

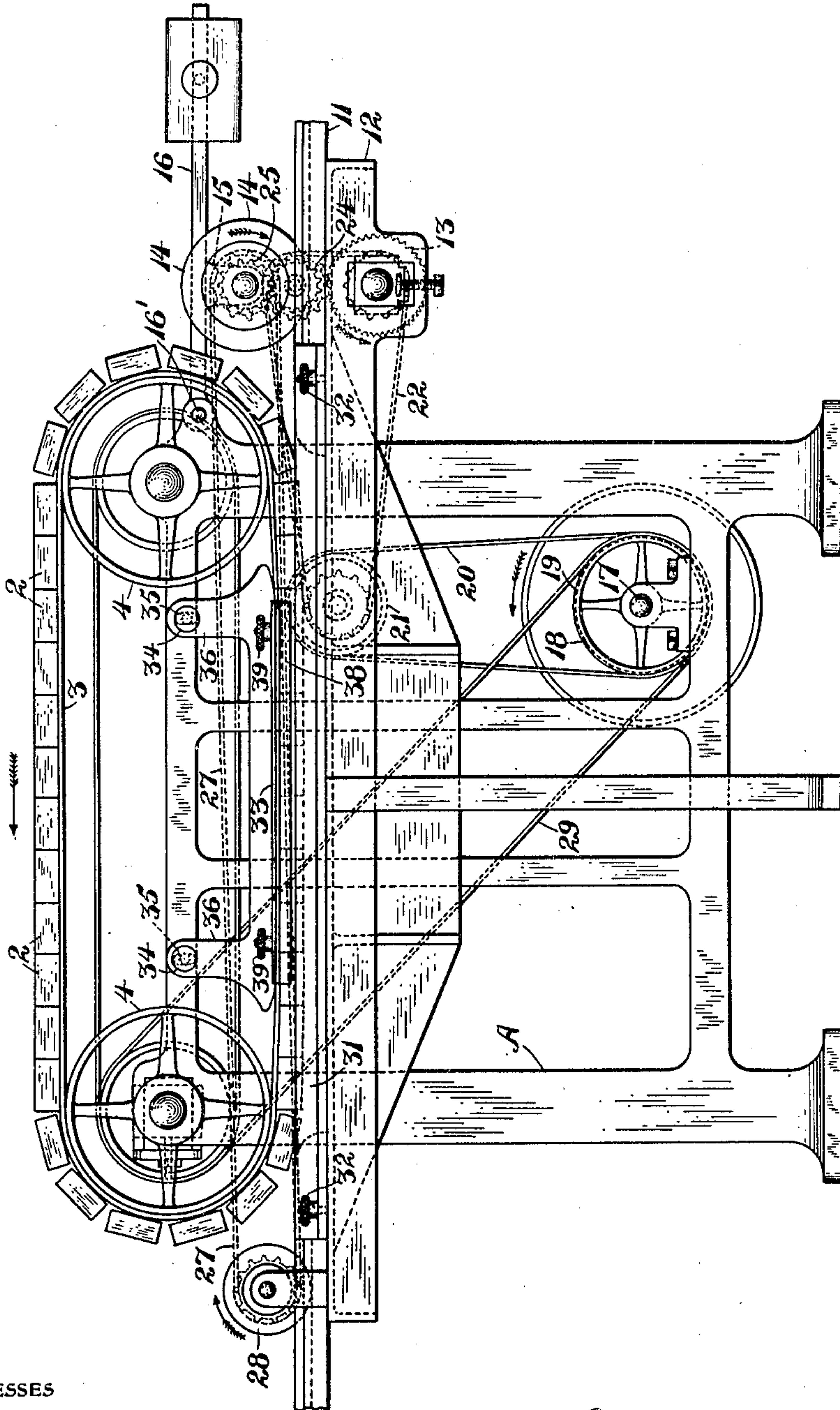
F. A. OEHM.  
SANDPAPERING AND POLISHING MACHINE.  
APPLICATION FILED SEPT. 2, 1908.

925,942.

Patented June 22, 1909.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES

*F. C. Fiedner*  
*Attorney*

INVENTOR

*Franklin A. Oehm*  
BY *Geo. H. Worrig*  
ATTORNEY

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2 SHEETS—SHEET 2.

Fig. 2.

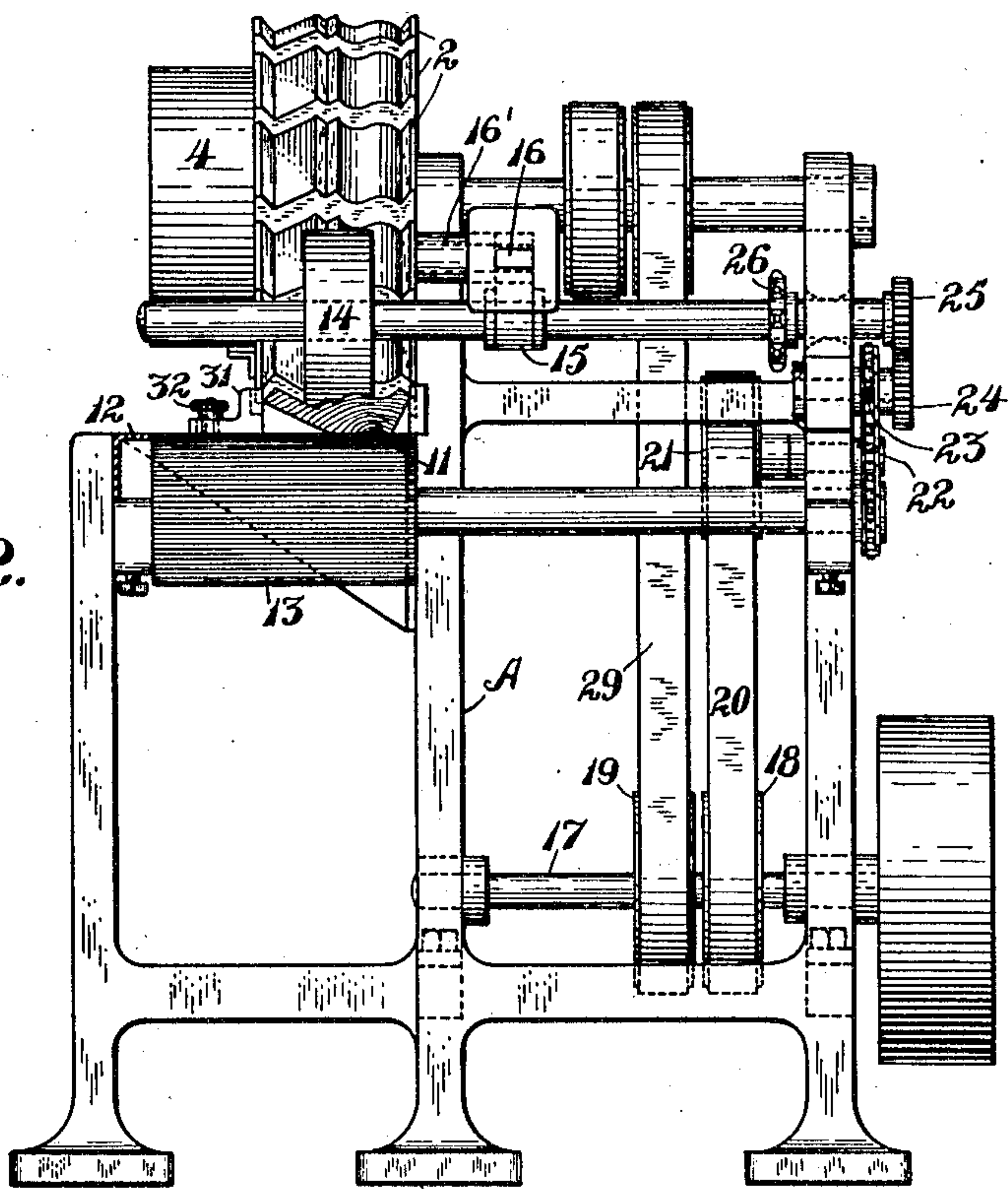


Fig. 3.

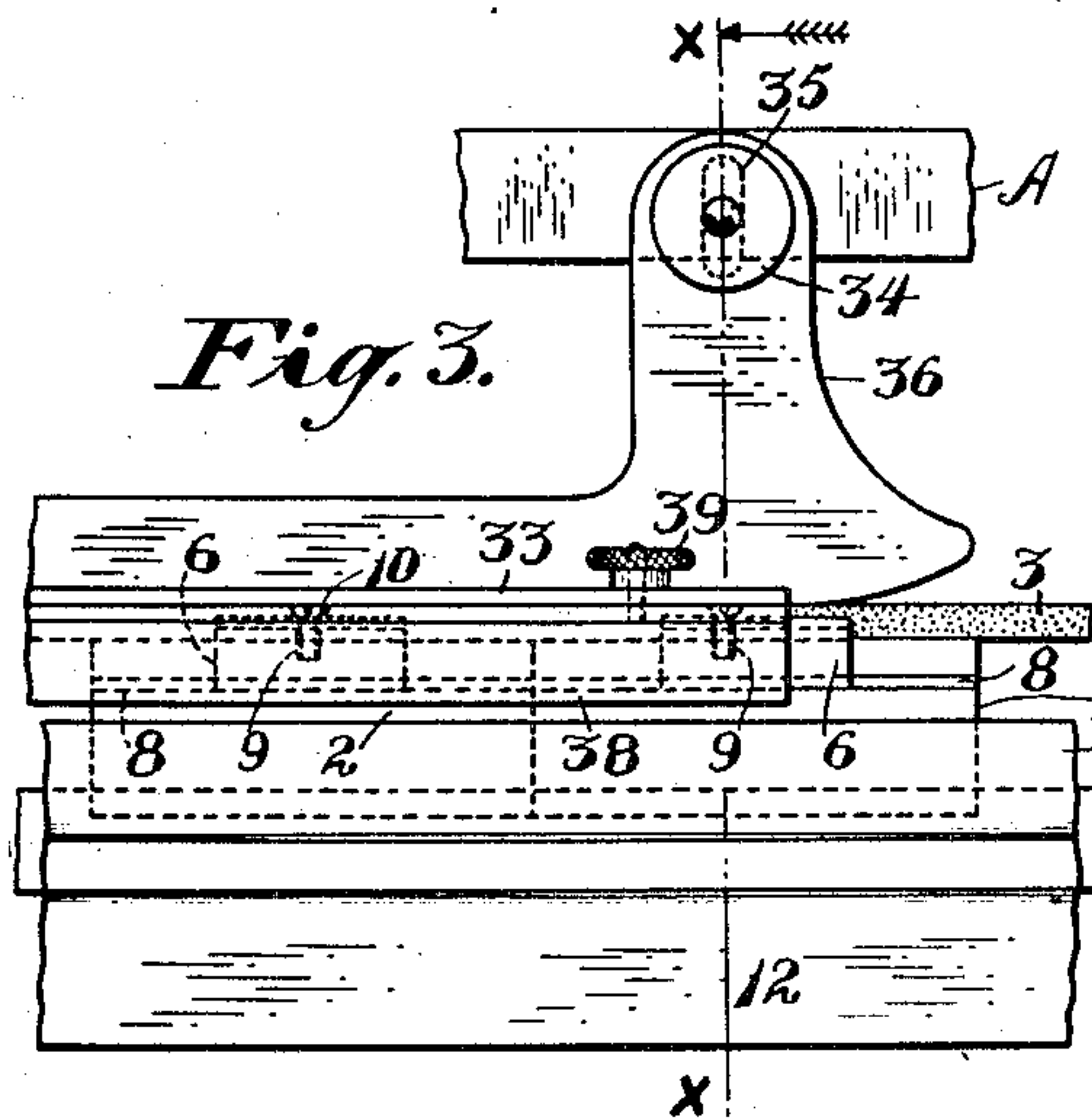
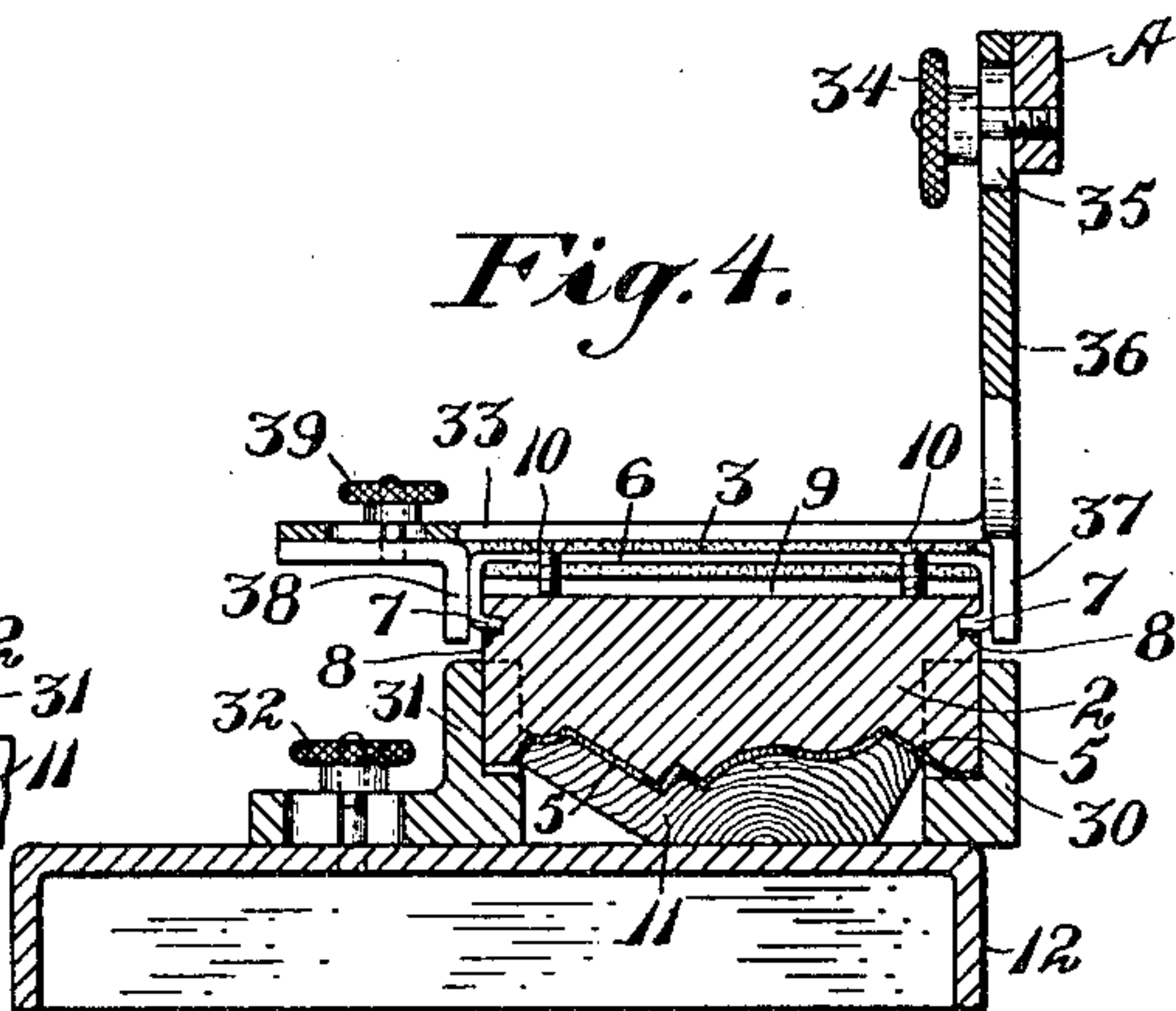


Fig. 4.



WITNESSES

J. C. Fiedner  
C. A. Ruffield

INVENTOR

Franklin A. Oehm  
BY Geo. H. Strong.  
ATTORNEY



# UNITED STATES PATENT OFFICE.

FRANKLIN A. OEHM, OF SAN FRANCISCO, CALIFORNIA.

## SANDPAPERING AND POLISHING MACHINE.

No. 925,942.

Specification of Letters Patent.

Patented June 22, 1909.

Application filed September 2, 1908. Serial No. 451,408.

*To all whom it may concern:*

Be it known that I, FRANKLIN A. OEHM, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Sandpapering and Polishing Machines, of which the following is a specification.

My invention relates to a machine for sandpapering and polishing surfaces which require such finish, and pertains especially to a machine for giving a surface finish to moldings and like irregular surfaces.

The object of the invention is to provide a simple, practical machine which can be manufactured at a comparatively small cost, and which will operate on moldings and the like more efficiently than the machines now commonly in use, in that with my machine I am able to work into all the corners and angles of the surface to be polished, instead of rounding off these angles or failing to get into the reëntrant angles as is now the case with the machines in use; also to render the machine readily adaptable for moldings of any width or thickness.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a side elevation of my machine. Fig. 2 is a front end view of same. Fig. 3 is an enlarged view of one end of the pressure shoe. Fig. 4 is a section on line X—X of Fig. 3.

A represents a frame of any suitable size, shape and material, supporting the working parts of the machine.

The polishing devices comprise a series of sections or blocks 2 suitably mounted on a suitable endless carrier 3 running over pulleys 4 which latter are appropriately mounted on the frame. The blocks 2 are each provided with a working face having a contour in cross-section corresponding to the cross-section of the surface of the molding or other material to be sandpapered or polished. The working face of each block is covered with sandpaper or a coating of carborundum or other polishing or abrasive substance, as represented at 5. These blocks are placed on the carrier 3 so that all the corresponding surfaces of the several blocks register and present a surface which is a complement of the surface of the molding to be polished.

These polishing blocks may be attached to the carrier in any suitable way. Preferably they are secured to the outer surface of the belt by means of metal plates 6 which are secured to the belt, and which plates have their ends bent outwardly from the belt and over the sides of the blocks with the extremities of the plates 6 bent inwardly to provide flanges 7 which engage in corresponding lateral grooves 8 in the blocks. The back of each block is provided with a transverse groove 9 in which suitable locking means, as the screws 10 passing through the belt and through a plate 6, engage. The plates 6 with their flanges 7 allow the blocks to be readily inserted in position on the belt before the belt is put on to the machine, by simply bending the belt back and slipping the block on over the flanges 7; then by screwing in the screws 10 so as to engage in the grooves 9, any lengthwise displacement of the blocks after being assembled is prevented. This removability of the blocks is necessary, because after a certain amount of use the surface of a block becomes worn smooth so that the block has to be taken out and resurfaced with sandpaper or other abrasive material. Meanwhile, other blocks can be placed on the same belt and the machine continue its operations. This method of attaching the blocks to a flexible belt provides for the necessary articulation of the blocks in passing around the pulleys 4.

The material or molding represented at 11, and which is to be polished, is supported on a suitable table or bed-plate, as 12, and fed through the machine in a contrary direction to the travel, and in the plane, of the polishing members 2. The feed of the material is accomplished by any appropriate means, as the coacting feed rollers 13—14 at the head end of the machine. The lower feed roller is provided with a corrugated feeding surface and is adjustably mounted in the frame below the bed-plate, as shown in Fig. 1. The upper feed roller 14 which is designed to bear on the irregular surface of the molding is preferably of soft rubber or other suitable composition which will adapt itself readily to the elevations and depressions of the molding. This feed roller 14 is adaptable to different thicknesses of material, by reason of the fact that it is journaled in a bracket 15 carried on the weighted arm 16 which latter is suitably fulcrumed, as represented at 16'.

Appropriate motion is given to the feed



rollers 13—14 by any suitable connections. As here shown, the driving shaft 17 carries two pulleys 18—19. A belt 20 connects pulley 18 with another pulley 21, the shaft of which latter has a sprocket around which runs a chain 22. This chain 22 passes around a sprocket on the shaft of the roller 13 and thence around an idle sprocket 23. The shaft of sprocket 23 has a gear 24, Fig. 10 —, meshing with gear 25 on the shaft of the roller 14. The result is that the contiguous surfaces of the feed rollers 13—14 travel in the same direction. The shaft of roller 14 carries a sprocket 26 around which passes a chain 27 which runs back to a rear roller 28 of rubber or the like, by which the finished molding strip is discharged from the machine. The polishing carrier 3 is driven from the pulley 19 on shaft 17 by suitable connections, as the belt 29; it being understood that the blocks 2 in polishing contact with the molding travel toward the front of the machine, while the molding is moving toward the rear.

25 The molding in passing through the machine is laterally supported between the guides 30—31, one of which, as 31, is made adjustable by appropriate means, as the screws 32. The carrier 3 carrying the polishing blocks is adjusted to bear with the right pressure on the molding by appropriate means, as the shoe 33 which bears on top of the lower plane of the carrier, and which is adjustable up and down on the frame by appropriate means, as the set screws 34 engaging in the slots 35 of the brackets 36 which carry the shoe. This shoe 33 has the downwardly projecting lateral guides 37—38 one of which, as 38, is adjustable by means of the screw 39 to adapt the shoe to carriers and blocks of different widths.

It is understood that for different moldings a different carrier and different type of polishing block are required. Also, as moldings are of different thicknesses, I have designed this machine so as to adapt it to all practical purposes. Consequently, by raising or lowering the shoe 33 the machine is adapted to moldings and blocks of different thicknesses, and by moving the adjustable guide plate 38 on the shoe, and likewise adjusting the guide 31 on the bed-plate, the apparatus is adapted to blocks and moldings of different widths.

Any appropriate form of belt-tightening means (not necessary here to be shown) may be employed in conjunction with one or

other of the pulleys 4 to secure the right tension on the carrier 3, according to the adjustments up or down of the shoe 33.

Having thus described my invention, 60 what I claim and desire to secure by Letters Patent is—

1. In a polishing machine, the combination of an endless traveling belt, a series of blocks having polishing surfaces corresponding in cross-section to the surface of the material to be polished, said belt and blocks having co-acting flanges and grooves, a work support, and means for feeding the work in a direction opposite to the travel of the belt. 70

2. In a polishing machine, the combination of an endless carrier and a series of separable, independently removable polishing sections or blocks, said belt and blocks having co-acting side flanges and grooves. 75

3. In a polishing machine, an endless belt provided with plates having inturned flanges, polishing sections or blocks having lateral grooves to fit the flanges, and locking means carried by the belt engaging transverse grooves in the sections. 80

4. In a polishing machine, an endless belt provided with plates having inturned flanges, polishing sections or blocks having lateral grooves to fit the flanges, locking means carried by the belt engaging transverse grooves in the sections, a work-supporting table with means for guiding and feeding the work to be polished to the sections, and a vertically adjustable shoe acting on the belt to press the sections on to the work. 90

5. In a polishing machine, an endless belt provided with plates having inturned flanges, polishing sections or blocks having lateral grooves to fit the flanges, locking means carried by the belt engaging transverse grooves in the sections, a work-supporting table with means for guiding and feeding the work to be polished to the sections, a vertically adjustable shoe acting on the belt to press the sections on to the work, said shoe having lateral guides engaging the sides of the sections, and means for varying the distance between the guides to accommodate the shoe to different widths of belt and sections. 100

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses. 105

FRANKLIN A. OEHM.

Witnesses:

ENGELHARD OEHM.

J. D. HEISE.