April 28, 1936. N. M. MacKENZIE 2,039,177

CLEAN-OUT PUMP FOR DENTAL HANDPIECES

Filed Dec. 27, 1932

Fig. 1.

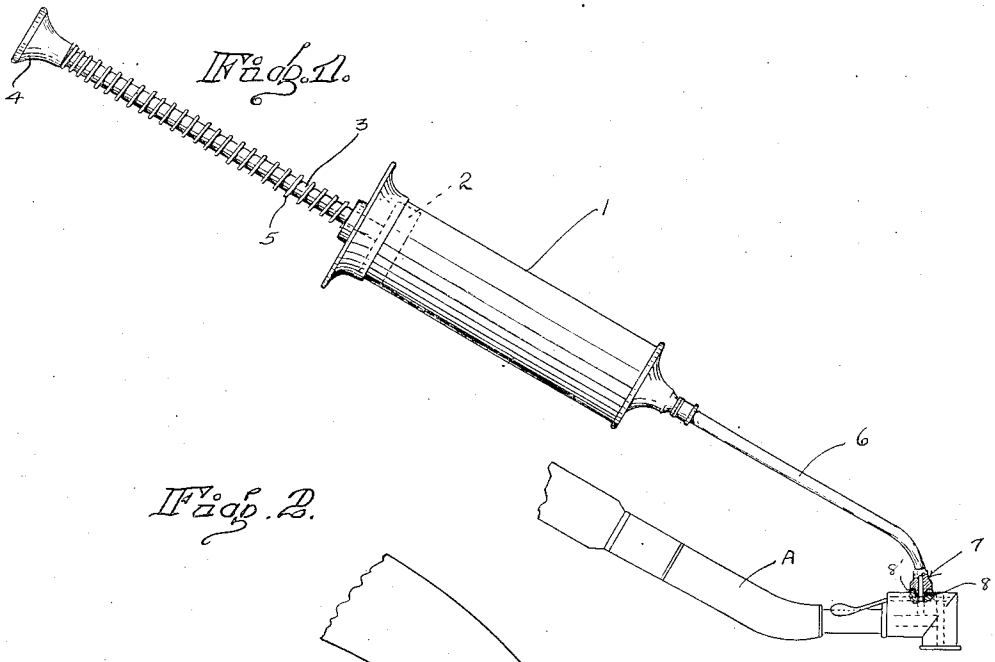


Fig. 2.

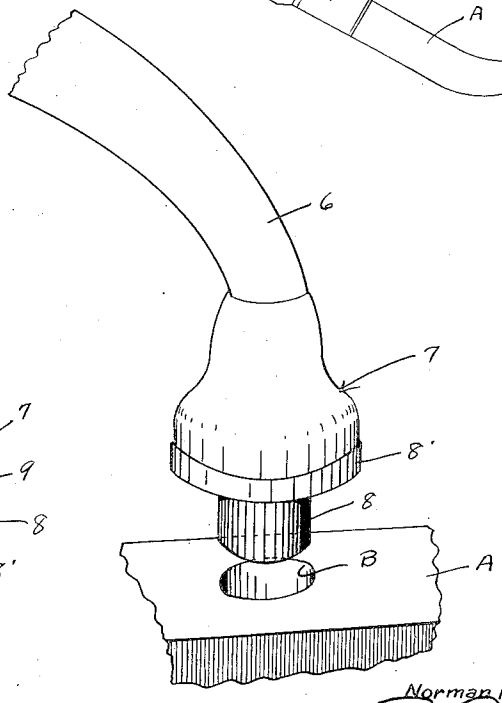
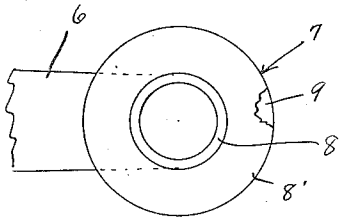


Fig. 3.



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CLEAN-OUT PUMP FOR DENTAL HANDPIECES

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Application December 27, 1932, Serial No. 648,949

1 Claim. (Cl. 221—47)

This invention resides in the provision of a simple, inexpensive and efficacious pump for quickly and easily cleaning out grit and other foreign matter from the interior of dental hand pieces. These hand pieces when clogged around the bearings and shafting, by accumulation of dust, grit and filings which work into the interior of the pieces through the chucks, will vibrate objectionably, and often prove discomforting to the patient. Due to the construction of these hand pieces, the present method of removal of the accumulations of grit, etc., is a difficult task and usually fails to thoroughly clean out the pieces. With the pump of my invention especially constructed to be quickly applied to standard makes of dental hand pieces, oil or other liquid under pressure, may be effectively forced through the hand pieces so as to thoroughly remove the foreign matter therefrom.

With the above mentioned and other objects in view, the invention consists in the novel construction and combination of parts hereinafter described, illustrated in the accompanying drawing, and set forth in the claim hereto appended, it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claim may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Referring to the drawing:

Fig. 1 is a perspective view of the pump of my invention showing the discharge fitting in section and applied to a dental hand piece.

Fig. 2 is an enlarged fragmentary perspective view of the discharge fitting of the hand piece, also showing the lubricant hold in the standard type of hand piece.

Fig. 3 is an enlarged fragmentary top plan view of the outlet fitting.

The embodiment of the invention shown in the accompanying drawing comprises a pump cylinder 1, having the usual piston 2 and piston rod or plunger 3, which latter extends outward from the cylinder and has a finger piece or handle 4 on its outer end. A helical expansion spring 5 surrounds the projecting portion of the rod 3 and normally holds said rod extended. A tubular discharge spout 6 extends from the other end of the cylinder and has a curved outer end to facilitate application of the spout to the hand piece A, which latter has an oil hole B leading into the interior thereof.

An especially constructed fitting 7 is fixed to the discharge end of the discharge spout. This fitting has a reduced outer end 8 which is adapted to fit into the hole B. An annular rubber gasket 8' surrounds the reduced end 8 and abuts the shoulder 9 provided by reducing said fitting, said gasket engaging the upper side of the hand piece around the hole B, and providing a tight joint of the pump with the hand piece.

To clean out the hand piece, the pump is applied as shown in Fig. 1, with the reduced end 8 pressed into the hole B, and assuming that a quantity of oil or other suitable liquid has previously been drawn into the pump, on operating the pump, the oil or other liquid is forced through the hole B under pressure, and out through the chuck end and other outlets of the hand piece, carrying with it any obstructions or accumulations of foreign matter, and thereby cleaning out the hand piece.

Another way to effectively clean the hand piece is to place the same in a body of oil or other liquid and then apply the pump as shown in Fig. 1, but to use the pump to suck the oil through the passages of the hand piece and thereby suck out the foreign matter. In either method of using the pump, and when oil is used, the hand piece is not only cleaned out but thoroughly lubricated.

I claim:

In combination with a dental hand piece having a lubricant opening therein, of a clean out pump for said hand piece comprising a closed end barrel; a removable piston reciprocatingly confined in said barrel, said piston having a rod extended out through an end of the barrel and being movable manually in one direction; a spring to move said piston in the opposite direction; a spout removably connected with the other end of said barrel; an enlarged head formed on the discharge end of said spout, an end of said head being reduced in diameter to provide a shouldered portion thereon; and a resilient washer around the reduced sized end of the head and abutting the shoulder thereon to effect contact with the opening in said hand piece to effect the surge of lubricant into and from the hand piece when the piston is reciprocated.

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