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DETACHABLE FACE PLATE FOR SUCTION HEADS

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Fig. 1

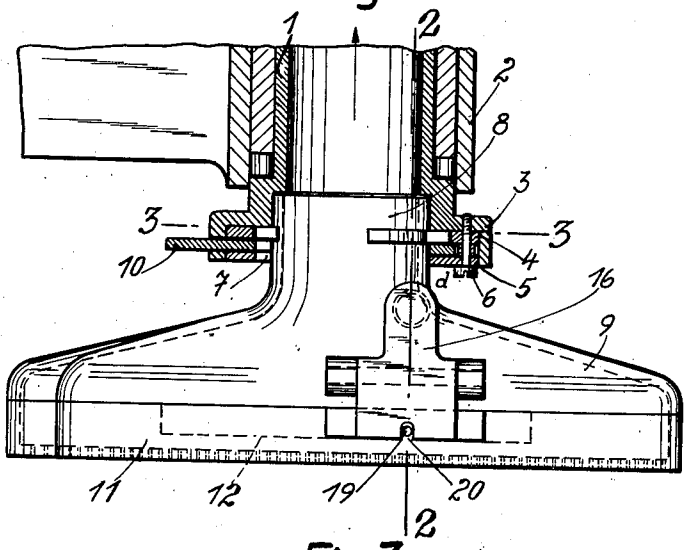


Fig. 3

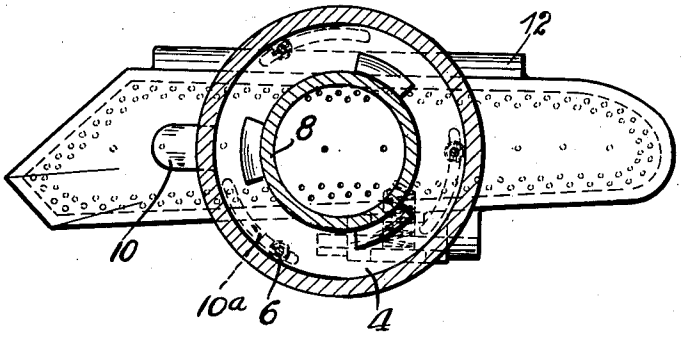
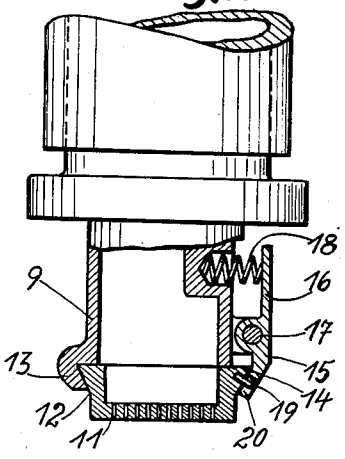


Fig. 2



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DETACHABLE FACE PLATE FOR SUCTION HEADS

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4 Claims. (Cl. 131—105)

The present invention relates to suction heads, particularly used in cigar wrapping machines, for picking up and conveying a cut wrapper from the cutting table to the wrapping mechanism.

An object of the present invention is to provide a suction head with a removable bottom section which carries the usual perforated face plate for receiving the wrapper, and improved coupling means for holding the face plate to the body of the suction head with a firm gripping action to seal the face plate against the bottom of the head.

Another object of the invention is to provide a wedging connection between the body of the suction head and the lower portion thereof which binds the two together incident to the assembling of the same.

The invention also aims to provide a detachable face plate for a suction head with interfitting parts at opposite sides having their contacting surfaces inclined to provide wedge portions, and with at least one of the interfitting parts yieldably urged into binding position for exerting a tension on all of the coupling parts and a binding action of the plate against the bottom portion of the suction head to insure a tight fit between the same.

Another feature of the invention is to provide a coupling of this character which normally exerts a binding or holding action between the parts and which may be quickly released so as to remove the face plate when it is desired to cleanse the same.

The invention also has for an object a clamping or binding device of this character for not only holding the face plate firmly against the bottom of the suction head but also to hold the face plate from shifting or becoming displaced in an edgewise direction on the suction head.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawing, wherein like symbols refer to like or corresponding parts throughout the several views.

Figure 1 is a side elevation, partly in section, of a suction head mounted on the supporting arm, and showing the face plate or bottom section in position.

Figure 2 is a vertical section taken through the suction head on the line 2—2 in Figure 1, and

Figure 3 is a horizontal section taken through the upper portion of the suction head on the line 3—3 of Fig. 1, showing the face plate construction in dotted lines.

Referring now to the drawing, the suction head 9 may be mounted on the support 2 in any suitable manner. In the present instance the support 2 is in the form of a sleeve in which is rotatably disposed a pipe section 1 which is enlarged and stepped at its lower end to provide a socket for the reception of the shank 8 of the suction head 9. The lower end of the pipe 1 is provided with a downwardly opening flange 3 providing a hollow collar, and mounted in the collar are a pair of spaced rings 4 and 5 secured by screws 6 in the collar and provided with spaced slots or recesses 7 adapted to receive projections carried on the exterior of the head shank 8, as shown in Figure 1, so that the projections when registering with the recesses 7 may pass freely through the lower ring 5 and into the recesses of the upper ring 4 as the shank is fitted in the lower end of the pipe 1. A locking ring 10 having a projection at one side is fitted between the rings 4 and 5, has similar slots 7 therein and is adapted to be turned within the limits of arcuate slots 10a provided in the ring 10 so that the solid portions of the ring might be brought beneath the projections of the shank 8 to lock the head to the pipe 1. Of course the head 9 may be supported in any other suitable manner.

The suction head 9 is of the usual hollow construction with its body portion opening downwardly and against which is fitted a bottom section 11. The bottom section 11 is hollow and of substantially plate form and has a flat lower surface or face portion adapted to receive thereagainst the wrapper from the cutting table. The bottom wall of the section 11 is perforated in the usual manner for holding the wrapper flat against the face plate by the induced suction in the head.

At one side of the head 9, the lower section 11 is provided with a wedged-shaped bead 12 having its outer face portion relatively straight and disposed in undercut relation at the upper edge of the section 11. The adjacent side of the suction head 9 is provided with a flange or claw 13 which has an inclined surface at its inner side corresponding to the slope of the outer surface of the bead 12 so that when the bead 2 is forced laterally toward the flange 13, the bead will tend to rise upon the flange and force the upper edge of the bottom section 11 into tight engagement with the lower edge of the body portion of the suction head.

At the opposite side of the head 9 the bottom section 11 is provided with a bead 14 similar to

the bead 12, being of wedge-shape and having its outer surface inclined upwardly and outwardly with respect to the axis of the suction head. The bead 12 and its supporting flange 13 are, as shown in dotted lines in Figure 1, of substantial length so as to hold the bottom plate against twisting in an edgewise direction on the lower end of the head. The bead 14 of the bottom section 11 is of less length but is of sufficient length to closely seat against a spring latch 16 which is pivoted upon a pin 17 mounted in suitable lugs provided on the side of the suction head 9. The latch 16 is of lever form with its lower end 15 bent inwardly to provide a claw or flange opposed to the flange 13 at the opposite side of the head.

The inclination of the claw 15 is such that the inner flat side thereof engages flat against the inclined face of the bead 14 so that by the inward pressure of the claw 15 the bead 14 will be forced upwardly to hold the bottom section 11 tight against the suction head 9.

The upper end of the latch lever 16 extends above the pin 17 a suitable distance to receive a spring 18 which is seated at one end in the side of the suction head 9 and engages at its outer end against the outer side of the latch lever 16 to urge the upper end thereof outwardly and provide a continuous binding action of the claw 15 against the bead 14. The upper end of the latch lever 16 is also in position to be readily engaged by the thumb or fingers for locking the lever 16 and releasing the bead 14 from the claw 15. In this manner the lower section 11 of the suction head may be quickly and easily removed for the purpose of cleansing the same, and may be quickly replaced, the pressure of the claw 15 causing the beads 12 and 14 to be properly seated and to force the lower section 11 upwardly against the head.

For the purpose of holding the bottom or lower section 11 from shifting lengthwise of the beads 12 and 14, the bead 14 is provided with a pin 19 projecting from the inclined surface thereof and engaging in a slot 20 provided in the lower end of the claw 15, the pin engaging the walls of the slot and holding the lower section against shifting.

The means thus provided for detachably holding the face or bottom section 11 on the body section of the head not only effectively holds the parts together but also tends to constantly draw the parts together to insure a firm seating of the lower section against the body section and thus seal the head at the joint between the two sections. The parts of the holding device are also out of the way and do not interfere with the operation of the head or of the other devices of the tobacco wrapping machine which are adjacent the head during its movements between the cutting table and the wrapping mechanism.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

What is claimed is:

1. In a cigar wrapping machine, a suction head having a body section, a bottom section removably seated thereagainst, said sections having interfitting wedge parts at one side of the head and the bottom section having a fixed wedge part at the opposite side of the head, a movable wedge part on the body section at said opposite side of the head for engagement with the adjacent fixed wedge part of the bottom section to bind the fixed and movable wedge parts together at one side of the head and the interfitting wedge parts together at the other side of the head for binding the bottom section against the body section and means carried partly by said bottom section and partly by said wedge part for holding the bottom section against endwise movement.

2. In a cigar wrapping machine, a suction head having a body portion and a surface plate portion detachably fitting against the body portion, said surface plate portion including a pair of parallel wedge-shaped beads at opposite sides facing outwardly and downwardly, said body portion including an inclined depending flange at one side for engaging the adjacent bead on the surface portion a spring pressed claw mounted on the opposite side of the body portion and directed inwardly to engage the opposite bead for urging the first bead upwardly into the flange and for urging the second bead upwardly to yieldingly hold the surface portion in sealed engagement with the body portion, an outwardly extending pin carried by one of said pair of beads, said claw having a recess to receive said pin to thereby hold said plate portion against endwise movement.

3. In a cigar wrapping machine, a suction head having a body portion and a bottom portion fitting against the lower end of the body portion, said bottom portion having outwardly flaring beads at opposite sides, said body portion having an inturned flange engaging one of said beads, a latch lever pivotally mounted at the opposite side of the body portion and having a claw on its lower end inturned at an angle to engage the other bead of the bottom portion, and a spring carried by the body portion engaging the upper end of the latch lever to yieldingly hold the lower end thereof against its bead and to urge by a transverse pressure the bottom portion into position beneath the body portion and with the beads engaging respectively the flange and the claw, said opposite side of said body and said claw having interengaging means for holding said bottom portion against endwise movement.

4. In a cigar wrapping machine, a suction head having a body portion, a depending flange carried by one edge of said body portion, said flange being formed on its inner face with a V-shaped groove having one side thereof horizontal and coplanar with the bottom surface of said body portion, a bottom part fitting against the bottom surface of said body portion, a pair of V-shaped parallel beads carried by said bottom part adjacent the upper edge thereof, one of said beads wedgingly engaging in said groove, a spring-pressed latch lever pivotally carried by said body portion on the side thereof opposite from said groove, an inwardly inclined claw carried by said lever engageable with the other of said beads, and a pin carried by the other of said beads, said claw having a notch therein to receive said pin to thereby hold said bottom part against endwise movement.

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