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STAIR TREAD GROOVING MACHINE

Filed Nov. 18, 1929

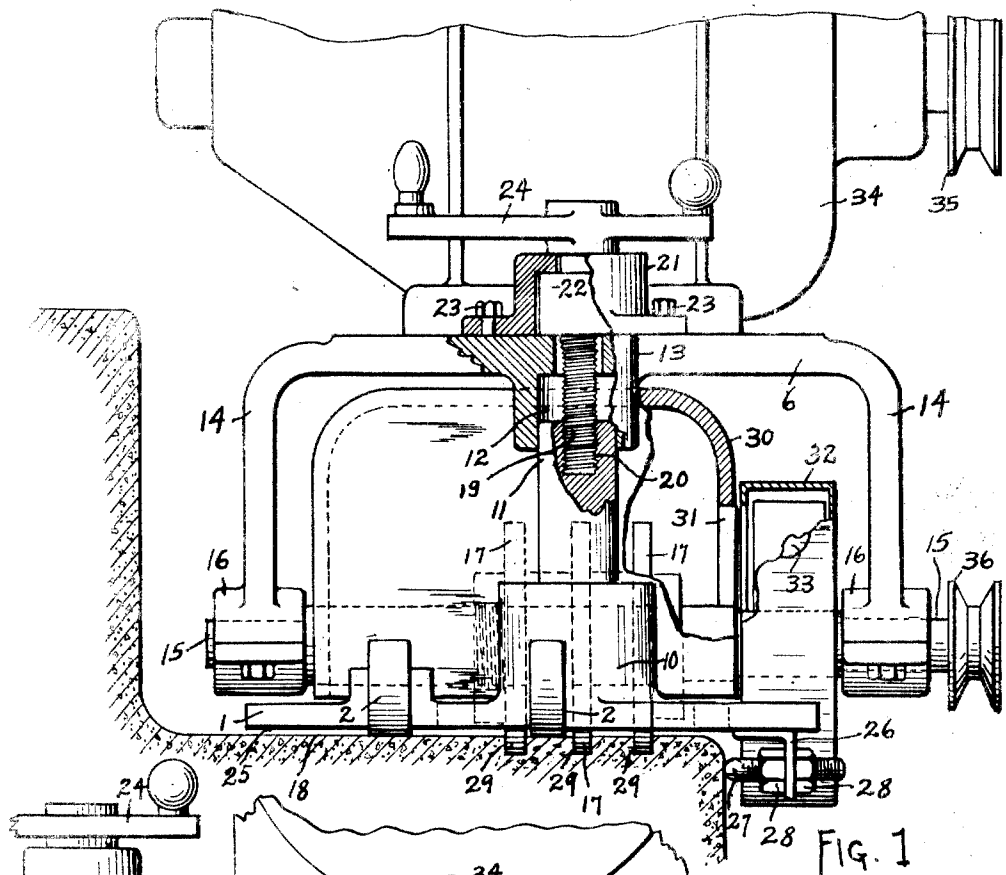



FIG. 1

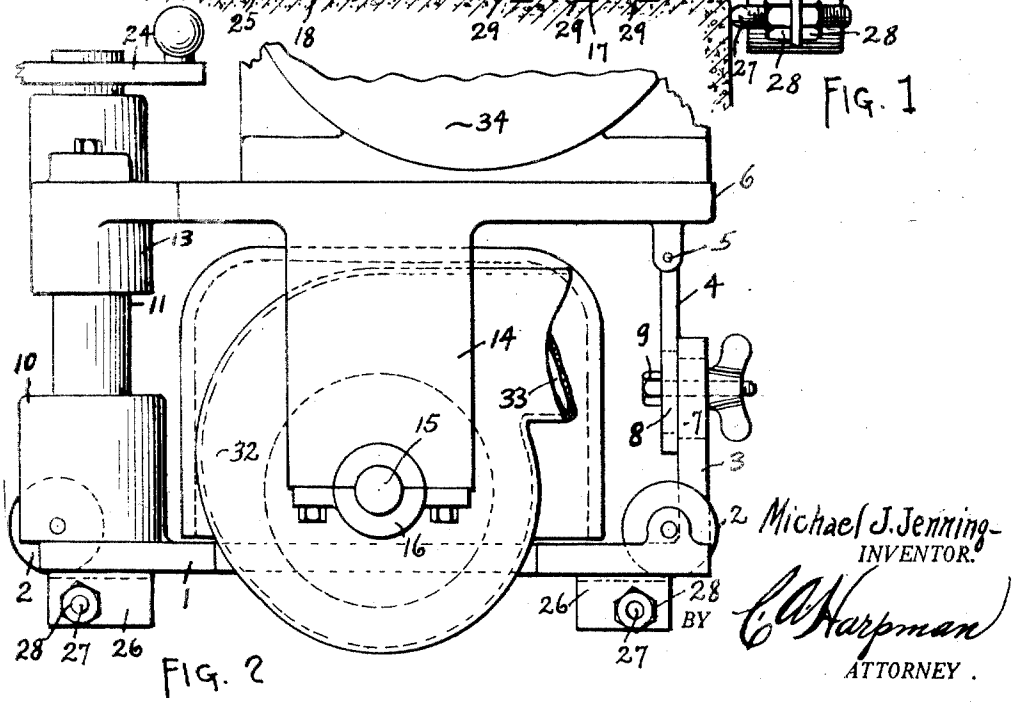



FIG. 2

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# UNITED STATES PATENT OFFICE

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## STAIR TREAD GROOVING MACHINE

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This invention relates to grooving machines and more especially to machines in making grooves in stair treads. These grooves in stair treads to be filled with desirable material but of a rough nature in order to prevent danger of slipping when going up or down stairs.

Another object of the invention is to provide a device that will work in making these grooves in different material such as wood, cement or stone.

A further object of the invention is to provide a device that will make a plurality of grooves at the same time.

A still further object of the invention is to provide a device wherein the depth of the grooves may be regulated by adjusting the machine.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, can be made within the scope of what is claimed, without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawings, wherein:—

Fig. 1 is a front elevation of the device with portions broken away.

Fig. 2 is a side elevation of the device.

By referring to the drawings it will be seen that I have provided a machine having a base member 1. This base member 1 is supported by a plurality of wheels 2 for the purpose of carrying the machine along a stair tread. At one end of the base member 1 there is provided a standard 3. This standard 3 supporting an adjustable arm 4 which is pivoted at a point 5 to an upper frame member 6. The standard 3 is provided with a slot 7 and the arm 4 is provided with a slot 8 through which functions a bolt 9. The distance of the frame member 6 to the base member 1 may be varied by loosening the bolt 9 and adjusting the arm 4 which may be moved up or down increasing or decreasing the distance between the frame member 6 and the base member 1. The other end of the base member 1 carries a support member 10 which is attached to the base member 1 and has an upper portion 11 which functions within a recess 12 formed in an enlarged portion 13 of the frame member 6. This enlarged portion 13 is centrally located in reference to the frame member 6.

By referring to Fig. 1 it will be seen that the frame member 6 is provided with a down turned end 14 which carries a shaft 15 by means of bearings 16. Mounted upon this shaft 15 are a plurality of circular cutters 17. In order that the cutters 17 may be adjusted to the stair tread 18 there has been provided an adjusting means comprising an adjusting screw 19 which functions in a threaded opening 20 of the upper portion 11 of the support member 10. In order that the adjusting screw 19 may cause the upper portion 11 to function within the recess 12 there has been provided a cap member 21 which encloses a circular flange 22 formed on the adjusting screw 19. This cap is removable and is held in position by lug screws 23.

In order to adjust the circular cutters 17 the operator may revolve the crank arm 24 which is secured to the top of the adjusting screw 19 in order to raise or lower the shaft 15 carrying the circular cutters 17, in relation to the lower surface 25 of the base member 1.

In order to guide the machine along the stair tread 18 there is provided brackets 26 which are secured to the base member 1 and each carries an adjustable guide member 27 which may be regulated by means of nuts 28. It will be seen that by means of this adjustable guide member 27 the grooves in the stair tread 18 may be made at a desirable position on the stair tread 18.

In order that the material cut from the grooves 29 may not be spread about there is provided a casing 30 which rests upon the upper surface of the base member 1 and encloses the circular cutters 17. This casing 30 is provided with an opening 31 which connects to a suction fan 32. This suction fan 32 is provided with a suitable outlet

33 which leads to a dust or material bag attached thereto.

In order to rotate the shaft 15, carrying the cutters 17 there has been provided an ordinary electric motor 34 secured to the frame member 6 and carrying a pulley shaft 35 in alinement with a pulley 36 positioned on the shaft 15. It is obvious that an ordinary belt may function with said pulleys.

What I claim is:

In a device of the class described comprising a casing covering and means for drawing cuttings by suction into a suitable bag, the combination of a base member, wheels supporting said base member, an adjustable frame member supported by said base member, a shaft supported by said frame member, said shaft provided with a plurality of circular cutters, means for raising or lowering said circular cutters, a casing covering said circular cutters, an opening in said casing, adjustable guide members for the purpose of guiding said machine along a stair tread, an electric motor supported upon said frame of machine for the purpose of rotating said circular cutters.

In testimony whereof I affix my signature.

MICHAEL J. JENNINGS.