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J. JONES

MEANS FOR ASCERTAINING THE POSITION OF PUNCTURES IN THE AIR TUBES OF PNEUMATIC TIRES

Filed June 25, 1923

Fig: 1.

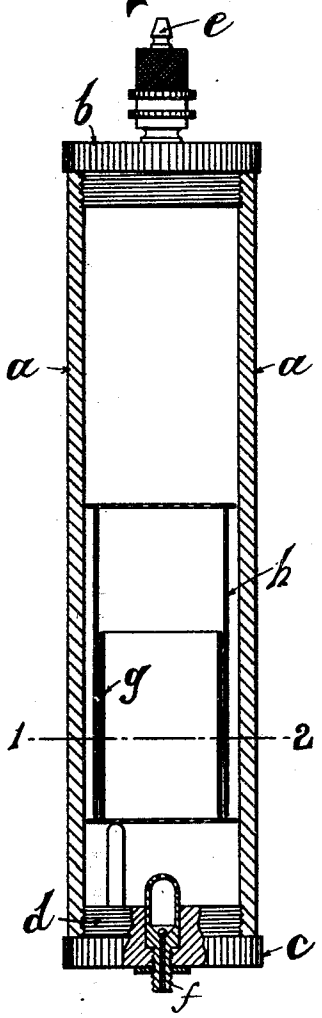
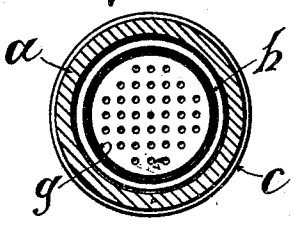


Fig: 2.



Inventor
John Jones.
by Herbert W. Jenner.
Attorney.

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UNITED STATES PATENT OFFICE.

JOHN JONES, OF LITTLEBOROUGH, ENGLAND.

MEANS FOR ASCERTAINING THE POSITION OF PUNCTURES IN THE AIR TUBES OF PNEUMATIC TIRES.

Application filed June 25, 1923. Serial No. 647,516.

To all whom it may concern:

Be it known that I, JOHN JONES, a subject of the King of Great Britain and Ireland, and resident of Littleborough, in the county of Lancaster, England, has invented certain Improvements in Means for Ascertaining the Position of Punctures in the Air Tubes of Pneumatic Tires, of which the following is a specification.

This invention relates to improvements in means for ascertaining the position of punctures in the air tubes of pneumatic tires and which apparatus is also useful for the fumigating of plants, fumigating rooms and for other similar purposes, the object being to provide a simple apparatus for these purposes.

My invention consists of a tubular cylinder closed at one end and provided with a removable cap at the other, a tire valve connection at one end of the cylinder and a pump or inflator connection at the other end and a removable casing or chamber within the cylinder perforated at both ends and adapted to receive raw cotton fumigating flakes or the like the smoke from which on being ignited can be forced through the cylinder by the pump into an air tube to locate he position of punctures therein or be passed direct into the atmosphere for fumigating purposes.

My invention will be fully described with reference to the accompanying drawing in which,

Fig. 1, is a horizontal sectional elevation of the device and

Fig. 2, a transverse section of same on line 1—2 of Fig. 1.

In accordance with my invention and referring principally to the apparatus as constructed for ascertaining the position of punctures in pneumatic tubes for cycle, motor cycle and motor tires I provide a cylinder *a* of metal or other suitable material of a hollow type having one end *b* entirely closed or fitted with a cover and the other end fitted with a removable cap or cover *c* preferably having a screw-threaded connection *d* with the hollow cylinder. At the closed end of the latter I provide a suitable form of connection *e* of a similar type to that employed on the end of the flexible member of an ordinary tire-inflating pump, such connection being adapted to engage with the screw-threaded tube of the valve of the air tube. On the cover *c* for the open end of the hollow cylinder I provide a convenient form of connection *f* adapted to be connected to the screw-threaded union or sleeve at the end of the flexible member of a tire-inflating pump. The connection *f* may be in the form of a back-pressure valve to prevent the return of air from the cylinder *a*. The cylinder forms an intermediate connection between the flexible member of the tire pump and the tire valve. Within the cylinder *a* I provide a removable chamber or casing *g* having a perforated end and the other end provided with a removable perforated cap *h*, the complete casing fitting loosely within the outer cylinder *a*. This casing is adapted to receive raw cotton, fumigating flakes or the like preferably of vegetable origin. In ascertaining punctures in an air tube the cap of the casing is removed and the latter is charged with a small quantity of raw cotton, fumigating flakes or the like, which is ignited by means of a match or other means after which the perforated cap is placed in position, the casing inserted within the outer cylinder *a* and the cover of the latter replaced. The pump is then connected to the cylinder and the latter coupled to the tire valve of the air tube, such tube having previously been removed from the tire cover. By operating the pump the smoke from the vegetable combustible material is forced into the air tube so that some of it escapes through the puncture or punctures and clearly indicates where the latter is. In passing the smoke leaves a slight stain on the air tube immediately surrounding the puncture and so enables the tube to be repaired in the ordinary way. The device is particularly serviceable where it is not possible to obtain sufficient water for finding the puncture in the way well known to those who use cycles or motor vehicles, and in fact dispenses entirely with the necessity for using water at all. The casing in which the vegetable material is placed prevents such material generating into a flame.

The same device is applicable for ordinary fumigating purposes by merely forcing the smoke through it by means of a tire pump.

What I claim as my invention and desire to secure by Letters Patent, is:—

1. An apparatus for locating punctures, comprising a cylinder provided with means

for connecting its end portions with an air tube and with an air pump respectively, and a removable chamber provided with perforated ends and inserted in the said cylinder, said chamber being adapted to contain combustible material which emits smoke when ignited.

2. Apparatus for ascertaining the position of punctures in the air tubes of pneumatic tires and likewise applicable for fumigating purposes consisting of a tubular cylinder closed at one end and provided with a removable cap at the other, a tire valve connection at one end of the cylinder and a pump or inflator connection usually provided with a back pressure valve at the other end and a removable casing or chamber within the cylinder perforated at both ends and adapted to receive raw cotton fumigating flakes or the like, the smoke from which on being ignited can be forced through the cylinder by the pump into an air tube to locate the position of punctures therein or be passed direct into the atmosphere for fumigating purposes.

In testimouy whereof I have hereunto set my hand.

JOHN JONES.