

A. F. DOLLIN & E. W. COUPER.
DENTAL SPRAY ATTACHMENT FOR HANDPIECES.
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953,022.

Patented Mar. 29, 1910.

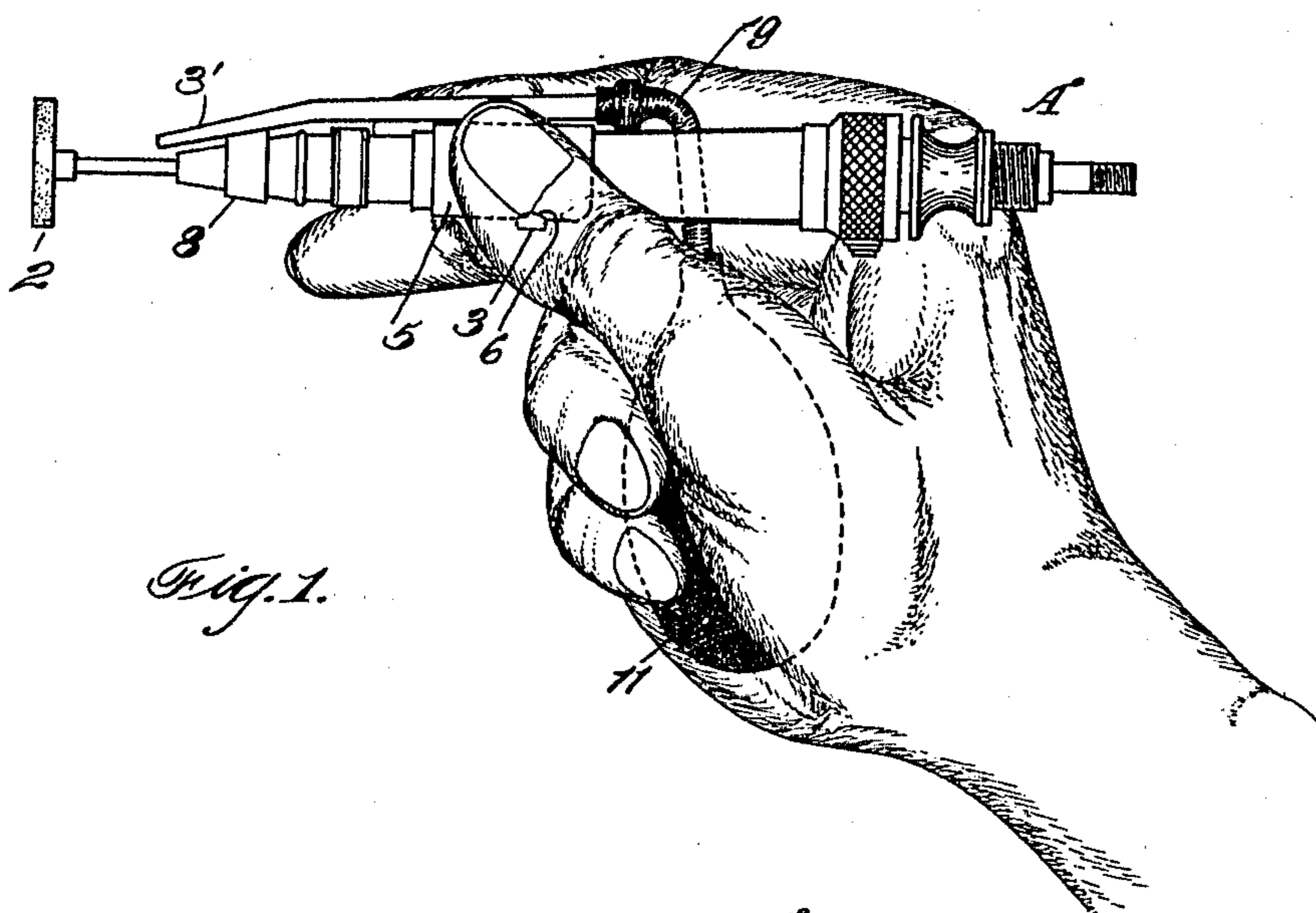


Fig. 1.

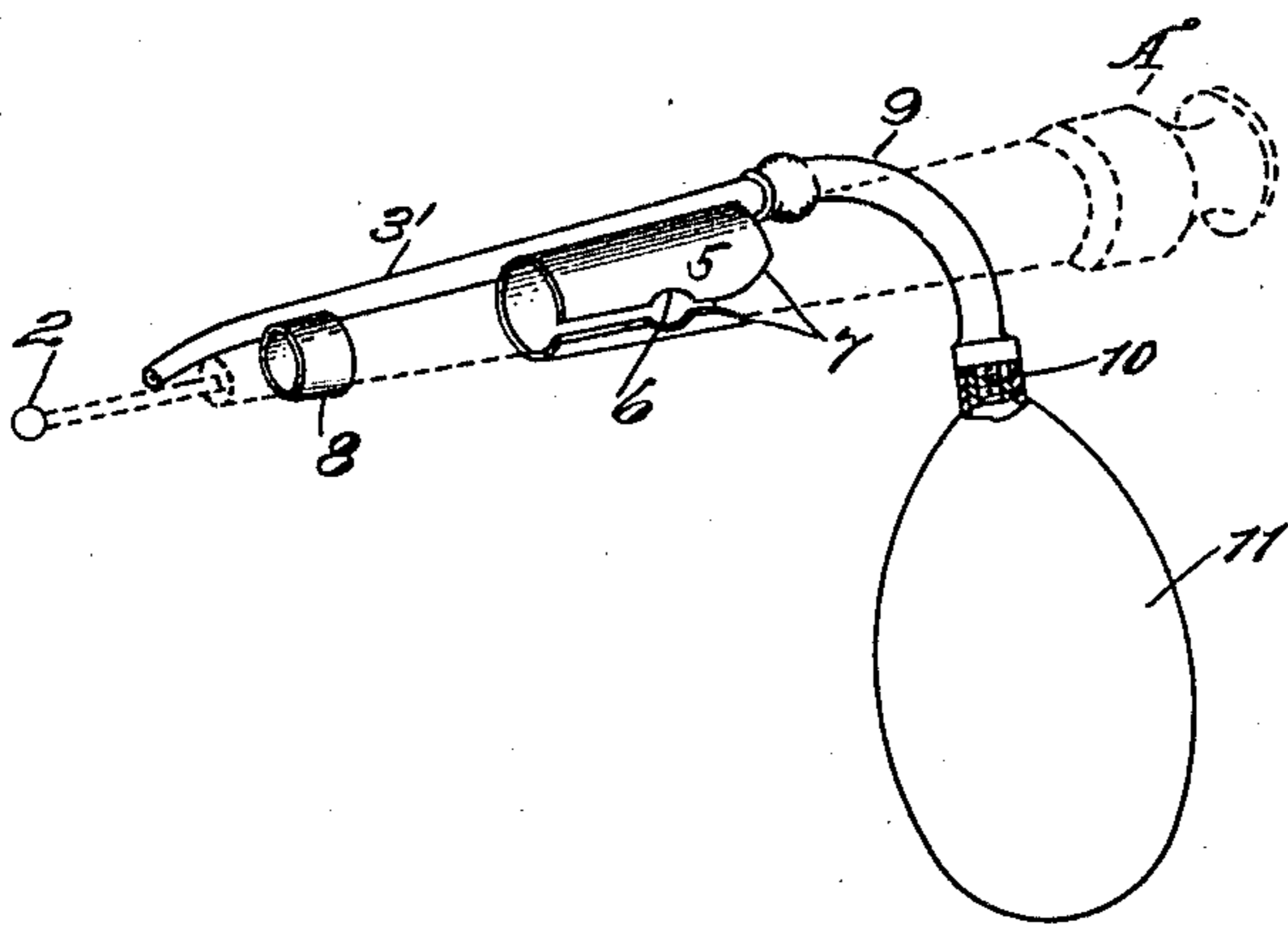


Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

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DENTAL-SPRAY ATTACHMENT FOR HANDPIECES.

953,022.

Specification of Letters Patent. Patented Mar. 29, 1910.

Application filed April 12, 1909. Serial No. 489,430.

To all whom it may concern:

Be it known that we, ANDREW F. DOLLIN and EDGAR W. COUPER, citizens of the United States; residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Dental-Spray Attachments for Handpieces, of which the following is a specification.

Our invention relates to a spraying attachment for an ordinary dental hand-piece.

The object of the invention is to provide a simple, cheap, practical, light spraying attachment for ordinary dental hand-pieces which can be held in and operated by the same hand that holds the hand-piece; and which attachment comprises a rubber bulb to be held in the hand with flexible and detachable connections with the nozzle, which is detachably carried on the hand-piece, so that the hand-piece can be operated either with or without the attachment.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a side elevation of the invention showing its application. Fig. 2 is a perspective of the invention with the hand tool in dotted lines.

A represents a hand-piece of standard construction, provided with suitable means for holding a dental grinding bur or disk as 2. These hand-pieces are usually provided with a lateral projection or boss 3 between its ends, and advantage of this boss is taken in attaching our device to the hand-piece.

As here shown, the invention comprehends a nozzle member 3' arranged to lie alongside of the hand-piece, with its discharge end projecting beyond the end of the hand-piece, and in the direction of the grinder 2 so as to discharge either a liquid spray, or an air-blast against the grinding part, or the part being ground. This nozzle is secured to the hand-piece by means of a spring metal clip or clamp 5 which is bent into cylindrical form, and split lengthwise so as to form spring sides adapted to encircle and grip the hand-piece. The opposite edges of this clip are notched, as shown at 6, and the rear corners of the clip are curved, as shown at 7, so that when the nozzle and

clamp are slipped on over the end of the hand-piece, the hand-piece will be made to slide up the boss 3, and embrace the latter in the notches 6, thereby holding the nozzle, both against turning, and against being pulled off, or slipping off over the hand-piece.

In order to support the front end of the nozzle in proper parallelism with the hand-piece, and prevent the nozzle from being pushed back too far on to the hand-piece, the front end of the nozzle is provided with a frusto-conical hollow guide 8, which is adapted to receive the reduced or tapered end of the hand-piece.

The rear end of the nozzle is slightly up-turned and suitably fashioned to receive and hold the end of a short section of rubber tubing 9; the other end of which tube 9 is provided with a screw coupling 10 to enable it to be connected with, or disconnected from the bulb 11. This section of tubing need not be over an inch or an inch and a half in length, because it is intended in practice that when the hand-piece is held in the hand in the usual fashion with the nozzle on top of the hand-piece, the bulb will be supported in the palm of the same hand that holds the hand-piece, so that the bulb can be readily manipulated by the third and fourth fingers, substantially as shown in the drawings.

It is manifest that the nozzle with the securing means provided by the spring clamp 5, and the tubular conical guide 8 enables the device to be readily and quickly put on or taken off of any ordinary hand-piece; and the same nozzle can be used for both air or a liquid spray, by simply disconnecting the tube from the nozzle. Also the coupling means for the tube, with the bulb, enables a fresh section of tubing to be substituted from time to time at very small expense.

The device is very cheap to manufacture, and markets at a small cost to the user, compared with the expensive hydraulic and foot-power operated machines commonly in use, and which latter devices frequently require a special type of hand-piece.

Having thus described our invention, what we claim and desire to secure by Letters Patent is—

1. The combination with a dental hand-piece, of a nozzle member with a bulb secured thereto, a clamp secured to said member and slitted on one side from end to end

to form opposed spring arms adapted to embrace the sides of the hand-piece, a tubular frusto-conical guide secured to the nozzle member near the front end thereof and
5 forming a socket into which the reduced end of the hand-piece is received, said hand-piece having a projection and said spring clamp cooperating with said projection to hold the nozzle from turning.

10 2. The combination with a dental hand-piece having a lateral projection between its ends, of a nozzle, a clamp secured thereto and having spring arms to grip the hand-piece, said spring arms being notched to re-

ceive said projection, a tubular guide se- 15
cured to said nozzle near the forward end thereof, adapted to receive the front end of the hand-piece, and a bulb flexibly and detachably connected with the nozzle.

In testimony whereof we have hereunto 20
set our hands in presence of two subscribing witnesses.

ANDREW F. DOLLIN.
EDGAR W. COUPER.

Witnesses:

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