# M. WIENER.

## MACHINES FOR POLISHING PAPER.

No. 186,184. Patented Jan. 9, 1877.

Fig. 3.

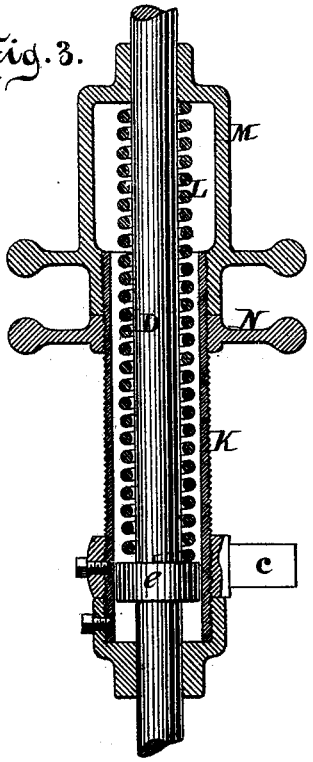



Fig. 1.

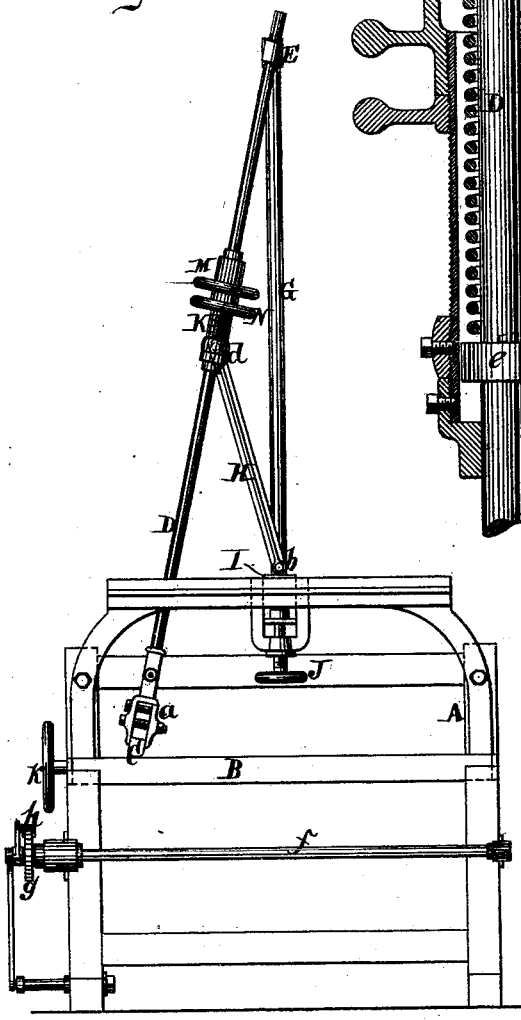
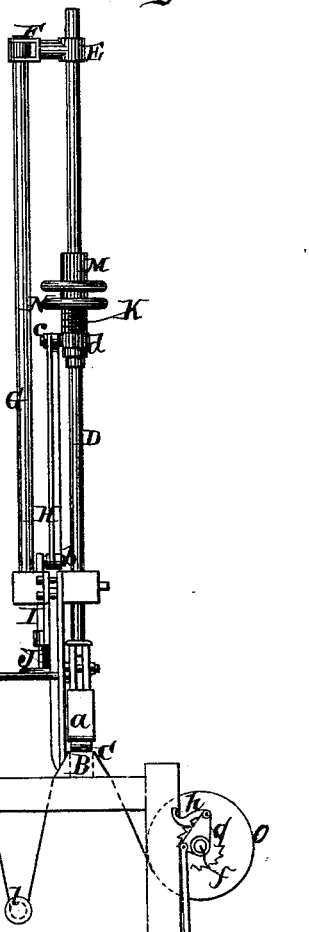



Fig. 2.




Witnesses.
Robt. E. Miller.
Chas. Wahlers.

Inventor.
Max Wiener
per
Van Santvoord & Hauff
his Attys.

# UNITED STATES PATENT OFFICE.

MAX WIENER, OF STAPLETON, NEW YORK, ASSIGNOR TO LOUIS DEJONGE & CO., OF NEW YORK CITY.

## IMPROVEMENT IN MACHINES FOR POLISHING PAPER.

Specification forming part of Letters Patent No. **186,184**, dated January 9, 1877; application filed November 10, 1876.

*To all whom it may concern:*

Be it known that I, MAX WIENER, of Stapleton, county of Richmond, and State of New York, have invented a new and useful Improvement in Machines for Polishing Paper and other Materials, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a front view of my machine. Fig. 2 is a side view thereof. Fig. 3 is a section of the rod which carries the polishing-stone, on a larger scale than in the previous figures.

Similar letters indicate corresponding parts.

My invention relates to a polishing-machine which is adapted to polishing paper and other like materials in a continuous sheet, so as to expedite the process of polishing; and it consists in the combination of a supporting bed or table, a polishing stone or tool so arranged as to be capable of receiving a reciprocating motion, and two shafts—one to carry a roll of the material to be polished, and the other to carry a take-up roller—these shafts being situated, respectively, on either side of the said bed or table, so that the material to be polished can be made to pass over said table as it is unwound from one roller and wound on the other, and the polishing stone or tool being placed immediately above the table, so that it can be brought in contact with the surface of the material passing over the table. The polishing stone or tool is affixed to the lower end of a rod which passes through a swivel-bolt secured to a standard which rises from the machine-frame, so that such rod can be moved up or down and swung back and forth, while the polishing stone or tool can thereby be adapted to the surface of the table or bed. With the said supporting-rod of the polishing stone or tool is combined a link, which is pivoted at one end to a tube arranged on the rod, and pivoted at its other end to the machine-frame, in such a manner that by said link the rod and polishing stone or tool are carried in a straight line over the table. By the said pivoted link, moreover, the tube arranged on the supporting-rod of the polishing stone or tool is held in a fixed position, and in the tube is arranged a spiral spring, which has a tendency to press the supporting-rod downward, and by the action of which the polishing stone or tool is held firmly in contact with the table or the material placed thereon to be polished.

In the drawing, the letter A designates the frame of my machine, in which is secured the table B. Over this table swings the polishing-stone C, which is affixed to the lower end of a rod, D, which, to this end, is provided with a clamp, *a*, at said lower end. The said rod D is guided in the eye of a swivel-bolt, E, having its bearing in a box, F, secured to a standard, G, which is firmly connected to the frame A. With the rod D is combined a link, H, the lower end of which swings on a pivot, *b*, which is firmly attached to a slide, I, arranged in ways formed on the frame A, and which can be moved up or down by means of a set-screw, J. The upper end of the link H swings on a pivot, *c*, which extends from a collar, *d*, forming part of a tube, K, through which passes the rod D. In this tube is placed a spring, L, (see Fig. 3,) which embraces the rod D, and the lower end of which bears against a shoulder, *e*, formed on said rod, while its upper end bears against a cap, M, which is secured on the tube K, and secured in position by a lock-nut, N. By screwing the cap M in or out, the tension of the spring L can be regulated, and the polishing-stone C, which is depressed by the action of said spring, can be made to bear on the table B with more or less force. The link H serves to carry the rod D and the polishing-stone in a right line over the table B, so that said stone bears upon the material to be polished with a uniform pressure throughout its whole stroke.

The object of the slide I is to permit of bringing the polishing-stone C out of contact with the table B, and this is accomplished by simply raising said slide I.

The material to be polished is taken from a roll, O, which is mounted on a shaft, *f*, having its bearings in boxes attached to the frame A. On this shaft *f* is mounted a ratchet-wheel, *g*, with which engages a lever-pawl, *h*, that is operated by a treadle, P, so that the roll may

be turned, and the material to be polished released, as required. This shaft *f* is placed on one side of the table B, and on the opposite side thereof is arranged a shaft, *i*, which carries the take-up roller *j*, and which is turned by a hand-wheel, *k*. Between this take-up roller and the table B is situated a guide-roller, *l*, around which the material to be polished is caused to pass, and by which it is caused to lie flat as it passes over the table B.

It will be seen that by my machine paper or any other material of a like nature can be polished as it is taken from the roll, and the pressure of the polishing-stone is uniform, while this pressure can be regulated to suit the material to be polished.

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

1. In a polishing-machine, the shaft *f*, for carrying the roll of material, and the shaft *i*, for taking up said material as polished, in combination with the bed B and the reciprocating polishing-tool C, the whole arranged to operate as and for the purpose described.

2. The standard G, provided at or near its upper end with the swivel-eyebolt E, in combination with the rod D, arranged at its upper end in said swivel-eyebolt, the polishing-tool secured to the other end of said rod D and to the standard H, the bed B, and shafts *f* and *i*—one for holding the roll of material, and the other for taking up the material as polished—substantially as described.

3. The combination of the tube K, having the screw-cap M and pivot *c*, the spring L arranged therein, the rod D, the swivel-eyebolt E on the standard G, the link H, pivoted on the pivot *c*, and on the pivot *b* the adjustable slide I, all substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 5th day of October, 1876.

MAX WIENER. [L. S.]

Witnesses:
W. C. HYATT,
C. L. KELLING.