2 Sheets—Sheet 1.

D. KOENIG.

EMBOSSING PRESS.

No. 190,148. Patented May 1, 1877.

Fig. 1.

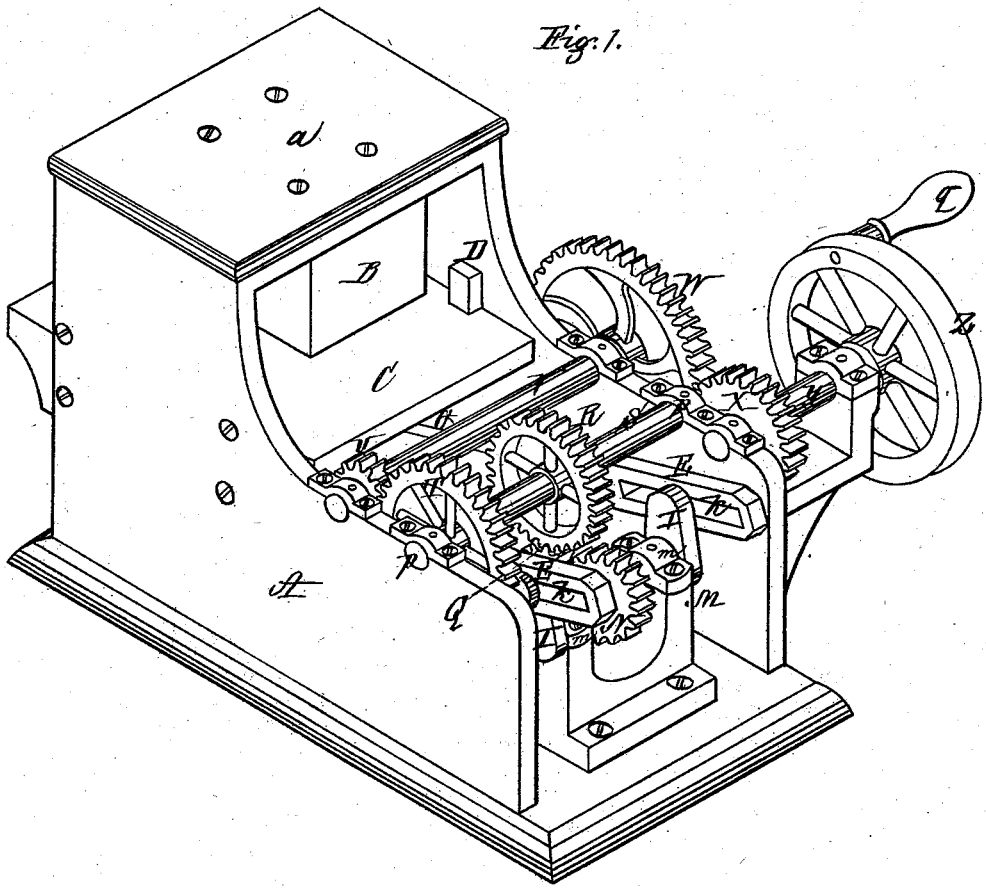

Fig. 4.

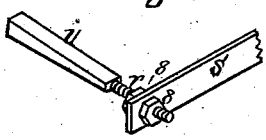

Fig. 7.

Witnesses,
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2 Sheets—Sheet 2.

D. KOENIG.

EMBOSSING PRESS.

No. 190,148, Patented May 1, 1877.

Fig. 2.

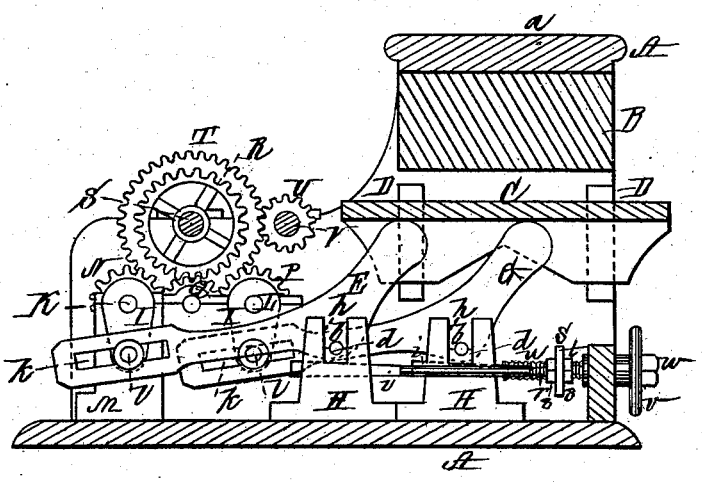

Fig. 3.

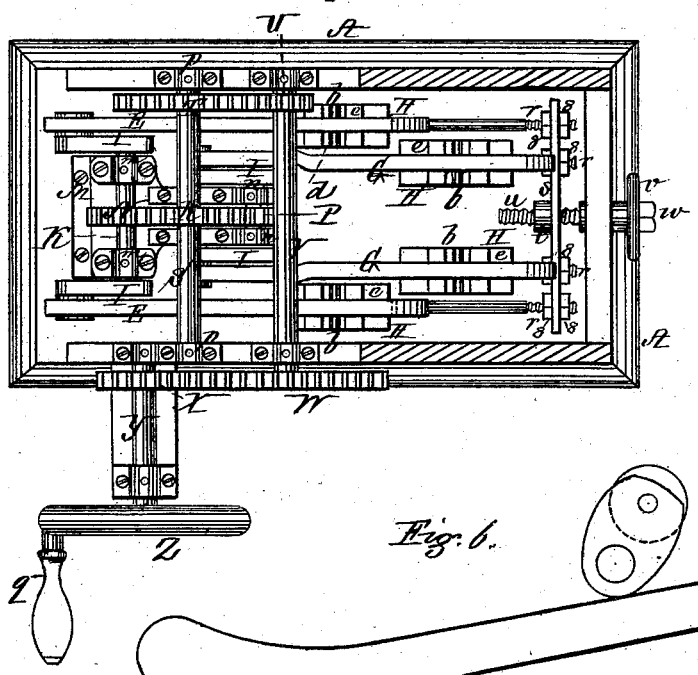

Fig. 5.

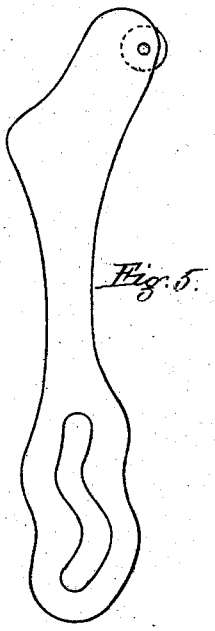

Fig. 6.

Witnesses,
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J. E. Cambridge.

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Dominique Koenig,
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UNITED STATES PATENT OFFICE.

DOMINIQUE KOENIG, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN EMBOSSING-PRESSES.

Specification forming part of Letters Patent No. **190,148**, dated May 1, 1877; application filed February 9, 1877.

To all whom it may concern:

Be it known that I, DOMINIQUE KOENIG, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Embossing-Presses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of an embossing-press constructed in accordance with my invention. Fig. 2 is a longitudinal vertical section through the same. Fig. 3 is a plan, the bed and a portion of the frame-work being removed. Fig. 4 is a detail in perspective; Figs. 5 and 6, modifications. Fig. 7 is a perspective view of one of the bearings.

Heretofore it has been customary to raise the bed of an embossing-press by means of a pair of toggle-joints pivoted to its under side, or by means of a single cam acting under its center. Both of these methods are objectionable, for the reason that the surface of the bed is not always kept uniformly in a horizontal plane, and consequently the pressure varies at different points, and the work is rendered imperfect.

To remedy this difficulty is the object of my invention, which consists in raising the bed by four levers, upon which it bears at four separate and independent points, by which means the surface of the bed is constantly maintained in a perfectly horizontal plane, thus insuring a uniform degree of pressure throughout the entire surface of the work.

My invention also consists in a device of peculiar construction for simultaneously adjusting the fulcra of the four levers, whereby the height of the bed may be varied as required.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A represents the frame-work, on the under side of the top *a* of which is secured the block B, to which is attached the embossing-die. (Not shown.) C is a bed or table, on which the work is to be placed, and by which it is brought up into contact with the die. This bed moves vertically on guides D, situated at or near its corners, and rests upon four levers, E E G G, each of which is provided with a fulcrum-pin, *b*, which rests in bearings *c* in a block, *d*, in the form of a cross, Fig. 7, which fits into vertical slots *e e h h*, formed in a pedestal or step, H, secured to the floor of the frame-work, the slots being at right angles to each other, two, *e*, located in a longitudinal, and the other two, *h*, in a transverse direction, each bearing-block resting on a wedge, *i*, made adjustable, in a manner and for a purpose to be fully described hereafter.

The end of each lever opposite that upon which the bed bears is provided with a longitudinal slot, *k*, within which moves the pin *l* of a crank, I, two of which cranks I I are secured to the opposite ends of a shaft, K, and the remaining two cranks I I secured to the opposite ends of a short shaft, L, both of these shafts having their bearings *m n* in opposite ends of a block, M, secured to the frame-work.

The shaft K is provided with a cog-wheel, N, and the shaft L with a cog-wheel, P, both of these wheels N P being driven by an intermediate gear, Q, with which engages a gear, R, secured centrally on a shaft, S, extending transversely across the frame-work, and having its bearings *p* therein. This shaft S carries at one end a gear, T, which is driven by a gear, U, on one end of another shaft, V, parallel to the shaft S, and extending across the frame-work, the opposite end of the shaft V projecting outside the same, and carrying a large gear, W, which is driven by a smaller gear, X, on one end of a shaft, Y, provided at its opposite end with a fly-wheel, Z, turned by power applied to a handle, *q*, or in any other suitable manner.

From the foregoing, it will be seen that the ends of all the levers E E G G which support the bed are simultaneously raised or depressed, thus causing the work to be carried up in contact with the die which gives the impression. Each of the wedges *i* is provided with a screw-shank, *r*, which passes through a transverse plate, *s*, having a screw-nut, *t*, at its center, for the reception of a screw, *u*, which passes through the frame-work, and is provided with a circular head, *v*, kept in place by a nut, *w*, the turning of this screw, by ap-

plying the hand to its head *v*, causing the plate *s* to move to and from the bearings of the levers E E G G, and simultaneously carry back or advance the several wedges *i* thereunder, by which means the fulcra of all four levers are raised or lowered at one operation, when the height of the bed requires to be adjusted relative to the embossing-die and thickness of the work, in order that the proper pressure may be obtained to secure a perfect impression.

On the end of the screw-shank *r* of each wedge *i*, both on the inside and outside of the plate *s*, turn nuts 8 8, which draw up or let out that particular wedge more or less, and consequently raise or lower the bearings of its lever, should, at any time, one corner of the bed be slightly out of level, each wedge being operated singly, so as to adjust the fulcrum of its respective lever independently of the other.

If required, each of the levers E E G G may be provided with a friction-roll for the bed C to rest on, so as to reduce the friction to a minimum, and, if it is desired to have the bed rise with a quick motion, the slots at the ends of the levers may be made of the form seen in Fig. 5; but this quick motion is not desirable, as it racks the floor, and produces unnecessary noise and wear.

Instead of operating the levers by cranks, as shown, they may be actuated by cams, (see Fig. 6,) or in any other suitable manner.

The above-described press is exceedingly simple, and much more powerful than any heretofore constructed, while it is noiseless in its action, and not liable to get out of order.

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

1. The bed C, in combination with, and raised by, the four levers E E G G, upon which it bears at four separate and independent points, substantially as and for the purpose set forth.

2. The wedges *i*, connected together and operated simultaneously by the screw *u*, in combination with the bearing-blocks *d* and levers E E G G, substantially as and for the purpose described.

Witness my hand this 2d day of February, 1877.

DOMINIQUE KOENIG.

In presence of—

JOHN HENESY,

FREDERIC AREND.