C. W. GRIFFITH.

EXHAUST HEATED VULCANIZER.

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1,167,165.

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Fig. 1

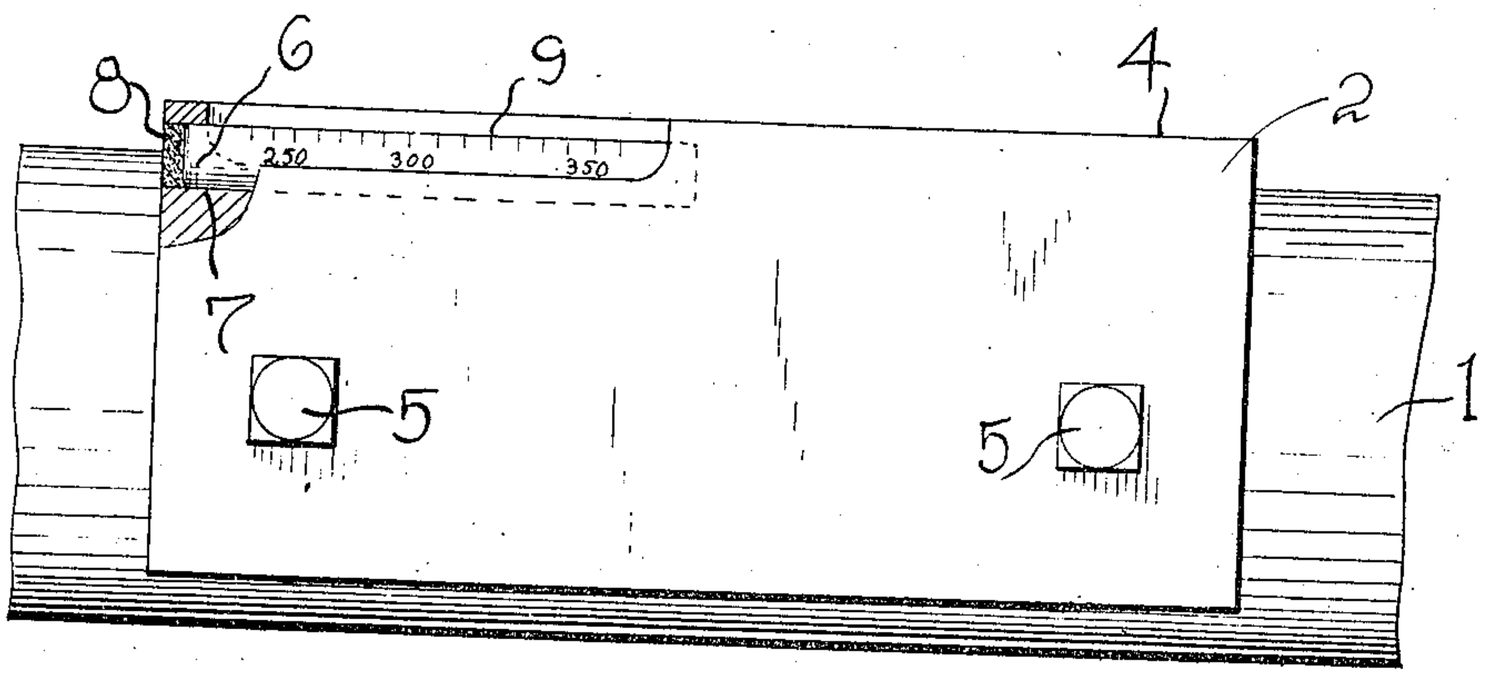
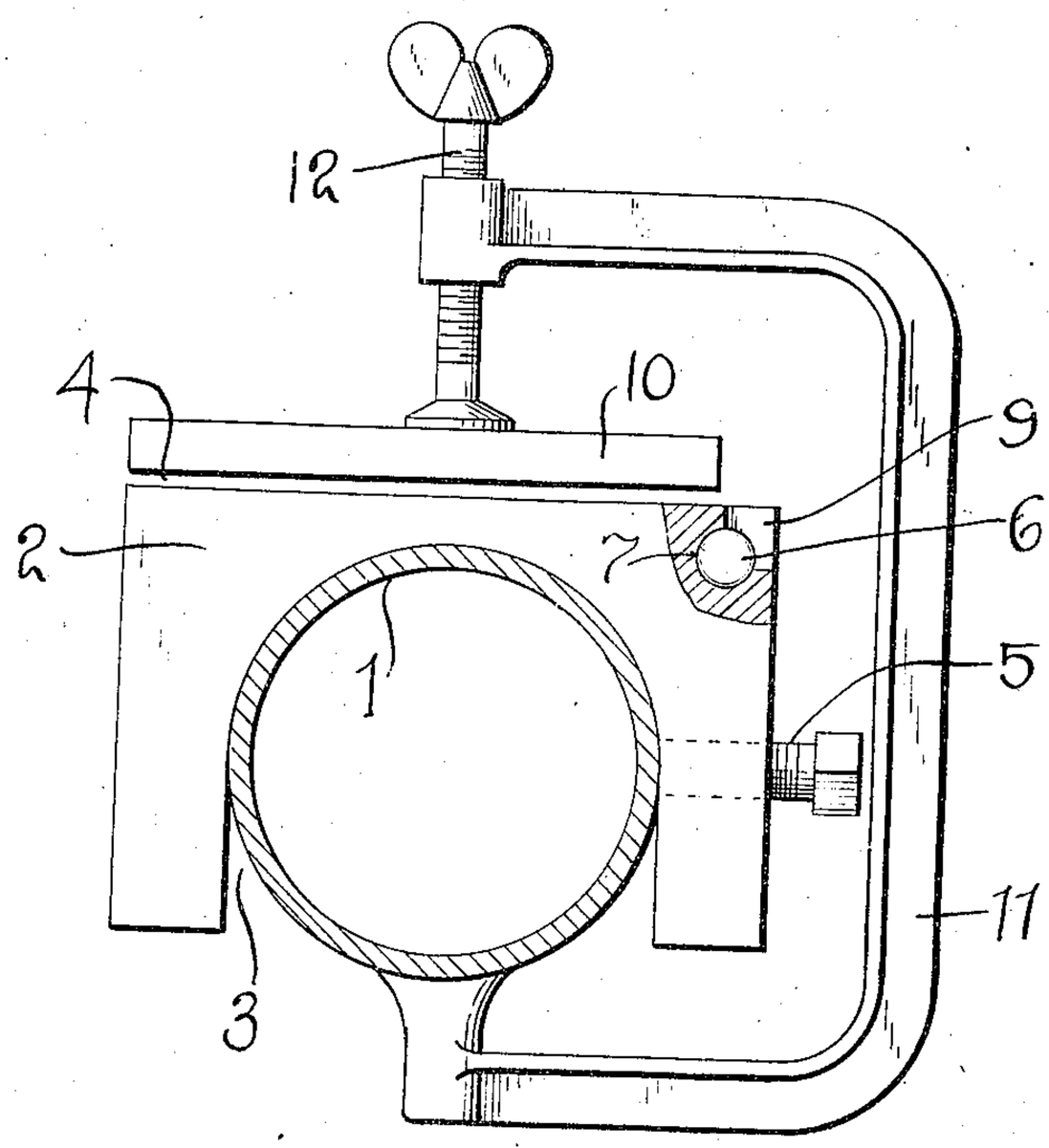


Fig. 2



Witnesses

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EXHAUST-HEATED VULCANIZER.

1,167,165. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed October 28, 1914. Serial No. 869,088.

To all whom it may concern:

Be it known that I, CHARLES W. GRIFFITH, a citizen of the United States, residing at Altoona, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Exhaust-Heated Vulcanizers, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to vulcanizers, and particularly to vulcanizers which are adapted to be heated by the exhaust from an internal combustion engine.

The primary object of my invention is the provision of a vulcanizing plate which is arranged to be heated by the exhaust pipe of an internal combustion engine, the plate being preferably, though not necessarily detachably mounted upon the exhaust pipe so that it may be readily put in place or removed therefrom.

A further object of the invention is to provide a vulcanizing plate which will be kept continually heated while a car is running and which is thus in condition for immediate use if a tire puncture occurs.

A further object of the invention is the provision in connection with a vulcanizing plate adapted to be mounted upon an exhaust pipe, of a thermometer disposed in the vulcanizing plate where it may be readily read.

Other objects will appear in the course of the following description.

My invention is illustrated in the accompanying drawing, wherein—

Figure 1 is a side elevation of a portion of the exhaust pipe of an engine and of my improved vulcanizer plate mounted thereon, the plate being in side elevation, one corner of the plate being broken away; Fig. 2 is an end view of the vulcanizing plate, the exhaust pipe being in section, and one corner of the plate being broken away.

Corresponding and like parts are referred to in the following description and designated in all parts of the accompanying drawing by like reference numerals.

Referring to these figures, 1 designates the exhaust pipe of an automobile engine, and 2 a vulcanizing plate mounted thereon. This plate is formed of a relatively thick rectangular body of iron or other suitable metal, cut away upon its under side as at 3 so as to fit over the exhaust pipe 1, and have its under face in contact with the curved outer face of the exhaust pipe so that there is intimate contact between the metal of the exhaust pipe and the metal of the plate, whereby the heat of the exhaust may be quickly and fully transmitted to the plate. The upper face 4 of the plate is of course flat. The plate is held in engagement with the exhaust pipe by any suitable means, but I have shown for this purpose the set screws 5 which extend through one side of the plate and into the cut away portion thereof so as to bind against the pipe.

In order that the temperature of the vulcanizing plate may be noted so that accurate vulcanizing may be performed, I provide in connection with the plate and preferably embedded therein, the thermometer 6. This thermometer is inserted in a bore 7 which extends longitudinally of the vulcanizing plate adjacent one of its upper corners, and this bore is closed after it is mounted in place by means of a plug 8, of cement or other suitable material. In order that the thermometer may be read, the corner of the plate is cut away as at 9, it being of course understood that the thermometer is longer than this cut away portion 9. It will be noted that as the corner of the plate is cut away, the thermometer may be read either from the top of the plate or from one side thereof.

Any suitable means may be used in connection with the vulcanizing plate for binding or pressing the material to be vulcanized down upon the face 4 of the plate and to this end I have shown a block 10, preferably of wood, which is intended to be disposed upon the upper face of the plate, and I have also shown a clamp 11, one end of which engages beneath the exhaust pipe or beneath any suitable abutting member, the other end of which extends over the top of the vulcanizing plate and has extending therethrough the screw 12, the lower end of which is adapted to bear against the upper face of the wood block 10.

It will be understood that the tube in which a puncture has occurred and which it is desired to vulcanize is to be disposed with the punctured part between the wood block and the vulcanizing plate, a suitable patch having been applied to the puncture, and the wood block is then forced down against the plate by means of the screw 12. The

wood block and the screw clamp are intended of course to be carried in the tool box of the automobile, but the vulcanizing plate is intended to be attached at all times to the exhaust pipe and is not removed therefrom after use. Thus the vulcanizer is ready for use if any punctures occur on the road.

The provision of a thermometer in conjunction with the vulcanizing plate is of particular value, as thereby accurate vulcanizing may be performed, which is not the case where vulcanizers are heated by gasolene lamps and with no provision for determining the degree of heat to which the vulcanizing plate has been raised.

It will be seen that my improved vulcanizing plate is extremely simple, may be readily applied and detached, may be used practically on all forms of motor vehicles, and is extremely handy in use.

While I have referred to the pipe 1 as the exhaust pipe of an engine, it will be understood that where automobiles are driven by steam power the plate might be applied equally well to a steam pipe.

It is also to be understood that while I preferably mount the plate detachably upon the exhaust pipe, yet the plate might be cast with the exhaust pipe, and still be within the scope of my invention.

Having described my invention, what I claim is:

1. The combination with a pipe carrying heated vapors, of a solid vulcanizing plate detachably mounted upon the pipe and having a thickness greater than the diameter of the pipe and a recess having a depth approximately equal to the diameter of the pipe whereby to provide oppositely disposed depending portions engaging on each side of the pipe, and means passing through one of said depending portions for engaging the pipe and clamping the vulcanizing plate upon the pipe.

2. A vulcanizing attachment comprising a plate cut away upon its under face to fit over and partially embrace the exhaust pipe of an internal combustion engine, said plate having a flat upper face, a clamping plate confronting the flat upper face of the vulcanizing plate, and a clamp comprising a body having one terminal adapted to engage with the under face of the exhaust pipe and the other terminal extending over the upper face of the clamping plate, and a clamping screw passing through the last-named terminal and engaging with the clamping plate.

3. A vulcanizing attachment comprising a plate cut away upon its under face to fit over and contact with the exhaust pipe of an internal combustion engine, and provided with oppositely disposed depending portions engaging on each side of said exhaust pipe, a screw passing through one of these depending portions and adapted to engage the exhaust pipe to detachably hold the vulcanizing plate in place thereon, and a clamping member approximately U-shaped in form adapted to have one terminal engage beneath the exhaust pipe and the other terminal extend over the vulcanizing plate, and a clamp screw passing through this last-named terminal.

4. A vulcanizing plate having a thickness greater than the diameter of an automobile engine exhaust pipe and being recessed at its under side to fit over the said exhaust pipe and contact therewith, said recess having a depth approximately equal to the diameter of the exhaust pipe, said vulcanizing plate having a longitudinal bore extending from one end of the plate adjacent an upper corner thereof, a corner of the plate being cut away to intersect this bore, means for detachably engaging said plate with the exhaust pipe of the engine, and a thermometer mounted within the bore and entirely housed thereby, the thermometer being read through the cut away corner of the plate.

5. A vulcanizing plate for detachable connection to the exhaust pipe of an automobile engine, said plate having a thickness greater than the diameter of the exhaust pipe and being recessed on its under side to fit over the exhaust pipe and contact therewith, said recess having a depth approximately equal to the diameter of the exhaust pipe, and means passing through the side of the vulcanizing plate and adapted to engage the exhaust pipe to hold the vulcanizing plate in place thereon.

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

CHARLES W. GRIFFITH.

Witnesses:
S. A. TREES,
A. J. FILLER.