J. Henry.

Printing Press.

No. 18744. Patented Dec. 1. 1857.

Fig. 1.

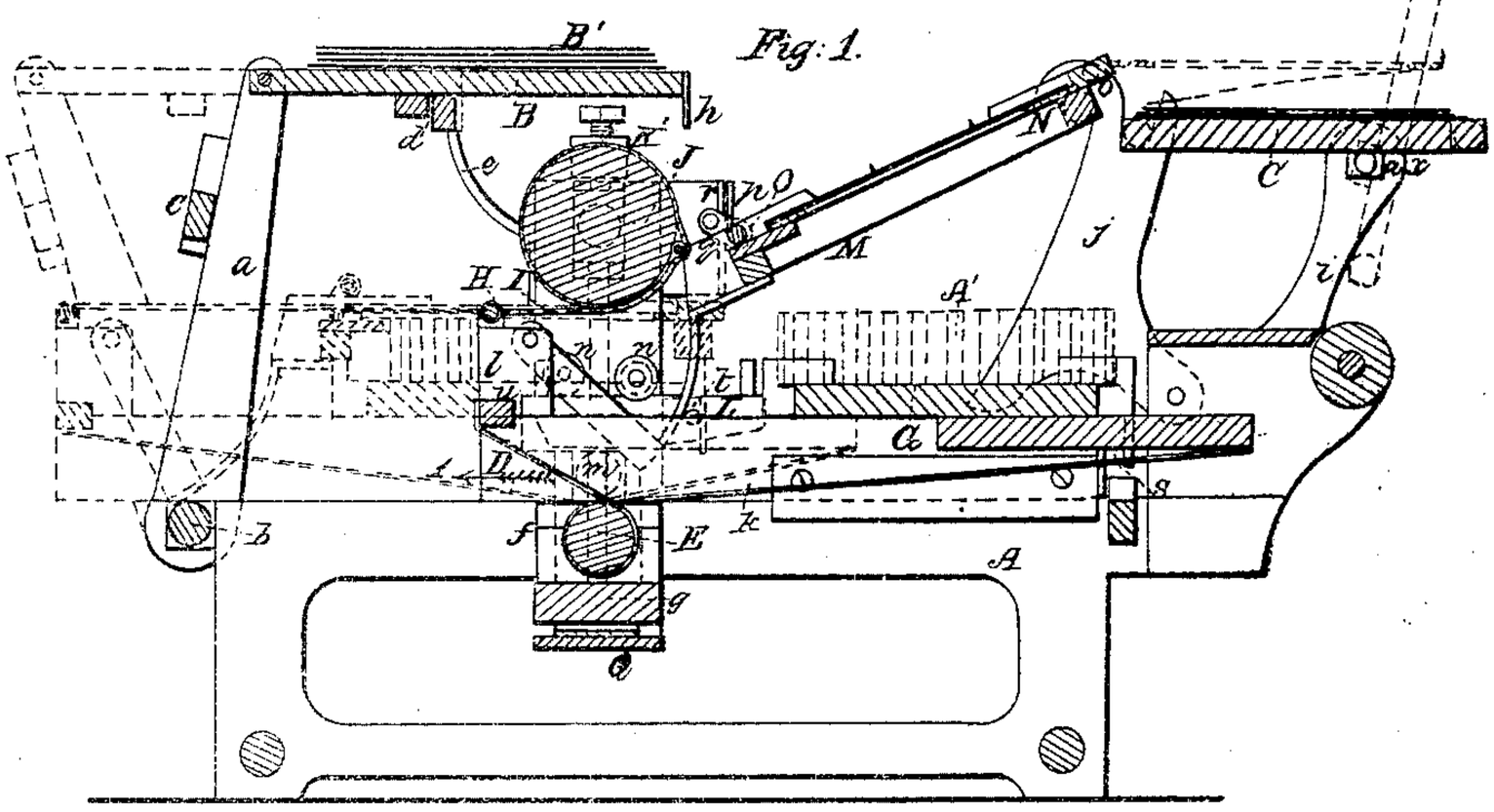


Fig. 3.

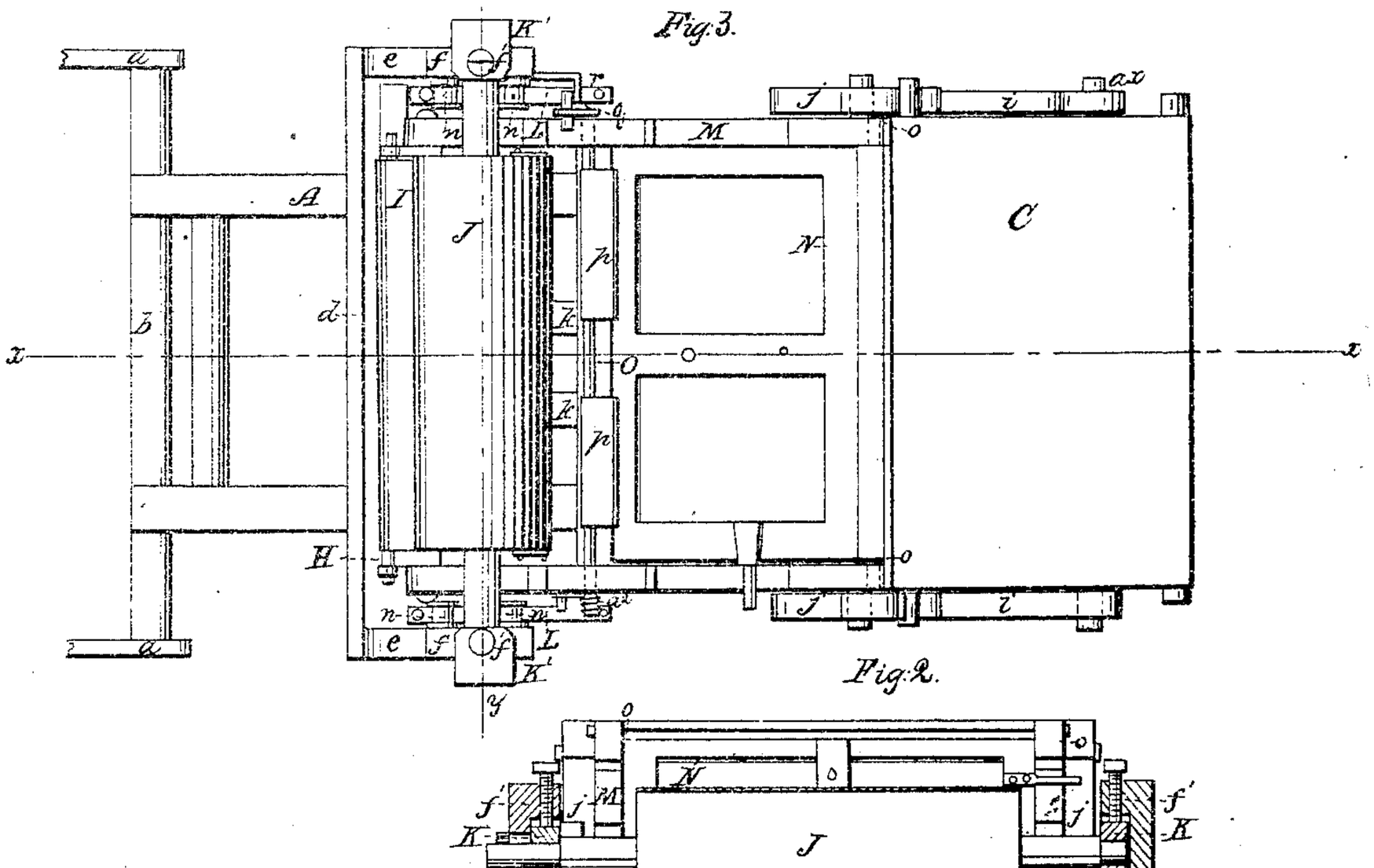
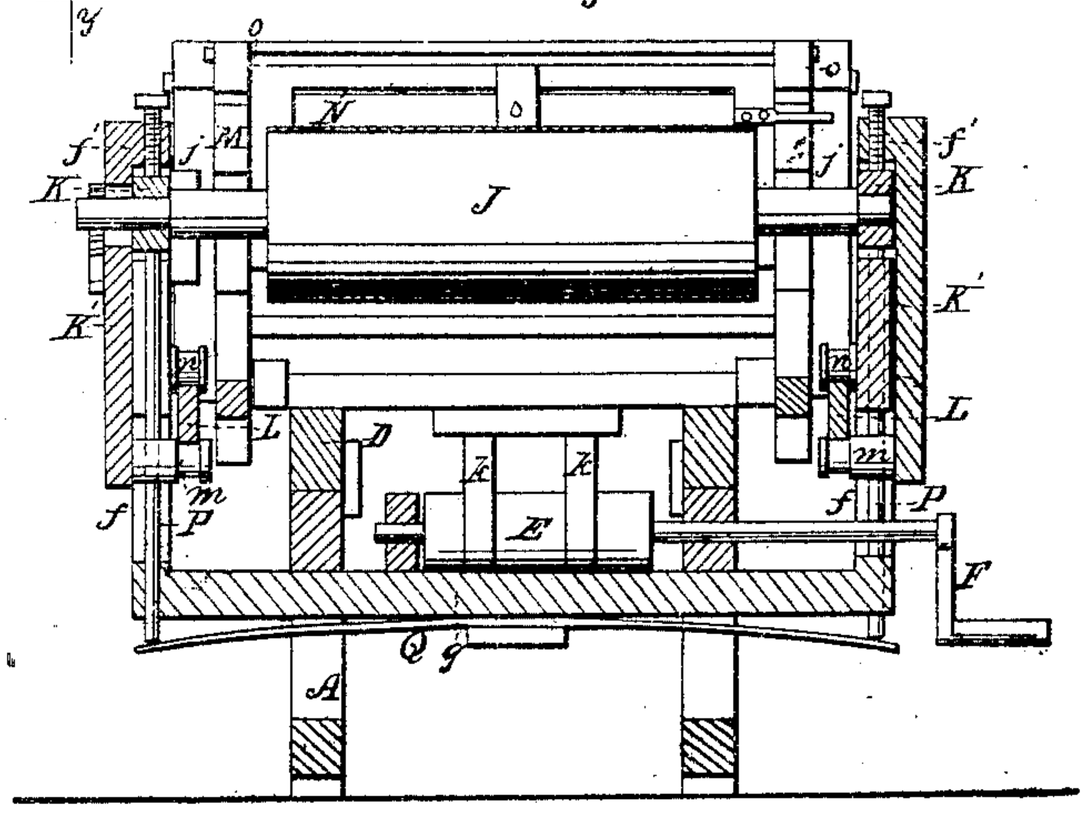


Fig. 2.



UNITED STATES PATENT OFFICE.

JOHN HENRY, OF VEVAY, INDIANA.

PRINTING-PRESS.

Specification of Letters Patent No. 18,744, dated December 1, 1857.

To all whom it may concern:

Be it known that I, JOHN HENRY, of Vevay, in the county of Switzerland and State of Indiana, have invented a new and Improved Printing-Press; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a longitudinal vertical section of my improvement, taken in the line (*x*), (*x*), Fig. 3. Fig. 2, is a transverse vertical section of ditto, taken in the line (*y*) (*y*) Fig. 3. Fig. 3, is a plan or top view of ditto.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement in hand printing presses and is designed to facilitate the operation of printing by hand so that the work may be performed in a much more expeditious manner than heretofore equally as perfect if not more so, and with considerable less labor.

To enable those skilled in the art to make and use my invention I will proceed to describe its construction and operation.

A represents a rectangular frame which supports the working parts of the press, and (*a*) (*a*) are two upright bars the lower ends of which are fitted on the ends of cross-piece (*b*) so that they may turn freely thereon. The upper parts of the bars (*a*) (*a*) are connected by a cross tie (*c*) and a feed board B is attached thereto by pivots or screws, the inner end of said board resting on a traverse bar (*d*) which is attached by curved bars (*e*) to uprights (*f*) (*f*), said uprights being secured to the ends of traverse bar (*g*) placed within the frame A. The feed board B may be moved further inward or outward on the bar (*d*), but is prevented from being moved off from its casually by means of stops (*h*) secured to its inner edge. The cross piece (*b*) is placed at one end of the frame A and to the opposite end of the frame two inclined bars (*i*) (*i*) are attached, one at each side and a fly-board C is secured between the upper ends of said bars, the fly board being attached to a bar ($a^{\times}$) the ends of which are fitted loosely in the bars (*i*) (*i*). To each side of the frame A a bar (*j*) is pivoted. These bars serve as supports to the inner end of the fly board, the inner end of said board having a journal or projection at each end which fit in slots in the upper ends of the bars or supports, see Figs. 1 and 3.

D is a rectangular frame which rests on the upper part of the frame A and is moved back and forth thereon by straps or belts (*k*) which are attached to a drum E in the frame A and to the front and back ends of frame D. The drum E being turned by hand first in one direction, and then the other by a crank F. On the frame D, the form bed G is placed, and two small uprights (*l*) (*l*) are attached to one end of frame D, said uprights having the ends of a traverse rod H, fitted in their upper ends. To this rod H one end of an apron I is attached and the opposite end of this apron is secured to a cylinder J, the journals of which are fitted in sliding bearings K, K, placed in the uprights (*f*) (*f*) and underneath projecting lips (*f'*) on the upper ends of bars K'. The lower end of each bar K' has a friction roller (*m*) attached to its inner side, and two stationary rollers (*n*) (*n*), are attached to the inner side of each upright (*f*). Between the roller (*m*) on each bar K', and the two rollers (*n*) (*n*) on the inner side of each upright (*f*) a taper bar or wedge L is placed. The shape of these bars or wedges is shown by dotted lines in Fig. 1.

M is the carriage for the frisket, the inner end of which is jointed to the uprights (*l*), (*l*). This frisket carriage is a rectangular frame and has a frisket N, fitted in it, said frisket being jointed to the outer end of the frisket carriage as shown at (*o*). In the frisket carriage M a transverse shaft O, is placed said shaft having two plates (*p*) (*p*) attached to it which plates serve as clamps and when depressed overlap the inner edge of the frisket. The clamps (*p*) are operated by having a crank (*q*) at one end of the shaft, said crank being actuated by coming in contact with a projection (*r*) attached to one of the uprights (*f*). The frisket N is of the usual form and construction, but is so combined with its carriage M that it can readily and conveniently be used to deliver or discharge the printed sheet on to the fly-board C, thus performing both the uses of a frisket and a fly.

The bearings K, K, each rest on a rod P, and the lower ends of these rods bear or rest upon the ends of a spring Q which is attached to the under side of the bar (*g*).

The operation is as follows:—The form

A′ is properly placed on the bed G, and the feed board B is shoved forward so that its inner edge will project over or beyond the cylinder J. The blank sheets B′ are laid in a pile on board B, and the frame D is moved outward by turning the crank F and the outer end of the frisket carriage is forced upward against the inclined sides of the bars (*j*) as the outer end of the frisket carriage strikes against projections on the upper ends of said bars (*j*) the end of the crank (*q*) strikes the projection (*r*) and the plates or clamps (*p*) (*p*) are thereby raised so that a blank sheet may be taken from the board B by the attendant and laid upon the frisket N. The crank F, is then turned in the opposite direction and the frame D is moved underneath the cylinder J, the frisket carriage passing down the inner sides of the inclined blocks (*j*) (*j*) the impression being given the sheet as it passes underneath the cylinder J. The cylinder J, is made to press upon the sheet by means of the taper bars or wedges L, L, which as the frame D is moved in the direction indicated by arrow (1) and the impression given the sheets are thrown backward in consequence of projections (*s*), (*s*), striking against pins (*t*) on said blocks, see Fig. 1, and the thin or narrow ends of the blocks pass between the rollers (*m*) (*n*) (*n*) and allow the spring Q to throw up the cylinder, said wedges being moved in a contrary direction just before the frame D reaches the end of its outward movement in consequence of projections (*u*) on the end of the frame D striking against the back ends of the wedges L, L. This latter movement of the wedges brings down the cylinder J, so that upon the return movement of the frame D the impression may be given the sheet. When the frisket carriage M has been run up the inclined bars (*j*) (*j*) and the clamps (*p*) (*p*) raised as described the operator throws over the frisket N and the printed sheet is deposited upon the fly board C. The frisket is then turned back, a succeeding blank sheet placed on it, and the crank turned as before. The clamps (*p*) (*p*) are pressed down upon the edge of the sheet by a small spring (a^2) placed at one end of it. The form A′, is inked by an attendant from underneath the fly board C, and the form bed G is rendered very accessible and also all the other working parts by shoving back the feed board B, turning up the fly board C, and frisket carriage M, see dotted lines Fig. 1.

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

1. The frisket-carriage M attached to the frame D as shown, and used in connection with the inclined bars or guides (*j*) (*j*) whereby said frisket-carriage and its frisket is elevated at the termination of the outward stroke of the frame, so that a blank sheet may be readily and conveniently adjusted on the frisket, or a printed sheet be discharged therefrom as described.

2. I claim the frisket N, when used for the purpose of discharging or delivering a printed sheet as set forth.

3. I claim the combination of the pressure cylinder J, and frame D when said cylinder is operated automatically by the wedges L, L, and spring Q as shown so as to be depressed at the proper time and give the necessary impression to the sheet and also be thrown up free from the sheet after the impression has been given as described.

4. I claim the arrangement of the feed board B, and fly board C, when arranged as shown, so that said boards are made adjustable and capable of being removed at one side so as to render the working parts of the press accessible as described.

JOHN HENRY.

Witnesses:
ISAAC STEVENS,
B. F. SCHENCK.