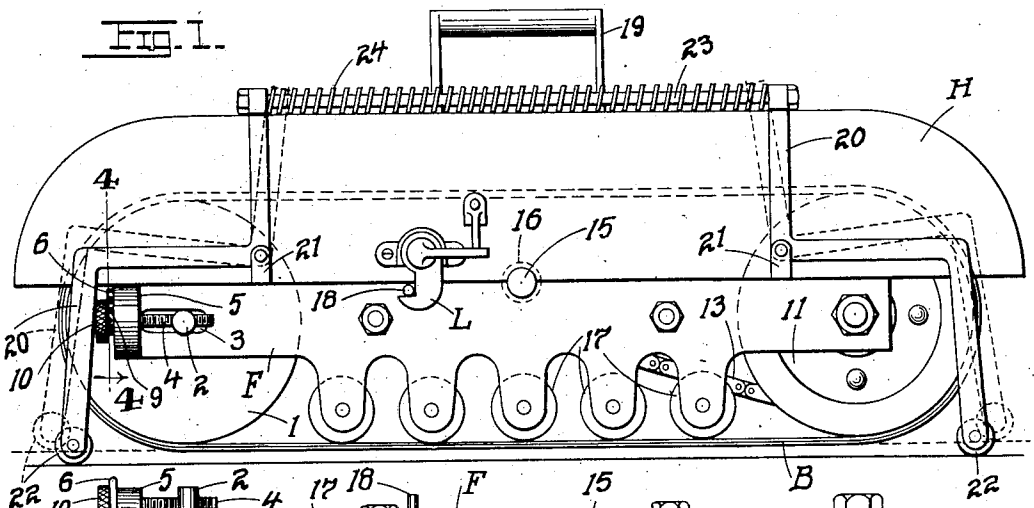
No. 814,787. PATENTED MAR. 13, 1906.

J. LEHNBEUTER.

POLISHING MACHINE.

APPLICATION FILED SEPT. 8, 1905.

Fig. 1.



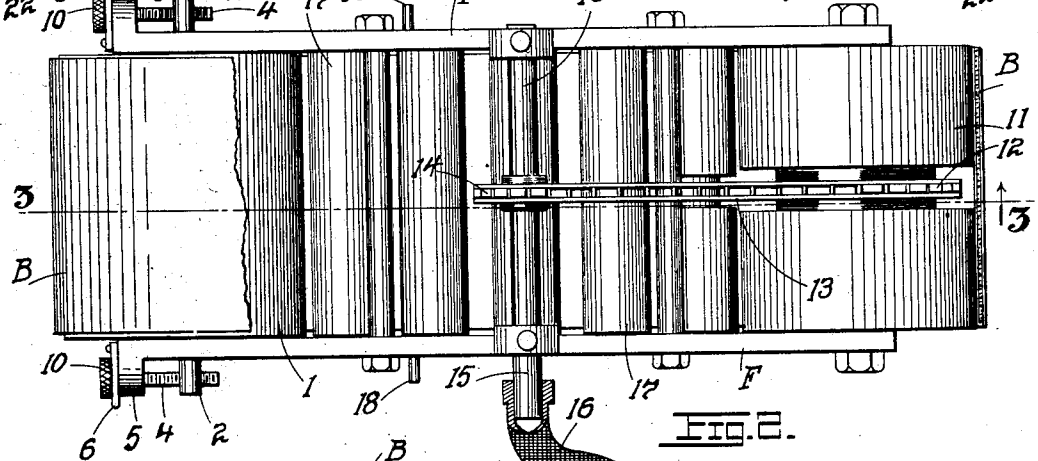


Fig. 2.

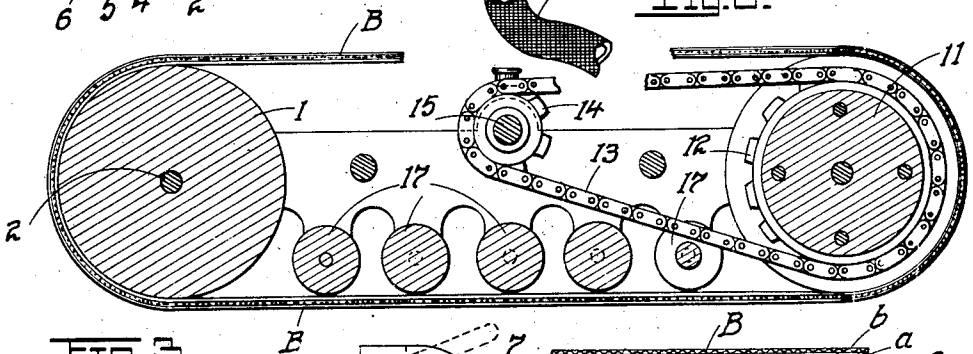


Fig. 3.

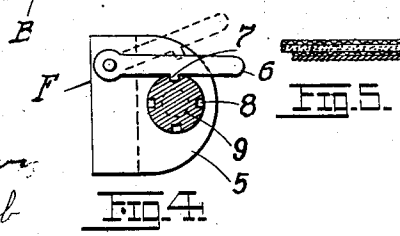


Fig. 5.

Fig. 4.

WITNESSES

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JOSEPH LEHNBEUTER, OF ST. LOUIS, MISSOURI.

POLISHING-MACHINE.

No. 814,787. Specification of Letters Patent. Patented March 13, 1906.

Application filed September 8, 1905. Serial No. 277,537.

To all whom it may concern:

Be it known that I, JOSEPH LEHNBEUTER, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Polishing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in hand wood-polishing machines; and it consists in the novel construction and combination of parts more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a side elevation of the machine. Fig. 2 is a top plan with cover or hood removed. Fig. 3 is a vertical longitudinal section on the line 3 3 of Fig. 2. Fig. 4 is a sectional detail on the line 4 4 of Fig. 1, showing the locking-latch for the adjusting-screw of the adjustable axle of the terminal drum-pulley; and Fig. 5 is an enlarged section showing the formation of the polishing-belt.

The object of my invention is to construct a hand-tool which can be brought to operate on and polish the surface of any piece of woodwork or other structure already in place, dispensing with the necessity of bringing the work to the machine, as must be done with stationary polishing machinery. The present machine is not only portable, but light enough to be passed by hand over the surface to be polished or finished.

A further object is to construct a machine which will be simple, light, cheap, durable-positive and uniform in action, and one possessing further and other advantages better apparent from a detailed description of the invention, which is as follows:

Referring to the drawings, F represents an oblong frame having mounted at one end between the sides of the frame a pulley or drum 1, freely rotatable about an axle 2, whose opposite ends pass through longitudinally-elongated slots 3 of the sides of the frame. The purpose of the slots is to allow for adjustment of the axle along the frame for taking up the slack of the polishing-belt, as presently will more fully appear. The opposite ends of the axle are controlled by the adjusting-screws 4, whose screw-threaded portions pass through the axle, the screws being carried by the lateral lugs 5 of the frame. To the base of each lug 5 is pivoted a gravity latch or arm 6, provided along its bottom edge with a finger 7, which drops into one of a series of sockets 8, formed in the hub 9 at the base of the head 10 of the screw. By turning the screws 4 in proper direction the axle 2 will be adjusted within its slotted bearings and when once adjusted is locked in position by dropping the arm 6 to cause the finger 7 to engage the socket 8 that happens to be opposite thereto.

Mounted at the opposite end of the frame are a pair of drums or pulleys 11, separated by a sprocket-wheel 12, mounted on the same axle therewith, the sprocket-wheel having a sprocket-chain 13 leading therefrom over a sprocket-pinion 14, carried at the middle of the intermediate drive-shaft 15, mounted transversely across the frame F and parallel to the axes of rotation of the pulleys 1 and 11. To the projecting end of the drive-shaft 15 is attached one end of a flexible shaft 16, leading to any source of power. (Not shown.) Passing over the respective pulleys is the polishing-belt B, whose detailed construction will presently be referred to. The under lap of the belt passes over a series of idlers or rollers 17, mounted at the lower side edges of the frame F.

The frame F is provided with a cover or hood H, which is attached to the frame on the sides by the latches L engaging pins 18 on the frame, this form of latch being well known and requiring no detailed description here, especially in view of the fact that any kind of locking-latch may be used. The cover is provided with a handle 19, by which the machine may be passed by the hand over the surface to be polished. To raise the belt B off the floor when the machine is set down, (especially should the belt be running,) I provide the cover H at the sides with bent levers 20, pivoted to the lugs 21 on the cover, the pairs of levers at each end of the machine having their lower ends connected by rollers 22 and their free upper ends by a rod 23, (the ends of the levers loosely embracing the rod,) about which is coiled a spring 24, which normally forces the upper arms of the levers at opposite ends apart, as shown in Fig. 1, the roller ends of the levers approaching one another from opposite ends to raise the frame F and the belt B off the floor or other surface on which the machine may be resting. The raising of the belt B off the floor prevents the machine from running away should the operator release his hold on the same. When it is desired to operate the machine, a slight pressure thereon will force the roller ends

apart, (see dotted position, Fig. 1,) thereby allowing the belt to come in contact with the surface to be polished.

The belt B is preferably made of a filling of felt *a*, Fig. 5, having an inner facing of buckram *b* and an outer facing of cotton *c*, the latter having pasted thereto the sheet of sandpaper *d*. The sheet *d* may of course be varied according to the requirements of work to be performed. The filling *a* being more or less yielding enables the belt to better conform to the unevenness of the surface passed over, thus passing over the surface with a minimum amount of resistance. The polishing material *d* being disposed along a sheet or belt operates over an extended surface, which of course is impossible with machines operating with polishing drums or rollers, which can contact only along a line or very narrow strip of surface.

In the operation of the machine the workman simply passes the belt B back and forth over the wood or surface to be polished, subjecting the same to sufficient pressure to force the rollers 22 apart. When any particular job is finished, the machine may be set upon the floor without any danger of its running away, since the resiliency of the springs 24 is sufficient to tilt the levers 20 to a position to elevate the weight of the frame off the floor. The flexible shaft 16 may, if desirable, be kept running constantly. By disposing the shaft 15 centrally the machine becomes very effectively balanced, and while I here show a noiseless drive-chain 13 it is apparent that any other form of gear mechanism may be substituted therefor without departing from the spirit of the invention. According to the character of the work to be done the abrading-surface *d* may of course be varied.

Having described my invention, what I claim is—

1. A hand polishing-tool comprising a suitable frame, a substantially centrally disposed drive-shaft mounted across the frame, drums at opposite ends of the frame, intermediate gearing between the drive-shaft and one of the drums for imparting rotation thereto, and a polishing-belt traveling about the drums, substantially as set forth.

2. A hand polishing-tool comprising a frame, devices on the frame for operating upon the surface to be polished, and a spring-controlled support for raising the operating parts of the machine off the surface on which it may be placed, substantially as set forth.

3. A hand polishing-tool comprising a frame, devices on the frame for operating upon the surface to be polished, a hood for the frame, spring-controlled belt-levers at each end and on opposite sides of the hood, rollers mounted between the lower ends of a pair of levers at each end of the hood, and springs engaging the upper ends of each pair of levers on the same side of the hood, and means for locking the hood to the frame, substantially as set forth.

4. A hand polishing-tool comprising an oblong frame, a centrally-disposed transverse drive-shaft on the frame, a central sprocket-pinion on the shaft, drums or pulleys at opposite ends of the frame, means for adjusting the axis of one of the terminal drums longitudinally along the frame, a polishing-belt encompassing the drive-shaft and passing over the drums, a detachable hood for the frame, a yielding support for the frame carried by the hood, a sprocket-wheel on the shaft of one of the terminal drums, and a drive-chain connecting said sprocket-wheel with the sprocket-pinion, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH LEHNBEUTER.

Witnesses:
EMIL STAREK,
MARY D. WHITCOMB.