July 8, 1924. 1,500,771

M. L. SCHLUETER

FLOOR SANDING MACHINE

Filed March 6, 1922

Fig. 1.

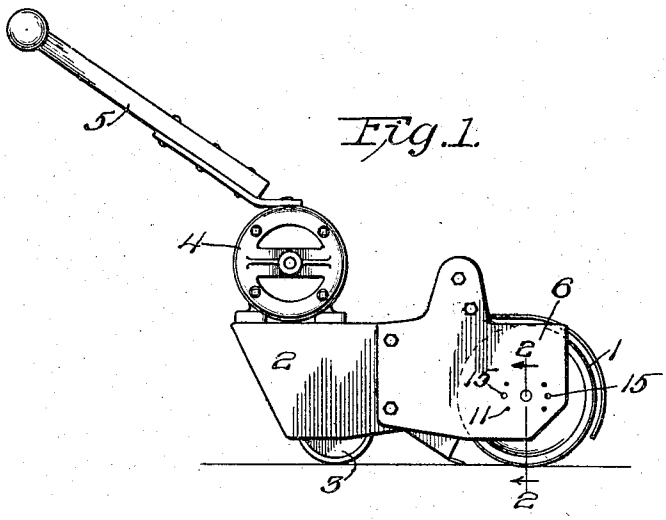


Fig. 2.

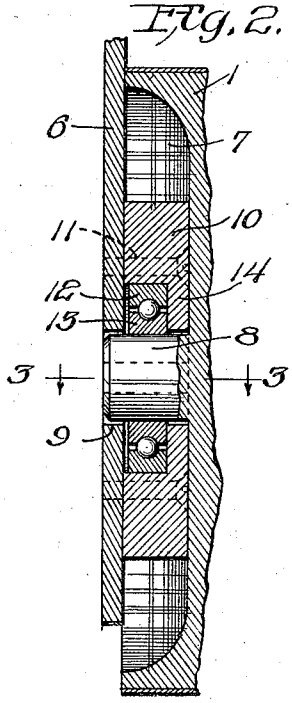
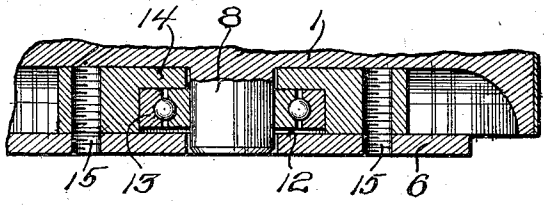


Fig. 3.



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UNITED STATES PATENT OFFICE.

MAX L. SCHLUETER, OF CHICAGO, ILLINOIS.

FLOOR-SANDING MACHINE.

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To all whom it may concern:

Be it known that I, MAX L. SCHLUETER, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Floor-Sanding Machines, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to machines adapted to be moved across a floor and having a power-driven horizontal abrading cylinder for finishing the surface over which the machine is traveling and it has for its object so to construct a machine of this kind that the cylinder may be brought close to a vertical wall rising above the surface on which the machine is working, so that such surface will not be left with any considerable unfinished marginal portion.

The various features of novelty whereby my invention is characterized will hereinafter be pointed out with particularity in the claims; but, for a full understanding of my invention and of its object and advantages, reference may be had to the following detailed description taken in connection with the accompanying drawing, wherein:

Figure 1 is a side elevation of a floor sanding machine in common use, having my invention applied thereto;

Fig. 2 is a section on an enlarged scale taken approximately on line 2—2 of Fig. 1; and

Fig. 3 is a section taken approximately on line 3—3 of Fig. 2.

Referring to the drawing, 1 represents a horizontal abrading roller mounted in the front end of a suitable frame 2 the rear end of which is supported by a wheel or wheels 3. The abrading rollers would have to be driven by a motor 4 by mechanism, not shown, which lies on the opposite side of the machine from that shown in Fig. 1. 5 is a handle by means of which the machine may be moved about. One end of the abrading roller cannot be brought into close proximity to the wall of a room because of the presence of the driving gearing and heretofore, so far as I am aware, the construction on the opposite side of the machine has been such as to hold the opposite end of the abrading roller a considerable distance from a vertical wall.

In accordance with my invention I have produced a simple and novel means for supporting one end of the abrading cylinder so that even in the case of a large machine a floor may be finished up to within a small fraction of an inch from a vertical wall. To this end I have made the front end of the frame on one side of the machine in the form of a thin vertical metal plate 6 of sufficient depth or height to afford the necessary rigidity. In the adjacent end of the cylinder is formed a recess or cavity 7 in the center of which lies a short journal 8 fixed to the cylinder at the axis of the latter and of such a length that it will not project beyond the outer face of the supporting plate 6 although it may enter a hole 9 in the latter. Cylinders of this kind are driven at a high speed and the duty performed by them is heavy and therefore strong roller bearings must be provided for supporting the cylinders. I am able to use such a bearing at the end of the cylinder under discussion by reason of the recess or cavity into which may project a bearing hub of the necessary dimensions carried by the supporting plate. In the arrangement shown, the bearing consists of a block 10 adapted to lie against the inner face of the plate 6 and be secured thereto by means of screws 11; the block having therein a cylindrical pocket 12 in the side facing the plate. In the pocket is any usual or suitable ball bearing device 13 through which the journal 8 passes and by which the journal is supported. The pocket 12 does not extend entirely through the block and therefore after the ball bearing has been assembled in the block and the latter has been fastened to the plate, the ball bearing is held in place on one side by the plate and on the other side by a flange or wall 14 in the block. This arrangement permits the end of the cylinder to be brought up close to the inner face of the supporting plate so that when the machine is moved along a wall with the plate 6 in contact therewith, the adjacent end of the cylinder will be separated from the wall only by the thickness of the plate which, in large machines, need not be more than a quarter of an inch. The plate and the block may be provided with a pair of diametrically-opposed tapped holes 15 extending through the same; the purpose of these

holes being to permit set screws to be screwed into the same into engagement with the end of the cylinder when it is desired to remove the latter; the set screws serving to spread the frame far enough to permit the journal 8 to pass out of the bearing therefor.

While I have illustrated and described with particularity only a single preferred form of my invention, I do not desire to be limited to the exact structural details thus illustrated and described; but intend to cover all forms and arrangements which come within the terms employed in the definitions of my invention constituting the appended claims.

I claim:

1. In a machine of the character described, a horizontal rotatable cylinder, a supporting frame having at one side a thin flat vertical plate lying close to one end of said cylinder, the cylinder having in said end a central recess, a journal fixed to said cylinder at the axis thereof and extending through said recess, a block fastened to the inner side of said plate and lying in said recess, said block having a pocket therein facing said plate and an opening to permit said journal to project into said pocket, and a ball bearing for said journal arranged in said pocket.

2. In a machine of the character described, a horizontal rotatable cylinder, a supporting frame open at the front end, one side of said frame being in the form of a thin vertical plate lying close to one end of the cylinder, said end of the cylinder having a journal, a bearing for said journal fixed to the plate, and said plate having screw threaded holes through the same at said end of the cylinder to permit the insertion of screws to pry the plate away from the cylinder.

In testimony whereof, I sign this specification.

MAX L. SCHLUETER.