

A. A. BAGALIO.  
SANDPAPERING ROLLER.  
APPLICATION FILED JULY 13, 1910.

982,774.

Patented Jan. 24, 1911.

2 SHEETS-SHEET 1.

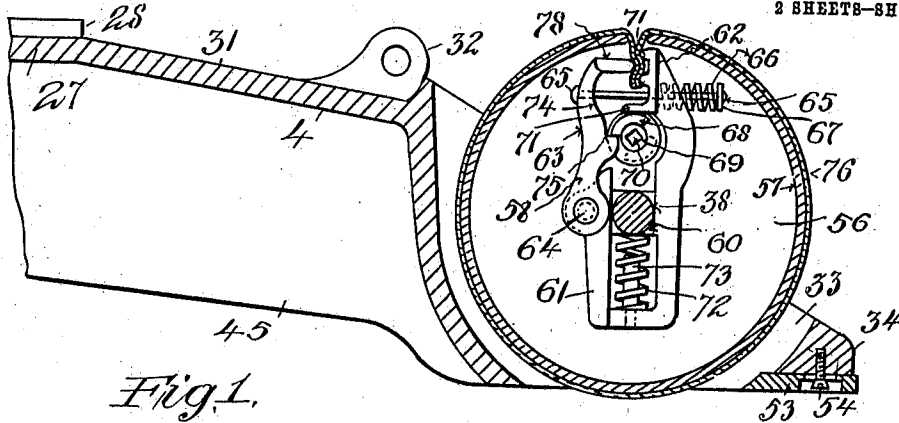


Fig. 1.

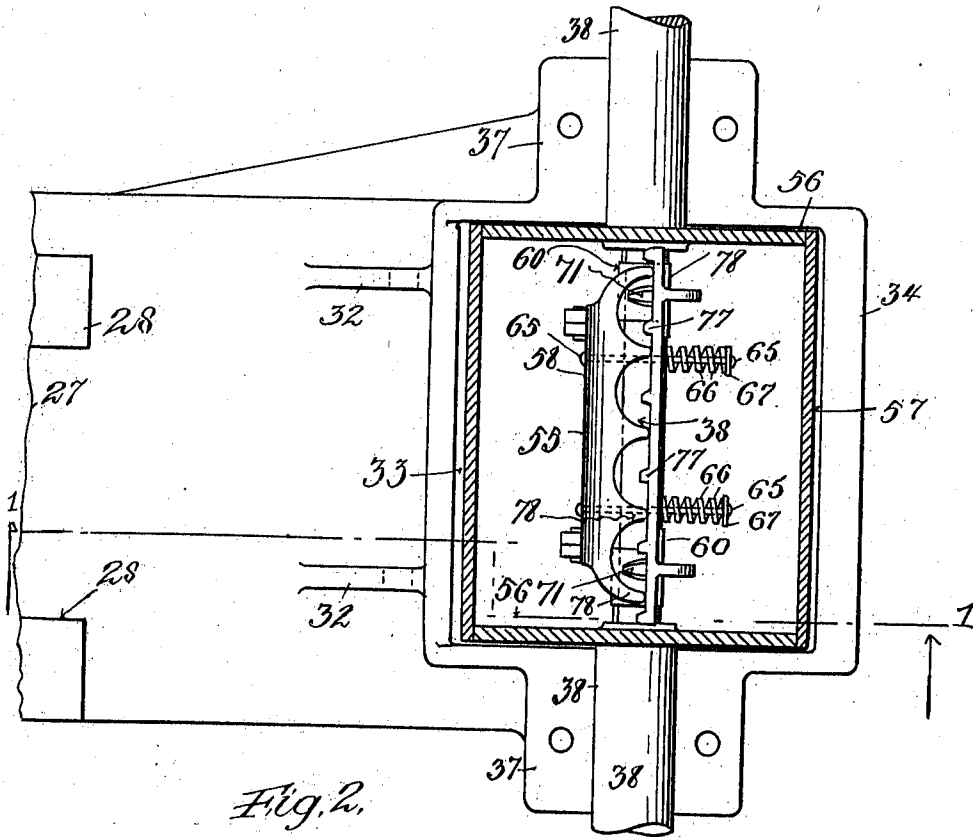


Fig. 2.

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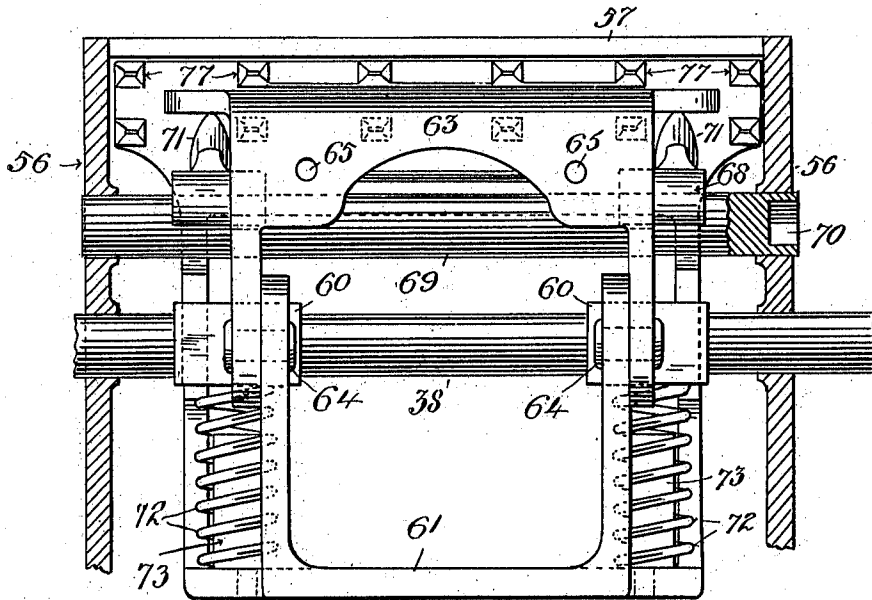


Fig. 3.

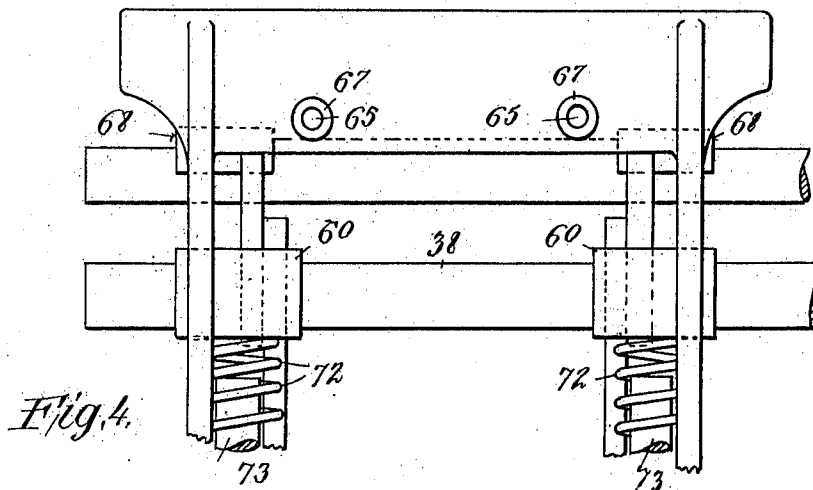


Fig. 4.

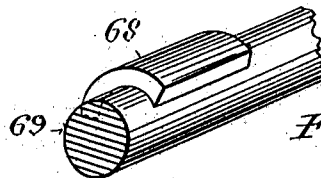


Fig. 5.

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# UNITED STATES PATENT OFFICE.

ANDREW A. BAGALIO, OF NEW YORK, N. Y., ASSIGNOR TO HENRY ROWLAND, OF NEW YORK, N. Y.

## SANDPAPERING-ROLLER.

982,774.

Specification of Letters Patent.

Patented Jan. 24, 1911.

Original application filed March 18, 1910, Serial No. 550,221. Divided and this application filed July 13, 1910. Serial No. 571,727.

*To all whom it may concern:*

Be it known that I, ANDREW A. BAGALIO, a subject of the King of Italy, and a resident of 1435 Minford place, Bronx borough, New York city, and State of New York, have invented a new and useful Improvement in Sandpapering-Rollers, of which the following is a specification.

This case is a division of my application for floor surfacing machines, filed March 18th, 1910, Serial No. 550,221.

The object of my invention is to provide a roller of this class which will be simple, durable and efficient, and which will hold the sand paper firmly and securely and stretch the same tight at all times regardless of the amount of stretching of the sand paper or similar abrasive while in use. This object is accomplished by my invention, one embodiment of which is hereinafter set forth.

For a more particular description of this invention, reference is to be had to the accompanying drawings forming a part hereof in which:

Figure 1 is a sectional view taken on the line 1—1 of Fig. 2, looking in the direction of the arrows, a portion of the sand papering roller and bed of the machine being shown. Fig. 2 is a plan view partially in section, of the structure partially shown in Fig. 1. Fig. 3 is an enlarged sectional view showing the clamping mechanism. Fig. 4 is a reversed elevation of a portion of the structure shown in Fig. 3. Fig. 5 is a perspective view of a cam shaft and a cam.

Throughout the various views of the drawings, similar reference characters designate similar parts.

In the structure herein described, the bed 4 of a sand papering machine is partially shown. 27 designates the top of this bed on which are suitable machined surfaces 28 adapted to support the motor, and forward of this is an inclined portion 31 provided with ears 32 adapted to receive pivots which pass through corresponding ears on a cover which is not shown. A suitable opening 33 is formed in the bed 4 forward of the ears 32, and in this opening the sand papering roll 55 is received. This roll 55 is mounted on a suitable shaft 38, which revolves in suitable bearings 37 which are preferably formed integral with the remainder of the

bed 4. This bed is suitably reinforced by webs 45. The extreme forward end 34 of the bed 4 may carry a knife 53 held in place by screws 54. This knife forms a slide adapted to ride on the floor being surfaced but performs no other function while the sand papering roller is in use. It performs a very important function when the sand papering roll is replaced by a cutter head as described in my said application.

The sand papering roll 55 is composed of disks 56 mounted on the shaft 38, which disks carry a cylindrical shell 57 whose ends are separated to permit sand paper to be passed therethrough at its ends where it is held by jaws 58. The shaft 38 has two square portions 60 against which rests a casting 61, which has one of the jaws 62 and to which the other jaw 63 is secured by pivots 64 and small bolts 65, each of which are surrounded by coiled springs 66 at one end. These springs 66 engage the jaw 62 and nuts 67 on the bolts 65 and normally force the jaws 62 and 63 together so that when these jaws are separated, they are separated by cams 68 on a shaft 69 pivoted in the disks 56. This shaft 69 has a suitable recess 70 which is adapted to receive a key through which it may be rotated. The cams 68 are preferably segments of cylinders, as shown, extending about 120 degrees, and these engage lugs 71 on the jaws 62 and thus cause the casting 61 to move against the tension of coiled springs 72 resting on the bottom of the casting 61 and surrounding lugs 73. As the cams 68 are further turned, they next, after raising the jaws 58, engage surfaces 74 on the jaw 63 and force this jaw from the jaw 62, against the tension of the springs 66, and this continues until these cams 68 reach stops 75 on the jaw 63, at which time the jaws 62 and 63 are sufficiently opened to permit the ends of the sand paper 76 to be inserted. When the movement of the cams is reversed, the jaws 62 and 63 close on the sand paper 76 and grip the same firmly with the aid of projections 77 on the jaw 62 and 78 on the jaw 63, and as these cams are further turned, the lugs 71 are cleared and then the springs 72 act to draw down the jaws 58 and thereby draw the paper 76 tight on the surface 57 and keep it so regardless of the amount of stretching while in use. By again re-

versing the movement of the cams 68, the paper 76 may be released and replaced from time to time, as desired. The casting 61 is so shaped as to ride true on the parts 60.

5 It will be observed that the parts of the roller above described are well balanced with regard to the axis of the shaft 38, so that this roller will run true at all speeds. Worn out paper can easily be removed by inserting a key in the recess 70 as described above, so that not only is the sand paper or similar abrasive readily inserted or removed, but it is held firm and true at all times and properly stretched by a spring 72.

10 While I have shown and described one embodiment of my invention, it is obvious that it is not restricted thereto, but is broad enough to cover all structures that come within the scope of the annexed claims.

20 What I claim is:

1. In a sand papering roller of the class described, a shaft, pivotally connecting jaws mounted on said shaft, springs and bolts adapted to close said jaws and cause the same to grip sand paper, and cams adapted to separate said jaws.

2. In a sand papering roller of the class described, a shaft, pivotally connecting jaws mounted on said shaft, springs separating said shaft and a portion of said jaws, means for holding said jaws in contact, so as to grip sand paper and cams and means for mounting the same, whereby said cams may compress said springs and separate said jaws, or may be made to permit said jaws to come in contact and remove some of the tension from said springs.

3. In a sand papering roller of the class

described, a shaft with square portions thereon, disks mounted on said shaft and a cylinder carried by said disks, pivotally connected jaws sliding on said square portions, means for holding said jaws in contact when not forced apart, a cam shaft mounted in said disks, springs between said first mentioned shaft and portions of said jaws, cams on the cam shaft and projections on said jaws, so that when said cam shaft is turned in one direction, the springs are compressed and the jaws are separated, and when the cam is turned in the other direction, the jaws are brought together, and the springs are released.

4. In a sand papering roller of the class described, a cam shaft 38 having square portions 60, a part 61 having a jaw 62 integral therewith, and a jaw 63 pivoted thereto, coiled springs 72 separating the part 61 from the part 60, disks 56 mounted on said shaft 38, a cylindrical shell 57 mounted on said disks, a cam shaft 69 mounted between said disks, cams 68 mounted on said cam shafts, bolts 65 and springs 66 adapted to force said jaws to grip the sand paper carried by the roller and suitable surfaces on the jaws 62 and 63 engaged by the cams 68, whereby the spring 72 is compressed and the jaws are separated when the cam shaft 69 is revolved in one direction and the jaws are allowed to come together, and the spring 72 expanded when the cam shaft 69 is turned in the other direction.

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