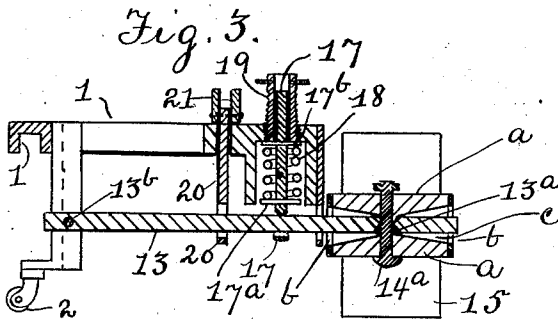
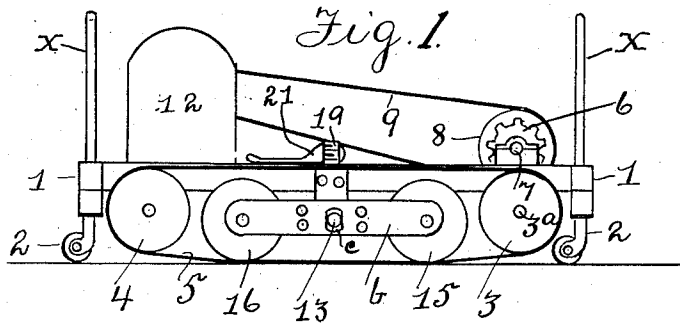
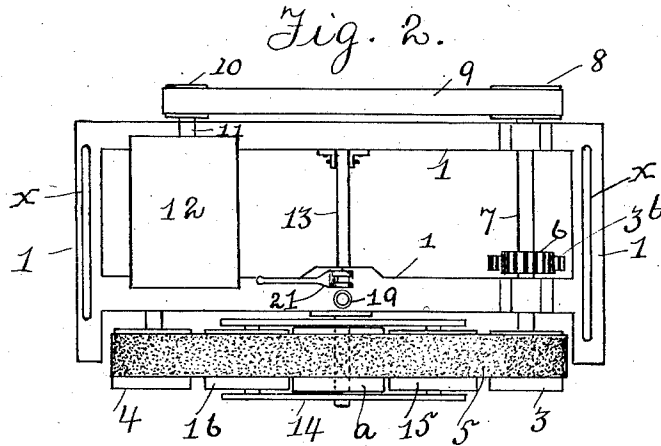


G. SMITH.  
SANDPAPERING MACHINE.  
APPLICATION FILED JAN. 26, 1909.

963,481.

Patented July 5, 1910.



WITNESSES:

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ATTORNEY.

# UNITED STATES PATENT OFFICE.

GEORGE SMITH, OF DULUTH, MINNESOTA.

## SANDPAPERING-MACHINE.

963,481.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed January 26, 1909. Serial No. 474,281.

*To all whom it may concern:*

Be it known that I, GEORGE SMITH, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, 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.

My invention relates to sandpapering machines, and has for its object the provision of a practical and convenient machine for sandpapering floors.

It consists of the constructions, combinations and arrangements of parts hereinafter described and claimed.

In the drawings, Figure 1, is a side elevation of the preferred form of my invention. Fig. 2, is a top plan view of the same. Fig. 3, is a central transverse section of the same, omitting the power transmission means.

In the drawings, 1, is a frame, preferably rectangular in plan, which frame is mounted on supports of any suitable construction, as casters 2. Journaled in suitable bearings on said frame are belt wheels 3 and 4, which wheels are engaged by a belt 5, of any suitable material or construction having its outer face coated with an abrasive of any suitable nature, as sand. The wheel 3 is rigidly mounted on a rotatable shaft 3<sup>a</sup>, upon which is also mounted a gear 3<sup>b</sup> which meshes with a pinion 6, mounted on a rotatable shaft 7, upon which shaft 7, is also mounted a belt wheel 8, engaged by a belt 9, which belt 9 also engages the belt wheel 10, which is mounted on the drive shaft 11, forming part of a motor 12, of any suitable construction—but preferably an electric motor—many forms of which are well known to the art and therefore it is not thought necessary to particularly describe the construction of the motor. Mounted on said frame is a tiltable shaft 13, extending transversely of the machine and into the space inclosed by said belt 5. Upon one end of said shaft and within said space is mounted a cradle 14, adapted to rock longitudinally and transversely on said shaft 13, for a limited distance. Said cradle is preferably secured to said shaft 13 by a centrally disposed vertically directed bolt 14<sup>a</sup>, extending through a tapered aperture 13<sup>a</sup> in said shaft, and through said cradle. The cradle pref-

erably consists of a central block *a* and side plates *b* bolted to said central block and extending longitudinally beyond the same at each end, said cradle having a transversely extending slotted aperture *c* formed therein at or near its center, said aperture fitting the shaft 13, closely at its sides but being enlarged at its ends to permit the cradle to rock transversely on said shaft 13 longitudinally thereof. Said shaft is intermediate of its ends, or at its opposite end as at 13<sup>b</sup>, pivotally supported on said frame. Mounted in suitable bearings on said cradle are two padded presser wheels, 15 and 16, extending into the space inclosed by said belt 5 and adapted in operation to bear upon the lower loop of said belt and press the same upon the floor or surface to be sandpapered. The pressure of said presser wheels may be regulated by a vertical piston 17, actuated by an expanding spring 18, which piston has an eye formed in its lower end for the passage of said shaft 13. Said spring is positioned between a fixed collar 17<sup>a</sup> formed on said piston near its lower end, and a loose collar 17<sup>b</sup> mounted on said piston above said spring. The upper end of said piston extends into a tubular set screw 19 which is internally threaded to engage a threaded aperture in said frame, and is adapted to be set more or less forcibly against the upper face of said loose collar so as to depress the same upon said spring and effect the required tension thereof. In order to raise said presser wheels out of operative position, I have provided a vertically directed drawbar 20, extending vertically through said frame and provided at its upper end with a cam lever 21. The lower end of said drawbar is slotted for the passage of said shaft 13, said slot permitting sufficient vertical play of the shaft when the drawbar is in lowered position. By means of said cam lever and draw-bar, said shaft 13, together with the cradle and presser wheels supported thereby may be raised in opposition to the influence of said spring. The wheel 4, is an idler, and is preferably mounted on a shaft which is journaled in a journal-box, adjustable longitudinally of said frame so that tension may be put on said belt 5 independently of the effect of said presser wheels thereon.

Handle bars *X* are provided for pushing the machine along the floor.

In operation, the shaft 13 is lowered and

the desired pressure is imparted to the lower loop of the belt 5. The motor is started and the machine is pushed back and forth along the floor. In case the floor is uneven, the 5 cradle rocks so as to cause the lower face of the belt 5 to accommodate itself in large measure to the floor levels.

The preferred form of construction described may be altered or modified in various particulars without departing from 10 the spirit of my invention or from the scope of certain of my claims. And especially may the dimensions and proportions of said machine or of parts thereof be so altered.

15 What I claim is:—

1. In a sand papering machine, the combination with suitable supports, of a frame, a belt having an abrasive-coated outer face, adapted to contact with a foreign surface 20 to be smoothed thereby, means for driving said belt, a vertically yielding cradle positioned within the space inclosed by said belt and adapted to rock longitudinally and transversely therein, presser wheels rotatably mounted on said cradle at the opposite 25 ends thereof and adapted to bear upon one of said sides of said belt and to be rotated by the same and means for supporting said cradle on said frame.

2. In a sandpapering machine, the combination of a frame, a belt having an abrasive coated outer face adapted to bear against a foreign surface to be smoothed thereby, means for driving said belt, a shaft, a cradle 30 mounted upon one end of said shaft and adapted to rock transversely and longitudinally thereon and extending into the space inclosed by said belt, presser wheels mounted on said cradle and extending into the

space inclosed by said belt and adapted to 40 bear upon one side of said belt and to be rotated by the same, and yielding means for depressing the cradle-supporting end of said shaft.

3. The combination of a frame, a belt 45 adapted to contact with a surface to be smoothed thereby, means for driving said belt, a shaft, a cradle mounted upon one end of said shaft and adapted to rock transversely and longitudinally and extending 50 into a space inclosed by said belt, presser wheels mounted on said cradle and extending into said space and adapted to bear against one face of said belt, and means for supporting said shaft from said frame: 55

4. The combination of a frame, a vertically rotatable belt adapted to contact with an underlying surface to be smoothed, means for driving said belt, a shaft extending transversely of said belt and frame, a cradle 60 mounted on said shaft and extending into a space inclosed by said belt and adapted to rock longitudinally, presser wheels mounted on said cradle and extending into said space and adapted to bear against the upper 65 face of the lower side of said belt and to be rotated thereby, means for supporting said shaft from said frame, yielding means for depressing the cradle supporting end of said shaft, and means for raising the cradle sup- 70 porting end of said shaft.

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

GEORGE SMITH.

Witnesses:

JAMES T. WATSON,  
C. T. CRANDALL.