W. A. LAVALETTE.

Printing-Press.

No. 208,184. Patented Sept. 17, 1878.

Fig. 1

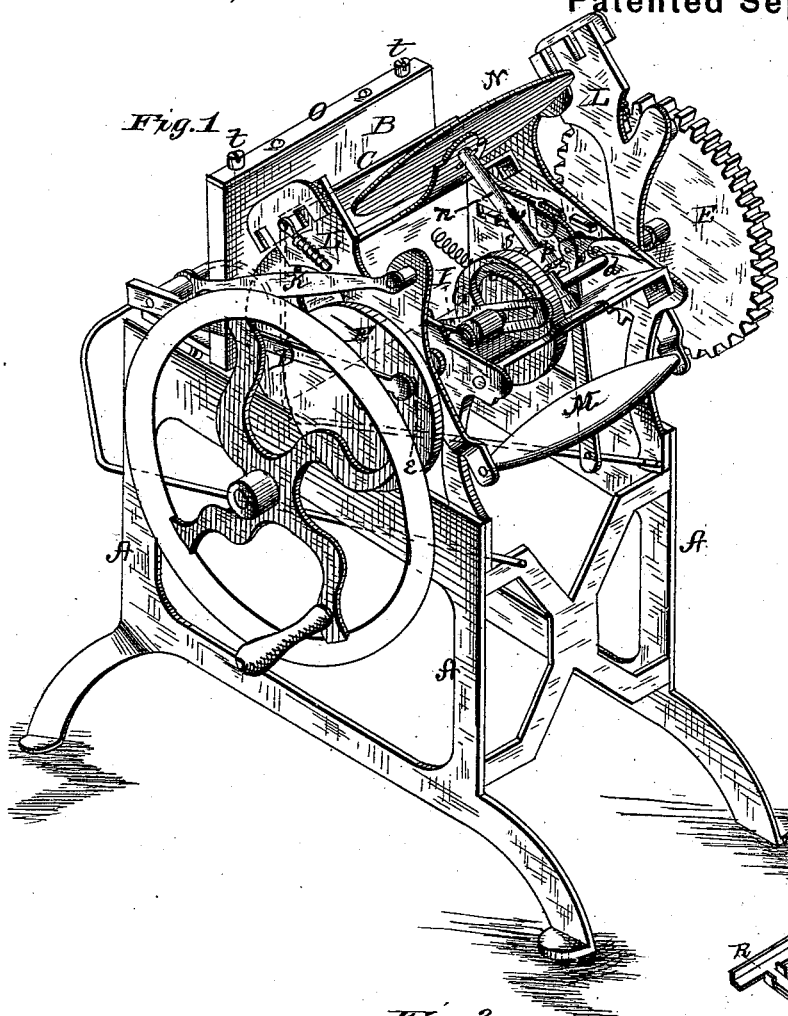
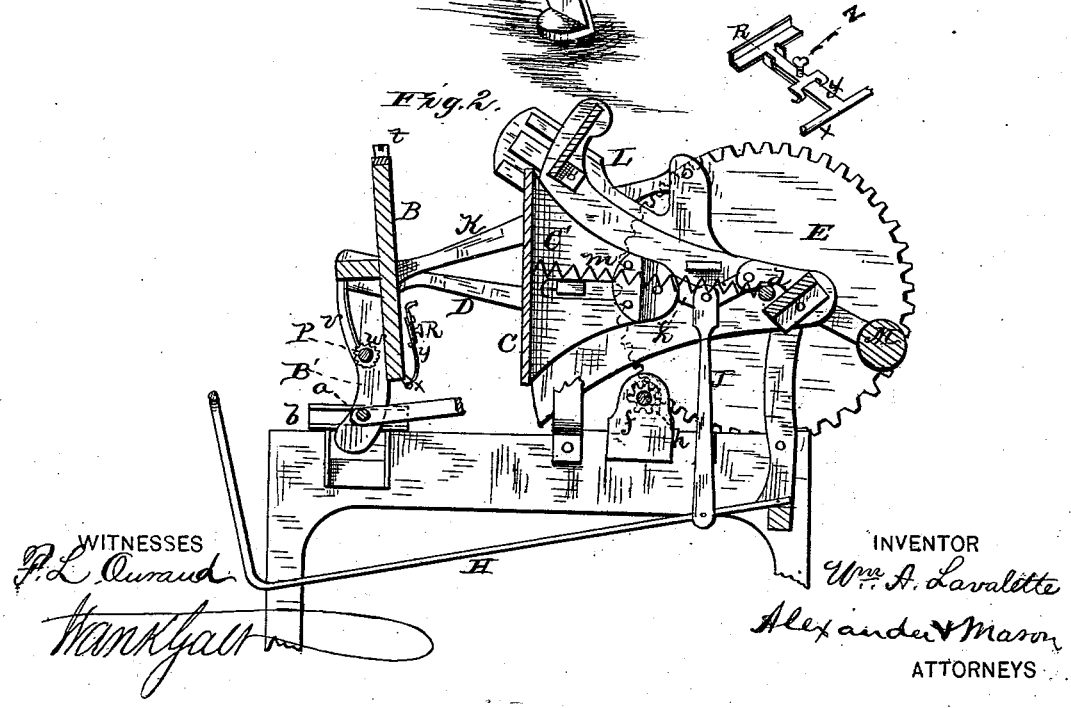


Fig. 2.



WITNESSES

P. L. Durand

Frank Gall

INVENTOR

Wm. A. Lavalette

Alexander & Mason

ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM A. LAVALETTE, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN PRINTING-PRESSES.

Specification forming part of Letters Patent No. **208,184**, dated September 17, 1878; application filed December 10, 1877.

To all whom it may concern:

Be it known that I, WILLIAM A. LAVALETTE, of Washington, in the county of Washington and in the District of Columbia, have invented certain new and useful Improvements in Printing-Presses; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a printing-press, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a perspective view of my improved printing-press. Fig. 2 is a longitudinal vertical section of the same.

A represents the frame of the press, constructed in any suitable manner to receive the various operating parts. B is the platen, and C the bed.

The platen B is provided with two arms, B′ B′, which are hinged at their lower ends to a rod or shaft, *a*, having its bearings in horizontal guides or ways *b b* attached to the main frame A or formed therewith. The platen B is turned backward and forward upon the shaft *a* by means of pitmen D D connecting with wrist or crank pins *e* upon disks E secured on the ends of a shaft, *d*. One of these disks is cogged upon its periphery, and receives its motion from a pinion, *f*, upon the main driving-shaft *h*, said shaft being rotated either by hand or power, as desired.

When, during the revolution of the shaft *d*, the platen is turned so as to stand perpendicularly, it is immediately acted upon by devices hereinafter described, so as to be brought up square against the bed to make the impression. These devices consist of a forked draw-rod, I, placed on the shaft *a*. The rear end of this draw-rod is slotted, and passes over the shaft *d;* and on the side thereof is a stud, with friction-roller fitting in a cam-groove, *i*, on the side of a disk, G, secured on said shaft *d*. This cam-groove is so arranged that, by means of the forked draw-rod, the platen is moved bodily forward with its face parallel with the bed, and backward again as soon as the impression is taken. This is in connection with and in addition to the movement of the platen caused by the pitmen D.

The bed C is connected to slotted arms C′ passing over suitable guides in the frame A, and at the inner ends of said arms are toggle-joints *k*, which are connected by arms J with a lever or treadle, H. These parts are so arranged that when in proper position the bed will be held perfectly rigid; but as soon as pressure is applied to the lever H the toggle-joints are broken and the bed drawn back, so that no impression will be taken when the platen is brought up. A spring, *m*, aids in breaking the toggles and drawing the bed back.

The platen B is, by a pitman, K, on each side, connected with the roller-carrying levers L, which are pivoted to the main frame. The rollers are carried in the upper or front ends of these levers L L, and held by any suitable or well-known means. Between the rear or lower ends of these levers is attached a weight, M, to counterbalance the weight of the rollers, which makes the press run more smooth and even, without the jar so often experienced in this class of machines.

N represents the inking-table, attached to a shaft, *n*. This shaft is at or near its lower end provided with a pinion, *p*, and upon the side of the cam-disk G is a tooth or lug, *s*, which once during each revolution of said disk turns the shaft *n* the distance of one of the teeth or cogs of the pinion *p*.

In a full-sized machine the shaft *n* with the table N will be made removable from the frame, so that it can be easily taken out for cleaning, &c., when desired.

On the upper edge of the platen B is a bar, O, held by two or more screws, *t*, for fastening the upper edge of the tympan, the lower end whereof passes around the lower edge of the platen and up on the back thereof, and is rolled upon a shaft, P, having its bearings in ears on the back of the platen. This shaft is provided with a ratchet-wheel, *w*, in which works a spring or spring-pawl, *v*, to hold the tympan tight.

The shaft P is on its ends provided with

suitable knobs for turning the same. By this means the tympan can be easily loosened for putting in and taking out the paper sheets underneath, as desired.

The platen B is on its lower edge provided with a rod, *x*, from which projects an arm, *y*, and upon this arm is adjustably attached a guide, R, fastened at any point desired by a set-screw, *z*. A similar guide may be arranged on one end of the platen.

The lever H may be provided with a ratchet for holding it in position.

The impression may be regulated by any of the well-known means.

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

1. In a printing-press, the combination, with the platen and pitmen D D for rocking the same, of a sliding shaft, to which the platen is pivoted, a draw-rod, and a cam, whereby the platen is brought up square against the bed, substantially as herein set forth.

2. In a printing-press, the combination of the movable bed C with arms C′, toggles *k*, connecting-arms J, and lever H for retracting the bed when desired, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of December, 1877.

W. A. LAVALETTE.

Witnesses:

FRANK GALT,

H. AUBREY TOULMIN.