

No. 867,474.

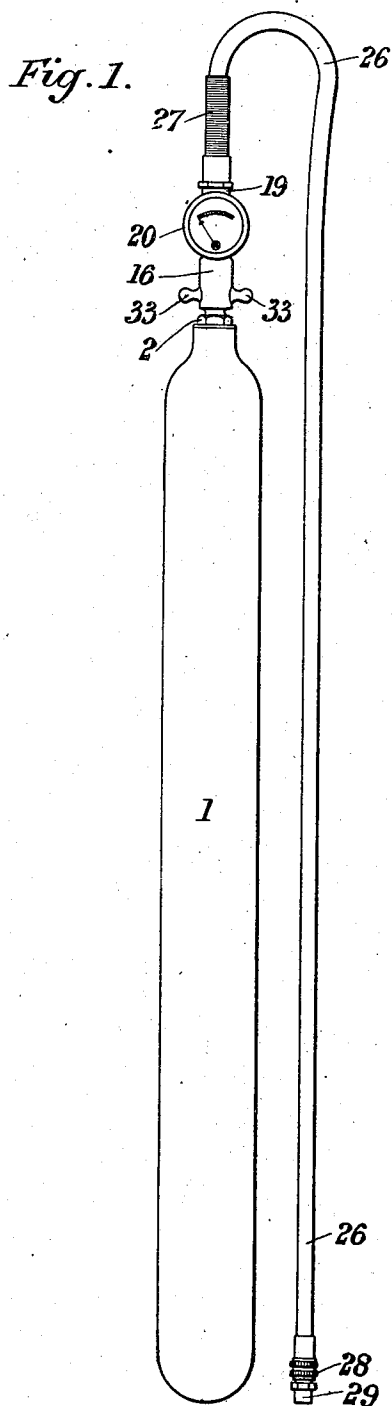
PATENTED OCT. 1, 1907.

R. H. CAMPBELL.

DEVICE FOR INFLATING TIRES, &c.

APPLICATION FILED SEPT. 29, 1906.

2 SHEETS--SHEET 1.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 2.

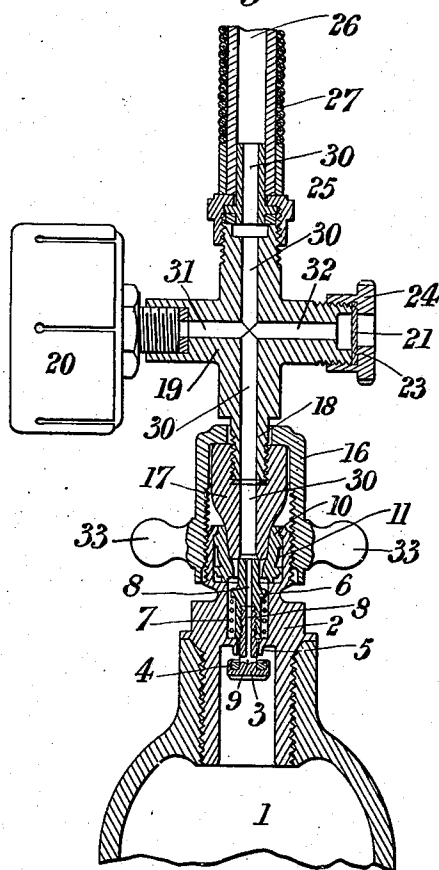
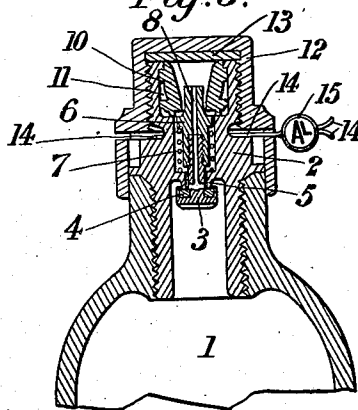


Fig. 3.



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UNITED STATES PATENT OFFICE.

ROBERT HUNTER CAMPBELL, OF EDMONTON, ENGLAND, ASSIGNOR TO AERATORS LIMITED,
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DEVICE FOR INFLATING TIRES, &c.

No. 867,474.

Specification of Letters Patent.

Patented Oct. 1, 1907.

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To all whom it may concern:

Be it known that I, ROBERT HUNTER CAMPBELL, a subject of the King of Great Britain and Ireland, residing at Angel Road, Edmonton, in the county of Middlesex, England, mechanical engineer, have invented a new and useful device for inflating tires, foot-balls, balloons, and the like and for other purposes where a regulatable supply of gas under pressure is required, of which the following is a specification.

10 This invention has for its object to provide a convenient device especially intended for use in inflating pneumatic tires, but applicable also for inflating foot-balls, balloons, and the like, and for other purposes where a regulatable supply of gas under pressure is required.

15 The accompanying drawing represents a device in accordance with this invention.

Figure 1 is an elevation and Figs. 2 and 3 are sections, drawn to a larger scale, of sufficient of the device to show the gas-liberating parts thereof, Fig. 2 showing the upper part of the cylinder with the parts in place for liberating the gas, and Fig. 3 showing the upper part of the cylinder with a sealed cap on it as the cylinder is sent out for use.

25 1 is a cylinder, of any required capacity, for containing the compressed, or liquefied, gas. In its neck is screwed a piece 2 carrying a valvular arrangement consisting of a valve-proper 3 having flexible material 4 confined by the turned over edge, or flange, of the part 3, the said flexible part 4, when the valve is closed, bearing against a valve-seat 5 on the part 2. The valve stem is screwed into the piece 6 which has a flange for the valve-closing spring 7 to bear against. The piece 6 and valve stem are perforated at 8 and the perforation communicates with the interior of the cylinder 1 (when the valve is open) by sideways openings 9 which cause the outgoing gas to sweep over the elastic material 4 on the valve and over its seat and keep them clear of any foreign particles. The upper end of the piece 8 is surrounded by a flexible piece 10 with a space around it at 11 to constitute it a pneumatic washer.

When the cylinder 1 has been charged with gas, the cap 12 is screwed onto the upper part of the piece 2, the elastic pad 13 bearing on the top edge of the said piece 2. A wire or the equivalent 14 is passed through a slot in the side of the cap 12 and into a groove in the part 2 and the ends of the said wire, or the like, are passed through holes in the other side of the cap and the ends of this wire, or the like, are twisted and sealed at 15 so that the cap cannot be removed without breaking this wire, or the like, or the seal. When the device is to be used, the cap 12 is removed and the piece 16 is screwed in its place, the said piece 16 inclosing a presser 17 screwed to a screw 18 on one arm of a cross-piece 19. The two side arms of this cross-piece 19

carry respectively a pressure-gage 20 and a safety disk 21 of material which will be ruptured, or cut, by the edge 23, in the perforated screwed cap 24, when a pre-determined pressure is exceeded.

To the upper arm of the cross-piece 19 is connected, by the fastening 25, a flexible tube 26, wrapped with wire at 27, the other end of the said tube 26 carrying means, as at 28, for attachment to the tire valve-nipple, or the equivalent. The end 29 may be made removable to allow of different ends being affixed to suit the nozzle, or other part, to which they are to be attached. The presser 17 and the cross-piece 19 and the part 25 are perforated at 30 to allow of the gas escaping into the tube 26 and thence into the interior of the tire, or other article, or space, to which the gas is to be supplied and the side arms of the cross-piece 19 are perforated at 31 and 32 to allow the pressure of the gas to be exerted on the pressure gage 20 and the safety disk 21 respectively.

By screwing down the piece 16 by the thumb pieces 33 the presser 17 will be caused to press down the part 6 against the spring 7 and so open the valve 3 to a very accurately regulatable extent to liberate the gas exactly as required.

We do not limit ourselves to the precise means described for liberating the gas.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is—

1. A device for inflating pneumatic tires and for other purposes; the said device consisting of a cylinder provided with a valve and an attachment provided at one end with means for opening the valve and at the other end with means for attachment to the nozzle of the inlet valve of the tire, or the equivalent, to which gas is to be supplied, the said attachment also being provided with a branch therefrom carrying a pressure gage.

2. A device for inflating pneumatic tires and for other purposes; the said device consisting of a cylinder provided with a valve and an attachment provided at one end with means for opening the valve and at the other end with means for attachment to the nozzle of the inlet valve of the tire, or the equivalent, to which gas is to be supplied the said attachment being also provided with a branch therefrom carrying a safety device.

3. A device for inflating pneumatic tires and for other purposes; the said device consisting of a cylinder provided with a valve and an attachment consisting of a perforated cross-piece the arms of which respectively carry gas liberating means, a pressure gage, a safety device and means for attachment to the nozzle of the inlet valve of the tire, or the equivalent, to which gas is to be supplied.

4. A device for inflating pneumatic tires and for other purposes; the said device consisting of a cylinder provided with a valve in a piece screwed into the neck of the cylinder and having, on its upper end, a screw adapted to receive the attachment for opening the valve and for connection with the nozzle of the inlet valve of the tire, or the equivalent, to which gas is to be supplied and a cap

adapted to be screwed onto the last named screw and perforated for the passage of a wire, or the like, a recess for the said wire, or the like, in the piece which carries the valve and a seal applied to the said wire, or the like.

- 5 5. A device for inflating pneumatic tires and for other purposes; the said device consisting of a cylinder provided with a valve in a piece screwed into the neck of the cylinder and with a groove therein to receive a sealing wire, or the like, an attachment consisting of a perforated cross-
10 piece the arms of which respectively carry gas-liberating means, a pressure gage, a safety device, and a tube for

attachment to the nozzle of the tire, or the equivalent, to which gas is to be supplied and a cap perforated for the said wire, or the like, and adapted to be screwed onto the piece carrying the valve when the aforesaid cross-piece is removed therefrom. 15

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

ROBERT HUNTER CAMPBELL.

Witnesses:

ERNEST HENRY KNOWLES,
GEO. GODFREY SELKIRK.