W. SASSACK.

Machine for Smoothing Wood, &c.

No. 224,480. Patented Feb. 10, 1880.

Fig. 1.

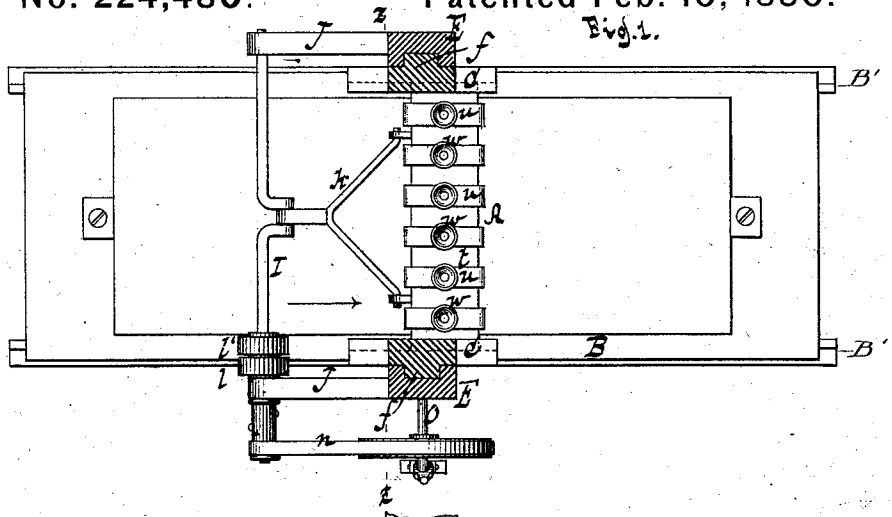


Fig. 2.

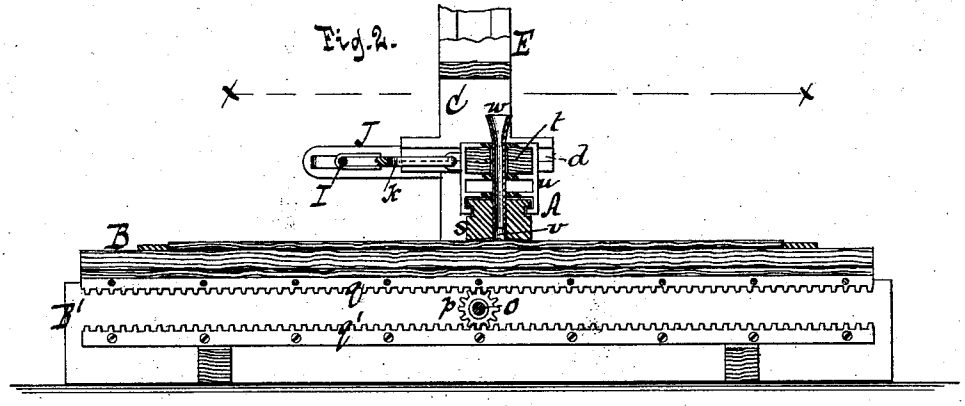


Fig. 3.

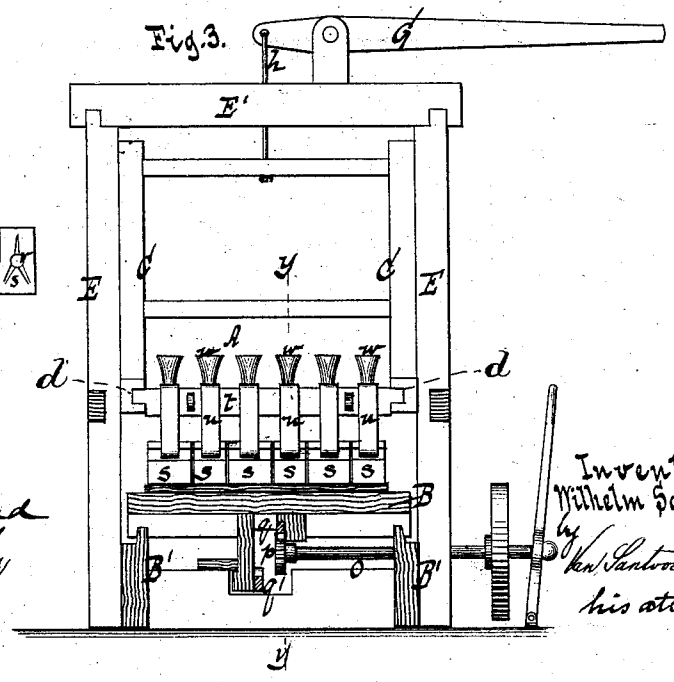
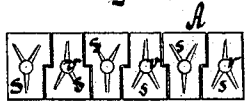


Fig. 4.



Witnesses

Otto Hufeland

William Miller

Inventor

Wilhelm Sassack.

by Van Santvoord & Hauff

his attorneys

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILHELM SASSACK, OF NEW YORK, N. Y.

MACHINE FOR SMOOTHING WOOD, &c.

SPECIFICATION forming part of Letters Patent No. 224,480, dated February 10, 1880.

Application filed December 26, 1879.

To all whom it may concern:

Be it known that I, WILHELM SASSACK, of the city, county, and State of New York, have invented a new and useful Improvement in Smoothing-Machines, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 shows my machine partly in top view and partly in horizontal section, the plane of section being indicated by the line *x x*, Fig. 2. Fig. 2 is a longitudinal vertical section thereof in the plane of the line *y y*, Fig. 3. Fig. 3 is a cross-section of the same in the plane of the line *z z*, Fig. 1. Fig. 4 is an inverted plan view of the smoothing-head.

Similar letters indicate corresponding parts.

My invention relates to machines for smoothing the surfaces of veneers—as, for example, those used for piano-tops and other articles, whether of wood or other material.

In the drawings, the letter A designates a head, constituting the part whereby the smoothing is effected, and B is a bed for supporting the veneer or other article to be acted on. The smoothing-head A rests on the bed B, or the article placed thereon, by its own weight and that of a frame, C, which is constructed with horizontal ways *d*, with which the smoothing-head is arranged to engage, so that the head is capable of a horizontal reciprocating motion, and is guided therein by the frame C. The bed B is movable and rests on parallel guide-ways B′. The guide-frame C is arranged between two standards, E E, connected at the top by a cross-piece, E′, and it engages these standards by vertical tongues and grooves, as at *f*, Fig. 1, so that the guide-frame is adapted to be moved up and down between the standards, whereby the smoothing-head A becomes lifted up from the bed B or lowered thereon.

For the purpose of moving the guide-frame C up or down, I have in this example used a lever, G, attached to the cross-piece E′, and a connecting band or rod, *h*, passing through such cross-piece.

With the smoothing-head A is combined a mechanism for imparting thereto a reciprocating motion, consisting of a crank-shaft, I, which has its bearings in arms J projecting from the standards E E, and connects with the smoothing-head A by means of a bifurcated rod, *k*. The crank-shaft I carries a fast and loose pulley, *l* and *l′*, and is geared by a belt, *n*, with a shaft, O, carrying a pinion, *p*, which is arranged in such relation to racks *q q′*, both fastened to the bed B, that by a longitudinal movement of the shaft O the pinion is thrown in gear with either of the racks, whereby the bed obtains reverse motions on the ways B′. Any other suitable reversing-gear, however, may be substituted for the racks and pinion—as, for example, the reversing-gear used in metal-planing machines; or the bed may be left stationary.

The smoothing-head A consists of a series of stone blocks, *s*, a back, *t*, and a series of yokes, *u*, one to each block. The stone blocks *s* are shaped to interlock with each other, and in this example they are made of a substantially T shape, as shown in Fig. 4; but it is obvious that the desired object can be attained with a variety of other shapes.

The back *t* is the part whereby the smoothing-head engages the guide-frame C and connects with the crank-shaft I, and the yokes *u* embrace the back, as shown in Fig. 2, while they are bent toward each other at their extremities, where they grasp the stone blocks *s*, fitting loosely into horizontal grooves in the latter, so that while the blocks are firmly supported on the back *t* by the yokes they are permitted to rise independently of the back, and thus readily adapt themselves to any sinuosities in the surface of the article passing through the machine.

Each of the stone blocks *s* has an eye, *v*, which extends through the block from top to bottom, so that a suitable quantity of polishing or smoothing material, as pumice-stone, may be introduced to the eyes, whence it falls and is distributed on the surface acted upon by the blocks.

To facilitate the distribution of the smoothing material by the stone blocks *s*, they are provided with channels in their lower surfaces, radiating from the eyes *v*, as clearly shown.

For the purpose of introducing the smoothing material to the eyes *v* of the stone blocks *s*, I use funnels *w*, which pass through the back *t*, and are supported by that means, and thence pass into the eyes, so that a continuous supply of smoothing material may be kept up.

The operation of my machine is as follows:

The veneer or other article is placed on the bed B, and then the crank-shaft I is set in motion, when the smoothing-head A obtains a reciprocating movement on the surface of the veneer, while the latter, at the same time, is caused to advance and recede by the reversing-gear, so that the entire surface of the veneer is subjected to the action of the smoothing-head, whereby it is uniformly smoothed or polished.

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

1. In a smoothing-machine, the combination of a smoothing-head consisting of a series of stone blocks capable of vertical movement independently of each other, mechanism for imparting a reciprocating motion to the smoothing-head, a vertically-movable frame adapted to guide the smoothing-head, a movable bed for supporting the article to be smoothed, and reversing-gear acting on the said bed, the whole being adapted to operate substantially as described.

2. A smoothing-head consisting of a series of stone blocks shaped to interlock with each other, a back, and a series of yokes embracing the back and engaging the stones, in combination with mechanism for imparting a reciprocating motion to the smoothing-head, a frame adapted to guide the smoothing-head, a bed for supporting the article to be smoothed, and reversing-gear acting on the bed, the whole being adapted to operate substantially as described.

3. A smoothing-head consisting of a series of stone blocks shaped to interlock with each other, and having eyes for the reception of smoothing material, a back carrying the stones, and a series of funnels passing through the back and into the eyes of the stones, in combination with mechanism for imparting a reciprocating motion to the smoothing-head, a frame adapted to guide the smoothing-head, a bed for supporting the article to be smoothed, and reversing-gear acting on the bed, the whole being adapted to operate substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 5th day of December, 1879.

W. SASSACK. [L. S.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.