

*J. Koehler
Lithographic Press.*

N^o 53,309.

Patented

Mar. 20, 1866.

Fig. 1.

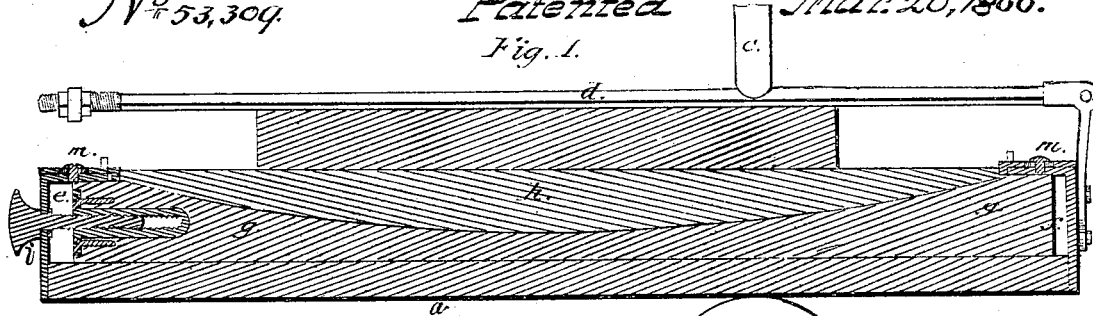


Fig. 2.

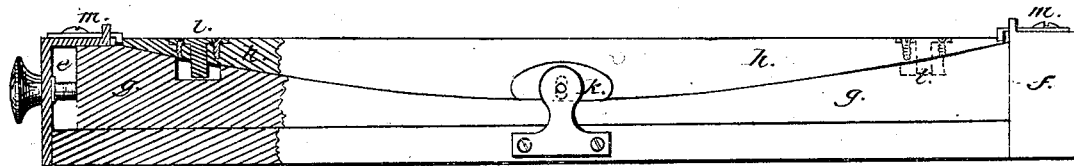
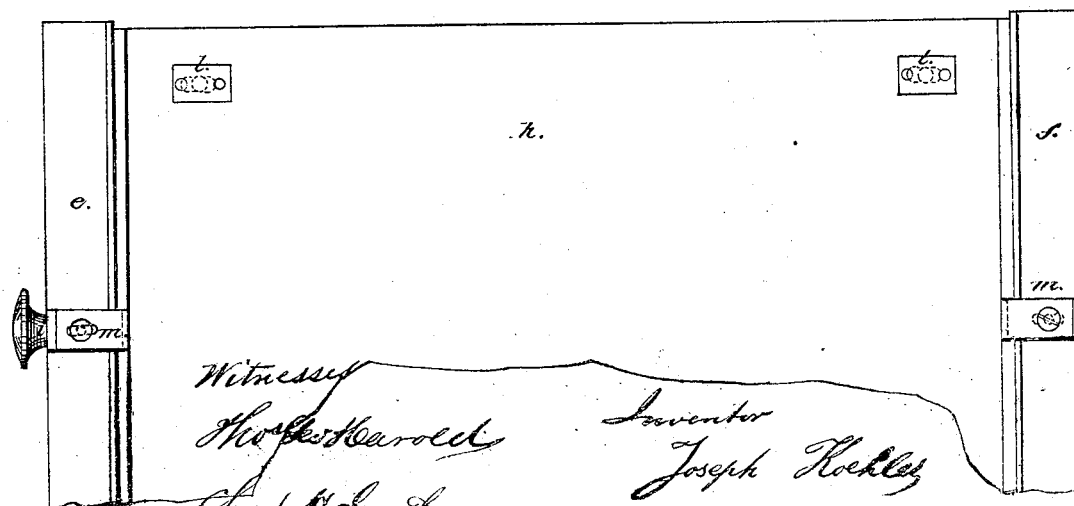


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOSEPH KOEHLER, OF NEW YORK, N. Y.

BED FOR LITHOGRAPHIC PRESSES.

Specification forming part of Letters Patent No. 53,309, dated March 20, 1866.

To all whom it may concern:

Be it known that I, JOSEPH KOEHLER, of the city and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Beds for Lithographic Presses; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a section, longitudinally, of the bed of a lithographic press. Fig. 2 is a side elevation of said bed, with one end partially in section, and Fig. 3 is a plan of part of said bed.

Similar marks of reference denote the same parts.

Lithographic stones are usually ground off on both sides, and they are seldom perfectly parallel in their top and bottom surfaces, and if one end of the stone is thicker than the other the impression printed from the same will not be uniform. It is therefore necessary to place sheets of thick paper, card-board, or similar material under the thinnest end of the stone, in order to render the upper surface of the stone level with the under side of the bed that rolls over the pressure-roller. This operation is attended with difficulty, particularly with large stones requiring several men to handle them, and even when adjusted there is great risk of the stone being broken by the pressure in printing, in consequence of the yielding nature of the material upon which the stone rests, and sometimes in consequence of the stone resting at the ends upon the bed and not being properly filled in intermediately.

The nature of my said invention consists in a safety regulating-bed for lithographic stones, formed by two parts, one a convex curved surface and the other concave, the one sitting within the other, so as to take a firm extended bearing, and to one of which a movement can be given longitudinally of the bed, so that the said curved surfaces shall cause the bed to be raised or lowered at either end, according to the direction in which one curved surface is moved on the other. By this device the most accurate adjustment is effected with great rapidity, and

the moving and blocking up of the stone to bring it level is entirely avoided, and the risk of breakage to the stone is almost wholly removed, because the under side of the stone will sit level or uniformly upon the adjustable bed.

I here remark that the adjustment is not required transversely of the bed in lithographic presses because the scraper will accommodate itself to the stone in this direction, said scraper being hung in the middle.

In the drawings, *a* is the metallic or other bed of a lithographic press. *b* is the pressure and moving roller, and *c* the scraper acting upon the tympan *d* to give the impression, as usual.

e and *f* are metallic boxes at the respective ends of *a*, receiving the ends of the adjustable bearer, *g*, having a concave upper surface receiving the stone-supporter *h*, having a convex surface fitting the surface of *g*.

A screw, *i*, is fitted at one end, by means of which the bearer *g* can be moved endwise in either direction upon the bed *a*, the ends of *g* being retained or guided within the boxes *e* and *f*.

The stone-supporter *h* is kept in place by an attachment, *k*, that connects it near the middle to the bed *a*, and projecting studs *l l* are provided near the corners of *h*, passing into mortises or slots in *g*.

It will now be understood that either end of the stone-supporter *h* can be raised and the other end correspondingly depressed by giving an end movement by the screw *i* to the bearer *g*, and thus varying thicknesses in the ends of a lithographic stone can be compensated, the stone resting flat upon its bed, and the parts of *g* and *h* also sitting tightly together.

Adjustable stops *m m* may be provided at the ends of the stone-supporter *h* to prevent any motion to the same after the adjustment has been effected.

It will be evident that the same adjustment could be effected if the bearer *g* was stationary and the stone-supporter *h* were moved upon it, and that the convexity might be on the upper side of *g* instead of the under side of *h*; but I prefer the construction shown.

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

1. The method herein specified of adjusting the beds of lithographic presses by moving one portion of the bed upon the other, the contiguous surfaces being curved, as and for the purposes specified.

2. In combination with the bearer and stone-

supporter, the boxes *e* and *f* and adjustable stops *m*, for the purposes and as specified.

In witness whereof I have hereunto set my signature this 20th day of November, 1865.

JOSEPH KOEHLER.

Witnesses:

LEMUEL W. SERRELL,

GEO. D. WALKER.