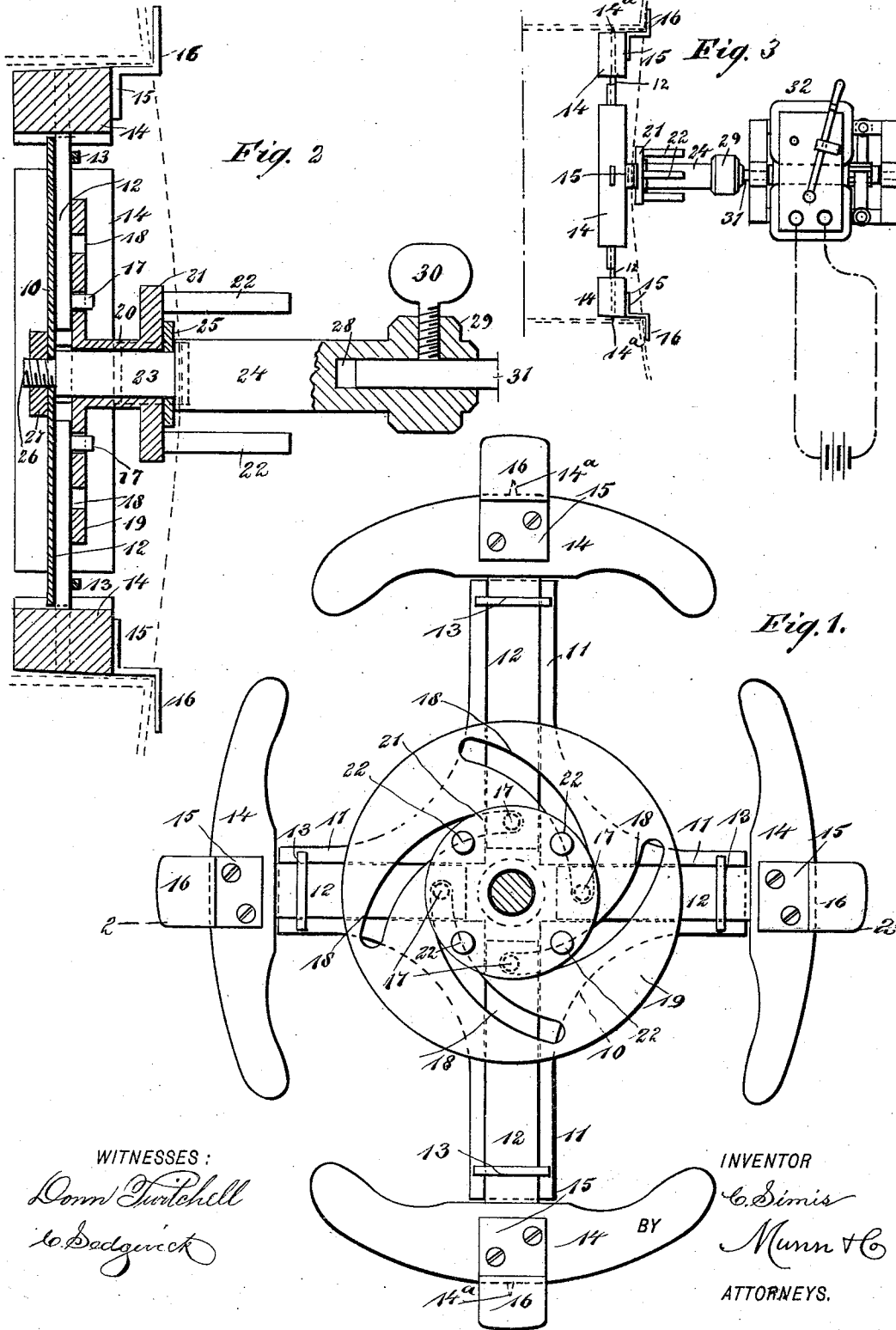


(No Model.)

C. SIMIS.
HAT POLISHING AND CLEANING MACHINE.

No. 477,965.

Patented June 28, 1892.



WITNESSES:
Donn Twitchell
to. Sedgwick

INVENTOR
C. Simis
BY
Munn & Co
ATTORNEYS.

UNITED STATES PATENT OFFICE.

CÆSAR SIMIS, OF BROOKLYN, NEW YORK.

HAT POLISHING AND CLEANING MACHINE.

SPECIFICATION forming part of Letters Patent No. 477,965, dated June 28, 1892.

Application filed March 14, 1892. Serial No. 424,790. (No model.)

To all whom it may concern:

Be it known that I, CÆSAR SIMIS, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved
5 Portable Hat Polishing and Cleaning Machine, of which the following is a full, clear, and exact description.

My invention relates to improvements in an apparatus for finishing, ironing, and performing similar operations on silk hats; and its object is to produce a simple and convenient holder which may be quickly and securely adjusted to any size of hat and which may also be secured to a revoluble shaft,
15 such as the armature-shaft of an electric motor, to the end that the hat may be firmly held and rapidly revolved, so that when a finishing cloth, brush, iron, or other article is held against the hat the nap of the same may be
20 quickly and smoothly laid and highly polished.

My invention is primarily designed for use in hat and furnishing stores, barber-shops, and other public places frequented by men,
25 and as skilled labor is not required and no hot iron is employed a boy or other employé may polish and clean a patron's hat in a few moments while he is engaged in making a purchase or being shaved or having his shoes
30 blackened.

To this end my invention consists in an apparatus, which will be hereinafter described and claimed.

Reference is to be had to the accompanying
35 drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a sectional plan of the hat-holder. Fig. 2 is a cross-section of the same
40 on the line 22 of Fig. 1, showing also the manner of applying the holder to a hat; and Fig. 3 is a plan view on a reduced scale of the entire apparatus—that is, it shows the holder applied to a hat and also to the shaft of an
45 electric motor.

The holder is provided with a base-plate 10, having diverging side arms 11, in the upper sides of which are formed longitudinal recesses, which form slideways to receive and
50 support the radially-extending arms 12, these arms having their outer end portions confined by keepers 13, which span the recesses or

slideways of the arms 11, and the extreme outer ends of the arms 12 terminate in blocks 14, which have their outer surfaces convex, so
55 as to fit snugly and firmly within a hat and against the hat-band. Two of the arms 12, which are placed opposite each other, are longer than the other two, as shown in Fig. 1, so that the holder will approximate in shape to
60 the shape of an ordinary hat; but it is not essential that the holder be provided with four arms, as shown, as a greater or less number may be employed. Two end blocks 14 have
65 projecting spurs 14^a, which spurs penetrate the material of the hat and prevent the hat from slipping.

On the back or rear sides of the blocks 14 are guide-plates 15, which are firmly secured to the blocks and which are bent forward and
70 outward twice at a right angle, as best shown in Fig. 2, thus producing outwardly-extending arms 16, which are adapted to overlap the hat-rim and prevent the holder from being thrust too far into the hat or the hat too far
75 upon the holder. The inner ends of the arms 12 are provided with laterally-extending studs 17, which project through cam-slots 18, which are produced tangentially in a plate 19, the latter being held parallel with the base-plate
80 10, and the plate 19 is formed integral with the sleeve 20, which has at its inner end an integral disk 21 with rearwardly-extending parallel pins 22, these serve the purpose of a hand-hold and enable the sleeve 20 and plate
85 19 to be easily turned. The sleeve 20 is journaled on the reduced portion 23 of the shaft 24, a washer 25 being inserted between the disk 21 and the shoulder of the shaft, as shown in Fig. 2, and the shaft extends centrally from
90 the base-plate 10 and at right angles thereto, the outer end of the shaft being reduced and screw-threaded, as shown at 26, so that it may project through the base-plate, and it is held thereto by a nut 27. The inner end of the
95 shaft 24 is provided with a socket 28, and the free end of the shaft is thickened, as shown at 29, so as to form a bearing for the set-screw 30. The socket 28 is adapted to receive the end of the horizontal armature-shaft 31 of an
100 electric motor 32, and the shaft 24 is held to the motor-shaft by the set-screw 30, the latter being made to impinge upon the shaft 31. The shaft 24 and the other parts of the holder

may be revolved by attaching the shaft 24 to any revoluble driving-shaft; but an electric motor is preferably employed to turn the holder, as by means of the motor a high rate of speed may be easily attained.

Ironing by means of a hot iron is rendered unnecessary, because the heat developed by the friction of the cloth or brush against the rapidly-moving surface of the hat answers every purpose that the heated iron is used to accomplish.

The operation of the apparatus is as follows: The holder is applied to the hat by inserting the blocks 14 within the hat, while the blocks are in their inner position and the studs 17 in the inner ends of the cam-slots 18. The guides or plates 16 assist in adjusting the holder, and when it is placed within the hat the plate 19 is turned by means of the holder-pins 22, and this forces the studs 17 toward the outer end of the cam-slots 18, thus moving outward the several arms 12 and forcing the blocks 14 firmly against the inner portion of the hat-body. The inclination of the cam-slots 18 is such that the studs 17 and arms 12 will not move inward until the plate 19 is turned back by hand. After the hat is adjusted the holder, which is connected to the shaft of a motor, as already described, is rapidly revolved and the cloth or brush, which is used in finishing or polishing the hat, is held against its surface, and the rapid rotation of the hat causes it to be quickly and nicely finished or polished.

In practice the holder is not removed from the armature-shaft; but after one hat is finished the holder is loosened, the hat removed, and another inserted in its place, the motor being of course stopped to enable the change to be made. To facilitate this operation, a small motor having on its upper side a convenient switch may be used, as shown in Fig. 3.

I do not confine myself to the precise construction and arrangement of parts set forth in the drawings and described above, as the

construction may be greatly modified without departing from the principle of my invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A machine for cleaning and polishing hats, comprising a motor having a driven shaft and an expansible or adjustable hat holder or carrier provided with a stem or shaft, and means for detachably coupling said stem or shaft with the said driven shaft, substantially as set forth.

2. In a hat cleaning and polishing machine, the rotary expansible hat holder or carrier to fit within the wearer's hat and rotate it and provided with a shaft or stem having a socket and set-screw to connect with a motor or power shaft, substantially as set forth.

3. A rotary expansible hat-holder for hat polishing and cleaning machines, comprising a plate having radial channels or grooves, arms sliding therein and having curved blocks or heads on their outer ends, a rotary cam-disk parallel with the said plate and engaging said sliding arms with its cam-surfaces to slide the same and expand the holder, a shaft or stem secured to the center of the said plate and adapted to be connected with a motor or power shaft for rotating the holder, and the stop projections extending outward from the back or rear sides of the blocks or heads to engage the hat-brim and limit the entrance of the holder into the hat, substantially as set forth.

4. The combination, with the plate and its carrying-shaft, of the sliding arms having blocks at their outer ends and studs on their exposed faces, and the cam having grooves into which said studs project, and a hand-hold formed by pins 22, parallel with said shaft, substantially as set forth.

CÆSAR SIMIS.

Witnesses:

WARREN B. HUTCHINSON,
E. M. CLARK.