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W. W. BURGIN.

CHIP BLOWING ATTACHMENT FOR DENTAL ENGINES.

(Application filed May 10, 1901.)

(No Model.)

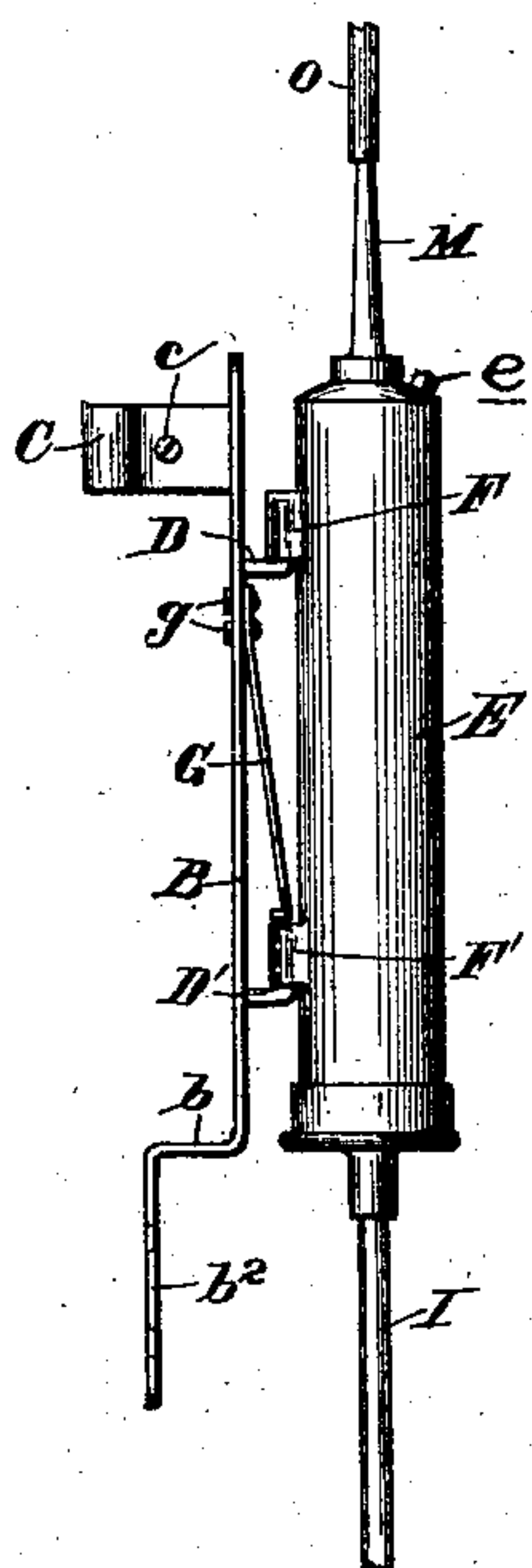


Fig. 2.

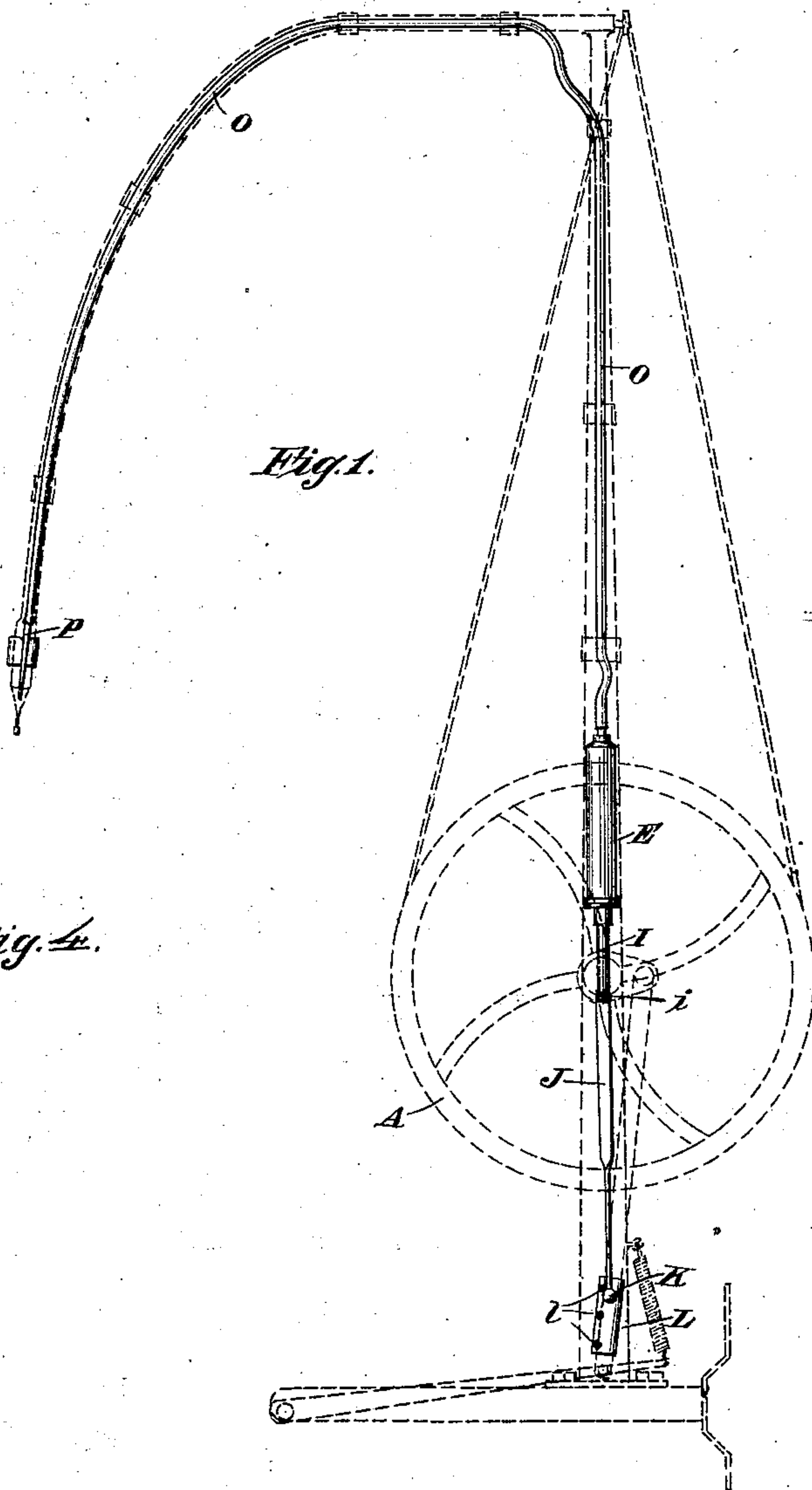


Fig. 1.

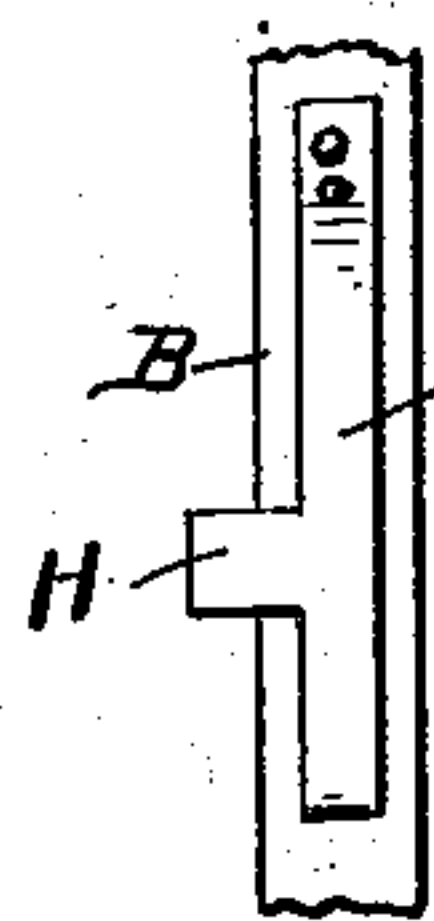


Fig. 4.

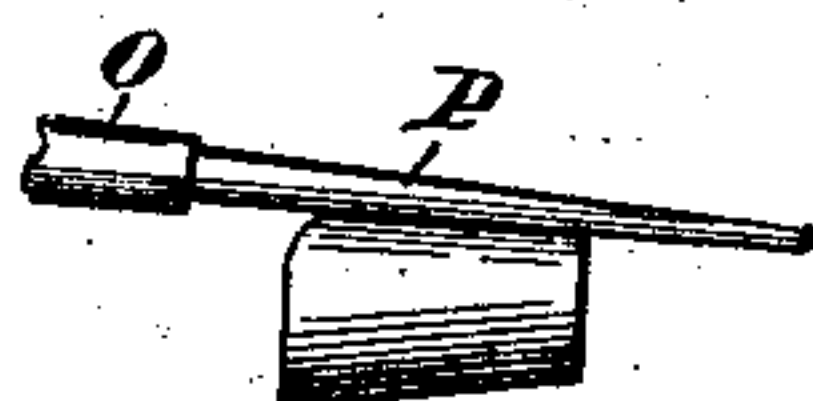


Fig. 3.

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CHIP-BLOWING ATTACHMENT FOR DENTAL ENGINES.

SPECIFICATION forming part of Letters Patent No. 694,526, dated March 4, 1902

Application filed May 10, 1901. Serial No. 59,571. (No model.)

To all whom it may concern:

Be it known that I, WELBY W. BURGIN, a citizen of the United States, residing at Richmond, in the county of Madison and State of Kentucky, have invented certain new and useful Improvements in Chip-Blowing Attachments for Dental Engines; and I do declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to a chip-blowing attachment for dental engines, and has for its object a device capable of being readily attached to an ordinary and well-known dental engine and operated by the operating-treadle or the like for the engine.

A further object of the invention is to make provision for quickly and easily detaching or disconnecting the blowing attachment from the engine when it is not desired to use the same and when the attachment would be in the way.

A further object of the invention is to so construct the attachment and its connections with the engine that it can be readily accommodated to engines of different make or type.

With such and other objects in view the invention is embodied in the novel parts, arrangement, and combinations of parts hereinafter described, and particularly set forth in the claims.

In the accompanying drawings is illustrated one form of an attachment embodying the invention; but it is to be understood that the improvements are not limited in their useful applications to the construction therein shown for the purpose of an understanding of the invention.

In the drawings, Figure 1 is an elevational view of the attachment, showing its position and relation to the engine, which latter is indicated by dotted lines. Fig. 2 is an elevation of the attachment, showing the connection between the pump and bracket. Fig. 3 is a view of the blowing-nozzle and the securing-clip therefor, and Fig. 4 is an elevation of the supporting-bracket detached.

Referring to the drawings, A indicates dia-

grammatically a dental engine, and it might be well to state here that the particular form of attachment shown in the drawings is intended for adjustment to that type of dental engine known as the "New S. S. White" engine, though it will of course be understood that the attachment is not limited in its useful application to this particular type, it being simply necessary to change the position and possibly the form of the securing-clips for the supporting-bracket and pitman to accommodate the attachment to other engines. Secured to the frame of the engine is a supporting-bracket B, which is shown as being provided with a U-clip C, adapted to embrace a part of the standard of the engine and be securely clamped thereon by means of a bolt and nut or the like, (indicated at c.) This clip is shown at the upper end of the supporting-bracket, the lower end of which is shown as being bent laterally at b and having the parallel depending foot portion b², provided with openings for securing-screws or the like. The bend in the supporting-bracket also provides space for the movement of the wheel-crank of the engine. The supporting-bracket B is provided with a plurality (two being shown) of attaching-lugs D and D' for the air-pump. This latter is indicated at E and is provided with a suitable inlet-valve e. It will be seen from the drawings that the pump is provided with a plurality of eyes or sockets F F', corresponding to and adapted to engage on the attaching-lugs D D'. The lugs and sockets are preferably angular in cross-section to hold the pump from lateral movement or play. As shown in the drawings, the lower lug D' is conveniently somewhat longer than the other lug D, which permits of the lower socket F being engaged therewith before the engagement of the upper socket with the upper lug, thus enabling a more ready engagement of the pump with the supporting-bracket. Secured to the supporting-bracket between the lugs D D' in any suitable manner, as by screws g, is a holding spring-tongue, (indicated at G,) which at its lower end is adapted to spring out and engage above the lower socket F when the latter is in place on the lug G, thereby holding the pump from upward movement and disengagement from

the supporting-bracket. In attaching the pump to the bracket it is simply necessary to press the pump inward against the spring-tongue until its sockets register with the lugs and slip the same downwardly on the lugs. To disengage the pump from the bracket, it is necessary to force the spring-tongue from its position above the socket F, and for this purpose the tongue is conveniently provided with a finger-piece H, extending laterally therefrom somewhat beyond the sides of the bracket, so as to enable the same to be quickly and easily reached for operating the spring-tongue. The lower end of the latter where it engages the socket is shown as being bent inward to provide a smooth and extended bearing end.

The pump (indicated at E) may be of any desired character and in itself forms no essential part of the present invention. That indicated in the drawing is a simple reciprocating air-pump, the piston of which has connected thereto the piston-rod, (indicated at I.) At its lower end the piston-rod I is connected at pivotally in any convenient manner to a pitman-rod J, the lower end of which is connected pivotally at K to a clip or clamp L, which latter is adapted to be secured to a part of the operating-pedal for the engine. The clip L is shown to be of elongated-U form, adapted to embrace a rod or part connected to or forming part of the engine-treadle, being secured thereon by means of bolts and nuts or the like, (indicated at L.) The clip is shown as being provided with the laterally-projecting stud or pivot K, above mentioned, to which the lower end of the pitman-rod is detachably connected. As has been before stated, the style of clips or means for securing the supporting-bracket to the engine-frame and the pitman-rod to the treadle are not an essential part of the present invention and may have to be more or less changed, according to the type of engine with which the attachment is intended to be used. The upper end of the pump is shown as being provided with a nipple M, to which one end of a flexible tube O is connected, the other end of the tube being connected to a nozzle P. The nozzle P is provided with suitable means for securing the same detachably to the hand-piece carrying the drill or cutting-tool in proper position to blow the chips cut thereby away from the cutting-point of the tool to pre-

vent the same from being obstructed or hidden from the view of the operator. It will be understood that the flexible tube O can follow and, if necessary, be detachably connected with the flexible operating-shafting of the engine. No means are shown for this purpose, and where necessary any suitable means may be employed.

It is believed that from the above description the purpose and operation of the attachment will be readily appreciated by those skilled in the art to which it appertains.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a supporting-bracket, and means for securing the same to an object, of lugs carried by said bracket, a pump, sockets carried by said pump adapted to engage said lug, and a spring-tongue connected to the bracket and adapted to engage a part carried by the pump to prevent the disengagement of the same from said lugs, substantially as described.

2. In an attachment of the character described, the combination with the bracket and means for securing the same to an engine, of an air-forcing means having sliding engagement with said bracket, and a spring-controlled member for preventing the sliding of said air-forcing means to prevent its detachment from said supporting-bracket, substantially as described.

3. In an attachment for dental engines adapted to be secured to the engine-standard adjacent to the pitman, the combination of a pump, a bracket for supporting the pump in accessible position outside the plane of movement of the pitman, said bracket having attaching means located on one side thereof, a portion traversing the plane of movement of the pitman beyond its limit of throw, and devices disposed on the opposite side of said bracket whereby the same is secured to said standard; and means for actuating the pump operatively connected with the said pitman, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WELBY W. BURGIN.

Witnesses:

B. E. TURLEY,
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