

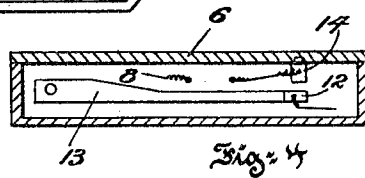
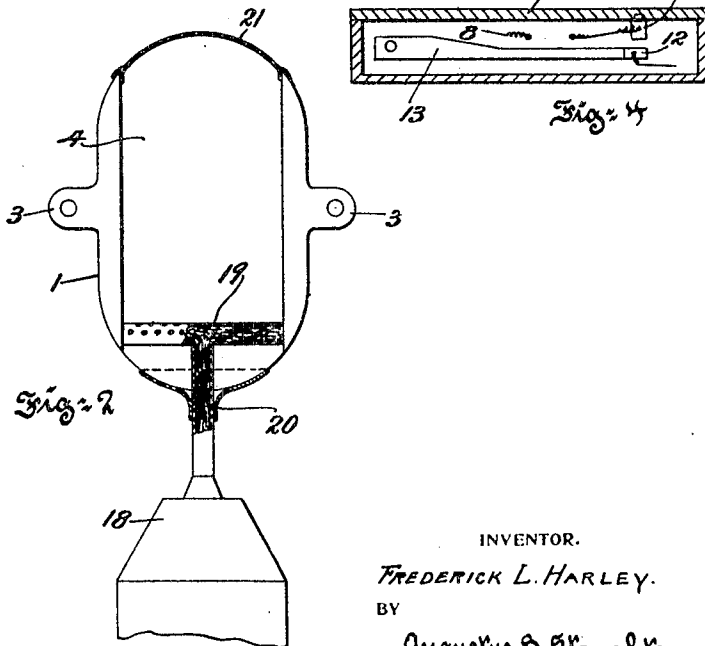
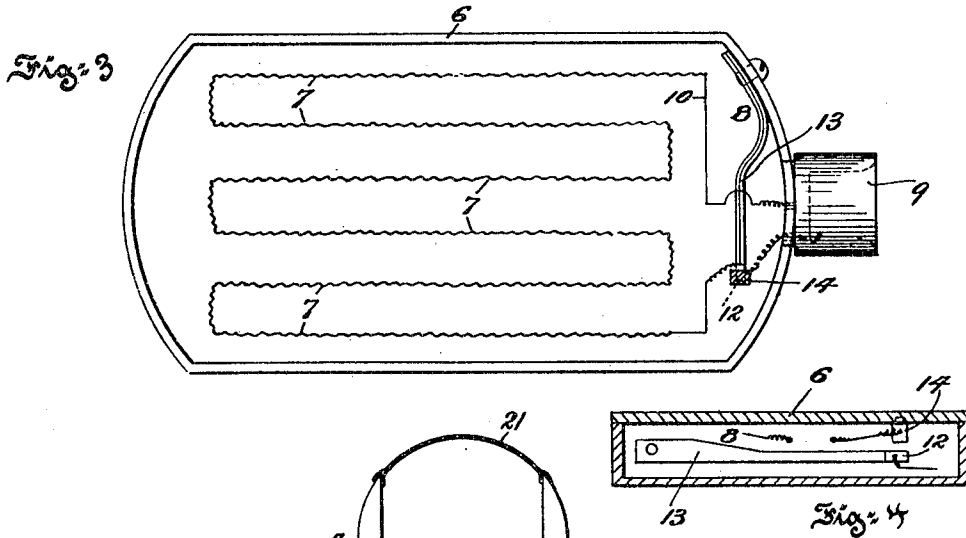
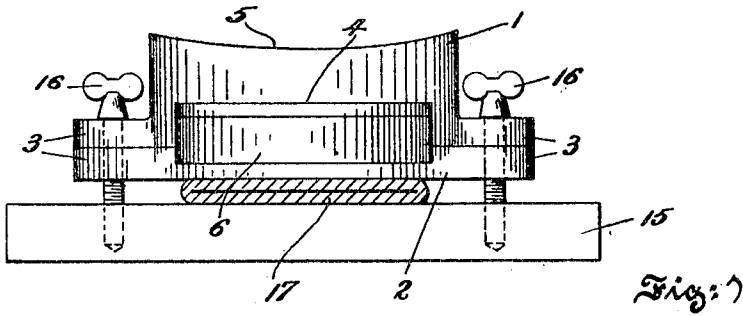
No. 852,326.

PATENTED APR. 30, 1907.

F. L. HARLEY.

APPARATUS FOR REPAIRING PNEUMATIC TIRES.

APPLICATION FILED DEC. 22, 1906.



WITNESSES.

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APPARATUS FOR REPAIRING PNEUMATIC TIRES.

No. 852,326.

Specification of Letters Patent.

Patented April 30, 1907.

Application filed December 22, 1906. Serial No. 349,101.

To all whom it may concern:

Be it known that I, FREDERICK L. HARLEY, a citizen of the United States, and a resident of Quakertown, in the county of Bucks and State of Pennsylvania, have invented a certain new and useful Apparatus for Repairing Pneumatic Tires, of which the following is a specification.

The principal object of the present invention is to provide simple, comparatively inexpensive and efficient apparatus for repairing pneumatic tires by vulcanization in a permanent and reliable manner, either on the road or in localities where electric current is obtainable.

To this and other ends hereinafter set forth the invention stated in general terms comprises the improvements to be presently described and finally claimed.

In the drawings I have illustrated apparatus embodying features of the invention, and Figure 1, is an end view partly in section. Fig. 2, is a side view with a part of the device removed. Fig. 3, is a top or plan view with the upper part removed, of an electrical heating unit or device, and Fig. 4, is a transverse sectional view of Fig. 3.

In the drawings 1 and 2, are two members arranged face to face and each having lateral attaching ears 3.

4, is an open ended chamber formed between the members 1 and 2 by longitudinally grooving their abutting faces.

The member 1, is provided with a concaved surface 5, adapted for application to the shoes of tires when the same are in position on the rims of wheels. The member 2, is provided with a flat outer face that is adapted for operation upon inner tubes when the same are flattened.

6, is a receptacle adapted to be placed in the chamber 4 and to be clamped to place therein. Within this receptacle 6, there is arranged a number of heating coils 7, and also a thermostatic cut-out 8.

9, is a socket which may be connected with any suitable source of current. The circuit is by way of the conductor 10, through the coils 11, to a contact 12, carried on the end of an arm 13 made of thermostatic material, such as two strips of different metals properly connected together. The circuit is then by way of the fixed contact 14, when the thermostatic arm is in position for bringing the

two contacts together, which is its normal position. However, when the temperature exceeds that required for proper vulcanization, the thermostatic arm moves into the position shown in Fig. 4 and thus interrupts the circuit. In consequence of this the degree of temperature attainable is automatically limited.

When the device is to be used where there is current the described electrical apparatus is employed. To use the apparatus, a patch is placed upon the part to be repaired and suitable cement, such as can be vulcanized, is employed. The part and the patch are then clamped between the described device and a suitable support and the proper degree of heat continued and applied so as to effect vulcanization. In the case of a flat tube, use may be made of a board 15, provided with clamp screws 16, by means of which the two members of the device are clamped together and the device as a whole is clamped to the tire and patch 17. In patching a shoe the board 15, is applied opposite the face 5, and the tire is clamped between the board and the face 5 and heat is applied to it as above described. When current is not available as for instance on the road, use may be made of a lamp 18, for heating the device. This lamp 18, is provided with a perforated burner 19, into which a wick extends.

20, are plates by means of which the lamp may be clamped to the device in position for holding the burner in the chamber 4.

21, is a perforated plate or cap that may be applied to the end of the device opposite the burner and which operates as a damper.

What I claim is,

1. Apparatus for repairing pneumatic tires which comprises two similar separable members arranged face to face and each having lateral attaching ears and a longitudinal groove on the abutting faces and whereof one is flat and the other convex on its outer face and the grooves of said members constituting a chamber, a heating unit or device detachably applied to the chamber and adapted to impart heat to said members, and clamping means for said ears, substantially as described.

2. Apparatus for repairing pneumatic tires which comprises a housing having a concaved and flat surface, an open ended chamber and a heating unit or device attached to

the chamber and provided with electrical heating apparatus which includes a thermostatic cut-out, substantially as described.

5 3. Apparatus for repairing pneumatic tires which comprises a housing having a concave and a flat face and provided with laterally extending perforated lugs or ears and with electrical connections, clamping means engaging said ears or lugs, and electrical

heating provisions arranged in the housing and including a thermostatic cut-out for limiting the heat, substantially as described.

In testimony whereof I have hereunto signed my name.

FREDERICK L. HARLEY.

Witnesses:

A. B. STOUGHTON,
FRANK E. FRENCH.