

C. Montague. Sheet 1, 2, Sheets.

Printing Press.

N^o 9424.

Patented Nov. 23. 1852

Fig: 1.

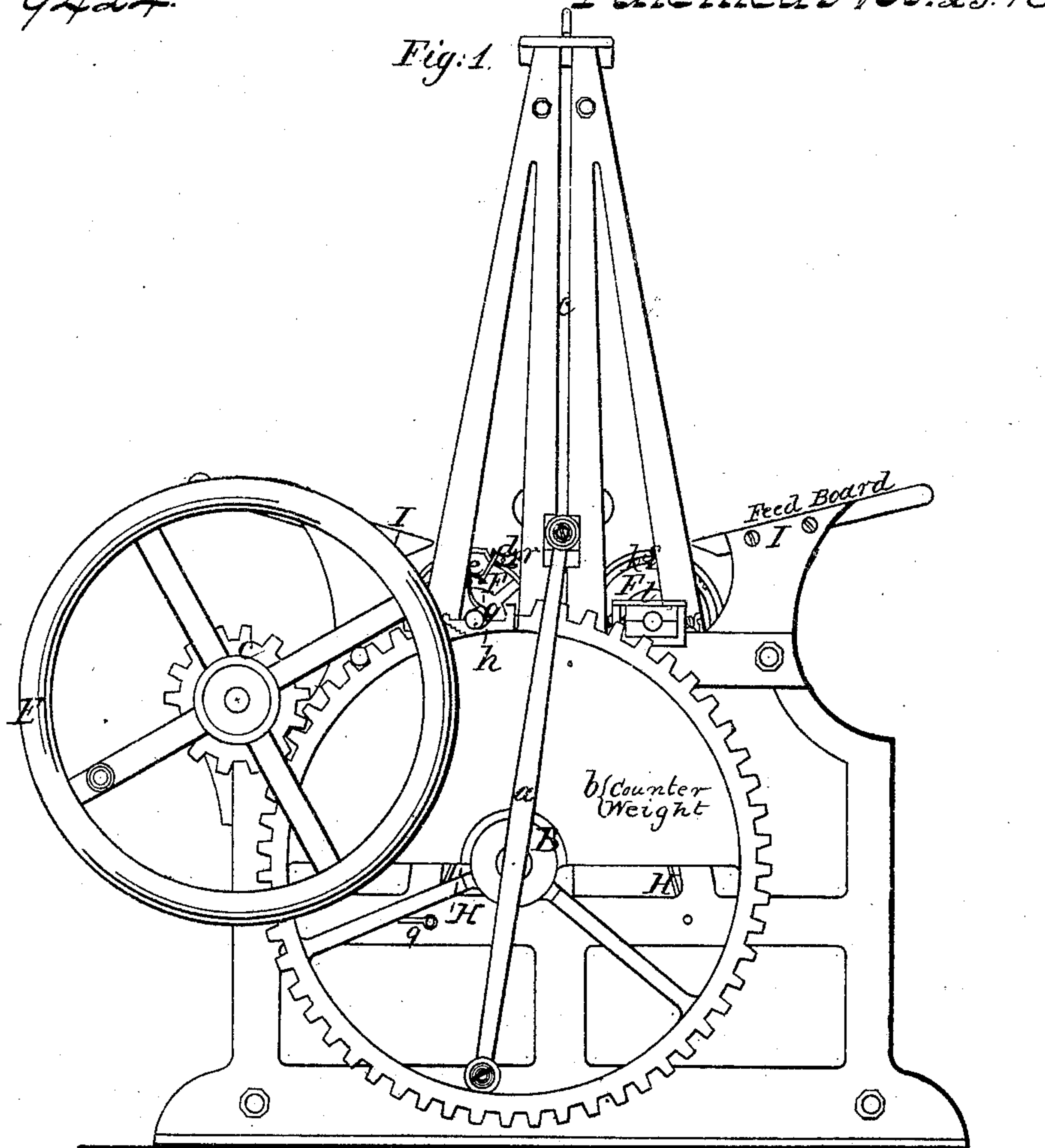
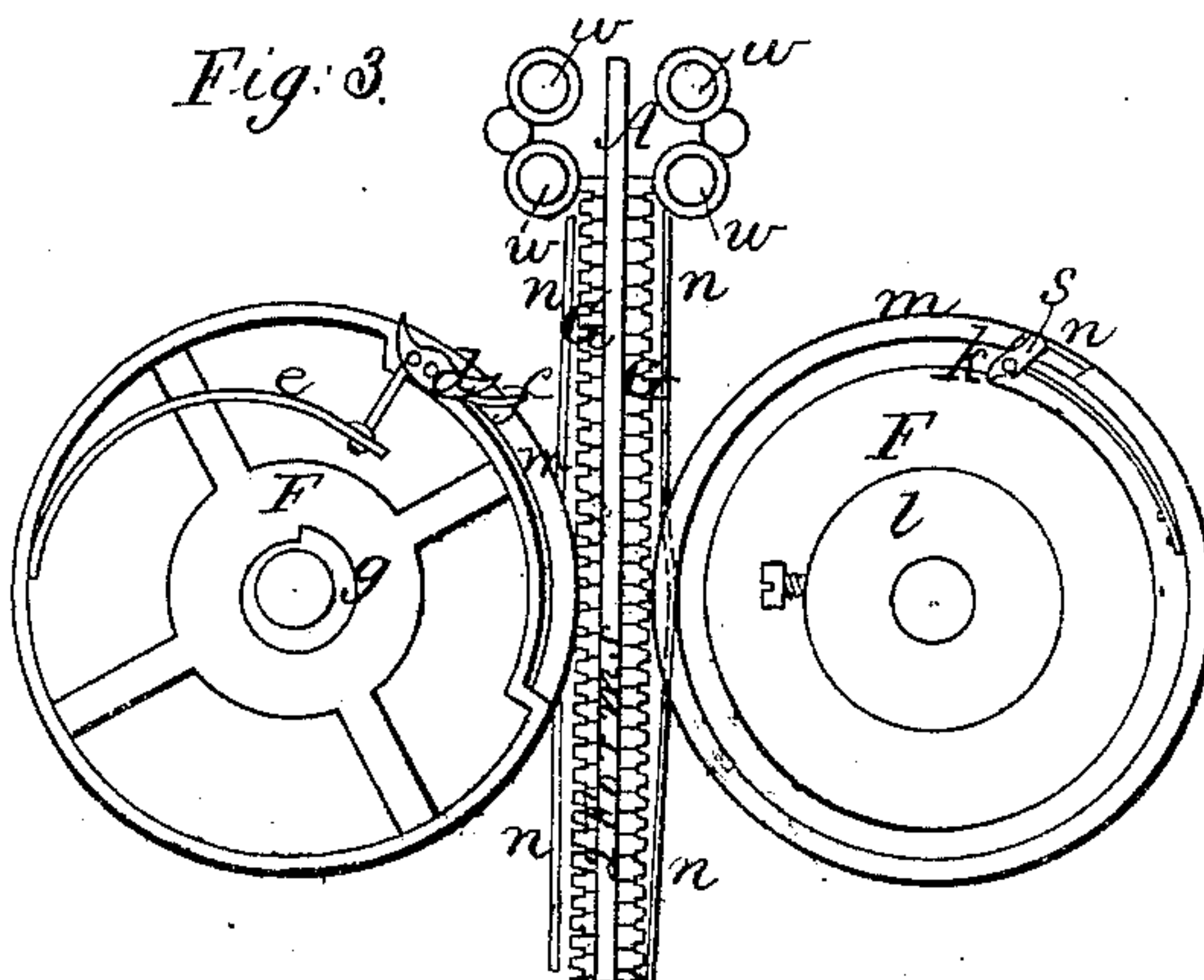


Fig. 3.



Sheet 2. 2 Sheets.

Printing Press.

N^o 9424.

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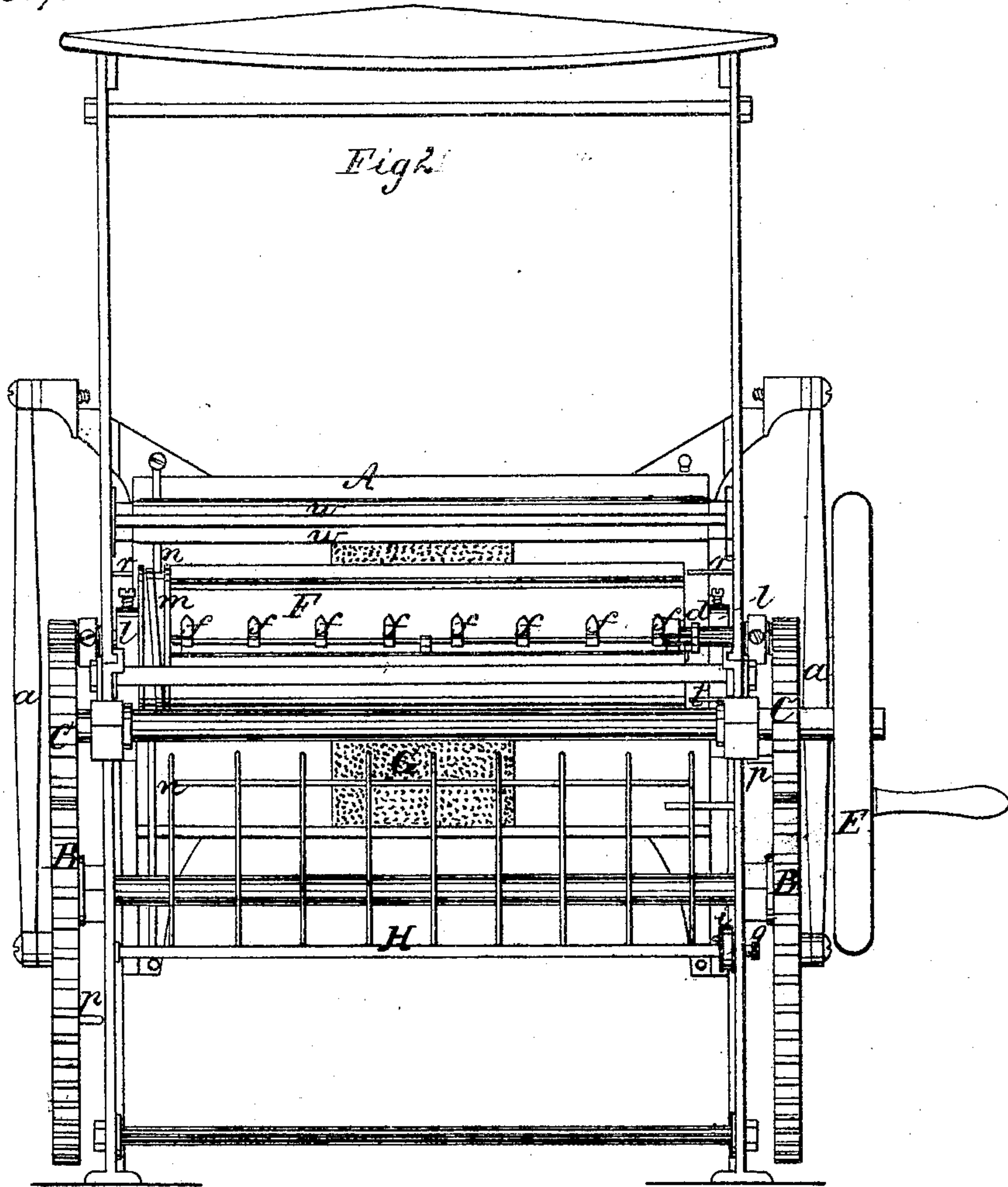


Fig: 4.

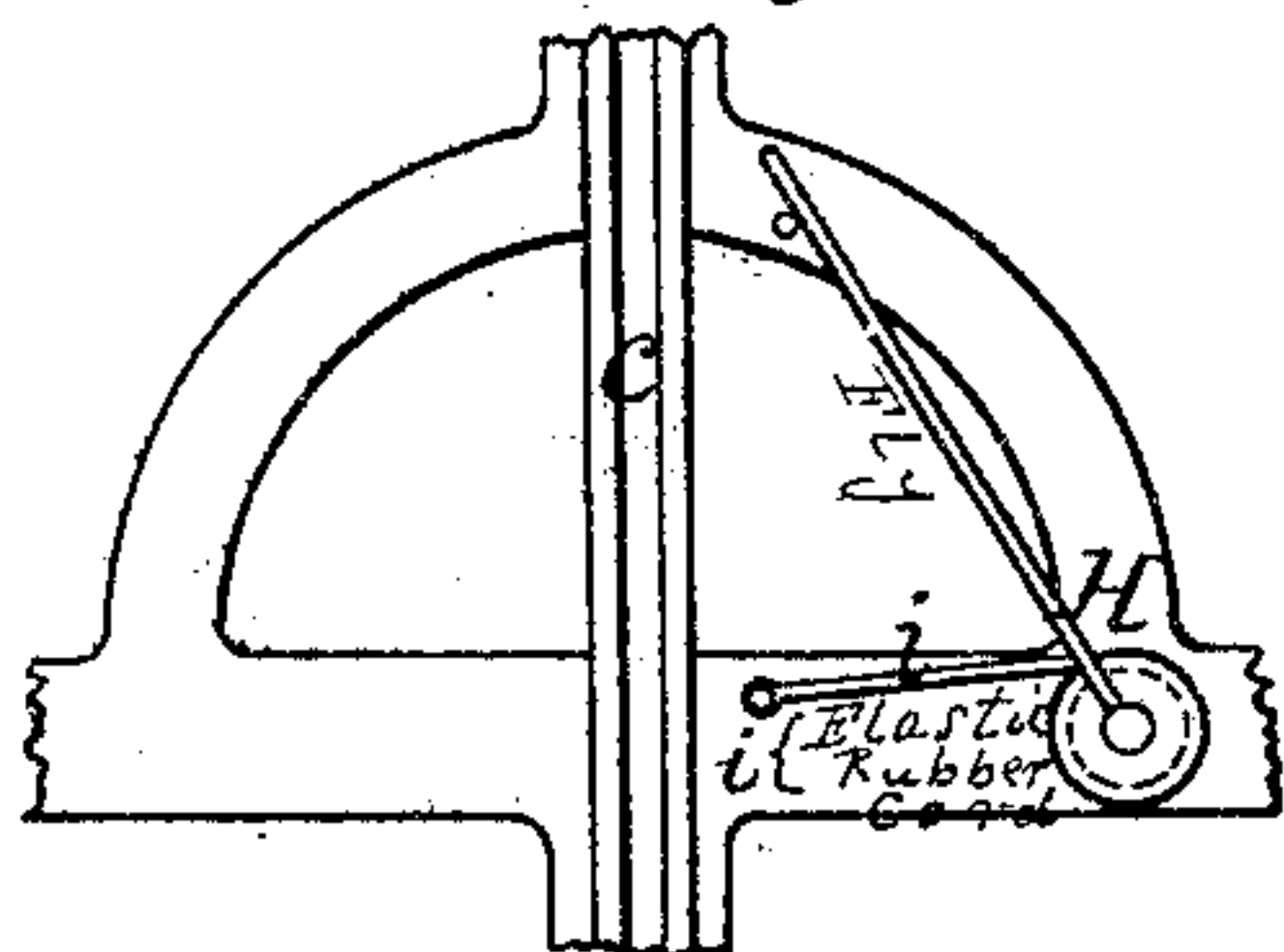
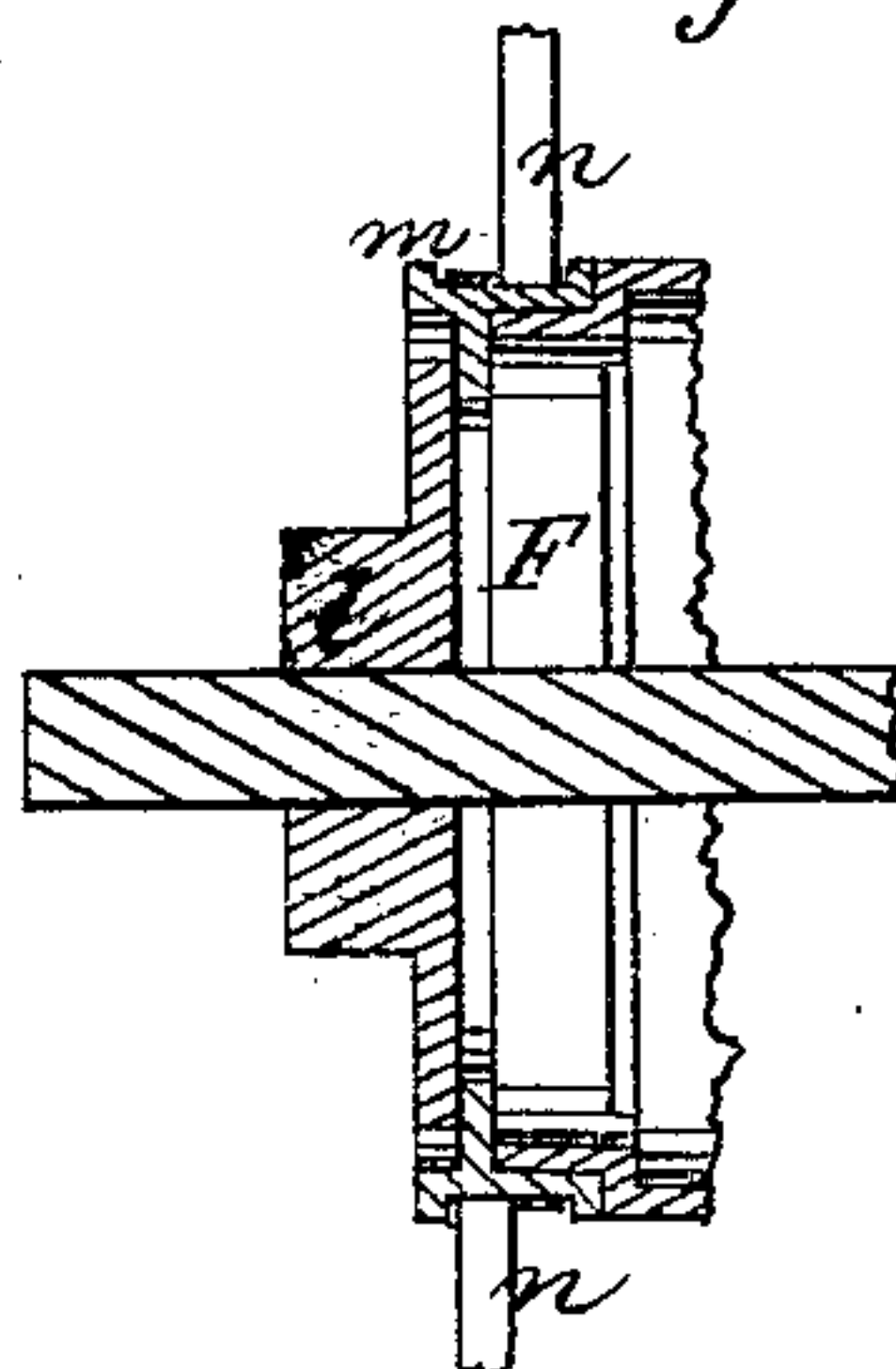


Fig: 5



UNITED STATES PATENT OFFICE.

CHAS. MONTAGUE, OF PITTSFIELD, MASSACHUSETTS.

PRINTING-PRESS.

Specification of Letters Patent No. 9,424, dated November 23, 1852.

To all whom it may concern:

Be it known that I, CHARLES MONTAGUE, of Pittsfield, in the county of Berkshire and State of Massachusetts, have invented
5 a new and Improved Printing-Press; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in
10 which—

Figure 1, is a side elevation of my improved printing press, Fig. 2, a front elevation of the same, Figs. 3 and 4, views of parts detached, and Fig. 5, section of a part
15 detached.

Like letters designate like parts in all the figures.

I place my bed plate A, in a perpendicular position, and cause it to move up and
20 down in grooves *c, c*, by means of pitmen *a, a*, and wheels B, B, which are driven by pinions C, C, on the shaft, through which the power is applied. I place forms G, G, on one or both sides of the bedplate, so as
25 to take one, or two impressions at once as may be desired. In the drawings two forms are represented. The cog-wheels B, B, should be loaded on the side opposite the journals of the pitmen *a, a*, as represented at *b*, in order to counterbalance the
30 weight of the forms and bedplate. The impression is made by means of pressure cylinders F, F, made adjustable to and from the forms by movable bearings. Each one
35 of said cylinders has a portion of its periphery removed, and replaced by a portion of a smaller cylinder. Each cylinder has upon one end a cylindrical flanged ring *m*, revolving freely upon its cylinder. It is put in
40 motion by means of a band or chain *n*, which passes once tightly around the ring and has its two ends attached to the upper and lower sides of the bed-plate. When the bedplate ascends, said rings turn in one direction, and
45 in the opposite direction, when the bedplate descends. Each ring is provided with a spring click *s*, which falls into a notch *k*, at each revolution of the ring. The notch *k*, is made in the edge of a disk *l*, which is
50 adjustable upon the shaft of the cylinder. One end of each cylinder shaft has also a notch *g*, into which a spring catch *h*, plays at the end of each revolution of the cylinder. When the bedplate descends, the ring

m, revolves so as to press the click *s*, against
55 the notch *k*, and consequently moves the cylinder around with it till the bedplate reaches the bottom of its downward stroke, when the catch *h*, falls into its notch *g*, and
60 prevents the cylinder revolving in the opposite direction while the bedplate is making its ascending stroke. When the bedplate is ascending, the click *s*, recedes from its notch *k*, and leaves the cylinder stationary till the click again falls into its dent at
65 the end of the upward stroke, and the bedplate begins to descend. By this arrangement the receding portion of each cylinder is brought opposite the form and held there stationary, so that the type and cylinders
70 are not in contact during the ascent of the bedplate. But as soon as the bedplate begins to descend the cylinders begin to revolve, and the pressure portions of their surfaces are brought against the type and print
75 the sheets. Near one side of each receding portion of the cylinders, I arrange a series of fingers *f, f*, &c., upon a small shaft, which revolves in bearings attached to the cylinder. These fingers are so arranged that they fit
80 closely over the edge of the outer periphery of each cylinder when turned one way on their shaft, and, when turned back, sink into the receding side of each cylinder, so as to allow the cylinder to revolve without ob-
85 struction. I attach to one end of their shaft a small cam *d*, having a small rod attached to it on one side of its axis, which rod is attached at its other end to a spring *e*. Said
90 spring holds the fingers back or forward according as it is on one or the other side of their shaft. I attach a small pin *r*, to the frame in such a position that it shall strike the cam *d*, and reverse its position just as the
95 cylinder begins to revolve; and also another pin *t*, in a similar manner below, which brings the cam back to its first position, when the cylinder has turned a certain distance. By this arrangement the sheets are
100 seized, as they are placed upon the shelves I, I, and drawn around upon the cylinders till they receive the impression, when they are left free again to be thrown off from the press. I make use of a fly H, which is provided with an elastic cord *i*, to hold it in
105 near the bedplate till the moment when the sheets have received their impression and are left free by the fingers. At that mo-

ment, a pin *p*, attached to the large cog-wheel B, strikes an arm *g*, attached to the shaft of the fly, and thereby turns the fly out and casts off the sheets. By thus causing my bedplate to move vertically between the pressure rollers, I am enabled to make two impressions at the same time with my cylinder press; and another advantage is gained in transferring all the friction, produced by the motion of the bed plate, to the journals of the pitmen.

The peculiar advantages of the intermittent motion of the pressure cylinders consist in the small size, which I am enabled to give the cylinders; and, by their having a motion only in one direction, in feeding the sheets in and delivering from the press in the most simple manner.

The forms pass up between the ink rollers *w*, *w*, &c., and the ink is applied to them by any suitable and well known means.

I do not claim placing the bedplate in a vertical position, as I am aware this has been done before, but

What I do claim as my invention and desire to secure by Letters Patent, is—

1. Placing the bedplate in a vertical position, when a reciprocating motion is imparted to it, by which two impressions can be made at each forward movement of the said bed plate, substantially as herein set forth.

2. I also claim the combination of the vertically acting bed with a cylinder or cylinders, arranged in such a manner that the forward movement of the bed will impart motion to the cylinder, or cylinders, to give or take an impression, and allow said cylinder, or cylinders, to remain stationary during the return movement of the bed, substantially as herein set forth.

The above specification of my improved printing press, signed and witnessed this fifth day of April, 1852.

CHARLES MONTAGUE.

Witnesses:

JULIUS HARFWELL,
F. D. OWEN.