

March 5, 1929.

C. BROWN

1,704,241

VACUUM PRODUCING DEVICE

Filed Feb. 24, 1925

2 Sheets-Sheet 1

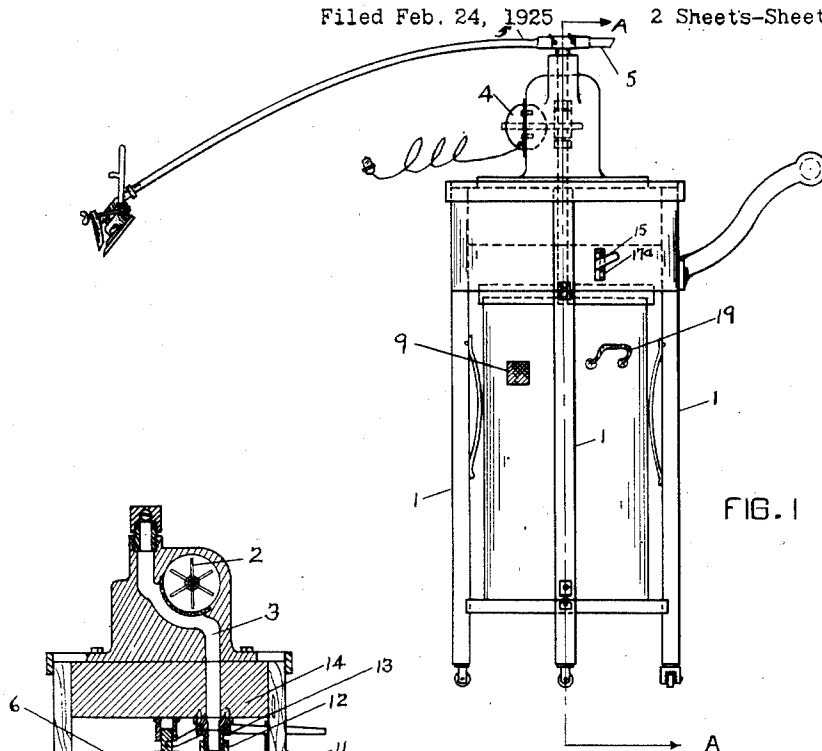


FIG. 1

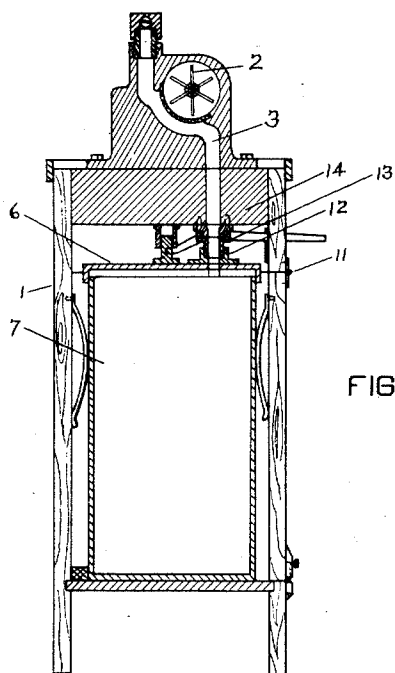


FIG. 2

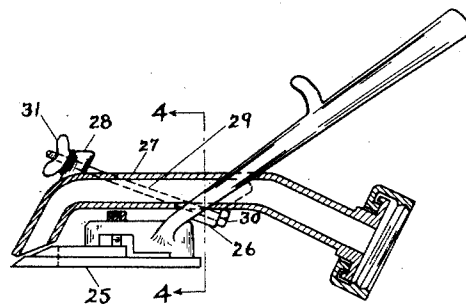


FIG. 3

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2 Sheets-Sheet 2

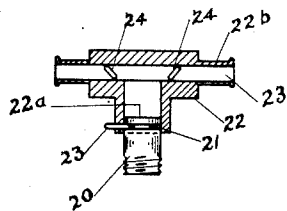


FIG. 7

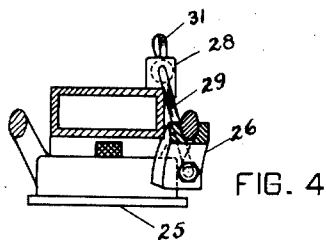


FIG. 4

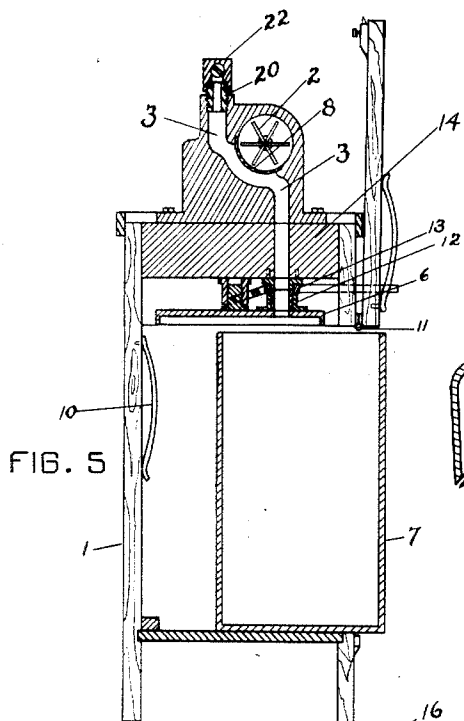


FIG. 5

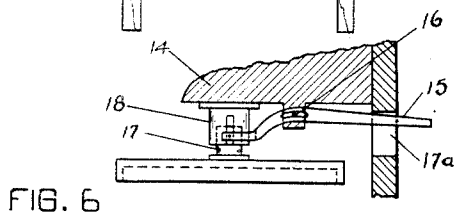


FIG. 6

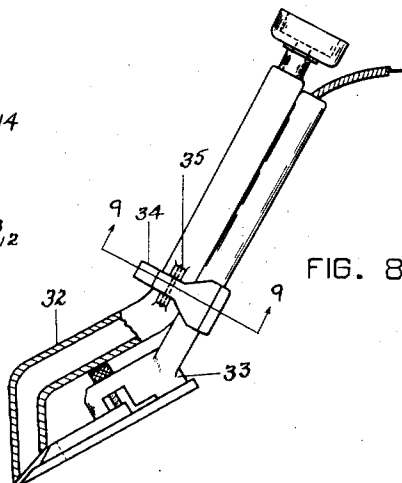


FIG. 8

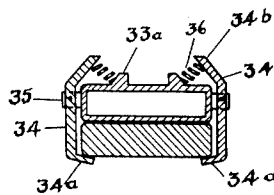


FIG. 9

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1,704,241

UNITED STATES PATENT OFFICE.

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VACUUM-PRODUCING DEVICE.

Application filed February 24, 1925. Serial No. 11,339.

This invention relates to a device for producing a vacuum effect in connection with hair clippers or other barbers' appliances.

One object of the invention is to provide a device which may be readily applied to a hair clipper to take up the ends of hair as they are cut.

A further object of the invention is to provide a device of this character in which a central vacuum producing means, and hair receiving receptacle, is so arranged that it may be connected with a plurality of hair clippers or other generally similar barbers' appliances, so that one device may be used simultaneously by several operators.

In the accompanying drawings Figure 1 is a side elevation of the vacuum producing machine, showing one vacuum tube thereof with a hair clipper attached thereto; Figure 2 is a vertical sectional view on the line A—A Figure 1; Figure 3 is a view showing a hand operated hair clipper in elevation, and a vacuum nozzle in vertical section attached thereto; Figure 4 is a cross sectional view through the hair clipper and vacuum nozzle on the line 4—4 Figure 3; Figure 5 is a vertical section through the machine on the line A—A Figure 1, showing the device in position for removal of a hair containing receptacle thereof; Figure 6 is a fragmentary detail view of the means for raising the lid of the hair containing receptacle of the device; Figure 7 is a sectional detail view of the fitting for the attachment of vacuum tubes; Figure 8 is a side elevation of an electrical operated hair clipper with a vacuum nozzle attached thereto; and Figure 9 is a cross sectional view on the line 9—9 Figure 8.

The device comprises primarily a stand, having legs 1, a suction wheel 2 in communication with a passage 3, a motor 4 for actuating the suction wheel or rotor 2, and a plurality of tubes 5 for connection with hair clippers or similar device.

The passage 3 of the device terminates at one extremity in the lid 6 of a container 7 for receiving the ends of hair delivered to it. The suction producing wheel or rotor 2 communicates directly with the passage 3, and is protected by a screen 8 from the entrance of hair and other trash into the rotor chamber. The receptacle 7 is provided with a screen opening 9 to place it in communication with the atmosphere.

It is desirable that this receptacle 7 be

readily removable for disposal of the clipped hair delivered to it. For this purpose two of the legs 1 are provided with bow springs 10 arranged to bear against receptacle 7, and one of the legs is hinged at 11, as shown, to permit the removal of the receptacle.

In order to slide the receptacle 7 from position in the frame, it is necessary that its lid 6 be first raised thereabove. For this purpose the lid 6 of the container 7 has shown thereon a sleeve 12 which surrounds, and is slidable on, a sleeve 13 fixed to the upper portion 14 of the device, which contains the vacuum producing wheel or rotor 2. A lever arm 15 is fulcrumed at 16 in the portion 14 of the device, and is secured at its inner extremity to a plunger member 17. This member 17 is secured to the lid 6, and is guided by means of a sleeve 18 on the portion 14 of the device, so that the lid 6 is maintained at all times in the same horizontal position. The outer end of the lever 15 extends through a slot 17^a in the frame work of the upper portion of the device in proximity to a handle 19 on the receptacle 7.

In order, therefore, to remove receptacle 7, it is merely necessary to raise the hinged leg 11, to depress lever 15, and so slide the receptacle from the frame of the device.

At the end of passage 3 in the portion 14 of the machine is inserted a screw plug 20 having adjacent the upper extremity thereof a circumferential groove 21. A fitting 22 is held on the screw plug 20 by means of a pin or plate 23, which extends through a flange portion 22^a of the fitting and into the groove 21. The fitting 22 may thus be rotated through any desired angle without removing it from the machine. Fitting 22 is provided with a plurality of tubular portions 22^b, for the attachment of the vacuum tubes 5. The passages 22^c through these tubular portions are provided with valves 24. The fitting is shown as provided with two tubular connecting portions only, but it will be understood that more may be provided changing the general structure or arrangement of this portion of the device.

As shown, the vacuum tubes 5 are connected with a suitable nozzle for attachment to a hair clipper. As shown in Figures 3 and 4 of the drawings, the vacuum nozzle is attached to a hand operated hair clipper. This clipper 25 has thereon a lug 26, while the vacuum nozzle 27 has thereon a lug 28.

The nozzle is secured to the clipper by means of a bolt 29, which passes through the lugs 26 and 28, and has a head 30 bearing against the lug 26, and a wing nut 31 arranged to engage the bolt and bear against the lug 28 on the nozzle member 27.

It will be noted that the nozzle and clipper are so mutually engaged that the orifice at the extremity of the nozzle is closely adjacent the working blades of the clipper; and also that the clipper and nozzle are readily engageable and disengageable one from the other. With this arrangement a succession of sharp clippers may be attached to the vacuum nozzle 27, without removing the nozzle from the vacuum tube 5 to which it is attached.

In Figures 8 and 9 of the drawings a vacuum nozzle 32 is shown attached to an electrically operated clipper 33. The nozzle and clipper are mutually engaged by means of brackets 34, which are attached to the nozzle by straps 35. Brackets 34 have angularly disposed portions 34^a for embracing the clippers 33, and angularly disposed portions 34^b overlying the nozzle 32. The portions 34^b of the brackets have secured thereto coiled springs 36, arranged to bear against lugs 33^a on the nozzle, to maintain the bracket in position to engage the clippers. This arrangement also gives simple means for mutually attaching and detaching the nozzle and clippers, so that with these electric clippers also a succession of clippers may be used on the vacuum nozzle without detaching the nozzle from its connecting tube. The device as a whole presents a great advantage over similar arrangements comprising combined clippers and a vacuum nozzle in that it is adapted particularly for convenient use in barber shops. These particular adaptations are in the provision of central means for producing a vacuum arranged for the attachment of a plurality of units thereto, in the provision of readily removable means for receiving material drawn into the device by the vacuum producing means, and in the convenient means of mutually attaching hair clippers and the vacuum nozzles of the device.

What I claim is:

1. The combination of a conduit for attachment to a source of vacuum comprising a nozzle member of relatively rigid material and having its inlet opening in a depending portion thereof, a hair clipper having a handle thereon, and means for detachably interengaging the nozzle member of the conduit and the handle member of the clipper.

2. The combination of a hair clipper having a handle, a conduit for attachment to a source of vacuum comprising a nozzle member of relatively rigid material having

a portion arranged to extend along the handle of the clipper and an angularly extending portion having an inlet opening therein, and means for detachably connecting the handle of the clipper to the portion of the nozzle member lying therealong.

3. The combination of a hair clipper having a handle, a conduit for attachment to a source of vacuum comprising a nozzle member of relatively rigid material having a portion arranged to extend along the handle of the clipper and an angularly extending portion having an inlet opening therein, and yielding means for detachably connecting the handle of the clipper to the portion of the nozzle member lying therealong in such position that the forward portion of the clipper lies adjacent the inlet opening of the nozzle member.

4. The combination of a hair clipper having a handle, a conduit for attachment to a source of vacuum comprising a nozzle member arranged to extend along the handle of the clipper and having an inlet opening therein, the surfaces of the clipper handle and the associated portion of the nozzle member being so shaped as to lie in mutual contact, and means on the nozzle member for detachably engaging the clipper handle, the nozzle member being so shaped that its inlet opening lies adjacent the forward portion of the clipper when the nozzle member and clipper are mutually engaged.

5. The combination of a hair clipper having a handle, a conduit for attachment to a source of vacuum comprising a nozzle member arranged to extend along the handle of the clipper and having an inlet opening therein, the surfaces of the clipper handle and the associated portion of the nozzle member being so shaped as to lie in mutual contact, and yielding means on the nozzle member for detachably engaging the clipper handle, the nozzle member being so shaped that its inlet opening lies adjacent the forward portion of the clipper.

6. The combination of a hair clipper having a handle, a conduit for attachment to a source of vacuum comprising a nozzle member arranged to extend along the handle of the clipper and having an inlet opening, members attached to the conduit and arranged to embrace the clipper handle, and yielding means arranged to exert a force on said members for engaging the clipper handle, the nozzle member being so shaped and the attaching members so arranged that the inlet opening of the nozzle member lies adjacent the forward portion of the clipper when the nozzle member and the clipper handle are mutually engaged.

In witness whereof, I hereunto set my hand.

CHARLES BROWN.