No. 612,097. Patented Oct. 11, 1898.

H. R. GOODWIN.

ACCESSORY FOR USE IN CONJUNCTION WITH AIR PUMPS.

(Application filed Nov. 21, 1896.)

(No Model.) 2 Sheets—Sheet 1.

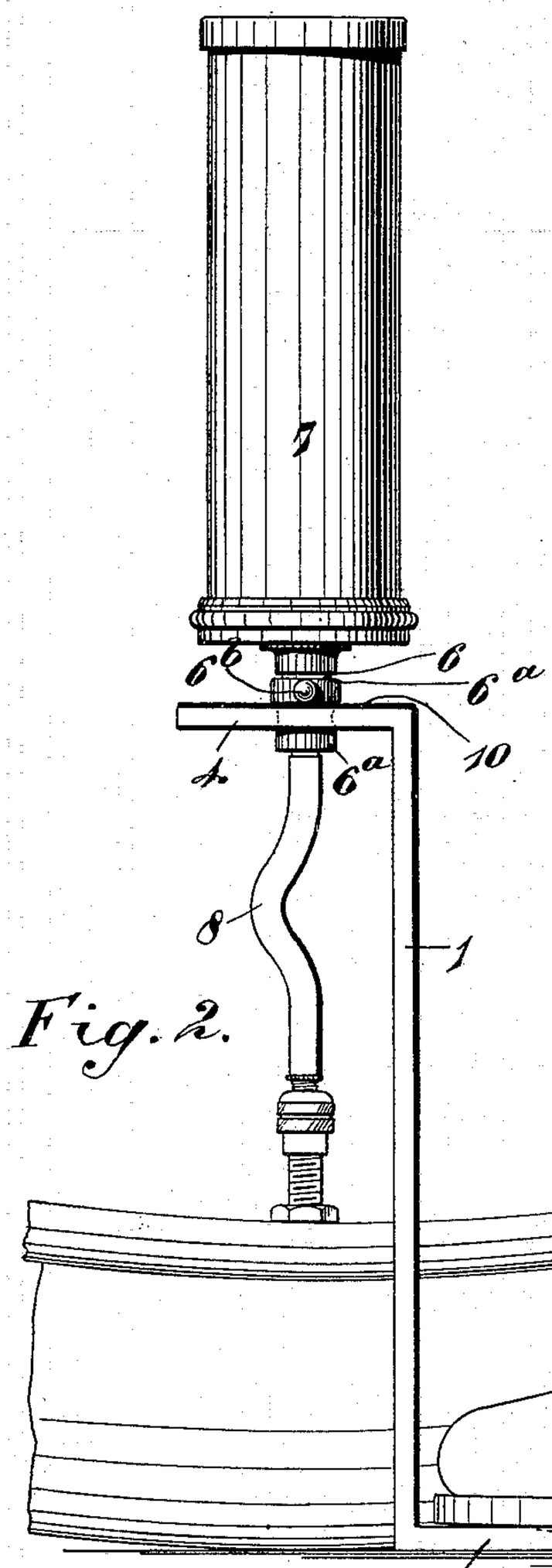

Fig. 2.

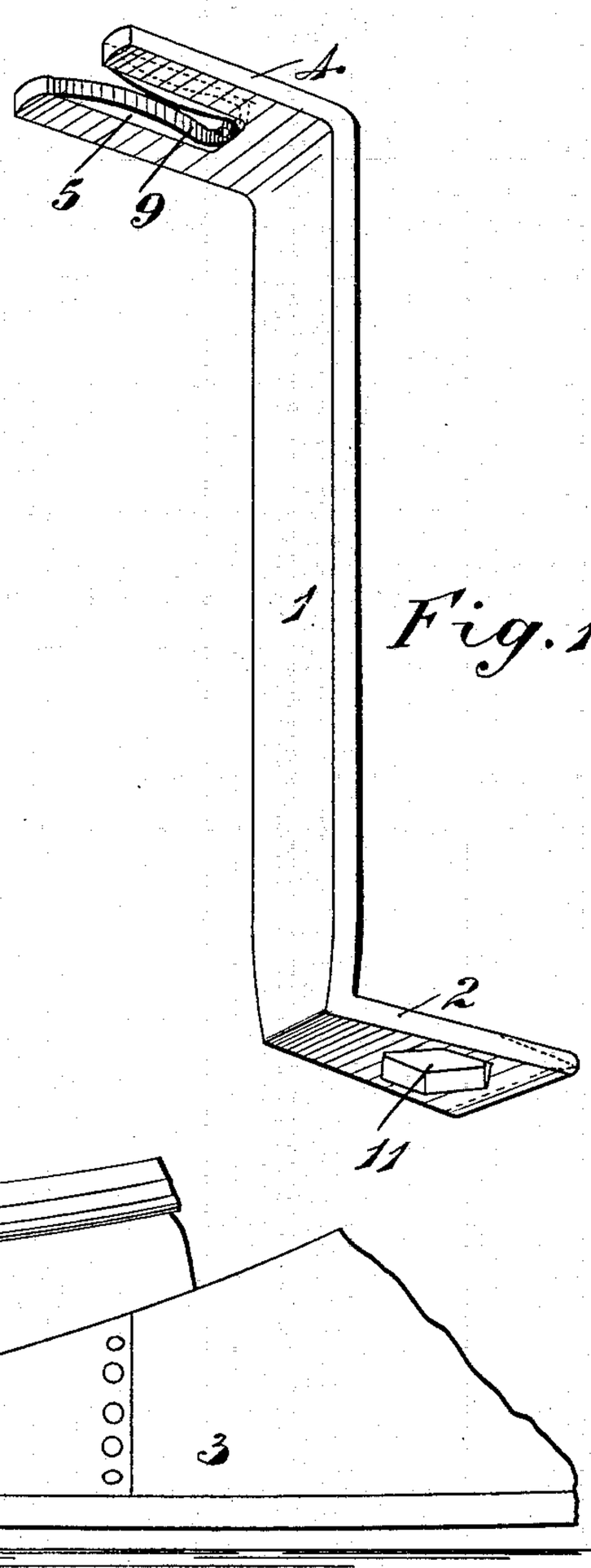

Fig. 1.

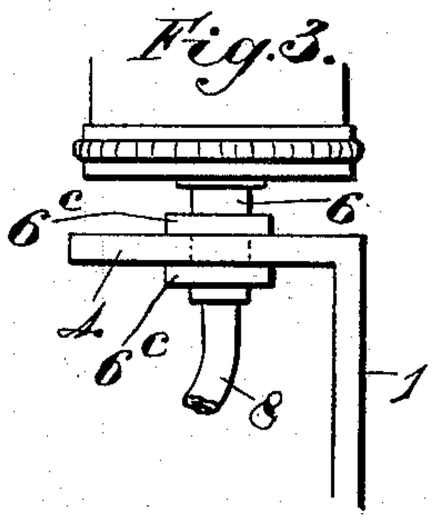

Fig. 3.

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Fig. 4.

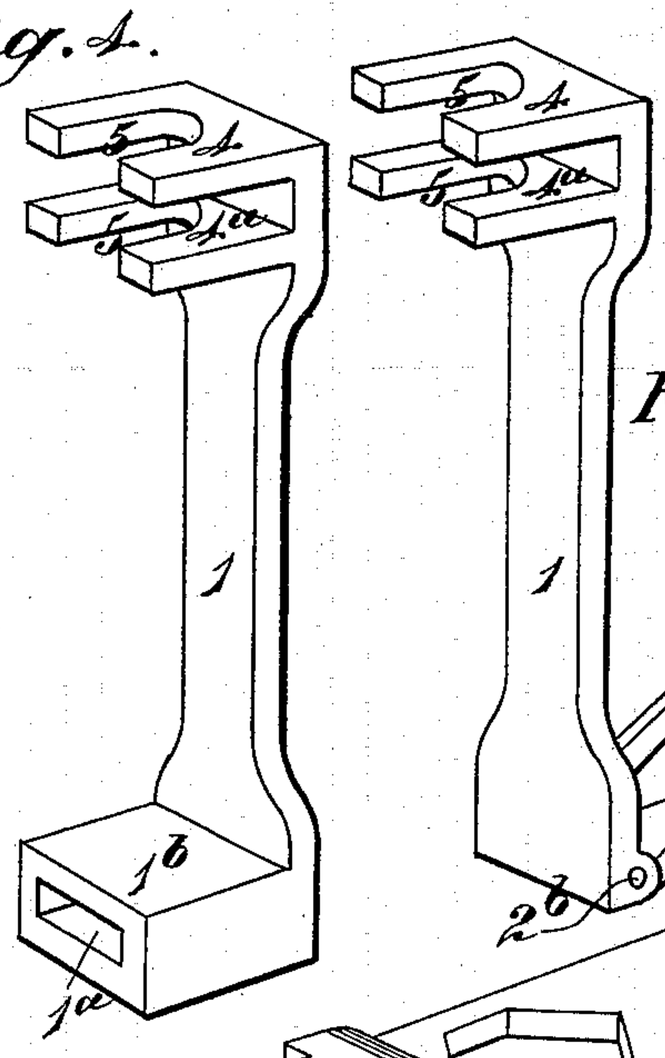


Fig. 7.

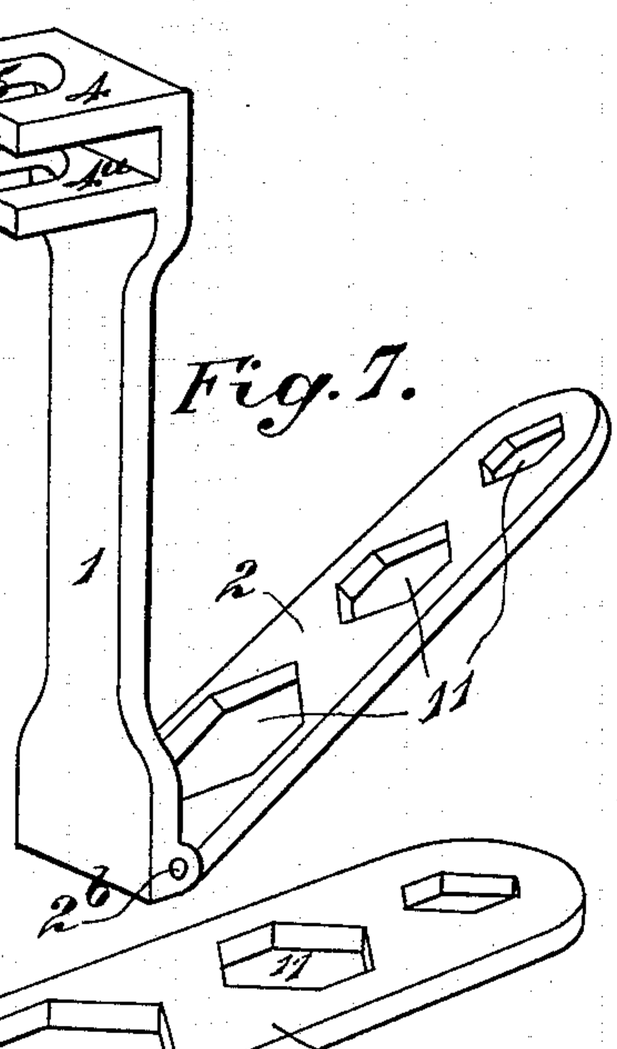
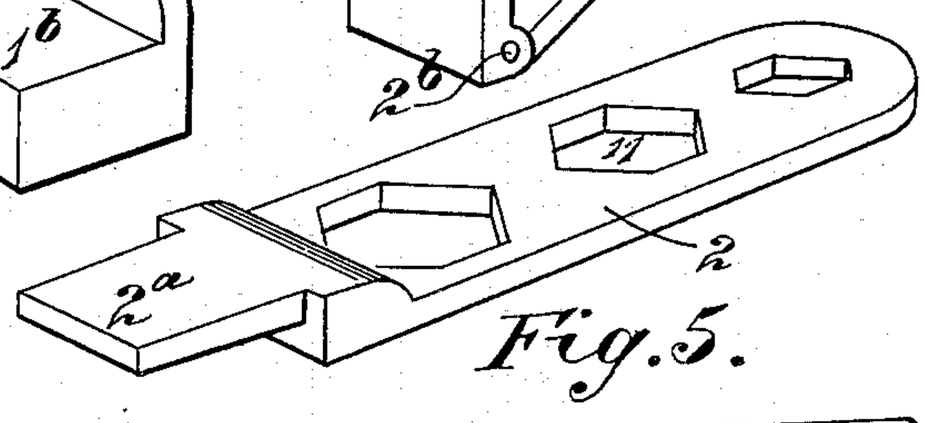


Fig. 5.



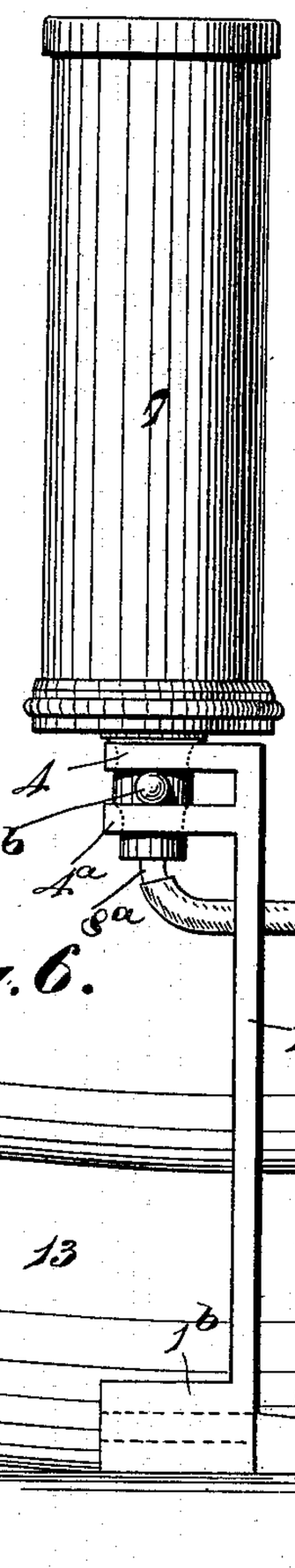
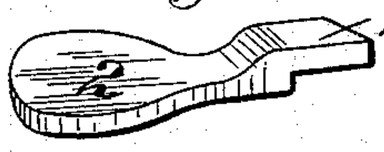


Fig. 6.

Fig. 8a.



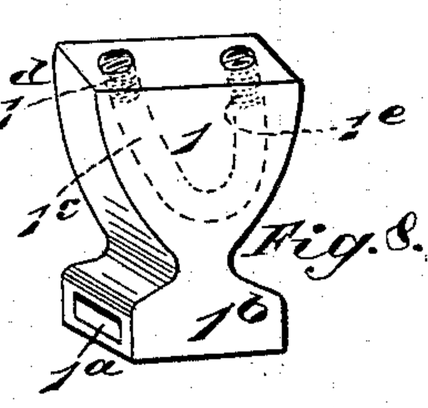


Fig. 8.

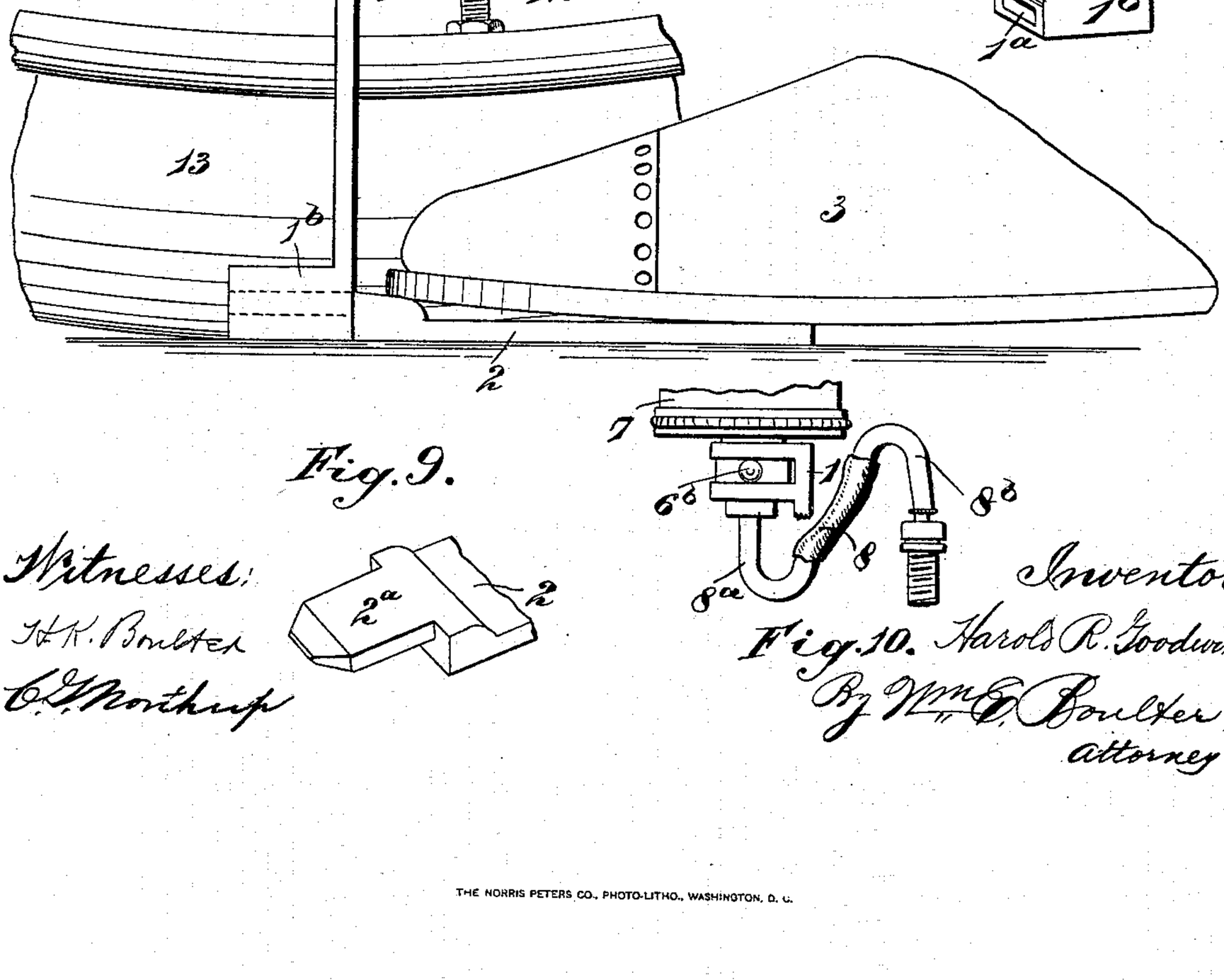


Fig. 9.

Fig. 10.

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UNITED STATES PATENT OFFICE.

HAROLD RICHARD GOODWIN, OF LONDON, ENGLAND.

ACCESSORY FOR USE IN CONJUNCTION WITH AIR-PUMPS.

SPECIFICATION forming part of Letters Patent No. 612,097, dated October 11, 1898.

Application filed November 21, 1896. Serial No. 613,007. (No model.) Patented in England October 9, 1896, No. 22,450; in France April 8, 1897, No. 265,841; in Belgium April 9, 1897, No. 127,757; in Cape of Good Hope November 19, 1897, No. 1,466; in Austria December 2, 1897, No. 47/5,198, and in Canada December 11, 1897, No. 79,425.

To all whom it may concern:

Be it known that I, HAROLD RICHARD GOODWIN, a subject of the Queen of Great Britain and Ireland, residing at Sudbury, near Harrow, London, in the county of Middlesex, England, have invented Improved Accessories for Use in Conjunction with Air-Pumps, (for which Letters Patent have been obtained in Great Britain, No. 22,450, dated October 9, 1896; in France, No. 265,841, dated April 8, 1897; in Belgium, No. 127,757, dated April 9, 1897; in Austria, No. 47/5,198, dated December 2, 1897; in Cape of Good Hope, No. 1,466, dated November 19, 1897, and in Canada, No. 79,425, dated December 11, 1897,) of which the following is a specification.

This invention has reference to improved accessories specially suitable for use in conjunction with air-pumps for inflating pneumatic tires, whereby such pumps, even when made short and of larger bore than usual, can be operated in a more advantageous manner and with less fatigue than has heretofore been usual, this result being attained by obviating the necessity of holding the stationary part of the pump by one hand while the other part of the pump is being operated by the other hand. An accessory for this purpose, according to this invention, comprises a support adapted at its lower end to rest and to be held upon the ground and at its upper end to receive and hold the delivery end of the stationary part of the pump and permit of the passage of the flexible pipe that connects such pump part to the air-valve of the pneumatic tire, the arrangement being such that when in use the device acts to hold the one part of the pump stationary while the other part is being operated.

Figure 1 of the accompanying drawings is a perspective view showing one construction of pump accessory according to this invention, and Fig. 2 is a side elevation showing how the said accessory is used for supporting a pump while inflating a pneumatic tire. Fig. 3 is a detail view showing a modification. Figs. 4 and 5 are perspective views showing the two parts of a modified construction of my pump accessory; and Fig. 6 is a similar view to Fig. 2, showing how such an accessory is used. Fig. 7 is a perspective view showing a further modified construction of my pump accessory. Figs. 8 and 8ª are perspective views showing another construction. Figs. 9 and 10 are detail views showing modified arrangements.

The pump accessory or support shown in Figs. 1 and 2 comprises a metal bar 1, provided at its lower end with a foot-piece 2, whereby it can be readily held upon the ground by the foot 3 of the pump-operator, as shown in Fig. 2, and at its upper end with a horizontal extension 4, that is formed with a slot 5, open at one end and carries a spring or other clip device, the arrangement being such that the stationary part 6 of the pump 6 7, with flexible delivery-pipe 8, can be readily engaged with the slotted part of the support by a lateral movement of the one part toward the other. The clip device may be of various kinds. Conveniently it may, as shown, be a strip 9 of spring-steel screwed or otherwise fixed in or on the slotted part of the extension 4, so as to form two spring-arms that will clip around the annularly-grooved end 6ª of the hollow piston-rod 6 or other fixed part of the pump and hold the same in position during the suction stroke of the pump—that is to say, while the pump-barrel 7 is being raised.

The above-described construction of supporting device is suitable for a single-acting pump, the piston-rod of which is provided at its outer end with a cross-bar or lateral extensions 6ᵇ, adapted to rest upon the slotted extension 4 of the support, which takes the thrust during the forcing or delivery strokes of the pump. The support shown in Figs. 1 and 2 may also be used with double-acting pumps if the piston-rod 6 of the pump be provided with two collars or pairs of lateral extensions 6ᶜ, adapted to receive between them the slotted horizontal extension 4 on the bar or support 1, as shown in Fig. 3, so that such extension will hold the pump-rod in each direction during the reciprocating movements of the pump-barrel. The slotted part 4 of the bar or support 1 may advantageously be provided with a layer 10, Fig. 2, of material, such as leather or india-rubber, to prevent

damage of the pump by abrasion and also to prevent the production of a disagreeable noise.

Figs. 4, 5, and 6 show another construction of support adapted for use with double-acting pumps. In this arrangement the support 1 is provided at its upper end with two slotted parts 4 4ª, arranged a short distance apart and one below the other, so as to be capable of receiving between them the cross-bar or lateral extensions 6ᵇ on the pump piston-rod and of holding the same in a vertical direction during each stroke of the pump. The foot-piece 2 may be made fast to the bar 1, as in Figs. 1 and 2, or it may be so connected to the bar 1 as to permit of the device being made into a small package for convenience of being carried. For this purpose the foot-piece 2 is, as shown in Figs. 4, 5, and 6, preferably made as a separate piece provided with a tongue or projection 2ª, adapted to be slipped into a corresponding hole 1ª in the enlarged lower part 1ᵇ of the bar or support 1, so that the two parts can be readily connected together for use, as shown in Fig. 6, and subsequently detached from each other, as shown in Figs. 4 and 5, to facilitate their being packed in a small receptacle.

In Fig. 7 the foot-piece 2 is shown as hinged at 2ᵇ to the bar or support 1, so as to admit of its being folded up against the said bar or support when not required for use. The horizontal extension 4, Figs. 1 and 2, might be similarly connected to the bar or support; but usually it will be so short as to render this unnecessary.

As will be obvious, the pump-support may be constructed in different forms and of various material. Thus Figs. 8 and 8ª show a pump-support in the form of a block of material—such, for example, as wood, vulcanite, celluloid, or like material—formed with a hollow lower part 1ᵇ to receive the detachable foot-piece 2 and with a curved air-passage 1ᶜ, the ends of which are suitably adapted, as by forming them with screw-threads 1ᵈ 1ᵉ, to admit of the attachment, respectively, of the corespondingly-formed outer end of the hollow pump-rod and of one end of a flexible air-delivery tube the other end of which is to be connected to the air-valve of a pneumatic tire. When the block is of material that can be cast, the curved air-passage 1ᶜ may be formed by a core. In other cases the block may be made in two parts adapted to be secured tightly together, the curved arc-passage being formed in the adjacent vertical faces of the two parts. Such a support may be made very small, say not more than about two inches in height.

The foot-piece 2 of pump-supports of the kind herein referred to may be provided with a polygonal hole 11, Fig. 1, to adapt the device for use as a spanner, or with a series of such holes of different sizes, as shown in Figs. 5 and 7, for use with nuts of different size. One or each of the free ends of the foot-piece 2 may also be adapted for use as a screw-driver. Thus the free end of the foot-piece 2 shown in Figs. 1 and 2 may be beveled, as shown in dotted lines in Fig. 2, and the free end of the part 2ª of the foot-piece shown in Figs. 4 and 5 may be shaped as shown in Fig. 8.

By using a flexible delivery-pipe 8, provided with curved unions 8ª 8ᵇ for attachment, respectively, to the pump 6 7 and air-valve 12 of a pneumatic tire 13, as shown in Fig. 6, the pump-support can be made comparatively short. It might even be made shorter than shown in Fig. 6 if the said unions be made **U** shape, as indicated, for example, diagramatically in Fig. 10.

Although I have for the sake of clearness shown the pump support in Figs. 2 and 6 with its upper and lower extensions 4 or 4 4ª and 2 parallel with the wheel the tire of which is to be inflated, usually it will be more convenient to place it in a position at right angles to that shown.

What I claim is—

1. A pump accessory comprising a rest or support having a foot or base whereby it can be held upon the ground by the foot of the pump-operator and a slotted upper part open at one side whereby it can be engaged with the delivery end of the stationary part of an air-pump provided with a central or axially-arranged air-delivery outlet and flexible air-tube after such tube has been connected to the air-valve of a pneumatic tire so as to support the said pump part and air-delivery outlet above the ground, substantially as described.

2. A pump accessory consisting of a rest or support adapted to be held upon the ground by the foot of the user and provided at its upper end with a clip device whereby it can be sprung onto the normally-fixed part of an air-pump so as to support such pump part and the flexible air-tube extending therefrom above the ground.

3. A pump accessory comprising a rest or support the upper end of which is formed with vertical and horizontal slots to adapt it to be engaged by a lateral movement with horizontal projections on the normally-fixed part of an air-pump and to support such pump part above the ground, and to be disengaged from said pump part by a reverse movement, and a foot-piece attached to the lower end of said rest or support and whereby the same can be held upon the ground, substantially as described.

4. A pump-rest comprising a support having a vertically and horizontally slotted upper end adapted to be applied to and disengaged from an air-pump by a lateral movement of the one part toward the other and to grip the pump part with a spring action, and a foot-piece at the lower end of said support and whereby the same can be held upon the ground as and for the purposes set forth.

5. A pump accessory comprising a bar or support having at its lower end a foot or base

by which it can be held upon the ground and at its upper end one or more lateral extensions formed or each formed with a slot or recess open at one end, substantially as described for the purpose specified.

6. A pump accessory comprising a bar or support provided at its ends with lateral extensions, one of which is movable relatively to the bar or support and is capable of being held upon the ground to hold said bar or support in position for use, the other extension or extensions being formed or each formed with a slot open at each end, substantially as described for the purpose specified.

7. A pump accessory comprising a bar or support having a removable laterally-extending foot-piece at its lower end and at its upper end two lateral extensions arranged a short distance apart and each formed with a slot open at one end, substantially as described for the purposes specified.

8. A pump accessory comprising the bar 1 having a hollow extension 1^b at its lower end, a removable foot-piece 2 provided with a shank 2^a fitting the hole in said extension 1^b, and a pair of lateral extensions 4, 4^a each formed with a slot 5 open at one end substantially as described.

9. The combination with an air-pump having an axial air-outlet with flexible air-delivery pipe of a detachable rest or support adapted to support the pump with its axial air-outlet above the ground substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HAROLD RICHARD GOODWIN.

Witnesses:
HUGH HUGHES,
EDMUND S. SNEWIN.