D. Wolfe. Sheet 1. 2 Sheets.

Printing Press.

No. 21228. Patented Aug. 17. 1858.

Fig. 1

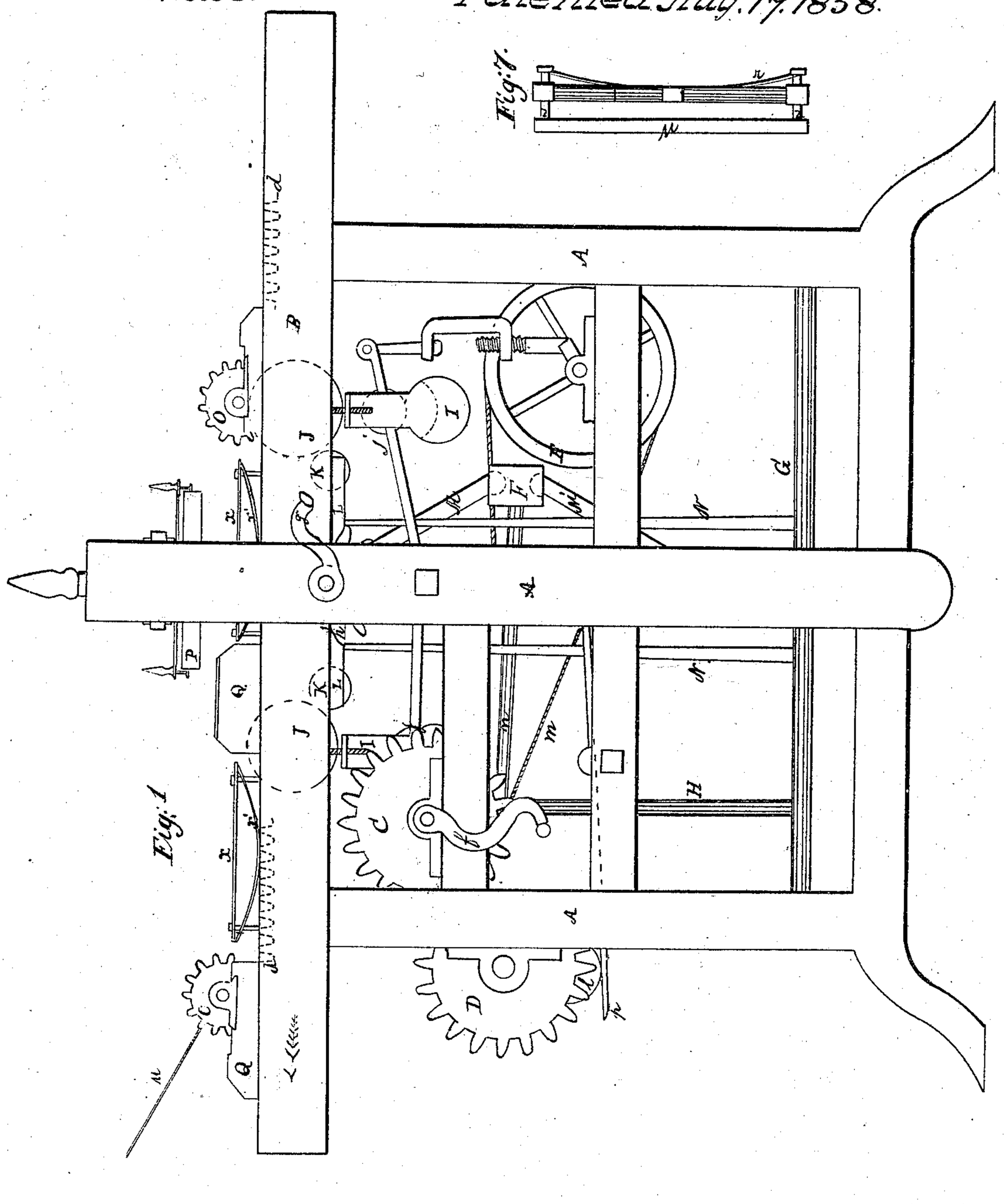


Fig. 2

D. Wolfe. Sheet 2. 2 Sheets.

Printing Press.

No. 21228. Patented Aug. 17. 1858.

Fig. 5.

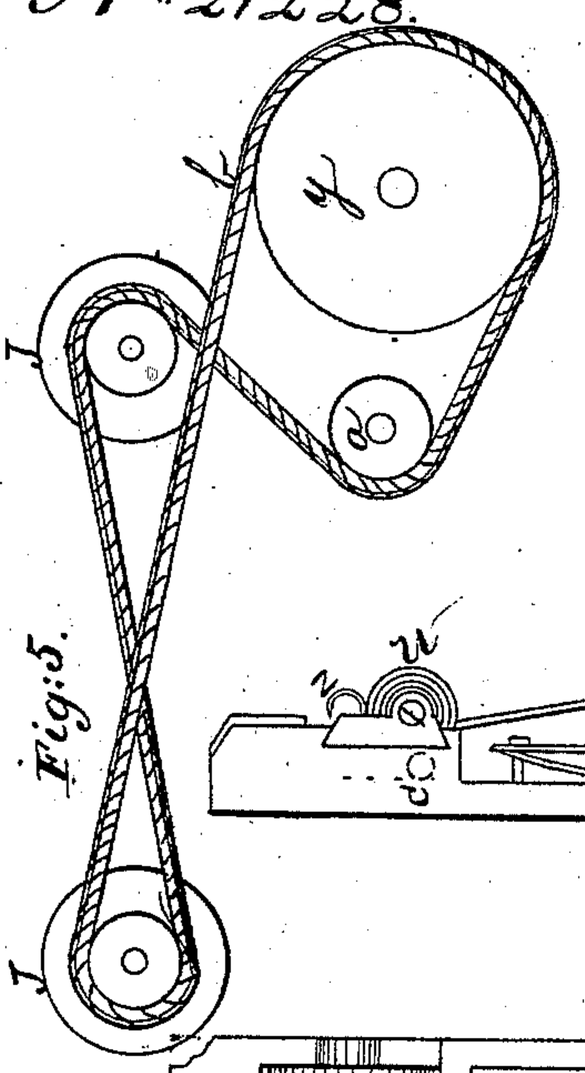


Fig. 6

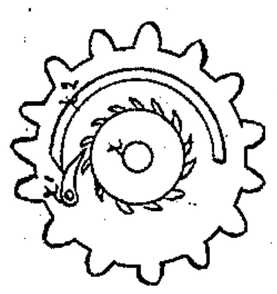


Fig. 4.

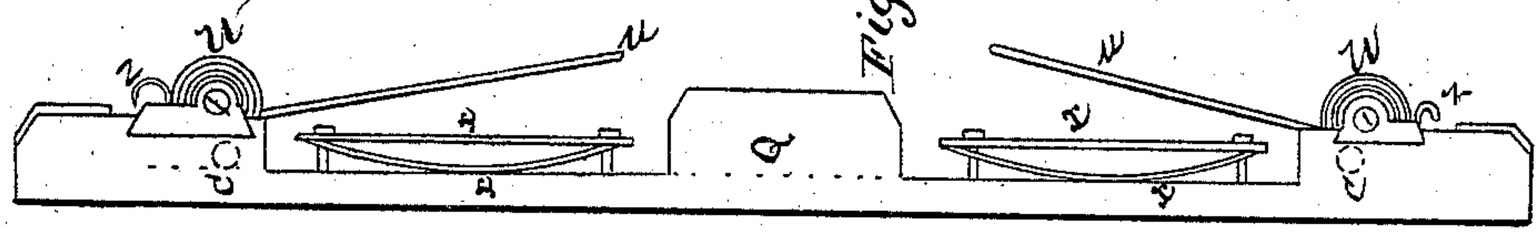


Fig. 3.

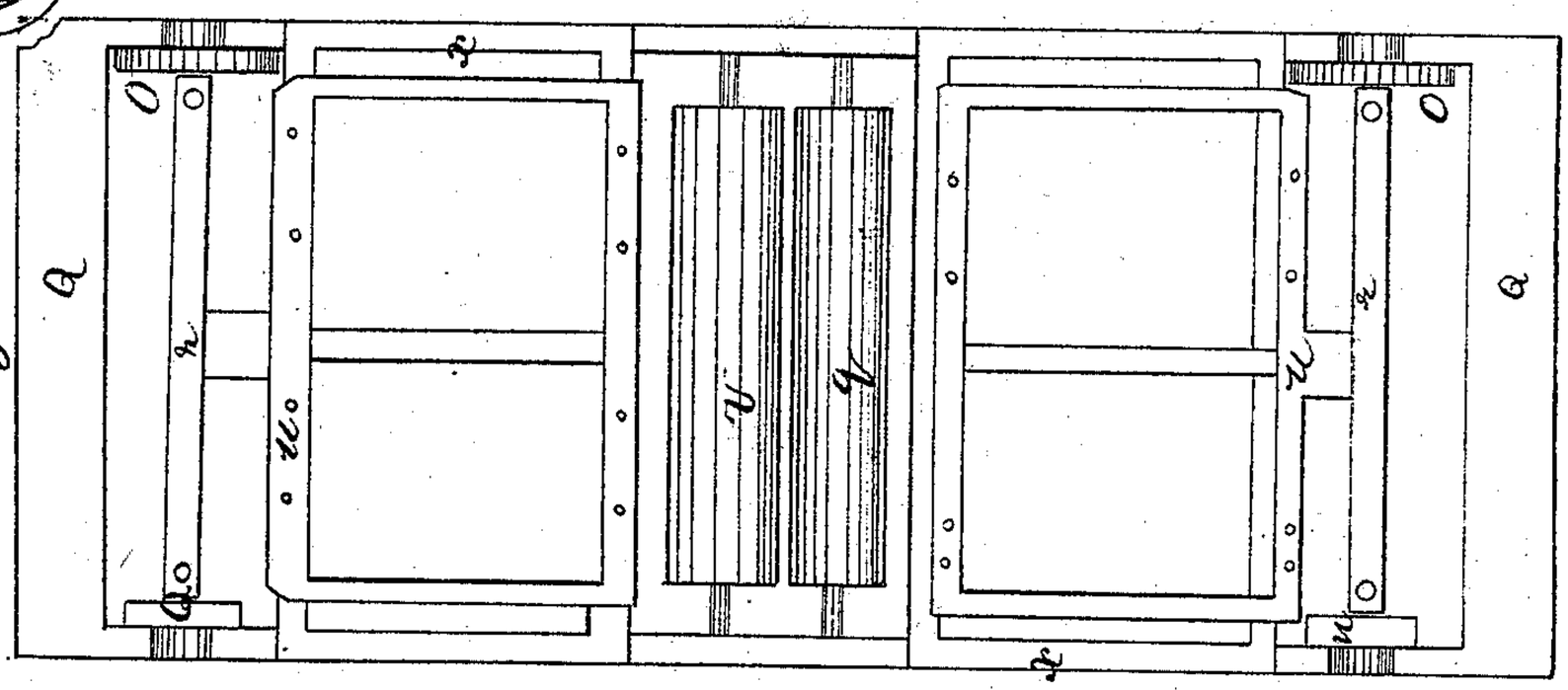
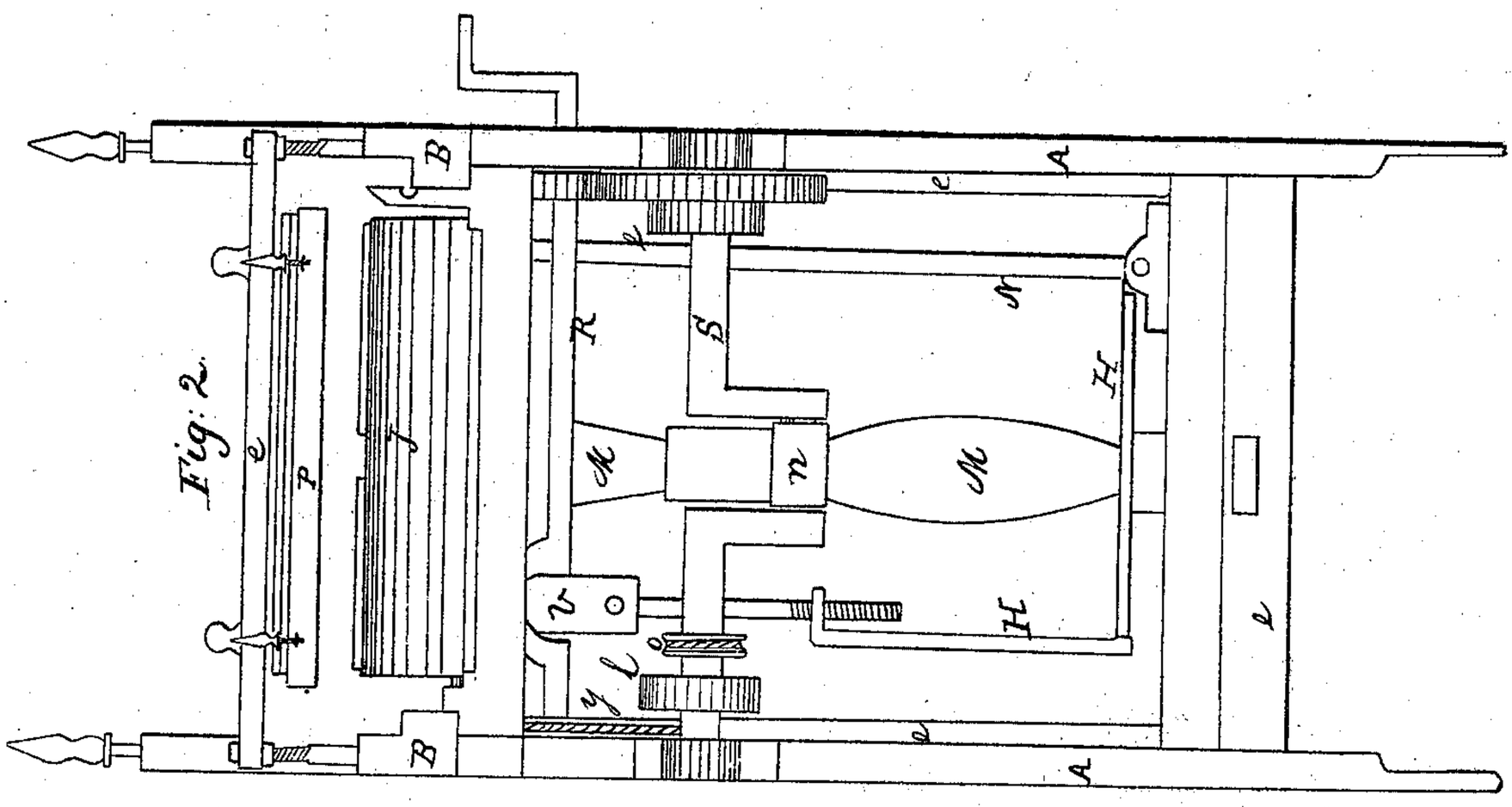


Fig. 2.



UNITED STATES PATENT OFFICE.

DANIEL WOLFE, OF DIXON, OHIO.

PRINTING-PRESS.

Specification of Letters Patent No. 21,228, dated August 17, 1858.

To all whom it may concern:

Be it known that I, DANIEL WOLFE, of Dixon, in the county of Van Wert and State of Ohio, have invented certain Improvements in Hand Printing-Presses; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in the arrangement of those parts the peculiarities of which will be hereinafter described.

In order that those skilled in the arts may use and manufacture my improvement I will proceed to describe its construction and operation.

In the annexed drawings Figure 1 is a side elevation. Fig. 2 is an end view. Fig. 3 is a plan view of the carriage. Fig. 4 is a side view of the carriage. Fig. 5 is a view of the pulleys and cord which drive the distributing rollers. Fig. 6 is a view of a pinion of the carriage with a ratchet wheel, ratchet and spring secured to it. Fig. 7 is a back view of the shaft to which the frisket is attached, showing means of attachment.

In the several figures similar characters refer to like parts.

(A,) represents the frame work of the machine.

B, B, represent two horizontal and parallel bars which rest on the top of the frame and have a rectangular groove in them as seen in Fig. 2, which grooves the carriage seen in Figs. 3 and 4, is made to traverse.

C, is the driving wheel which is secured to that portion of the press which operates the platen and the distributing and equalizing rollers.

D, is a wheel which gears into wheel C, and is located on the shaft S. The shaft S forms a crank about its center and to this crank is secured a pitman marked (*n*). This pitman has a block F, secured to its other end and into this block the two bars M, and M′, enter, forming a toggle joint on each side, as is seen in Fig. 1, M, is secured to the upper portion of the frame and works on a hinge while M′, forms a toggle joint with the sliding frame marked (*e e*). This frame *e*, extends up and the platen P, is attached to it. On the shaft S, is secured at each side as seen two cams *l*, *l*. These cams operate a lever marked (*p*) seen in Fig. 1. One end of said lever (*p*) operates the frame (*e*) upward when acted upon by the cam *l*, while the bar M′ operates the frame (*e*) downward, thus giving the frame (*e*) a reciprocating motion. On shaft S, is still a pulley marked (*o*) seen in Fig. 2. A belt, *m*, passes around this pulley and over a pulley marked E. On the shaft of this pulley E is a crank, which crank serves to convey motion to a lever marked (*i*). Said lever (*i*) works on a fulcrum at its center and has secured near each extremity two rollers *j*, *j*, which dip into the ink reservoirs I, I, and carry up the ink to the distributing rollers J, J.

R, is a shaft on which the driving wheel C, is secured. This shaft R, has a crank on it. A pitman V, works on this crank, and connects with two rods which are seen at right angles to each other in Fig. 2 and are marked H, and H′. H′ connects with shaft G, and gives motion to it, the motion being oscillating. To this shaft G, are connected two rods N, N, which pass up and are secured to small frame L, in which frame L, are placed two equalizing rollers, seen partly in dotted line, and marked K, K. The shaft G, having an oscillating motion, it will be seen that a reciprocating motion is given to the frame L, by means of rods N, N, and that the rollers at the same time they revolve play horizontally across the frame of the machine and pressing against the distributing rollers J, J, equalize the ink on them.

Figs. 3 and 4 represent a carriage which runs upon the bars B, B. This carriage is for the purpose of conveying the sheet to and from the type. It is provided with a rack on the bottom of one of its side bars into which meshes the pinion *k*, Fig. 1, and gives it motion. *g*, is a handle for operating pinion *k*.

q q are two small composition rollers secured in the carriage Q, and are for the purpose of conveying the ink from the distributing rollers to the type. These rollers pass over the type before each impression is taken, giving fresh ink each time.

U, U, represent the friskets one at each end of the carriage. In Fig. 7, it will be seen that two pins marked *z*, *z*, pass through the spring *r*, shaft 1, and into the frisket, thus securing it to shaft 1. This shaft 1 crosses the frame of the carriage and to it are secured the pinion O, and the coiled spring W, in the position seen in Fig. 3. A ratchet wheel marked *x*, Fig. 6 is also secured firmly to the shaft 1. Pinion O is

allowed to revolve in one direction on shaft 1 but being provided on its side with a ratchet x', and a spring x^2, which presses the ratchet into the ratchet wheel, it is prevented from turning when moved in an opposite direction, without turning the shaft over with it; thus the friskets being secured firmly to these shafts, turn with them and lay off the sheet at the desired time.

In Fig. 1 it will be seen that *d*, *d*, seen in dotted line represent a short rack on each end of the bar B. The pinions O work in these racks as the carriage moves backward and forward in the performance of its office. When the carriage is moving in the direction of the arrow seen in Fig. 1 pinion O, above the arrow is prevented from revolving on its axle by the ratchet wheel and ratchet. It consequently turns the axle with it and the frisket is seen turned over in a position to throw off the sheet.

As the carriage moves back the desired distance the hook (*z*) to the spring W, in Fig. 4 catches upon the pin, *c*, seen in dotted line in that figure, which tightens up the spring W, and as soon as the pinion passes beyond the rack and its teeth are free the spring being tightened, it throws the frisket back to its position. This spring, hook, pin, rack and pinion, being at each end of the carriage and track, this operation is regularly performed as often as the carriage is made to move backward and forward on the bars B, B.

Y, in Fig. 5, is a pulley around which a cord passes. This pulley is on shaft, R.

a is a small pulley for tightening cord C.

b, is a cord which passes around pulley Y and *a* and then around the distributing rollers J, J, and giving them motion.

In the operation of this machine, the two cranks *f*, and *g*, must be turned around alternately, *f*, having a continuous revolution while *g*, turns once around and then back again. The machine being set in motion for inking the type, the sheet to be printed is laid upon the frame X, and frisket U, U. The rollers being inked the crank, *f*, is turned until the platen is raised as seen in Fig. 1. Then crank, *f*, remains stationary and crank *g*, is turned running the carriage under the platen until the sheet stands directly under the platen between it, and the type. Then the carriage stands still and by turning crank, *f*, driving wheel C, operates upon wheel D, the shaft of which operates pitman *n*, which draws toward the center of the machine, straightening the bars, M, and M′, and M′ bearing upon the frame *e*, to which the platen is secured. The platen is brought down upon the sheet, pressing it against the type, and thus making the impression. The frame X, resting on the springs X′, is pressed down when the platen descends, but when it ascends, the springs raise the frame also and the sheet upon it, leaving it free and in proper condition to be carried away by the carriage and from the carriage by the frisket. After an impression is made the carriage is made to move back, carrying away one sheet and bring under another. As one passes off the rollers, *q*, *q*, between the two friskets supply the type with ink, and thus puts it in condition for another impression. At the time the frisket is throwing off one sheet another takes its place under the platen, the carriage again stands still and the platen is brought down as before and the impression is made.

This press may be operated by two hands, one for supplying power, and the other for supplying the machine with paper.

I claim—

The self emptying spring friskets (U, U,) arranged with the springing frames (*x*, *x*,) in the manner herein set forth and these in arrangement with the stationary bed plate, falling platen, frame L, bars M, and M′ and lever, *p*, when all are combined and constructed in the manner and for the purpose set forth.

DANIEL WOLFE.

Witnesses:

C. M. ALEXANDER,

SAMUEL YAVIAN.