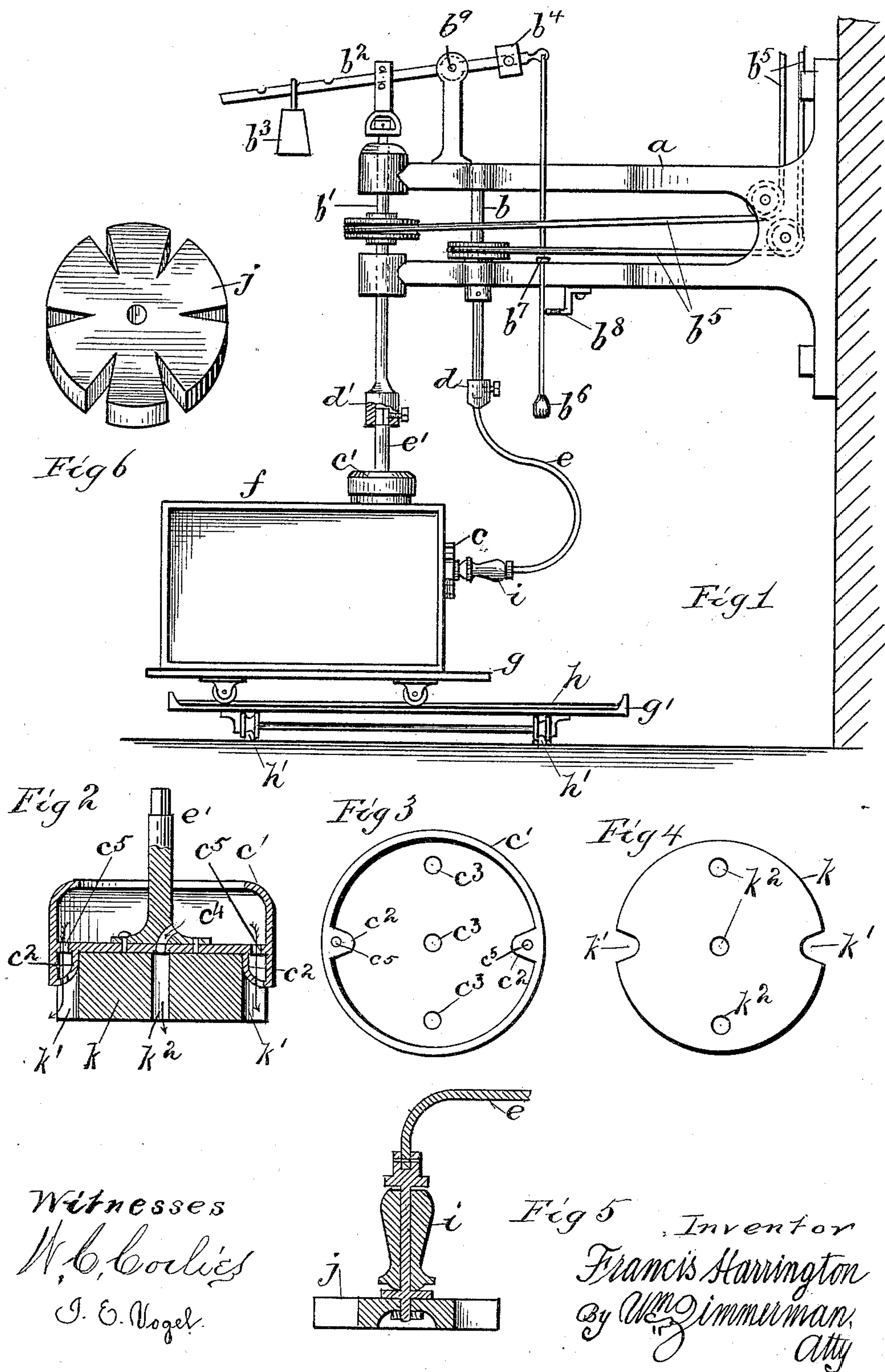


(No Model.)

F. HARRINGTON.
APPARATUS FOR POLISHING PAINT OR VARNISH.

No. 436,892.

Patented Sept. 23, 1890.



UNITED STATES PATENT OFFICE.

FRANCIS HARRINGTON, OF SOUTH BEND, INDIANA.

APPARATUS FOR POLISHING PAINT OR VARNISH.

SPECIFICATION forming part of Letters Patent No. 436,892, dated September 23, 1890.

Application filed March 8, 1890. Serial No. 343,129. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS HARRINGTON, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Apparatus for Polishing Paint and Varnish, which are fully set forth in the following specification, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 shows one form of my device as seen in side elevation and operating on a wagon-bed, the head d' being shown partly broken away to show its construction. Fig. 2 shows the head c' in central vertical section on an enlarged scale, so as to show the details of its construction. Fig. 3 shows Fig. 2 as seen on its under side. Fig. 4 shows a block of pumice-stone or felt formed ready to enter the head c' . Fig. 5 shows the mechanism attached to the end of the flexible shaft e in vertical central section, showing how the handle i is attached and how it must operate, and to said part is attached a notched piece of felt j , also shown in section. Fig. 6 shows a notched piece of felt j , adapted to work on concave and like irregular surfaces.

The object of my invention is to produce mechanism whereby paint and varnish may be rubbed down to a smooth surface, as it is done on carriage-bodies, furniture, &c. As heretofore practiced such work has been done mostly by reciprocating hand motion only, which is tedious as well as very expensive when compared with my method, which employs machinery and which preferably substitutes rotary for the old reciprocating motion to the polishing mechanism; and to attain said ends I construct my new mechanism in substantially the following manner, namely:

A long bracket or other suitable support a is put up at a proper height against a post or wall, and in the outer end of said bracket are carried vertical shafts $b b'$, provided with pulleys to give them rotary motion by means of belts b^5 , actuated by any convenient motor. The shaft b' is provided with a swivel-head at its upper end, through which passes a lever b^2 , fulcrumed at b^9 . Said lever is provided with two adjustable weights b^3 and b^4 , by means of which the pressure of its chuck may be varied or one weight may be made to

overbalance the other and thus suspend the chuck, and to one end of said lever is also attached a cord or small rope and handle b^6 . On said rope is a knot b^7 , which passes under a plate b^8 , provided with a notch to receive the rope and thus hold the said knot under the plate b^8 . Each of the lower ends of said shaft are provided with heads or chucks d and d' , adapted to receive the ends of the shafts e and e' , the former being a flexible shaft, and the lower ends of said shafts are provided with heads or chucks c and c' . Said heads c and c' are preferably constructed out of sheet metal, as shown on a more clear and enlarged scale in Figs. 2 and 3, and are adapted to hold pumice-stone or felt k in their lower ends and water in their upper parts c^4 . On the lower ends of said chucks are either spurs c^2 on the sides of the chucks or pins c^3 , projecting from heads, which serve to hold the pumice-stone or felt, &c., that may be put in said heads from slipping in the said chucks. The upper edges of the walls of said chucks are turned inward, as shown, for the purpose of holding water from flying out by centrifugal force. Through the heads of said chucks are cut a number of holes c^5 to let the water pass down through them, as indicated by the arrows, and into the circumference of the pumice-stone k or felt are cut notches k' or holes k^2 , or both, as the case may be, to fit over said parts c^2 and c^3 .

The form shown in Fig. 4 is used either for pumice-stone or felt for working on flat surfaces; but when concave and other irregular surfaces are to be worked the circular pieces of felt have to be made flexible, which is best accomplished by cutting out sections, as is clearly shown in Fig. 6, and said piece fitted to the ends of either of said shafts, as shown in Fig. 5, where the central portion has a nut to hold the felt, and for that purpose is hollowed out so as to sink the nut safely beyond the working-surface of the felt.

To the lower end of the flexible shaft is applied a loose handle i , which permits the end of the shaft to revolve in it for the purpose of holding and guiding the polishing material wherever desired, as shown in Fig. 1, where one chuck is applied to the end of a buggy-box and the other to the side of it at the same time, the latter operating on it by its own

weight and that of the weighted lever, thus enabling one man to attend to both parts at the same time.

On the floor is laid a railway-track h' , carrying a small platform-truck, and upon said truck is laid a track h at right angles to the track h' , and on said latter track is placed a truck g , upon which the buggy-box f is placed. By means of said track any portion of anything placed on said truck may be brought under the chuck c' by the application of very slight force.

When it is desired to "rub down" or "finish" the surface of any body, as a cutter or buggy box, it is put upon the truck g , as shown, and the chucks c and c' applied either alternately or simultaneously, the force of the shaft e' being regulated by the adjustable weight b^3 , and that of the shaft e by hand, the end of the shaft turning in the handle i , and the polishing material is charged with water or the surface to be polished is wet in any suitable manner, as with a sponge, and when the chuck c' has finished its work the cord b^6 is pulled and the knot b^7 caught under the catch b^8 .

What I claim is—

1. In a paint and varnish rubbing and polishing device, a bracket provided with parallel vertical shafts provided with removable extensions e and e' to said shafts, whereof

one of said extensions is a flexible shaft and the other vertically adjustable, and each provided with a chuck adapted to hold polishing bodies, in combination with trucks $g g'$, adapted to move on tracks $h h'$, crossing each other, substantially as specified. 35

2. In a paint and varnish rubbing and polishing device, a bracket provided with parallel vertical shafts whereof one is vertically adjustable and provided with mechanism adapted to give varying pressure in the direction of its axis and the other is provided with a flexible shaft, and each provided with a chuck, in combination with the trucks $g g'$, adapted to move on tracks $h h'$, crossing each other, substantially as specified. 40 45

3. In a paint and varnish rubbing and polishing device, a bracket provided with parallel vertical shafts whereof one is vertically adjustable and provided with mechanism adapted to give varying pressure in the direction of its axis and the other is provided with a flexible shaft, and each provided with a chuck, in combination with mechanism adapted to carry the body to be polished in any direction under said chucks, substantially as specified. 50 55

FRANCIS HARRINGTON.

Witnesses:

W. H. SLUSSER,
THOMAS FARLY.