

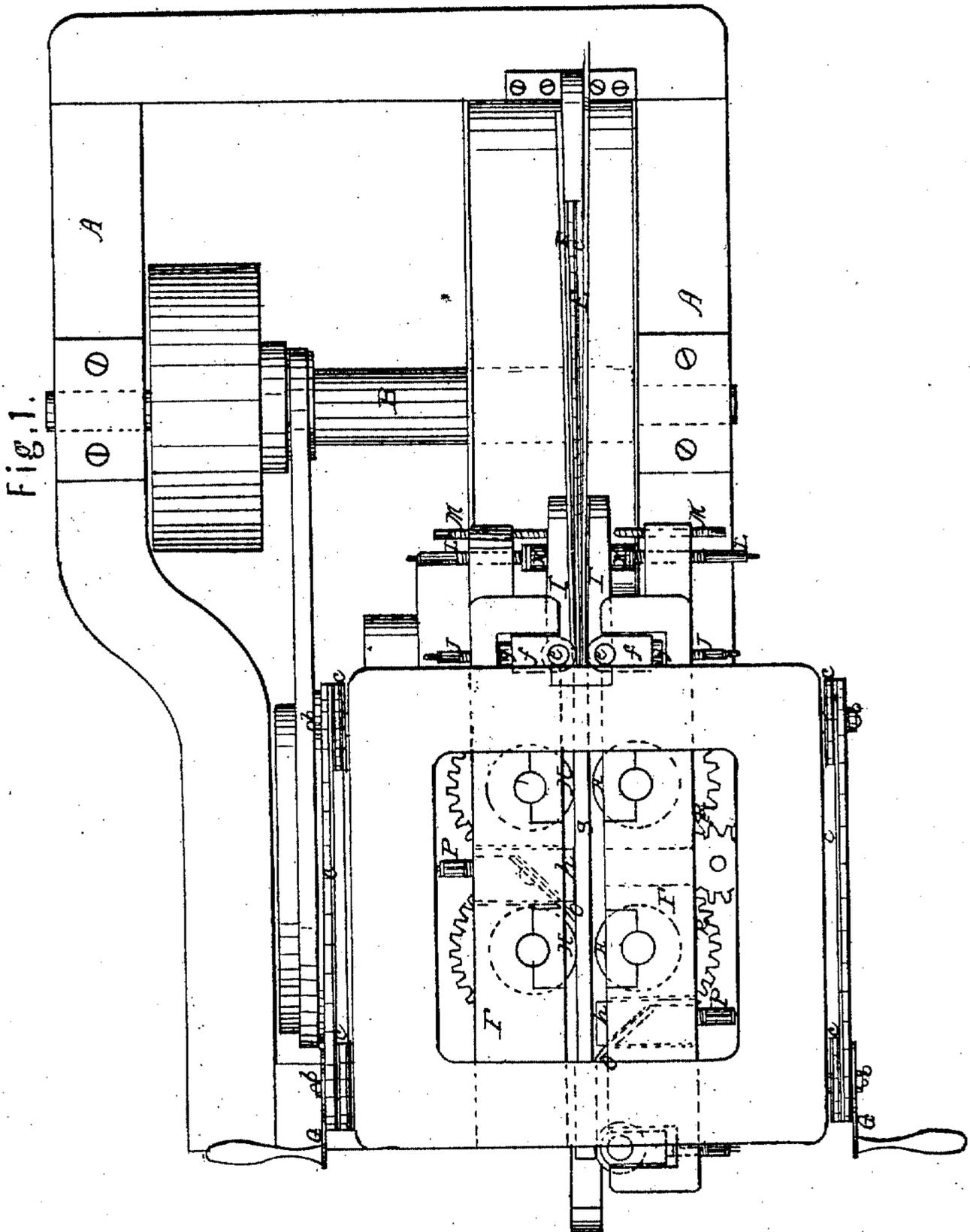
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J. Myers & R. G. Eunson.

Sawing thin boards.

No 10,965.

Patented May 23, 1854.



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Sheet 3.*

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Fig. 3.

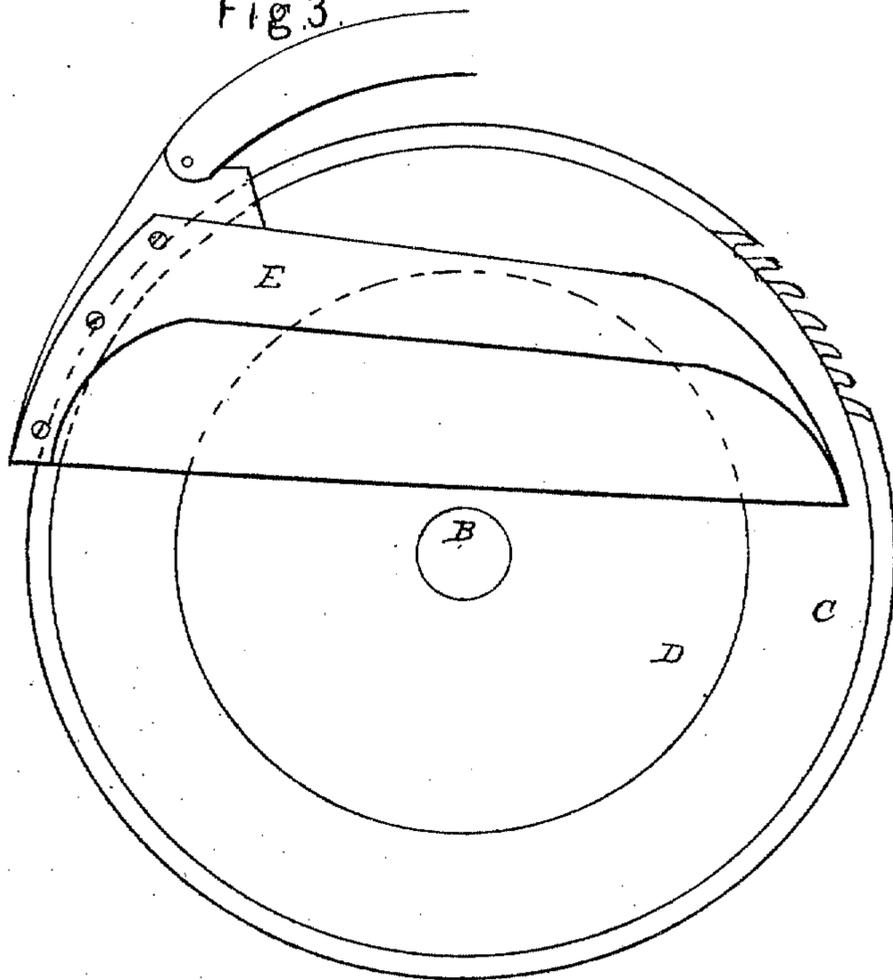
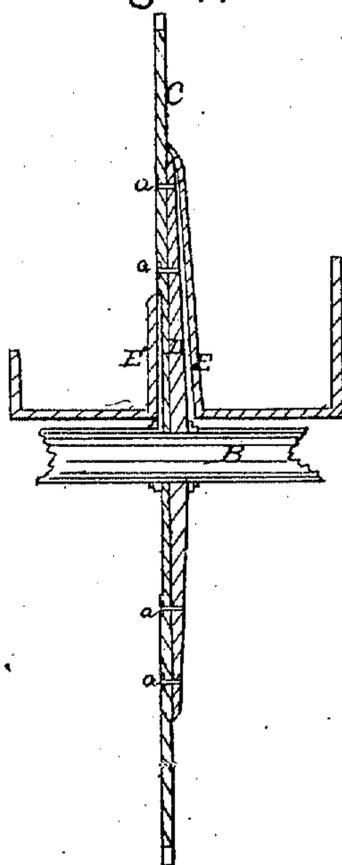


Fig. 4.



UNITED STATES PATENT OFFICE.

JOHN MYERS AND R. G. EUNSON, OF NEW YORK, N. Y.

MACHINE FOR SAWING THIN BOARDS, &c.

Specification of Letters Patent No. 10,965, dated May 23, 1854.

To all whom it may concern:

Be it known that we, JOHN MYERS and ROBERT G. EUNSON, of the city, county, and State of New York, have invented certain
5 new and useful Improvements in Machines for Sawing Lumber into Thin Stuff for Mirror-Backs, Picture-Frame Backs, &c., and we do hereby declare that the following
10 is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a plan or top view of our
15 improved machine. Fig. 2, is a side elevation of ditto. Fig. 3, is a side view of the circular saw, and one of the deflecting plates which covers the upper part of the stiffening plate of the saw. Fig. 4, is a vertical
20 section of the circular saw, deflecting plates, and guide troughs. The plane of section being through the center of the saw, and transversely with the guide troughs.

Similar letters of reference indicate cor-
25 responding parts in the several figures.

This invention relates to certain new and useful improvements in machines for sawing
30 lumber into thin stuff for mirror and picture frame backs and other purposes for which thin stuff is used.

The nature of the invention consists, 1st, in the employment, or use, of deflecting
35 plates—one or two—placed at the sides of a circular saw for the purpose of preventing the sawed stuff from coming in contact with the sides of the saw, and enlarging or expanding the saw kerf, and thereby preventing the stuff from binding against the edge
40 of the saw near its teeth. The deflecting plates also allow the saw to be stiffened by a proper plate secured to it, and a thin veneer saw may consequently be employed, which will cause but a small waste of stuff
45 in sawing, as a narrow kerf is made thereby.

2d. Our invention consists in the employ-
50 ment or use of elastic clamps attached to the ordinary adjustable and elastic beds between which the stuff is fed to the saw. The clamps above mentioned have an elasticity independent of the beds, and compensate for

the varying thickness of the different pieces of stuff to be sawed, by holding firmly the extreme end of the stuff, and keeping it in proper position to the saw, however much the elastic beds may be expanded by a suc-
55 ceeding piece of stuff of greater thickness.

3d. Our invention consists in the employ-
60 ment or use of knives or cutters secured to the adjustable beds, and so arranged as to cut or smooth off the rough and projecting sides of the stuff at the ends, making it of uniform thickness.

4th. Our invention consists in the combi-
65 nation of an adjustable bed and circular saw, arranged as will be hereafter shown.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

A, is a frame, which may be constructed
70 in any proper manner.

B, is a shaft running transversely across the front part of the frame, on which shaft a circular saw, C, is placed.

The saw, C, is formed of thin steel plate, and is such as is used for sawing veneers.
75 On one side of this saw, a circular plate, D, is secured by rivets, or screws, (a), the plate being somewhat less in diameter than the saw, see Figs. 3 and 4. The plate, D, stiffens the saw, and without its use, a com-
80 paratively much thicker saw would be required.

E, E', are deflecting plates, placed one at each side of the saw. The deflecting
85 plate, E, covers the upper part of the stiffening plate, D, as shown in Figs. 3, and 4, and the inner end does not project outward from the saw, C, quite as far as the outer end, as shown in Fig. 1. The other deflecting
90 plate, E', on the opposite side of the saw, is rather smaller in diameter than the deflecting plate, E, and projects from the saw, at about an equal distance at both ends.

F, F, Figs. 1, and 2, are two feed roller
95 beds placed vertically in the back part of the frame, A, and parallel with each other. Both of these beds are made adjustable by means of screw rods, (b), which bear against the sides of the beds, the screw rods of each bed being operated simultaneously by means
100

of chains, (c), passing around small toothed wheels, (d), see Fig. 2, at the ends of the screw rods, see Fig. 2.

5 G, G, are cranks, one of which is attached to one of the toothed wheels, (d), of each bed. The beds also have a lateral elasticity given them by means of india rubber, or other springs, attached to them in any proper manner.

10 H, H, H, H, are feed rollers placed in the beds, F, F; two rollers in each bed, see Figs. 1, and 2. The feed rollers project some distance beyond the inner edges of the beds, as shown in Fig. 1.

15 I, I, are clamps attached to the inner ends of the beds, F, F. At the back part of each clamp there are two journals, (e), (e), see Fig. 1—one at the top, and one at the bottom, see dotted lines, Fig. 2. These journals fit in boxes, (f), (f), which work or slide in recesses in the top and bottom pieces of the beds. The top boxes are shown in Fig. 1.

25 J, J, are set screws which pass transversely through the top and bottom pieces of each bed. The inner ends of these set screws bear against india rubber springs, (g), which are placed directly back of the boxes, as shown in Fig. 1.

30 K, K, Fig. 1, are india rubber springs at the top of the clamps, one spring to each clamp. These springs are placed between the clamps and set screws, L, L, which pass transversely through the top pieces of the beds, F, F.

M, M, are stops which pass through the top pieces of the beds—one through each top piece. The stops regulate the distance of the lateral vibration of the clamps.

40 O, O, are knives or cutters placed vertically in the beds, F, F, one knife or cutter in each bed. The top and bottom of the cutters are fitted in slides, (h), (h), see Fig. 1, in which the top slides are shown, 45 which fit in the top and bottom pieces of the beds, and are regulated by set screws, P, P. The cutting edges of the knives or cutters are on a line with the edges of the feed rollers, H. Motion is given the feed 50 rollers, H, by proper gearing, R, at the lower part of the rollers.

Operation: The beds, F, F, are adjusted relatively to the saw, C, so that the stuff may be sawed into the desired thicknesses. 55 Either side of the saw may be made the "line side," by fixing permanently, or destroying the elasticity of the proper roller bed. The stuff, S, see Fig. 1, is placed between the feed rollers, H, in the beds, F, F, 60 and motion being communicated to the saw and feed rollers, the stuff is fed toward the saw, and cut by it; the two pieces being prevented from bearing against the sides of the saw by means of the deflecting plates, E, E', 65 see Fig. 1. When the outer end of the stuff

has passed the innermost feed roller, the clamps, I, I, bear against the stuff, and hold it in a proper relative position to the saw. A fresh piece of stuff is now placed between the feed rollers—the latter piece of stuff 70 forcing forward the preceding piece. If the last piece of stuff is rather thicker than the preceding piece, it merely acts upon the beds, and forces the elastic one farther from the permanent one, without effecting the 75 clamps, which have an independent elasticity, owing to the springs, (g), K.

The knives or cutters, O, O, cut, or smooth off, to an equal thickness, the extreme ends of the stuff which is split, and not sawed— 80 the usual practice in saw mills.

We will suppose that the stuff, S, Fig. 1, is two inches in thickness, and it is desired to saw it into two strips; one of which is to be one quarter inch in thickness—the one 85 quarter inch strip being the thinnest, may be deflected by the plate, E, as it is inclined, or projects outward from the same, farther than the plate, E'. The roller bed, in line with the deflecting plate, E, is permanently 90 fixed at one quarter of an inch from the side of the saw. The opposite bed being elastic, the side of the saw on which the thin strip passes, is the line side. The opposite of the saw may be made the "line side," by per- 95 manently fixing the opposite roller bed, and allowing the other one to remain elastic.

By the above improvements, we are enabled, 1st, to employ a thin veneer saw, and consequently, a small amount of stuff is lost, 100 as the saw kerf is narrow. This is an object in saving thin stuff. 2d, the stuff to be sawed is always kept in a proper relative position to the saw when varying in thick- 105 ness, and the ends of each piece of stuff is smoother, or reduced to an equal thickness, before it leaves the feed rollers.

We do not claim the adjustable and elastic roller beds, F, F, for they have been pre- 110 viously used. But what we claim as new, and desire to secure by Letters Patent, is:—

1. The employment or use of the deflecting plates, E, E',—one or both placed at the sides of the saw, as herein shown, for the 115 purpose of preventing the sawed stuff from bearing against the sides of the saw, and expanding the saw kerf, and also for the purpose of allowing a thin veneer saw to be stiffened by plates, D, one or two, as de- 120 sired.

2. We claim the employment, or use, of the clamps, I, I, arranged as herein shown, or in an equivalent way, so as to have a lateral elastic movement independent of the 125 roller beds, to which said clamps are attached, for the purpose of compensating for the varying thickness of different pieces of stuff, and keeping them in a proper relative position to the saw.

3. We claim the knives, or cutters, O, O, 130

placed in the roller beds, F, F, and arranged substantially, as herein shown and described, and for the purpose as set forth.

4. We claim the employment of an adjustable bed, F, with clamps, as described, in combination with the saw, C, when the saw has a stiffening plate, E, in line with said bed, by which the stiffened, or rounded, side of the saw, is made the "line side."

10

JOHN MYERS.
ROBERT G. EUNSON.

Witnesses:

S. H. WALES,
JNO. W. HAMILTON.

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Disclaimer.

To the Commissioner of Patents:

The petition of EUGENE S. EUNSON and MARGARET MYERS, widow and executrix of JOHN MYERS, deceased, both of the city, county, and State of New York; JACOB LAGOWITZ, of Newark, New Jersey; EBEN PECK and GILBERT J. BOGERT, of New York, N. Y.; BENJAMIN R. SMITH and J. CAMPBELL HARRIS, of Philadelphia, Pennsylvania, respectfully shows: that on the 23d day of May, 1854, ROBERT G. EUNSON and the said late JOHN MYERS did obtain Letters Patent of the United States, bearing date on that day, and numbered 10,965, for a certain new and useful re-sawing machine, denominated in said patent "an improved machine for sawing thin boards," &c.; that your petitioners are the joint and exclusive owners of said Letters Patent within and throughout the whole of the United States and the Territories thereof, as they verily believe; that your petitioners have reason to believe, that through inadvertence, accident and mistake, and without any fraudulent or deceptive intention, the said patentees have claimed more than that of which as claimed they were the original inventors, to wit: the first claim of said Letters Patent is too broad, in that it includes that which your petitioners here disclaim.

Your petitioners, therefore, hereby enter their disclaimer to that part of the first

claim of said Letters Patent which covers the employment or use of the deflecting plate, E., at the side of the saw, thereby causing the said claim to include only the combination of the saw described with both of the deflecting plates, E. and E', when both of said deflecting plates are used at one and the same time, in the manner and for the purposes described in said patent. The said first claim of said Letters Patent will accordingly be as follows:

"1. The employment or use of the deflecting plates, E. E', both placed at the sides of the saw, as herein shown, for the purpose of preventing the sawed stuff from bearing against the sides of the saw, and expanding the saw kerf, and also for the purpose of allowing a thin veneer saw to be stiffened by plates, D., one or two, as desired."

Your petitioners also desire to disclaim that part of said patentees' description of their invention wherein they say the nature of the invention consists, first, in the employment or use of deflecting plates—"one or two"—placed at the sides of a circular saw, &c., and to limit the nature of the invention to which claim is made to the combination with the saw of the two deflecting plates, one at each side of the saw as described.

This disclaimer is to operate to the extent of the interest in said Letters Patent vested in your petitioners, who have paid ten dollars into the Treasury of the United States, agreeably to the requirements of the act of Congress in such case made and provided.

Nov. 30, 1870.

EUGENE S. EUNSON.
MARGARET MYERS,
Executrix of John Myers, deceased.
JACOB LAGOWITZ.
EBEN PECK.
GILBERT J. BOGERT.

Witness:

FREDERIC H. BETTY.
BENJAMIN R. SMITH.
J. CAMPBELL HARRIS.

Witnesses:

CHAS. L. LOOKWOOD,
A. J. SMITH.