

2 Sheets—Sheet 1.

No. 561,557.

Patented June 9, 1896.



Witnesses

Inventor: _____

Oscar A. Michel
Walter A. Gamble

Emil J. Bein.

By Drake & Co Atty's.

(No Model.)

2 Sheets—Sheet 2.

E. J. BEIN.
SANDPAPERING MACHINE.

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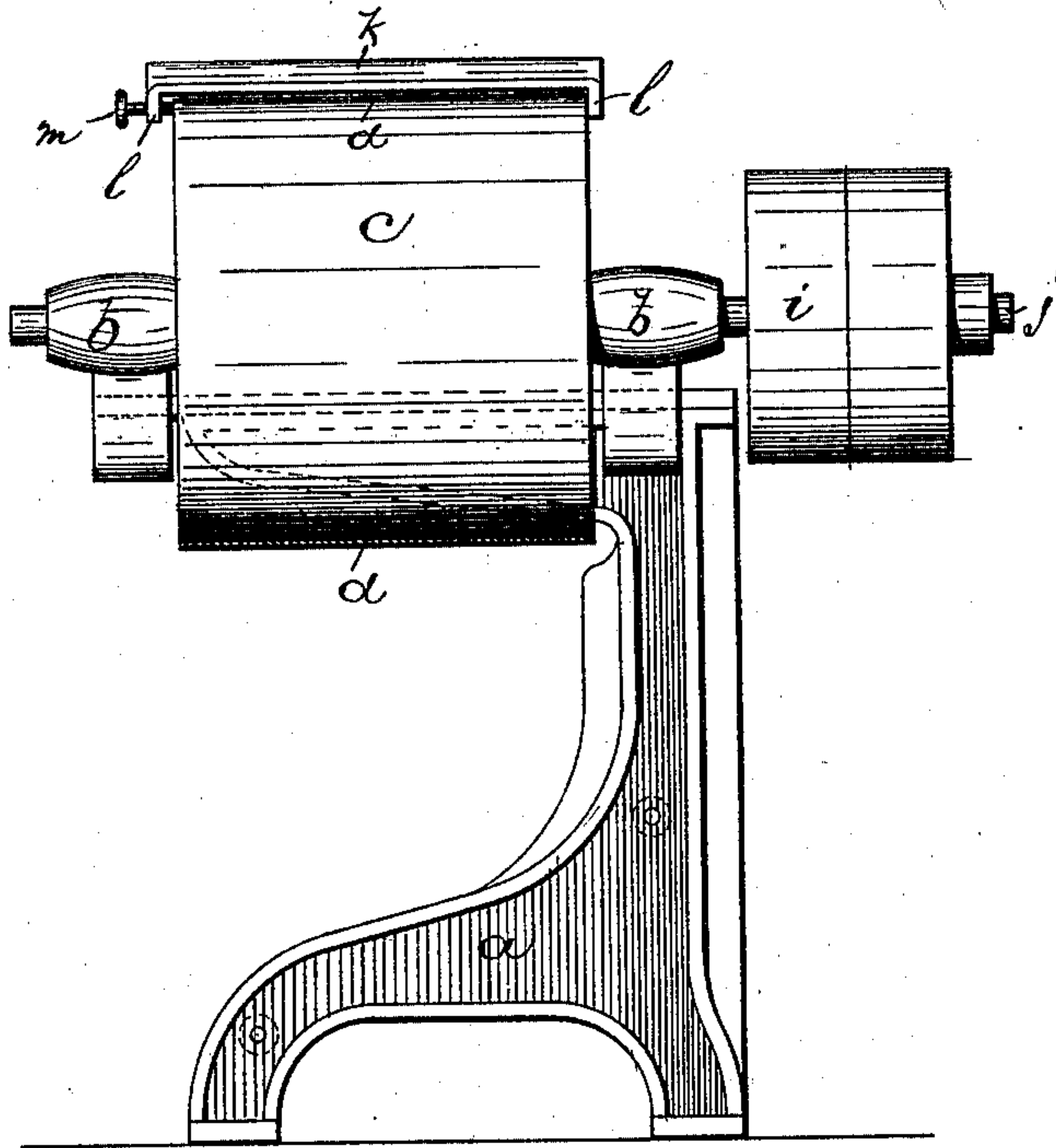


Fig. 3



Fig. 4

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Walter A. Gamble

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UNITED STATES PATENT OFFICE.

EMIL J. BEIN, OF NEWARK, NEW JERSEY.

SANDPAPERING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 561,557, dated June 9, 1896.

Application filed May 6, 1892. Serial No. 432,003. (No model.)

To all whom it may concern:

Be it known that I, EMIL J. BEIN, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Sandpapering-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to facilitate the operation of sandpapering articles of wood, &c., to secure a finished surface with greater ease, and to secure other advantages, some of which will be referred to in connection with the description of the working parts.

The invention consists in the improved sandpapering-machine and in the arrangements and combinations of parts substantially as will be hereinafter set forth, and finally embodied in the clauses of the claim.

Referring to the accompanying drawings, in which like letters indicate corresponding parts in each of the several views, Figure 1 is a front elevation of the improved sandpapering-machine. Fig. 2 is a plan of the same, and Fig. 3 an end view. Fig. 4 is an enlarged edge view of a portion of the belt on an enlarged scale, showing a joint therein, and the arrow indicating the direction of movement of the belt.

In said drawings, *a a* indicate the frame of the machine, providing at the opposite ends bearings *b b'* for the drums *c c'*, on which the endless belt *d*, of sandpaper or cloth, is stretched, the bearings *b* being preferably fixtures to or of said frame *a* and the bearings *b'* being preferably adjustable on said frame and controlled by adjusting-screws *e e*, arranged on opposite sides of the drum *c'* and having bearings in boxes *f f*, as will be understood.

The drums *c c'* are apart or separate from one another, and between the two is arranged a horizontal table *g*, having an elastic or rubber-covered upper face, which lies in a line with the upper portions of the peripheries of

the drums, as shown in Fig. 1, and is held by standards or supports *h h* of the frame, the said supports being adjustable in relation to the frame, so as to be raised or lowered thereon. The said supports are disposed at the opposite sides and ends of the table, so as to obtain the desired firmness and a proper adjustment of all parts of the table, so that the said table, when of the considerable length and width required by the work, can be brought up into proper parallelism with the belt as it travels over the surface and maintain a firm and uniform bearing for the piece to be sandpapered. This uniformity of bearing of the sandpaper on the wooden piece is increased or rendered more perfect by means of the elastic surface covering the top of the table.

The table referred to presents to the belt a flat even surface and thus differs materially from a belt-support consisting of a series of rollers or the like.

The drums and sandpapering-belt are driven by pulleys *i* on the shaft *j* of one of said drums, preferably the one in fixed bearings.

To prevent the article undergoing the sandpapering operation from being thrown from the belt should the operator lose his grasp thereon, and to provide a guide or gage against which the article may be placed and steadied and the course of the sandpaper over the surface of the paper be more perfectly governed and controlled, I have constructed a transverse guide and support *k* and secured it to the opposite sides of the table, so that it will be more firm to withstand the pressure brought thereon by the wooden piece, the broad surface of which is in closer contact with the rapidly-moving belt than when held by a single stud, as in certain other machines for allied purposes heretofore in use. Said support or guide extends over the surface of the sandpaper or cloth, as clearly indicated in Figs. 1 and 2. The said transverse support is provided with depending ears *l* to engage the table and with a set-screw *m* to firmly attach the support at its opposite ends to the opposite sides of the table.

The frame and drums thereon are constructed and arranged in relation to one an-

other so that the sandpapering-belt can be easily removed from the drums by lateral movement, the vertical parts of the frame lying on one side of the drums only.

5 In operating the machine power is transmitted to the pulley *i* from the belt *n*, Fig. 1, and rotary motion is thus imparted to the drums. The endless belt is thus given a straight course over the table. The article
10 to be finished is laid upon the table against the support *k*, and preferably so that the grain of the wood will lie parallel with the course of the paper. Thus the marks of the
15 sand will not be as apparent as they would were the marks transversely formed with relation to said grain of the wood and a better finish is secured.

In forming the endless belt of sandpaper or sanded cloth or other fabric the joint is made
20 by overlapping the ends of the belt and cementing them together, the overlying lap ex-

tending in the direction from which the belt travels.

Having thus described the invention, what I claim as new is—

25 The combination, in a sandpapering-machine with a frame having drums *c*, *c'*, and means for operating the same, a sandpapering-belt stretched over said drums, a table supported at opposite sides thereof and a
30 guide or support *k*, having depending ears, *l*, and a set-screw, *m*, engaging the edge of the table, substantially as and for the purposes set forth.

In testimony that I claim the foregoing I
35 have hereunto set my hand this 29th day of April, 1891.

EMIL J. BEIN.

Witnesses:

OLIVER DRAKE,
OSCAR A. MICHEL.