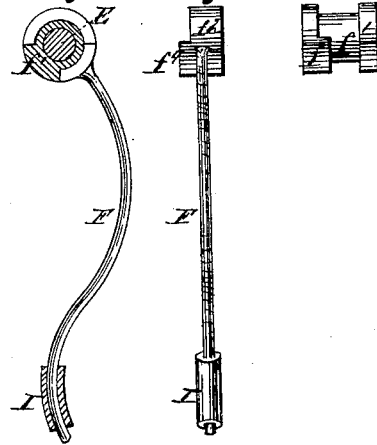


Fig 3. Fig 4. Fig 5



Witnesses.

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his attys.*

United States Patent Office.

ANDREW CAMPBELL, OF BROOKLYN, NEW YORK.

Letters Patent No. 114,106, dated April 25, 1871.

IMPROVEMENT IN PRINTING-PRESSES.

The Schedule referred to in these Letters Patent and making part of the same.

I, ANDREW CAMPBELL, of the city of Brooklyn, in the county of Kings and State of New York, have invented certain Improvements in Printing-Presses, of which the following is a specification.

Nature and Objects of the Invention.

My invention relates to the feeding mechanism of printing-presses, and consists in arranging above the feed-table a rock-shaft provided with a weighted arm or arms, and so operated by a cam upon the impression-cylinder, or other equivalent device, as to cause said arm or arms to bear upon the sheets after they are laid upon the table and adjusted to the feed-guides, and to hold them against displacement during the interval of time between the withdrawal of the feed-guides and the taking hold of the grippers, whereby a more perfect "register" may be secured.

Description of the Drawing.

Figure I is a side elevation of the impression-cylinder and feed-table of a printing-press, showing the application of my improvement thereto.

Figure II is a plan view of same.

Figures III, IV, and V are detail views of weighted levers.

General Description.

A represents the impression-cylinder, and

B the feed-table, both of ordinary construction.

C represents the grippers, by which the sheets are clamped to the cylinder, drawn from the feed-table, and carried to the impression. They are constructed and operate in a common manner.

D represents the feed-guides mounted upon a rock-shaft, D¹, and operated by an arm, D², on one end of said rock-shaft, and a cam, D³, on one end of the cylinder, this also being a common device.

E represents the rock-shaft which carries the weighted arms or sheet-holders F. It extends across the press and is located above the plane of the feed-table, and its arms F reach beyond the feed-guides D so that they may bear upon the sheet when laid against said guides.

The arms F are allowed a small amount of angular movement independent of the movement of the rock-shaft, by means of a double hub, one part, f¹, of which is fixed to the shaft by a set-screw or otherwise, and the other, f², is fixed to the arm; the fixed part f¹

having a lateral projection, f², and the arm part a corresponding lateral projection, f⁴, which projections will engage each other after the manner of a clutch-coupling and cause the arm to lift from the table when the shaft is rotated in one direction, and allow the arm to rest its weight upon the table when the shaft is rotated in the opposite direction.

The requisite movement of the shaft to rest the arms upon the table is obtained by an arm, G, upon one end thereof, engaging with a cam, G¹, upon the end of the cylinder, its return movement to raise the arm being effected by counterbalance weight H upon the other end.

The action of said weight is arrested when the arms are raised sufficiently high by a fixed stop, h', against which it strikes.

By the above-described means any degree of pressure upon the sheet necessary to properly hold it against displacement may be obtained by simply adjusting the weight of the arms.

The relative position and form of the cams D³ and G¹ is so adjusted that the arms will be made to bear upon the sheet just before the feed-guides are lifted, and to continue so to bear until after the grippers take hold of the sheet, thus insuring the perfect register of the sheet.

It is obvious that the arms can be so made as to bear upon the sheets with a spring pressure instead of simply by weight, but as the latter pressure can be more accurately and easily adjusted I consider it preferable.

To add to the friction of the arms F upon the upper surface of the sheet they may be provided with pads I of India rubber or cloth, as shown in Figs. III and IV.

Claim.

What I claim as my invention is—

The arrangement of a rock-shaft and weighted arm or arms above the plane of the feed-table in connection with means for automatically operating the same, substantially as and for the purpose hereinbefore set forth.

A. CAMPBELL.

Witnesses:

J. J. VAIL,

W. H. FORBUSH.