W. A. SCOTT.

FLOOR DRESSING TOOL.

APPLICATION FILED JUNE 4, 1910.

1,016,446.

Patented Feb. 6, 1912

2 SHEETS—SHEET 1.

Fig. 1.

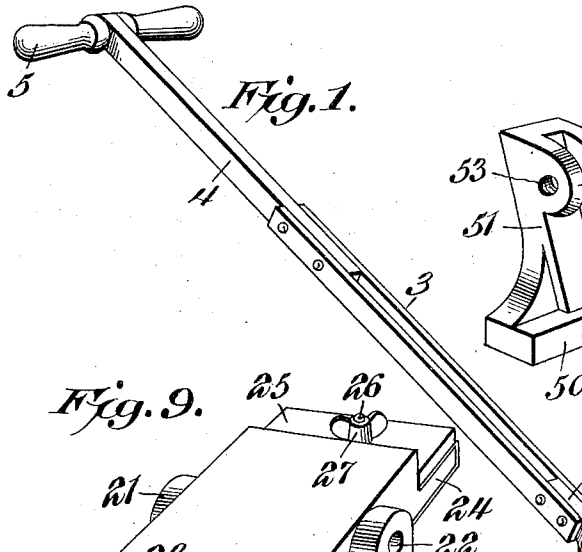

Fig. 8.

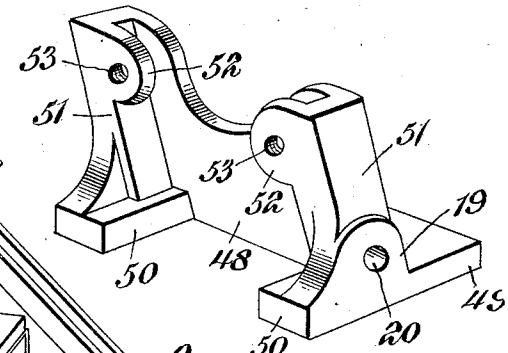

Fig. 9.

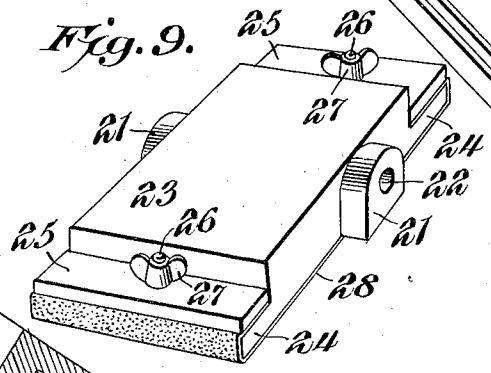

Fig. 2.

Witnesses

Howard D. Orr.

R. A. Bishop

Inventor,

Walker A. Scott,

By E. G. Siggers.

Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

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2 SHEETS—SHEET 2.

Fig. 3.

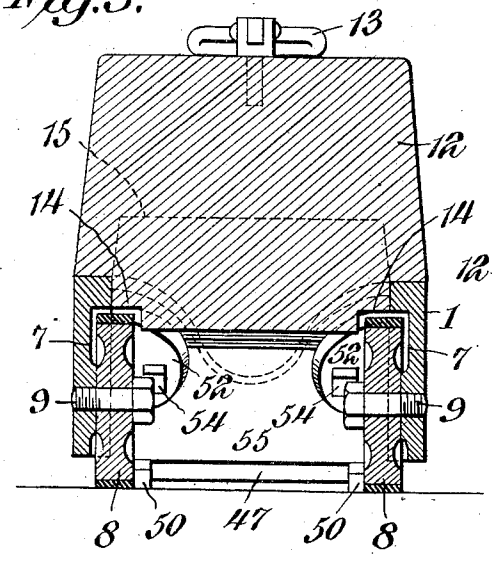


Fig. 5.

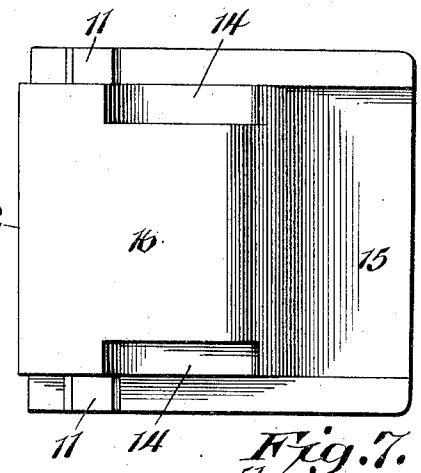


Fig. 7.

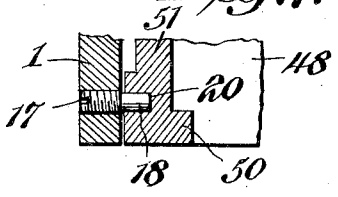


Fig. 4.

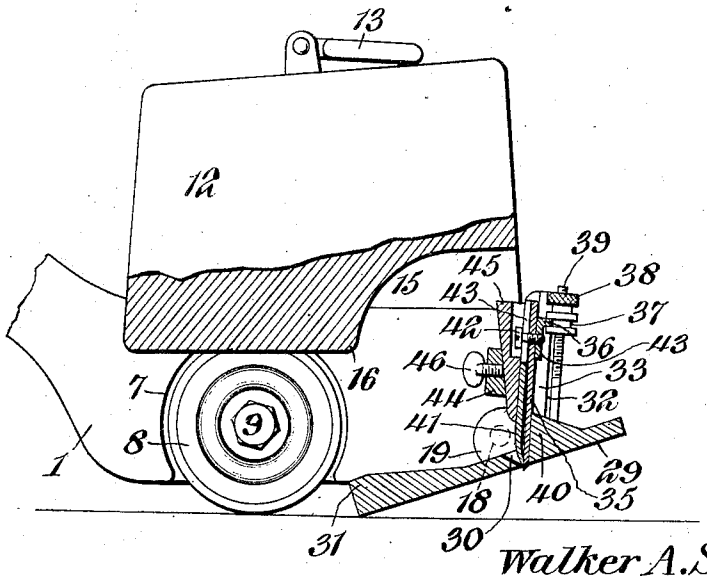
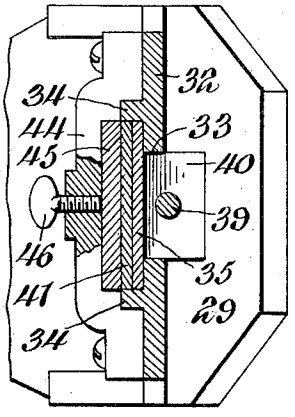


Fig. 6.



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Howard D. Orr.

R. H. Bishop

Walker A. Scott, Inventor,

By C. L. Siggers,

Attorney

UNITED STATES PATENT OFFICE.

WALKER AUGUSTUS SCOTT, OF EVANSVILLE, INDIANA.

FLOOR-DRESSING TOOL.

1,016,446. Specification of Letters Patent. Patented Feb. 6, 1912.

Application filed June 4, 1910. Serial No. 565,027.

To all whom it may concern:

Be it known that I, WALKER A. SCOTT, citizen of the United States, residing at Evansville, in the county of Vandersburg and State of Indiana, have invented a new and useful Floor-Dressing Tool, of which the following is a specification.

This invention relates to tools for finishing surfaces of hard wood floors, and the object of the invention is to provide a tool which may be easily manipulated to remove from a floor all irregularities in the surface of the same and produce a perfectly smooth surface which may be given a high polish or otherwise finished.

The invention also seeks to provide a device by which the various operations of planing, scraping, or polishing may be performed and in which the tools for the various purposes may be readily fitted.

A further object of the invention is to provide a device by which the blade or working tool will be held closely to its work when in use and may be readily held from the surface of the floor when the device is being returned to the starting point for another stroke.

All these objects, and such other incidental objects as will hereinafter appear, are attained in the device illustrated in the accompanying drawings, and the invention consists in certain novel features of the same which will be hereinafter first fully described and then more particularly pointed out in the appended claim.

In the accompanying drawings,—Figure 1 is a perspective view of the complete device showing the scraper in position therein. Fig. 2 is a longitudinal section of the device on an enlarged scale and showing the scraper blade in its working position. Fig. 3 is a transverse vertical section taken through the plane of the axles of the carrying rollers. Fig. 4 is a view partly in longitudinal section and partly in side elevation showing a planer in position in the frame or holder and showing the device arranged with the planer out of contact with the floor. Fig. 5 is a bottom plan view of the weight or device for holding the tool to its work. Fig. 6 is a detail horizontal section through the means for clamping the planer blade. Fig. 7 is a detail sectional view of the pivotal support for the holders. Fig. 8 is a detail perspective view of the holder for the scraper. Fig. 9 is a detail perspective view of a sand-paper holder.

In carrying out my present invention, I employ a substantially U-shaped frame 1 having a rearwardly projecting tang 2 to which a handle 3 is secured. The handle 3 may be of any desired length and may, of course, be of any preferred form, but in the drawings I have illustrated the same as consisting of a pair of parallel plates secured to opposite sides of the tang 2 and extending therefrom and having their rear ends secured to opposite sides of a single bar 4 equipped with grips 5 at its rear end. This construction will be found advantageous in shipping the device, inasmuch as the parts of the handle may be readily separated and stored in a compact form while they may be as easily and quickly secured rigidly together and to the frame when the device is to be used. The lower edges of the sides of the frame 1, at the front ends thereof, are slightly cut-away or beveled, as indicated at 6, so as to readily accommodate the working position of the tool fitted in the frame, as will be readily understood on reference to Fig. 2, while in the inner face of the said side members of the frame, near the the rear ends thereof, I provide recesses 7 to receive the rollers 8 upon which the device is supported when being pushed to the point at which it is desired to start a working stroke of the tool. The rollers 8 are held in the recesses 7 by independent axles 9 which are alined with each other, as will be readily understood. By placing the rollers between the sides of the frame I reduce the gage of the device and also provide a perfectly smooth outer surface for the same so that contact with the baseboards or walls of a room will not cause injury to such parts of the building, while by having the rollers near the rear ends of the side members of the frame I leave the front end of the frame available for the use of a wide blade and also facilitate the tilting of the frame in the operation of the device, as will hereinafter appear. In the upper edges of the side members of the frame, in rear of the axles 9, I form notches or recesses 10 in which are seated lugs 11, formed on the under side of a weight 12 which is adapted to rest upon the upper edges of the frame 1 and is held from sliding on said edges by reason of the engagement of the said lugs

11 with the recesses or notches 10. The weight is, of course, equipped with a handle 13 by which it may be easily lifted from the device or placed in position thereon as occasion may require, and in its under side it is provided with recesses 14 adapted to fit over the rollers 8 and at its front end with an enlarged recess or chamber 15 to accommodate the working tool and the frame in which the same is held. The central portion of the weight, designated by the numeral 16, depends between the rollers 8 and the side bars of the frame so that a large, heavy weight may be employed without being brought into contact with the tool or the rollers and thereby interfering with the proper operation of the device.

In the side members of the frame 1, at the front corners thereof, I provide suitable openings in which are fitted screws 17 having smooth inner ends 18 adapted to engage and serve as pivots for the working tools. The scraper and the planer will each be mounted in a frame equipped with lugs 19 having openings 20 therein to receive the pivots 18, and the sand-paper holder will be provided on its sides with small lugs 21 having openings 22 therein, corresponding in all respects to the openings 20 in the lugs 19 of the planer or scraper holder. The sand-paper holder consists of a block 23 of any desired dimensions provided with transverse flanges or lips 24 at its opposite ends and equipped with clamping plates 25 adapted to rest upon the said flanges, and with set screws 26 rising from the said flanges and equipped with thumb nuts 27 adapted to bear upon the clamping plates, as shown, and as will be readily understood. The sheet of sand paper 28 is placed against the under side of the block 23 with its ends drawn over the flanges 24 so that the sheet of paper will be held taut and smooth against the under face of the block, and the clamping strips or plates 25 are secured against the said ends of the sand paper by turning home the thumb nuts 27, as will be readily understood.

The planer illustrated in Figs. 4 and 6 comprises a base plate 29 having a transverse slot 30 at about its center and equipped at its rear end with a weight or enlargement 31 by which it will be held closely to the floor when in its working position. Projecting upward and rearward from the base plate 29 adjacent to and in rear of the lugs 19, is a supporting plate 32 provided with a central longitudinal slot 33 and having longitudinal ribs 34 on its rear face. The planer bit or blade 35 is seated upon the rear face of the plate 32, between the ribs 34, and is provided with a lug or rib 36 on its front side which is engaged by an annular groove 37 in a sleeve or nut 38 which is mounted on the upper end of a screw 39 secured in a lug or block 40 formed on the upper side of the base plate 29 adjacent the slot 30 therein, as shown, and as will be readily understood. The upper end of the screw 39 is threaded, and the adjusting sleeve or nut 38 is fitted upon the said threaded portion so that by turning the nut it will be caused to travel longitudinally of the screw and thereby move the blade or bit 35 so as to adjust the same to project through the slot 30 to the desired degree. The bit-cap 41 is secured to the rear face of the bit by a set screw 42 passing through a slot 43 in the bit-cap and threaded in the bit, the bit being preferably provided on its front face with an enlargement or lug 43 in order to give an increased bearing and support for the said set screw. A yoke 44 is provided on the rear face of the plate 32, and between this yoke and the bit-cap 41 I insert a wedge 45 which is held in its proper position by a thumb screw 46 mounted in the yoke and bearing upon the wedge, as shown. The wedge serves to hold the bit-cap and the bit firmly and squarely against the plate 32 between the ribs 34 thereon so that they will remain in their adjusted positions without exerting strain upon the adjusting nut or sleeve 38. The base plate 29 will be of such a width as to fit closely between the side members of the frame 1 yet be capable of swinging easily on its pivotal supports so that a wide bearing or support for the plane-bit will be provided and, consequently, the plane-bit will not readily drop into depressions in the surface of the floor, but will pass over the same so that the high portions of the surface will be cut off and the surface quickly brought into a level condition. The weighted portion 31 of the base plate serves to hold the edge of the bit off the floor when the device is returned to the starting point of the stroke, as will be understood on reference to Fig. 4.

The scraper blade 47 is arranged against the rear side of a holding plate 48 which extends upwardly and rearwardly from a base plate 49 having side extensions or runners 50, projecting from its rear edge, on which the lugs 19 containing the sockets 20 for the pivots are formed. The holding plate 48 is arranged just in advance of the sockets 20 and rearwardly and upwardly inclined arms 51 are formed on the rear face of the plate 48 at the opposite edges of the same, while at the upper ends of the said arms are lugs 52 having threaded openings or perforations 53 in which are mounted set screws 54 adapted to bear against the clamping plate 55 and thereby secure the scraper blade 47 against the rear side of the holding plate 48, as will be readily understood on reference to Fig. 2. This construction permits the scraper blade to be readily adjusted so as to project to the desired degree

below the under face of the base plate 49 and the runners 50, and also permits it to be readily shifted to compensate for wear. It will be readily noted that the base plate 49 and the runners 50 constitute a large bearing or support for the scraper blade so that it will not drop into hollows in the floor, but will ride over the same and act only on the projecting portions of the floor surface which will be thereby readily brought into the desired smooth condition.

In operating my device, the planer will be first placed in position between the side members of the frame 1, and the device will be pushed over the floor upon the rollers, as indicated in Fig. 4, so as to bring the planer blade or bit as close as possible to the side wall of the room. The handle is then raised so that the rollers will be lifted from the floor, as shown in Fig. 2, and the weight of the device, consequently, thrown upon the planer so that when the operator draws the tool toward him the planer bit will be forced to engage the floor surface and cut off the projecting portions of the same. The device having been drawn entirely across the room in this manner, the handle is lowered so that the rollers will again engage the floor and the device is then pushed back to the starting point or a point immediately adjacent the same so that it may be again drawn over the floor to cut the projecting rough portions therefrom, as will be readily understood. The work of the planer having been accomplished, the scraper is substituted therefor and the device operated in the same manner so as to remove from the floor those small projections which will not be acted upon by the planer, and, when the work of the scraper has been accomplished, it is removed and the sand paper holder substituted therefor. The sand paper holder will be operated in the same manner except that the same amount of pressure will not be required, and the weight 12 may be lifted from the frame so that the operator will not have to perform any unnecessary labor. The use of my device in the described manner will quickly produce the desired smooth surface on the floor which may be subsequently polished or otherwise prepared, as may be desired.

It will be readily noted that the scraper or planer or other tool fitted in the frame will, when in use, lie in a plane substantially coinciding with the beveled portions 6 of the main frame so that the frame will offer no obstruction to the progress of the tool over the floor. At the same time the tool is free to oscillate upon its pivotal supports to a slight extent so that while it will be prevented from dropping into the hollow portions of the surface, it will approximately follow the surface so that the blade or bit will not be subjected to hard blows or damaging impact with projecting portions of the floor. The travel of the device over the floor will be facilitated for the same reasons. It will also be noted that the tool is arranged close to the rollers by which the frame is supported when the tool is not working, and that the weight extends from end to end of the frame and, consequently, when the tool is at work, the weight of the frame and the superposed weight 12 will be forced directly upon the tool, and it will be thereby positively and firmly held to its work.

While I have described the principle of operation of the invention, together with the apparatus which I now consider to be the best embodiment thereof, I desire to have it understood that the apparatus shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claim appended hereto.

Having thus described my invention, what I claim is:—

In a floor dressing mechanism, a substantial weight-carrying wheeled frame, in combination with a tool holder having an elongated flat bearing face, and a blade projecting below said face intermediate its ends and at a substantial distance from each end, said weight-carrying frame being pivoted to said holder at its forward end near the lower corner so that the said frame may be tilted up to elevate its wheels from the floor and bring its weight upon said bearing face of the tool holder, said bearing face forming a shoe upon which the machine travels and which carries the greater portion of the weight of the machine, said holder acting as a gage for the blade and determining its depth of cut according to the adjustment of the blade through the said bearing face, while confining the cut to substantially the plane of said bearing face, the blade being mounted in and carried by said holder, whereby the relation of said blade to the tool holder is unaffected by the tilting of the frame on the tool holder.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WALKER AUGUSTUS SCOTT.

Witnesses:

J. A. McCoy,

Wm. H. Pritchard.