

No. 761,808.

PATENTED JUNE 7, 1904.

W. R. ALLEN.
SHAVING APPARATUS.
APPLICATION FILED OCT. 28, 1903.

NO MODEL.

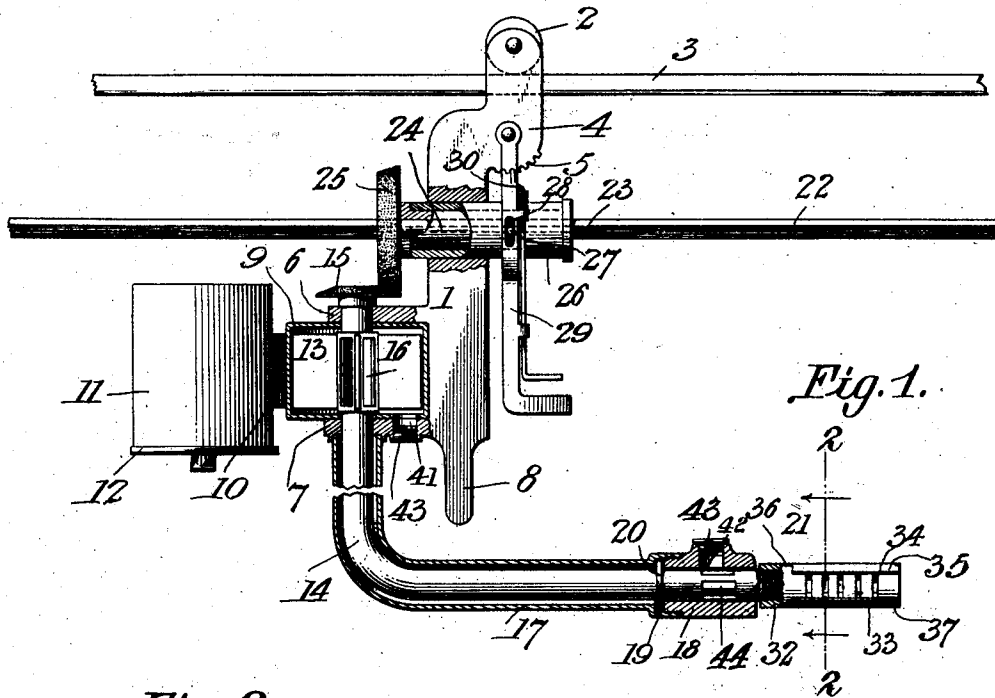


Fig. 1.

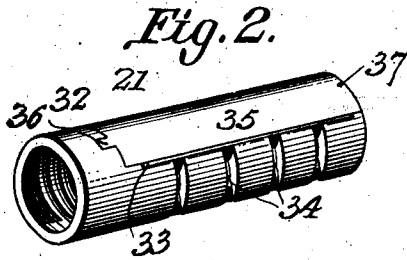


Fig. 2.

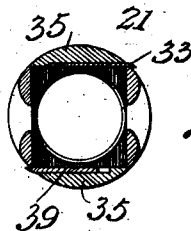


Fig. 3.

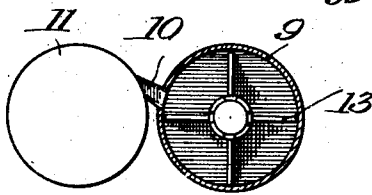


Fig. 4.

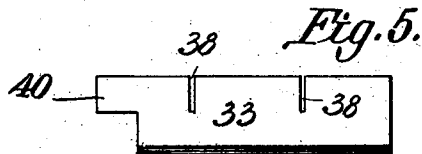


Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM R. ALLEN, OF HOQUIAM, WASHINGTON.

SHAVING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 761,808, dated June 7, 1904.

Application filed October 23, 1903. Serial No. 178,904. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. ALLEN, a citizen of the United States, residing at Hoquiam, in the county of Chehalis and State of Washington, have invented a new and useful Shaving Apparatus, of which the following is a specification.

My invention relates to a shaving apparatus for use in barber-shops, and has for its objects to produce a comparatively simple inexpensive device of this character which will be safe, efficient, and automatic in its operations and one which is designed for travel from place to place—that is, from chair to chair—in a shop.

To these ends the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a side sectional elevation of a shaving device embodying the invention. Fig. 2 is a detail perspective view of the razor. Fig. 3 is a cross-section of the same. Fig. 4 is a detail view of the fan-case and adjacent receptacle. Fig. 5 is a detail view of one of the razor-blades.

Referring to the drawings, 1 designates a carriage or hanger suspended by a roller 2 for travel upon a track or guide 3, which in practice will extend from end to end of a shop in suitable relation with the row of chairs. This hanger consists, preferably, of a vertically-disposed metal bar having an offset upper portion 4, provided at its lower end with a series of ratchet-teeth 5, while the hanger is provided with a pair of vertically-spaced horizontal arms 6 7 and at its lower end with a suitable handle 8.

Mounted between and sustained by the arms 6 7 is a casing 9, communicating, through a short tubular connection 10, with a receptacle 11, provided at its lower end with a removable lid 12, having a suitable handpiece.

Disposed within the casing 9 is a rotary suction-fan 13, fixed upon a flexible tubular shaft 14, having bearing in the arms 6 7, the upper end of the shaft being provided with a fixed bevel friction-disk 15, while the shaft at a point within the casing and between the fan-blades has a series of elongated openings 16,

the purpose of which will hereinafter appear. The shaft 14 extends through a protecting tube or case 17, which is attached at its upper end to the horizontal arm 7 at a point beneath the casing, and has tapped into its outer end a sleeve or nozzle 18, at the inner end of which the tube 17 has an internal groove 19, receiving a collar 20, formed upon the shaft 14, whereby longitudinal displacement of the latter is prevented. The outer end of the shaft 14 is screwed into the end of the rotary razor 21, which will be more fully hereinafter described, whereby as the shaft is rotated the razor will be operated, as is readily understood.

For operating the shaft 14 to impart motion to fan 13 and razor 21 I preferably employ the following mechanism, in which 22 is a drive-shaft lying parallel with the track 3 and suitably spaced from the latter, said shaft being provided throughout its length with a projecting key or spline 23. Slidably mounted upon the shaft 22, but held for rotation therewith by the spline 23, is a tubular spindle 24, having fixed upon its forward end a bevel friction-gear 25. The spindle 24 is surrounded by a sleeve 26, having bearing in the carrier or hanger 1 and provided with a laterally-extending pin 27, engaging a longitudinal slot 28, formed in a lever 29, pivoted at its upper end to the offset portion 4 of the hanger. This lever is provided with suitable lateral bearings in which is slidably mounted a spring-actuated pawl 30, designed for engagement with the teeth 5 to fix the lever against movement, whereby the latter, which may be actuated for moving the driving-gear 25 into or out of engagement with gear 15, as is obvious, may be locked to hold the gear 25 in either of said positions for driving or stopping the mechanism.

The razor 21 consists of a tubular frame 32, carrying suitable cutting-blades 33. The outer end of the frame is closed, while its inner end communicates with and is practically a continuation or extension of the shaft 14, the frame being provided between its ends and at diametrically opposite points with a series of openings 34, formed through its side walls. The sides of the frame at dia-

metrically opposite points and at right angles to the transverse axis of openings 34 has removable plates or sections 35, designed to overlie the blades 33, said sections being secured in place at their forward ends by a dovetail connection or joint 36, formed in the same and the body of the frame, and at their rear ends each by a screw or equivalent fastening device 37, whereby they may be readily removed to permit removal of the blades for sharpening, cleaning, or other purposes and also for having access to the interior of the frame for purposes of cleaning the latter.

The blades 33 are each provided with a pair of transverse slots 38, formed from its back or rear edge inward and designed for the reception of set-screws 39, by which the blades are adjustably secured in place, while at one end the blades are provided with a reduced extension 40, forming a seat for a handle by which the blade is held for sharpening.

In practice the shaft 22 is continuously driven from any suitable source of power, (not shown,) and when the disk 25 is moved into frictional engagement with disk 15, in the manner above explained, motion is imparted, through the medium of shaft 14, to the suction-fan 13 and also to the razor 21. The carriage having been moved to the proper position, the operator moves the rapidly-rotating razor over the skin, which has been previously lathered, and as the shaving process proceeds the fan draws the lather, &c., through the openings 34 and hollow shaft 14 and opening 16 into the casing 9, from which it is discharged through connection 10 into the receptacle 11, from which it may be removed from time to time by withdrawing the lid or cover 12.

I have provided through the arm 7 an opening 41, leading to the casing 9, and through the wall of the sleeve or nozzle 18 a similar opening 42, said openings being normally closed by screw-threaded plugs 43, and beneath the opening 42 I have formed in the hollow shaft 14 a series of elongated openings 44. In practice the openings 41 42 may, if so desired, be connected by a suitable tube (not shown) to serve as a conduit for the lather, &c., drawn by the fan from the razor.

From the foregoing it will be seen that I produce a device of comparatively simple construction and operation whereby the shaving process may be quickly and safely performed. In attaining these ends it is to be understood that I do not limit or confine myself to the precise details herein set forth, inasmuch as various changes may be made therein without departing from the spirit or scope of the invention.

Having thus described my invention, what I claim is—

1. In a device of the class described, the combination with a movable razor, of means for

operating the same, and a suction device associated with the razor.

2. In a device of the class described, the combination with a hollow rotary razor, of means for operating the same, and a suction device associated with the razor.

3. In a device of the class described, the combination with a hollow rotary razor, of means for operating the same, a tube or duct connected with the razor, and a suction device associated with the tube or duct.

4. In a device of the class described, the combination with a hollow rotary razor, of means for operating the same, a flexible tube or duct connected with the razor, and a suction device associated with the tube or duct.

5. In a device of the class described, the combination with a movable carrier, of a casing carried thereby, a fan disposed within the casing, a tube or duct communicating with the latter, a hollow rotary razor associated with the tube or duct, and means for operating the razor.

6. In a device of the class described, the combination with a movable carrier, of a suction device carried thereby, a tube or duct communicating with the latter, a hollow rotary razor associated with the tube or duct and means for operating the razor.

7. In a device of the class described, the combination with a track or guide, of a carrier movably sustained thereby, a casing carried by the carrier, a fan disposed within the casing, a flexible tube or duct communicating with the latter, a hollow rotary razor associated with the tube or duct, and means for operating the fan and razor.

8. In a device of the class described, the combination with a track or guide, of a carrier movably sustained thereby, a casing carried by the carrier, a fan disposed within the casing, a flexible tube or duct communicating with the latter, a hollow rotary razor associated with the tube or duct, means for operating the fan and razor, and means for simultaneously throwing the latter into and out of operation.

9. In a device of the class described, the combination with a hollow rotary razor, of a flexible tubular shaft operatively connected therewith, and a suction device carried and operable by the shaft.

10. In a device of the class described, the combination with a casing, of a hollow flexible shaft extending therethrough, means for operating the shaft, a fan carried for operation by the shaft within the casing, and a hollow razor connected for rotation with the shaft, the latter being provided with openings adjacent to the fan within the casing.

11. In a device of the class described, the combination with a movable carrier, of a suction device sustained thereby, a tube or duct communicating with the suction device, a mov-

able razor associated with the tube or duct, and means for operating the razor, said razor comprising a hollow frame provided with lateral openings, and blades carried by the frame.

5 12. In a device of the class described, the combination with a movable carrier, of a suction device sustained thereby, a tube or duct communicating with the suction device, a movable razor associated with the tube or duct, 10 and means for operating the razor, said razor comprising a hollow frame provided with inlet-openings, and blades adjustably associated with the frame.

13. In a device of the class described, the 15 combination with a track or guide, of a carrier movably sustained thereby, a drive-shaft, a tubular spindle slidably mounted upon the

shaft for rotation therewith and movably connected with the carrier, a gear fixed upon the spindle, a hollow flexible shaft carried by the 20 carrier, a pinion fixed thereon, a casing associated with the carrier, a fan disposed therein upon the shaft, a hollow rotary razor connected with and operable by the shaft, and means for 25 moving the gear into and out of engagement with the pinion for throwing the fan and razor into and out of operation.

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

WILLIAM R. ALLEN.

Witnesses:

J. H. JOCHUM, Jr.,

J. ROSS COLHOUN.