

J. HINCHCLIFF.
Printing-Press.

No. 162,650.

Patented April 27, 1875.

FIG. 1.

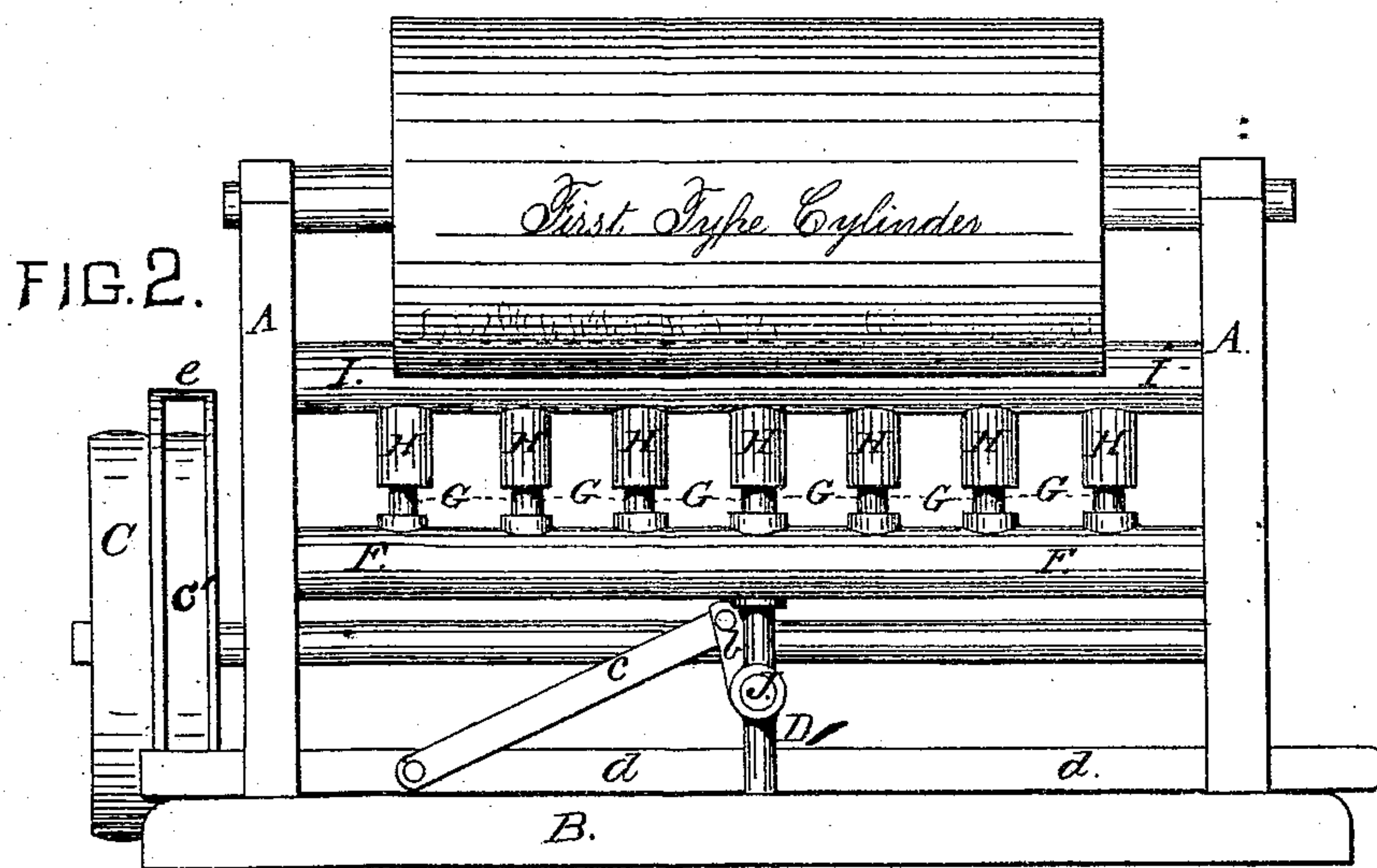
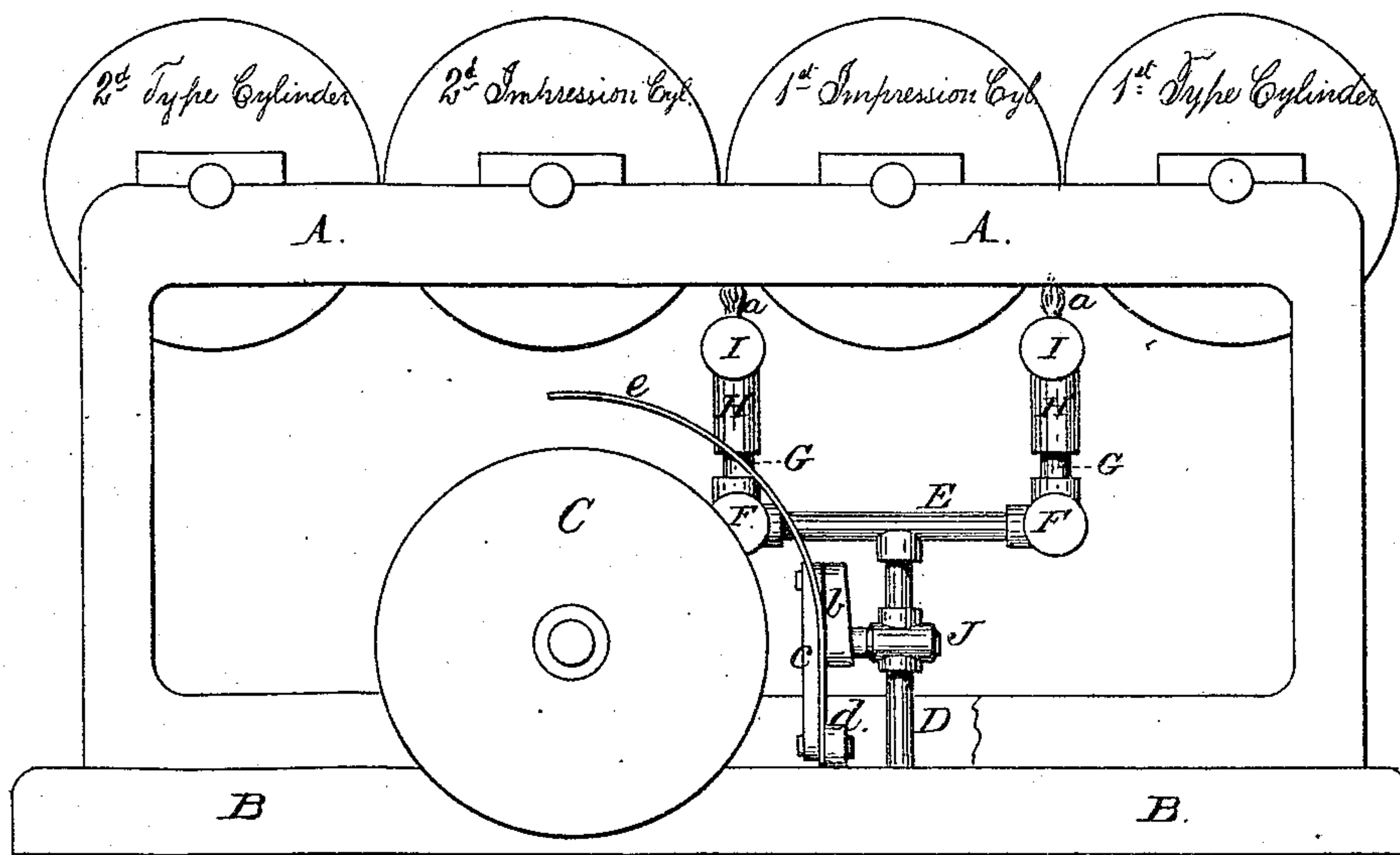
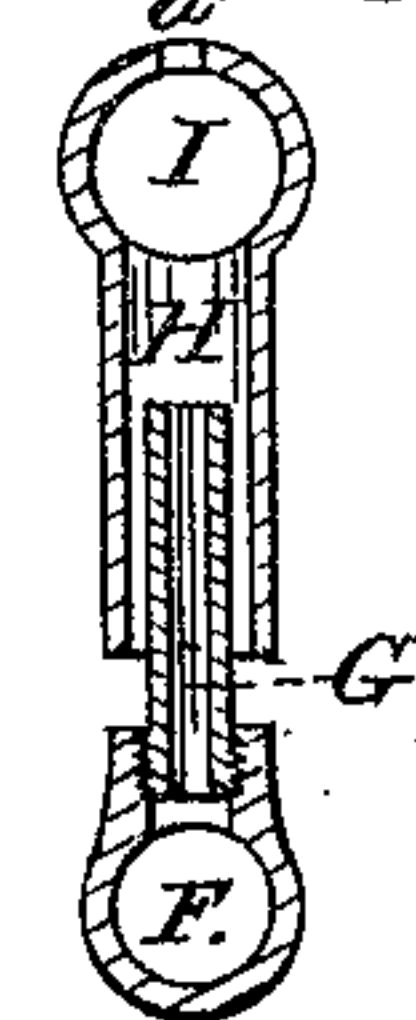


FIG. 3.



E. H. Johnson
J. P. Crawford

WITNESSES.

James Hinchcliff
per Eldon
att'y

INVENTOR

UNITED STATES PATENT OFFICE.

JAMES HINCHCLIFF, OF BROMLEY, ENGLAND, ASSIGNOR TO R. HOE & CO.,
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IMPROVEMENT IN PRINTING-PRESSES.

Specification forming part of Letters Patent No. **162,650**, dated April 27, 1875; application filed
October 13, 1873.

To all whom it may concern:

Be it known that I, JAMES HINCHCLIFF, of Bromley, in the county of Middlesex, England, subject of the Queen of Great Britain, have invented certain Improvements in Printing-Presses, which said improvements were patented in England on the 5th day of June, 1872, and numbered 1,705, of which the following is a specification:

My invention relates to printing-presses, and more particularly to those known as perfecting-presses; and consists, first, in a novel construction, combination, and arrangement of mechanism for drying the ink upon the sheets as they pass through the printing-machine, and thus facilitate the operation of printing perfected sheets; and the second part of my invention consists in a novel combination and arrangement of mechanism for shutting off the gas-flame simultaneously with the stoppage of the press.

Figure 1 is a side elevation of a perfecting-machine with my improvements. Fig. 2 is an end view of the same. Fig. 3 is a sectional detail.

In the drawing, A A show the side frames of a printing-press secured to the bed B; C, the driving-pulley, and C' a loose pulley. D shows a gas-tube, which rises from the bed B about half the vertical distance of the frame A. On the upper part of pipe D a branch pipe, E, is screwed, the ends of which enter the tubes F F, located transversely of the machine. In a series of bosses on the upper sides of the pipes are screwed the tubes G G, which enter the larger slitted gas-tubes H H, extending downward from the under side of the tubes I I, situated under and parallel with the first impression-cylinder. This arrangement is shown in detail at Fig. 3, the space between the tubes G and H affording a passage for air, which mingles with the gas from the tube G before it issues from the longitudinal slit *a'* in the pipe I, and when lit forms a long narrow

sheet of flame along the tube. The flame-tubes I I are situated below, on each side of the first impression-cylinder, and as the paper passes between this cylinder and the first type-cylinder it is carried along on the impression-cylinder with its freshly-printed side presented to the flames, and on arriving at the second impression-cylinder the ink is sufficiently dried to prevent its setting off on the blanket of the second impression-cylinder.

It will be necessary on stopping the machine to shut off the gas, and to do this the supply-pipe D is provided with a stop-cock, J, the crank-handle *b* of which is operated by the pitman C, connected with the slide-bar *d*, to which is secured the belt-shipper *e*, which runs the belt on and off the driving-pulley C, and it will be readily seen that as the bar *d* is reciprocated the stop-cock will be opened and closed.

To protect the first type-cylinder from the effects of the heat, a sheet-metal plate may be introduced between it and the flame.

I claim—

1. The combination, with two or more type and impression cylinders, whereby a web is printed on opposite sides, of a series of gas-burners, which direct heat upon said web at a point between the first type and first impression cylinders, or between the first and second impression-cylinders, whereby the ink is dried to prevent its offsetting, substantially as described.

2. In a printing-press having impression and type cylinders, the combination of the slitted gas-tubes I I with the shipper *e*, cock J in pipe D, and connecting-rod *c d* for shutting off the gas supply simultaneously with the stopping of the press, substantially as described.

JAMES HINCHCLIFF.

Witnesses:

G. N. SURSHAM,
J. W. FRIGOT.