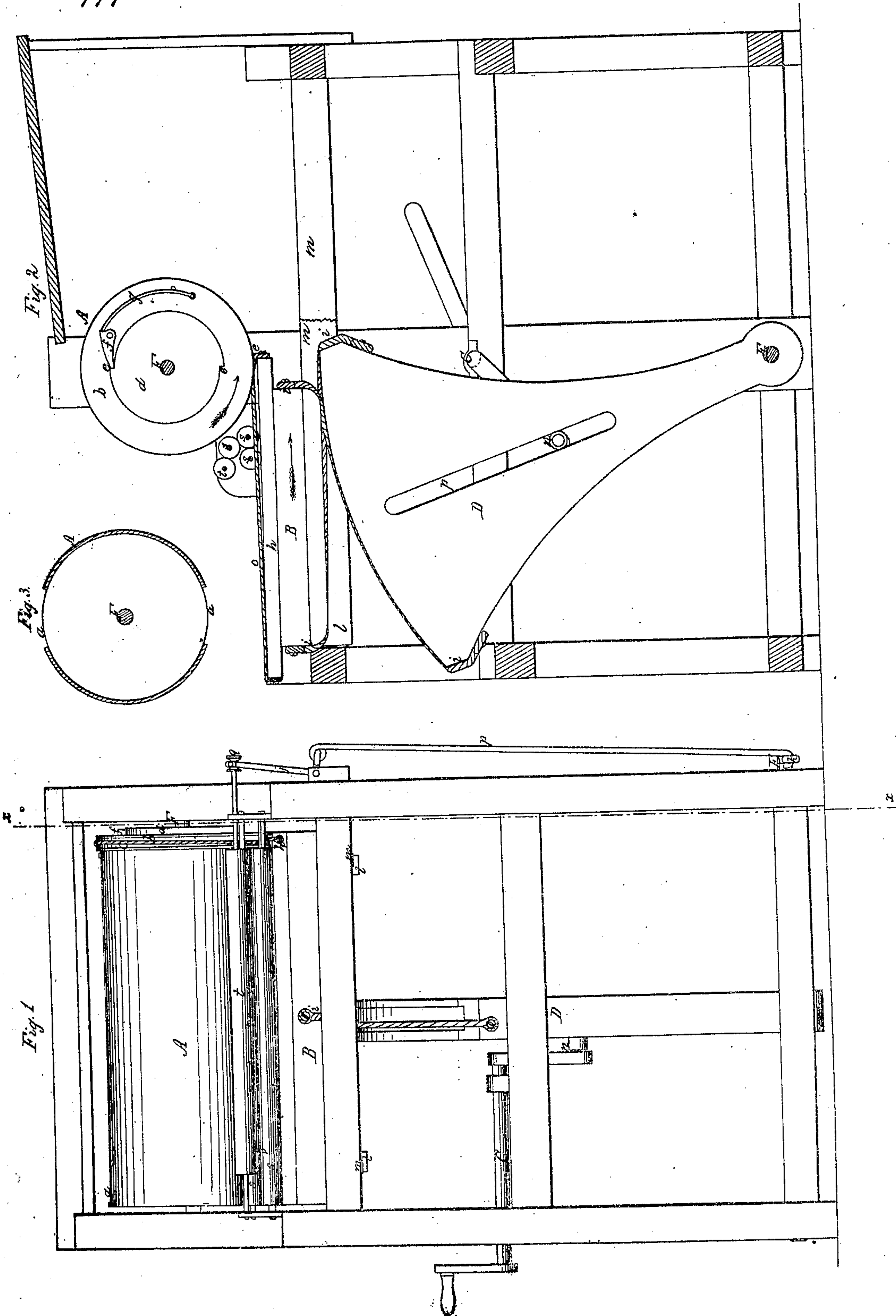


*C. Montague.*  
*Printing Press.*

*Nº 9992.*

*Patented Sept. 6. 1853.*





# UNITED STATES PATENT OFFICE.

CHARLES MONTAGUE, OF PITTSFIELD, MASSACHUSETTS.

## PRINTING-PRESS.

Specification of Letters Patent No. 9,992, dated September 6, 1853.

*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 a new and useful Improvement in Printing-Presses; 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, Figure 1 being an end elevation of the improved printing-press; Fig. 2, a longitudinal section thereof in the line  $x\ x$  of Fig. 1, and Fig. 3 a transverse section of the pressure-cylinder detached.

Like letters designate corresponding parts in all the figures.

The nature of my invention consists in such a combination and arrangement of the cylinder A, and bed B, that while one sheet is receiving its impression, the sheet to receive the next impression, will be carried forward upon the cylinder nearly to the bed, for the purpose of being in readiness to commence receiving its impression the moment after the bed starts upon its next forward movement, substantially as herein set forth.

The bed B, slides horizontally upon suitable ways  $m, m$ , being secured thereon by guides  $l, l$ . A reciprocating movement is given it by means of a vibratory lever D, terminating, at its vibratory end, in an arc, over which pass cords  $i, i$ , that are fastened to the ends of the bed, (as represented in the drawings,) for the purpose of imparting the motion of the lever to the bed. Said lever is caused to vibrate by means of a crank  $n$ , which is attached to the end of the driving shaft C, and enters a long radial slot  $p$ , in the lever. The driving shaft is turned in the proper direction to cause the crank  $m$ , to act in the upper end of the slot  $p$ , when the bed is moving in the direction for taking the impression, (as shown by the arrow, Fig. 2,) and to act in the lower end of said slot while bringing the bed back, after each impression. By this arrangement I am enabled to dispense with considerable power, since the crank thereby acts with considerably greater leverage while producing the impression, when most power is needed, and acts with diminished leverage during the return movement of the bed, when comparatively little power is required.

The shaft E, on which the lever D, vibrates, is firmly secured to, and vibrates

with said lever, in order to impart motion, by means of cranks  $j, k$ , and lever  $r$ , to a reciprocating ink roller  $t$ , which thus distributes the ink upon the other ink rollers  $s, s, s$ .

The pressure cylinder A, is of extra-large size, and is divided by planes through its axis into two or more sections, respectively of suitable width to pass upon the entire form, and separated by narrow openings, or spaces,  $a, a$ . Upon one end of its shaft F, is firmly secured a notched wheel  $d$ , leaving a narrow space between it and the end of the cylinder, within which is situated a flanged pulley  $b$ , equal in diameter to that of the cylinder, and made to play freely on said shaft. A cord  $c$ , passes around the periphery of said pulley, its middle being fastened thereto, and its ends attached to the ends of a projecting slat, or bar,  $h$ , on the bed B, as shown in the drawings; through which arrangement, a vibratory motion is imparted to said pulley by the movements of the bed. Upon the periphery of the notched wheel  $d$ , is formed a number of angular notches  $e, e$ , situated opposite the centers of the spaces  $a, a$ , of the cylinder, and formed as shown in Fig. 2.

When the bed B, moves forward in the direction shown by the arrow, for making an impression, the pulley  $b$ , is drawn around in the direction indicated by the arrow thereon, (Fig. 2,) which causes the cylinder A, to turn in the same direction and impart the required pressure to the form. Then, in the return stroke of the bed and pulley, the click  $f$ , is drawn in the opposite direction, away from its notch  $e$ , and around the periphery of the ratchet-wheel  $d$ , till it falls into the next notch; so that the cylinder remains stationary during said return movement of the bed; and a space  $a$ , being, at that time, at the bottom of the cylinder, and of sufficient width for the purpose, the bed returns without bringing the form in contact with the cylinder.

The sheets are fed to the cylinder as the sections for their reception pass the lower edge of the inclined table above the cylinder; consequently, there is no loss of motion of the cylinder, for the reason that the forward end of such sheet to be printed—after the first one—is brought down nearly to the bed by the movement of the cylinder in giving sheet is receiving its impression, the sheet whereas, in presses which print but one

sheet at each revolution of the cylinder, there is a loss of motion, at each revolution of the cylinder, equal to the distance between the edge of the table, that receives the imprinted sheets, and the bottom of the cylinder; which is fully one third the circumference of the cylinder.

Having thus fully described my improvement in printing presses, what I claim as new and desire to secure by Letters Patent, is—

Such a combination and arrangement of the cylinder A, and bed B, that while one sheet is receiving its impression, the sheet

to receive the next impression, will be carried forward upon the cylinder, nearly to the bed, for the purpose of being in readiness to commence receiving its impression the moment after the bed starts upon its next forward movement, substantially as herein set forth.

The above specification of my new and useful improvement in printing presses signed by me this 23rd day of March 1853.

CHARLES MONTAGUE.

Witnesses:

J. S. BROWN,

GEO. A. C. SMITH.