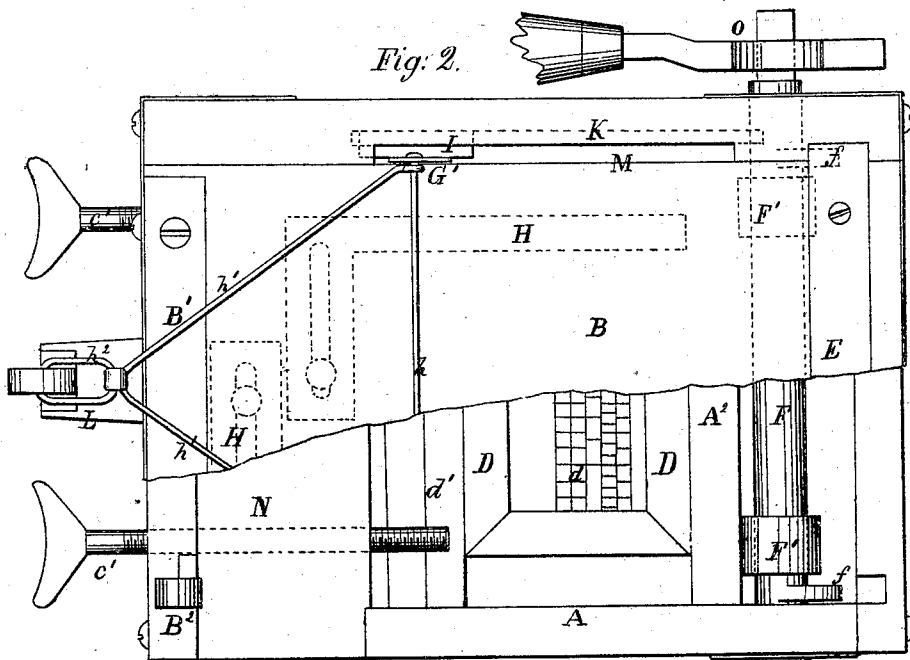
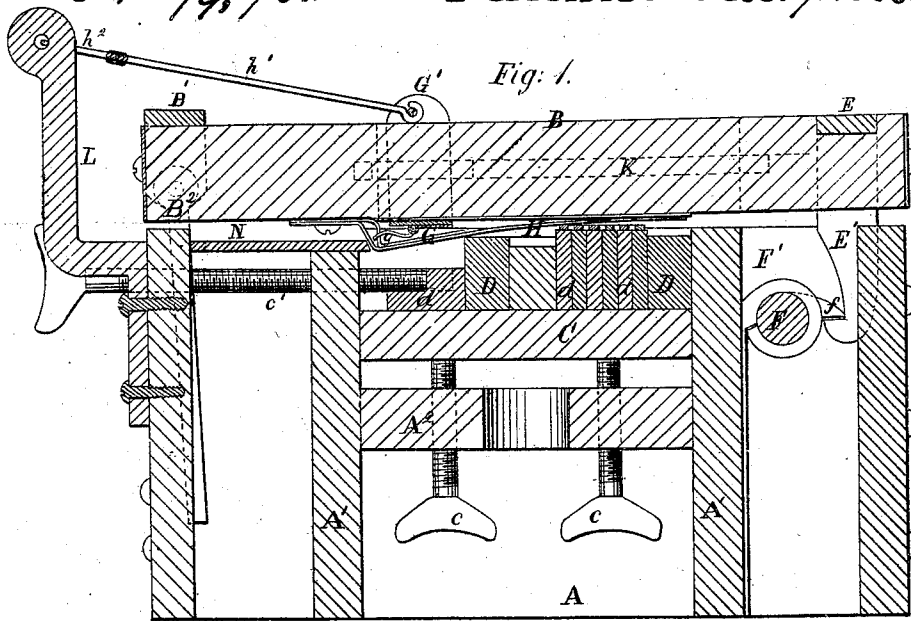


H. M. Hall & G. W. Esney.
Hand Press.

N^o 79,751.

Patented Jul. 7. 1868.



Witnesses.
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H. M. HALL AND GEORGE W. ESPEY, OF MOORE'S HILL, INDIANA.

Letters Patent No. 79,751, dated July 7, 1868.

IMPROVEMENT IN PRINTING-PRESSES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, H. M. HALL and GEORGE W. ESPEY, of Moore's Hill, in the county of Ripley, and State of Indiana, have invented certain new and useful Improvements in Printing-Presses; and we 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, which form a part of this specification, in which—

Figure 1 represents a vertical longitudinal section of our printing-press, and

Figure 2 a plan or top view of the same, a portion of the platen being broken away to show the construction more clearly.

The object of our invention is to provide a hand-printing-press, in which the downward and upward motion of its hinged platen shall cause the paper to be placed in proper position for receiving the impression of the types, and remove it therefrom after being printed; and to this end our improvements consist—

First, in providing a movable clamp in connection with the platen, and operating in a manner hereinafter described, to present the paper to the type, and withdraw it when printed.

Second, in combining a cam-shaft in the box with hooks upon the platen, to effect the pressing-movement.

In the accompanying drawings, A represents a stout box, which forms the main part or bed of the press. Partitions, A', extend across this box, between which the floor A² is secured. Above this floor is placed the movable type-bed C, the height of which is regulated by set-screws *c c* passing through the floor. There are four of these screws, but two only appear in fig. 1, being a section. This arrangement enables the type-bed to be inclined if necessary. The form D rests upon the type-bed, and is held firmly in position after the types have been set, by the set-screws *c'*, which pass through one end of the box and one of the partitions A', and press against the plate *d'*. N is an adjustable ink-bed, resting on the upper part of the box. The box has hinges B² firmly secured to it, to which the platen B is hinged by pins passing through eyes in the ends of the strap B¹. This strap is secured to the top of the platen, and has its ends bent downwards at right angles to it, to meet the hinges B², as stated. Slots, M, one of which is shown in fig. 2, are cut through the platen, near its sides, and in the direction of its length. A sliding clamp, G, upon the bottom of the platen, has its ends turned up to form ears, G', which slide in the slots M. The movable jaw of this clamp is operated by a handle or thumb-piece, *g*. The sliding motion of the clamp is directed by guides I, which are attached to its ends, and which slide in slots K in the platen. A rod, *h*, extends across the top of the platen, and is secured to the ears G'. A bent rod, *h'*, is hooked at its ends to the rod *h*, and has a loop, *h²*, fastened to its centre. This loop passes through a hole in the standard L, which is fastened to the box A in such manner as not to interfere with the movement of the platen B. H H are springs or fingers, which hold one end of the paper to be printed in contact with the platen, its opposite end being held between the jaws of the clamp G. These fingers are each made in two parts. That portion by which they are secured to the platen is at right angles with that which forms the spring. They are secured to the platen by screws passing through slots, as shown in fig. 2, which enables the distance between the ends of the fingers to be varied to suit different widths of paper. A strong strap of metal, E, is secured to the top of the platen, and has the ends bent downwards at right angles, and formed into the hooks E'. A metallic shaft, F, extends across the box A, and turns in the bearings F'. It has cam-projections *f* upon it, which engage with the hooks E' attached to the platen, and has its ends formed square in section, so as to receive the wrench O by which the shaft is turned.

The operation of our printing-press is as follows: The type-bed C being set in proper position by the set-screws *c*, the types are set up in the form D, which is secured in place by the set-screws *c'*, and the types inked by a suitable roller. The clamp G being pivoted to the standard L by the rods *h h'*, and loop *h²*, the act of raising the hinged platen from the box causes the clamp G to slide along the bottom of the platen, being guided by the blocks I working in the slots K, until the ears G' have reached the ends of the slots M which are farthest from the hinges. The jaws of the clamp G are then opened by pressing upon the handle or thumb-piece *g*, and one end of the piece of paper to be printed inserted between them. The lowering of the platen

upon the box causes the clamp and paper attached to move back to the position shown in the drawings, through the action of the rods, loop, and standard, before stated, and the ends of the fingers H hold the end of the paper against the platen, and prevent it from bending or doubling. The shaft F is then turned, by means of the wrench O, until the cams *ff* catch in the hooks E' E', when further movement of the wrench brings the platen down upon the type, and leaves a clear impression upon the paper. The wrench is then turned back until the cams have cleared the hooks, when the platen is raised, the act of which, as before explained, moves the clamp into proper position for receiving a fresh piece of paper. The printed piece is removed, and a blank one inserted, and the operation repeated.

The platen is so hinged to the box that it bears equally upon all the type, and a piece of cloth or velvet is placed upon it where the paper presses against it.

Having thus fully explained our improved printing-press, what we claim as new, and desire to secure by Letters Patent, is—

1. The movable paper-clamp G, when arranged as described, so as to receive the necessary movement from the raising and lowering of the platen.

2. The combination of the clamp G, and fingers H, when arranged as described, for the purpose of holding the paper.

3. The combination of the cam-shaft F and hooks E', for giving the impression to the paper, as set forth.

4. The combination of the clamp G, rod *h'*, and standard L, with the slotted hinged platen B, when arranged and operating substantially as and for the purpose described.

In testimony that we claim the foregoing as our own, we affix our signatures in presence of two witnesses.

H. M. HALL,
GEO. W. ESPEY.

Witnesses:

E. M. KELLUM,
JOHN H. EWING.