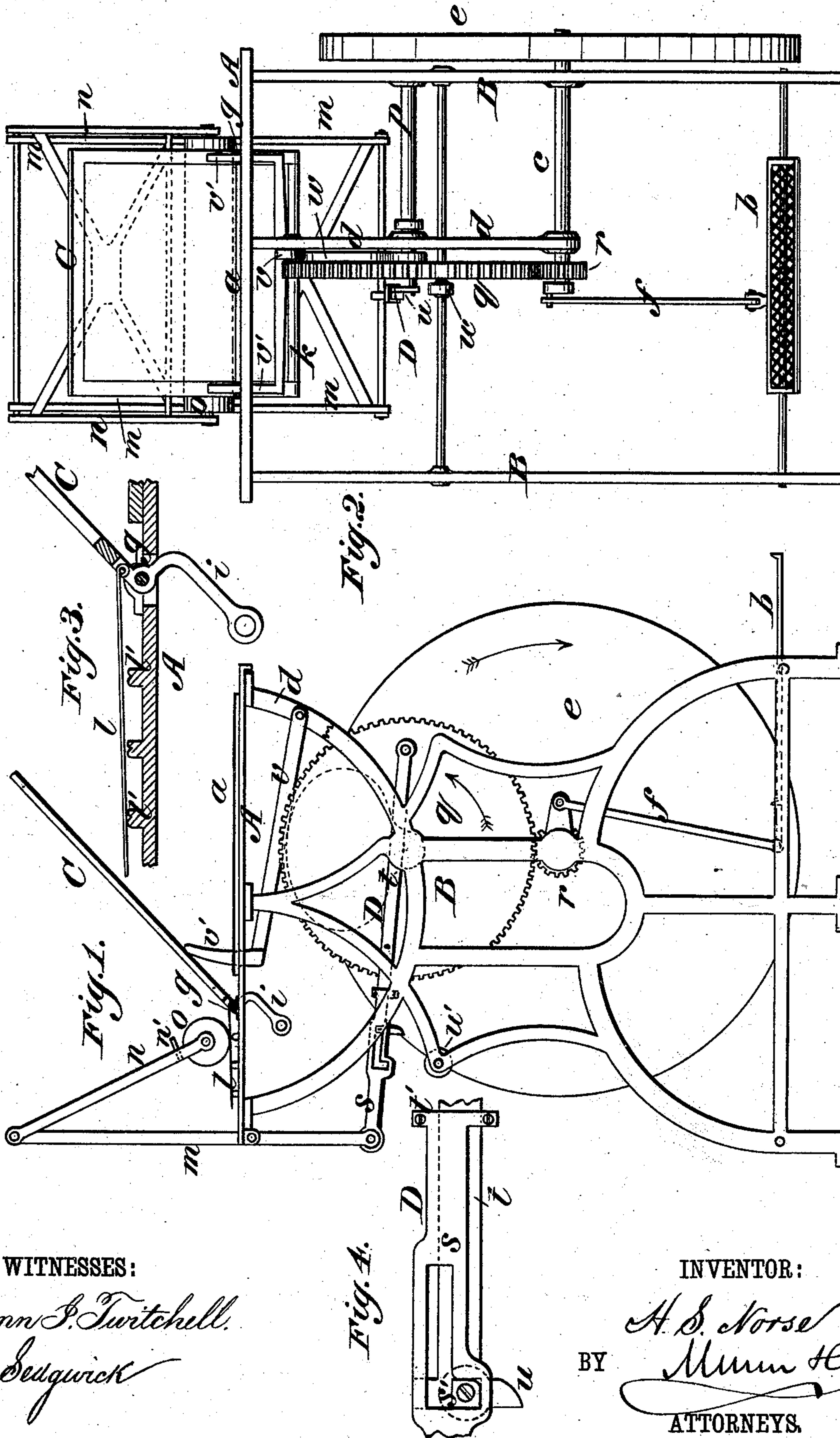


(No Model.)

H. S. NORSE.  
Duplicating Press.

**No. 238,956.**

**Patented March 15, 1881.**



**WITNESSES:**

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# UNITED STATES PATENT OFFICE.

HENRY S. NORSE, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND  
EUGENE H. HINTON, OF SAME PLACE.

## DUPLICATING-PRESS.

SPECIFICATION forming part of Letters Patent No. 238,956, dated March 15, 1881.

Application filed July 19, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY S. NORSE, of the city, county, and State of New York, have invented a new and useful Improvement in Duplicating-Presses, of which the following is a specification.

The object of my invention is to furnish a foot or power press for use in printing from stencil-plates, particularly stencils prepared with the electric pen, to the end that the labor and time heretofore required in such work shall be reduced.

My invention consists in a hinged frame carrying the stencil-plate, and a vibrating lever carrying the ink-roller, combined together and with a fixed platen or bed, and operated by mechanism of novel construction, whereby the hinged frame is raised for insertion of the paper, dropped upon the paper, the ink-roller brought over the stencil-plate with the required pressure, and then withdrawn while the frame is again raised, all as set forth more particularly hereinafter.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of my improved machine. Fig. 2 is a front elevation. Fig. 3 is a detail section of the bed, showing the support for the ink-roller; and Fig. 4 is a detail side view of the pitman.

Similar letters of reference indicate corresponding parts.

A is the table or bed of the machine, supported on the side legs, B B, which are fitted with a cross-rod for a treadle, b.

c is the driving-shaft, supported in bearings on one leg, B, and by a bracket, d, that depends from table A.

e is a balance-wheel on shaft c, and f is a pitman from a crank on said shaft to treadle b.

The bed A is formed with an elevated portion, a, at the front, which is of suitable size, and is the platen of the press. Upon bed A, behind platen a, there are boxes g g, to and between which is hinged a rectangular frame, C, that is to carry the stencil-plate. The frame C is of a size for inclosing the platen a, and the stencil-plate is to be secured to the upper side of the frame by devices of any suitable character, so that when frame C rests on bed A the plate shall lie flat upon the platen a.

The frame C is provided with rear arms, i, that are connected by a cross-rod carrying a weight, as shown at k, which serves to balance the frame C on its axis, or nearly so. Near the axis of frame C a plate, l, is connected by a loose joint, which plate rests on lugs l', that are fixed on bed A, so that plate l slides on the lugs as the frame C swings.

At the back of bed A levers m m are hung, and to the upper ends of these levers are hung arms n, that carry the ink and printing roller o, which is to be made of suitable material, and rests normally on the plate l.

A shaft, p, supported by bracket d and one leg, B, carries a large gear-wheel, q, that meshes with a pinion, r, on shaft c. The wheel q is provided with a crank-pin, and from the crank-pin a pitman, D, passes to and is connected with a cross-rod which connects the lower ends of levers m.

The pitman D, as shown most clearly in Fig. 4, consists of two portions, s t, one connected with levers m and the other to wheel q, and connected together by a joint, next described, which permits lost motion. The portion s is formed with an L-shaped slot that receives a lug, s', that is on the part t, and the inner end of piece s is also provided with a clip, t', that surrounds part t. The outer end of part t is provided with a beveled lug, u, that projects beneath the pitman for contact with a stud or roller, u', that is upon a cross-rod of the legs B.

The operation is that as the pitman is moved back the lug s', moving to the end of the slot in part s, carries that portion back, and, by dropping into the vertical portion of the slot, brings the part s forward again until the lug u is raised by contact with roller u', when the lug s' moves forward in the slot without effect on portion s.

Upon the bracket d is hung an arm, v, the outer end of which is forked and formed with fingers v', that project upward beneath the side bars of frame C. Upon the side of wheel q is a cam-projection, w, upon which arm v rests, so that said arm is swung in a vertical plane by the revolution of wheel q, and the frame C thereby raised from bed A.

In operation, the cam w being at its highest point, frame C is also raised, and the paper



can be placed on platen *a*. Then, as the arm *v* falls frame C falls upon bed A and the stencil-plate rests on the paper. During these movements the roller *o* is at rest, by reason of the disconnection of the pitman, as described, but is now moved forward over the stencil-plate by the action of the pitman on levers *m*, and then withdrawn until it rests again on plate *l*. When the disconnection of the pitman occurs the wheel *q* completes its revolution and cam *w* again raises frame C.

It will be seen that an impression from the stencil-plate is given at every revolution, and the work can thus be rapidly done. I prefer to use a hollow ink-roller for containing the ink. The plate *l* being hinged to the stencil-frame, there will always be a continuous surface for the roller to move on. The lugs *l'* are to be grooved, as shown in Fig. 3, for holding lubricant.

The details of the operating mechanism may be varied within the scope of my invention.

The fly-wheel will be fitted with a suitable brake to prevent revolution in the wrong direction.

The arms *n* carrying the ink-roller are fitted with a shelf, *n'*, upon which weights can be placed to regulate the pressure of the roller according to the character of the stencil-plate.

The driving-shaft may carry a pulley for connection to power by a belt.

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

1. The duplicating-press consisting of bed A having platen *a*, reciprocating frame C, fitted for receiving the plate, and inking pressure-roller *o*, carried by arms *n* of vibrating levers *m*, combined with operating mechanism, all substantially as shown and described.

2. In duplicating-presses, the combination, with the hinged stencil-frame C, of hinged arm *v*, having fingers *v'*, and revolving wheel *q*, carrying cam *w*, substantially as described and shown, whereby the frame is raised at every revolution of the wheel.

3. In duplicating-presses, the combination, with the stencil-frame C and the cam *w*, fitted to raise the frame at every revolution, of the levers *m*, arms *n*, carrying the ink-roller, and pitman D, substantially as shown and described, for operation as set forth.

4. In duplicating-presses, the two-part pitman D, composed of slotted portion *s* and portion *t*, provided with lugs *s' u*, combined with levers *m*, carrying the ink-roller, wheel *q*, moving the stencil-frame, and fixed stud or roller *u'*, substantially as and for the purposes set forth.

5. In duplicating-presses, the plate *l*, hinged to the vibrating stencil-frame C, combined with the stencil-frame bed A, and reciprocating ink-roller, substantially as and for the purposes specified.

HENRY STANSBURY NORSE.

Witnesses:

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