

G. P. Gordon.

Sheet 1, 2, 5, 6 of 5

Printing Press.

Patented Aug. 5, 1851.

N^o 8,285.

Fig. B.

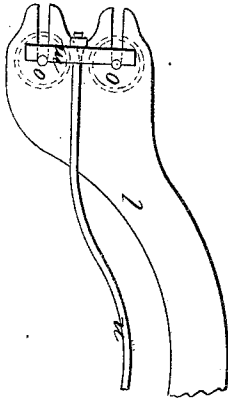
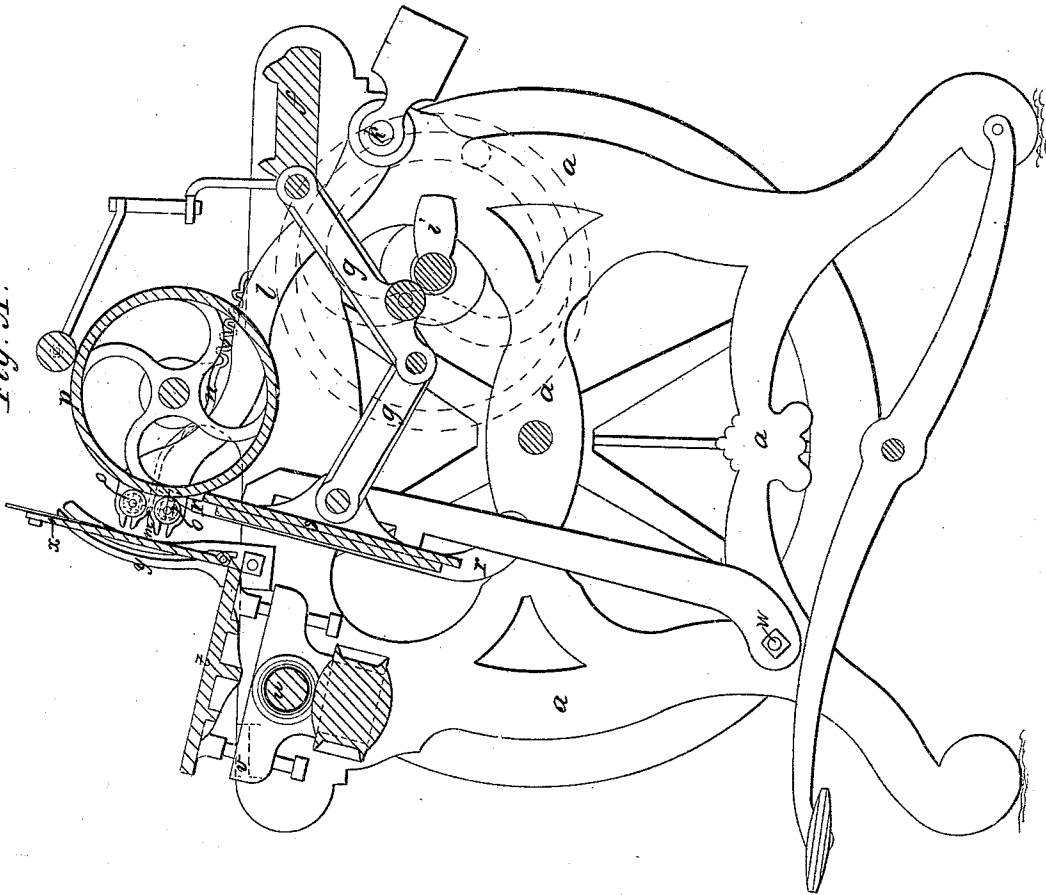


Fig. A.



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Fig: 7.

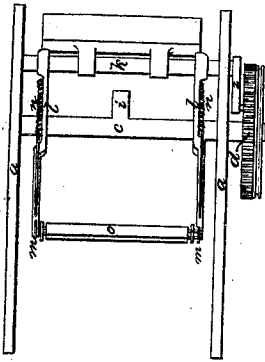


Fig: 9.

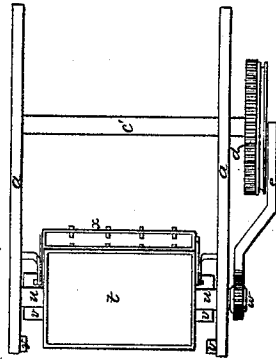


Fig: 11.



Fig: 12.

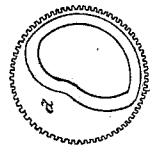


Fig: 6.

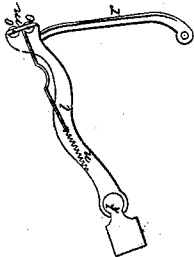


Fig: 8.

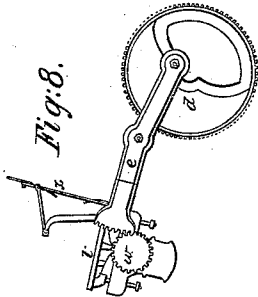


Fig: 10.

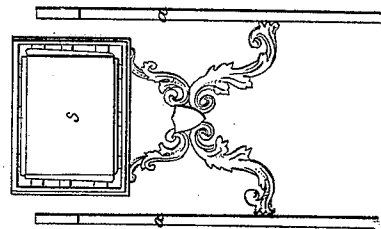


Fig: 4.

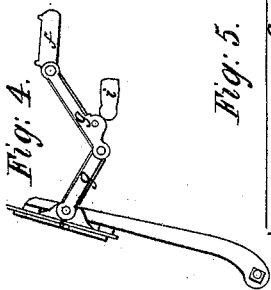


Fig: 5.

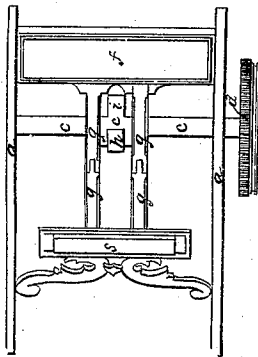
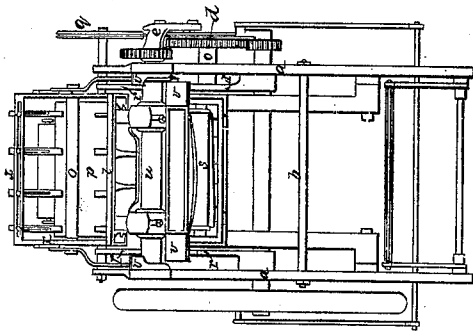


Fig: 3.



UNITED STATES PATENT OFFICE.

GEO. P. GORDON, OF NEW YORK, N. Y.

PRINTING-PRESS.

Specification forming part of Letters Patent No. 8,285, dated August 5, 1851; Reissued April 8, 1856, No. 366.

To all whom it may concern:

Be it known that I, GEORGE P. GORDON, of the city of New York and county and State of New York, have invented a new and
5 Improved Job-Printing Press; and I do hereby declare that the following is a full and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

10 Figure 1, is separated to show the method of holding the rollers in the arm. Fig. 3 is a front view. Figs. 4, 6 and 8 are sections. Figs. 5, and 9 are top views of the same in the press frame. Figs. 11 and 12
15 are relative side views of the cam (*d*) and Fig. 10 *e*, a front view of the bed and its standard as I make it.

The same letters of reference designate the same parts of the machine in all the fig-
20 ures of the drawings.

The nature of my invention consists in arranging a platen which vibrates upon a center so as to carry the face in the arc of a circle to and from the points or places of
25 receiving the sheet of paper and the impression at the proper time. Also in adapting the same to receive the sheet of paper between said platen and a frisket with adjustable nippers as well as a proper ar-
30 rangement of bed inking rollers, etc all of which is hereinafter fully described and set forth.

To enable others skilled in the art to make and use my invention, I will next describe
35 its construction and operation.

I provide a frame of suitable shape to receive the several parts properly; consisting of two sides (*a*), which may be bolted together in the usual way, that is, with bolts
40 (*b*), having collars, and secured to receive nut, placed on the side opposite to the collars.

(*c*) is the main shaft; and gives motion to the whole machine through pulleys, or
45 gearings, in any of the known methods. Upon the main shaft is a revolving cam (*d*), which gives the motion to the platen through a lever (*e*).

Near the back end of the frame is a substantial bearing piece (*f*) firmly attached to the frame; for receiving by joints the extreme end of the toggles (*g*). The toggles
50 (*g, g*) are of common construction, and have a frictionless roller (*h*) near the center of
55 action, for the impression cam to impinge against. The front end of the toggle is jointed to the back side of the bed. At the

center lengthwise of the main shaft is the impression cam (*i*); which gives the im-
pression by impinging against the friction- 60
less roller (*h*) at the proper time. Near the back end of the press, and beneath the bearing piece (*f*), is a rocking shaft (*k*), to
which are attached on both sides of the press arms (*l*); these arms at the opposite 65
end constitute a frame, for holding and carrying the inking rollers (*o*) from the distributing roller (*p*), to, and across, the form and back to the distributing roller, each time
an impression is taken. The caps (*m*) 70
which hold the rollers in place are connected with two springs (*n*), one extending to either of the arms, for the purpose of keeping said rollers firmly up to the form, and
75 the distributing cylinders at all times, this latter being driven by its pulley (*q*), from the pulley on the outside of the impression cam (*d*). On each side of the bed, are
placed stationary bearers (*r*); which bearers keep the roller frame or arms in a steady 80
position, while moving, and prevent the rollers from approximating too close to the form; that is, from pressing too hard upon the form. The bed (*s*) consists of a plate
85 of metal placed upon one of its edges in a vertical position at the time of impression, and is slightly thrown from this position, at the time of inking the form; it rocking
freely on its own axis (*w*), receiving a motion nearly horizontal in direction, advancing 90
for the impression, and receding after it. The platen (*t*) consists of a plate of metal made to swivel upon a center (*u*), to a given distance; so that the face may travel
95 in an arc of a circle, and thus be brought in contact with the frisket, or sheet-holder, at the proper time. The opposite side of the center, or shaft, of the platen, is constructed
so as to form a counter balance, and brings up against lugs (*v*) on the sides of the 100
frame, to prevent the platen from traveling too far in coming to the place of impression. The axle of the platen extends to the outside of the frame, and has upon such extended end, a section, or segment, of a wheel 105
(*w*), which is geared into another segment of a wheel forming a part of the arm (*e*), from the cam (*d*). The frisket (*x*) is a simple frame to pass around and nearly fit the edges of the platen. It is hinged to the 110
lower edge of the platen; and has slots through it, so that bolts may be placed to secure the nippers. At its upper, or opposite end, it has studs to extend into grooved

cams (*y*), see Fig. 1, Sheet 1, on the frame, which cams are so constructed, as to give the frisket an upward direction, at the same time the platen receives its backward movement; thus the two open in different directions. The frisket also has upon it adjustable nippers, see Fig. A, Sheet 1, and Fig. 9, Sheet 2, consisting of plain pieces of curved spring, with slots in them; and these are attached by bolt and nut to the frame of the frisket; the bolt passing through the slot in the spring nipper, and the slot in the frisket frame; by which the nipper can be freely moved to accommodate circumstances, and to grip the sheet in any direction, and place desired. The driving gear being ordinary is not here described. The same remark will apply to the inking apparatus. The inking apparatus arms are set in motion by a crank (*z*), see Fig. 7, from the inside cam placed upon the main revolving cam and this is placed on the driving shaft.

Operation: Motion being given to the main shaft, sets the whole machine in operation. We will suppose the platen to be in the position of receiving the sheet nearly horizontal (as represented in Figs. 1, 3, 8, 9, Sheet 2, and Sheet 1, Fig. A). The cam (*d*) will now begin to act, and throw the platen to the vertical position, or the place of receiving the impression. As this has taken place it will be understood that the sheet was placed in its proper position, upon the face of the platen before it moved; and in this movement the frisket has closed upon the sheet; tightly gripping it by the impinging of the nippers upon the sheet, as it laid upon the platen; the frisket having closed upon the platen as it changed its position, the platen carrying the frisket with it to the position for receiving the impression. Immediately on the platen assuming its position, the impression cam acts upon the toggle, and carries the bed forward, by straightening the toggle. This takes the impression. The bed then recedes to its first position. The platen next recedes to its first position, and when it is nearly at rest, or clear of the rollers, the inking rollers commence to descend, and pass across the form, and back again; and the printed sheet is taken off when these operations are repeated. Thus it will be understood that about two thirds of the time, of printing a sheet, is occupied in inking the form, and that the same time is allowed for taking off one sheet and putting on another; while the remaining one third of the time, is occupied in the movements of the other parts; during which the impression is given. The impression is given by an ordinary toe cam, acting upon a common toggle, placed between the movable bed, and the stationary brace, or bearing piece (*p*); the whole of this acting to

cause the bed to advance, and recede, for the purpose of giving an impression to the sheet, which for the time is at rest upon, and with the platen, for the purpose of receiving the impression. Immediately the impression is finished, and the bed withdrawn, the cam (*d*) throws the platen over to its horizontal position, by means of the lever segment, and the segment on its own shaft, in manner and to the effect hereinbefore described. At this stage the crank (*z*) sets the inking roller frame, consisting of the arms (*l*), in motion, carrying them down over the form, and back as herein more fully described.

What I claim as my invention and desire to secure by Letters Patent is:—

1. Giving to the platen a rotating reciprocating motion, which enables it to assume the two positions of receiving the sheet, and the impression alternately, when operated by the cam, sectional arm, and its own segment, geared with the segment of the sectional arm, by giving to it the movement described of an arc of the circle, when traversing from one of these positions to the other.

2. I claim affixing the vibrating bed on its own axis; so that it may recede into the proper position, for receiving the inking rollers for inking the form, and become perpendicular and directly face to face with the platen, when the toggle is straight, for the purpose of giving the impression.

3. I claim the arrangement of two side arms, so combined as to form a frame to hold and carry the inking rollers, and giving to them the motion both forward and backward over the form, for each impression, during the rest of the other parts; whether the same be done in this precise manner or equivalents to produce a like result.

4. I claim the grooved cam shaped arms or guides or their equivalent, for the purpose of carrying the frisket in the right direction, and holding it in the desired positions, during the intervals of rest given to the platen,—that is—opening it to relieve the printed sheet, and holding it open, to lay the succeeding sheet; and closing it firmly against the platen, to grip the sheet; and holding it closed until the bed has moved forward, given the impression and receded to its original position.

5. I claim the combination of the bed vibrating on its own axis with the roller frame composed of two arms, substantially as herein described and set forth.

GEO. P. GORDON.

Witnesses:

THOS. B. BARNARD,
J. L. HAIGSLEY.