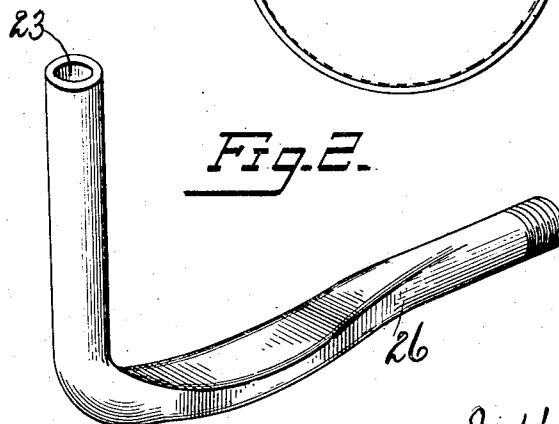
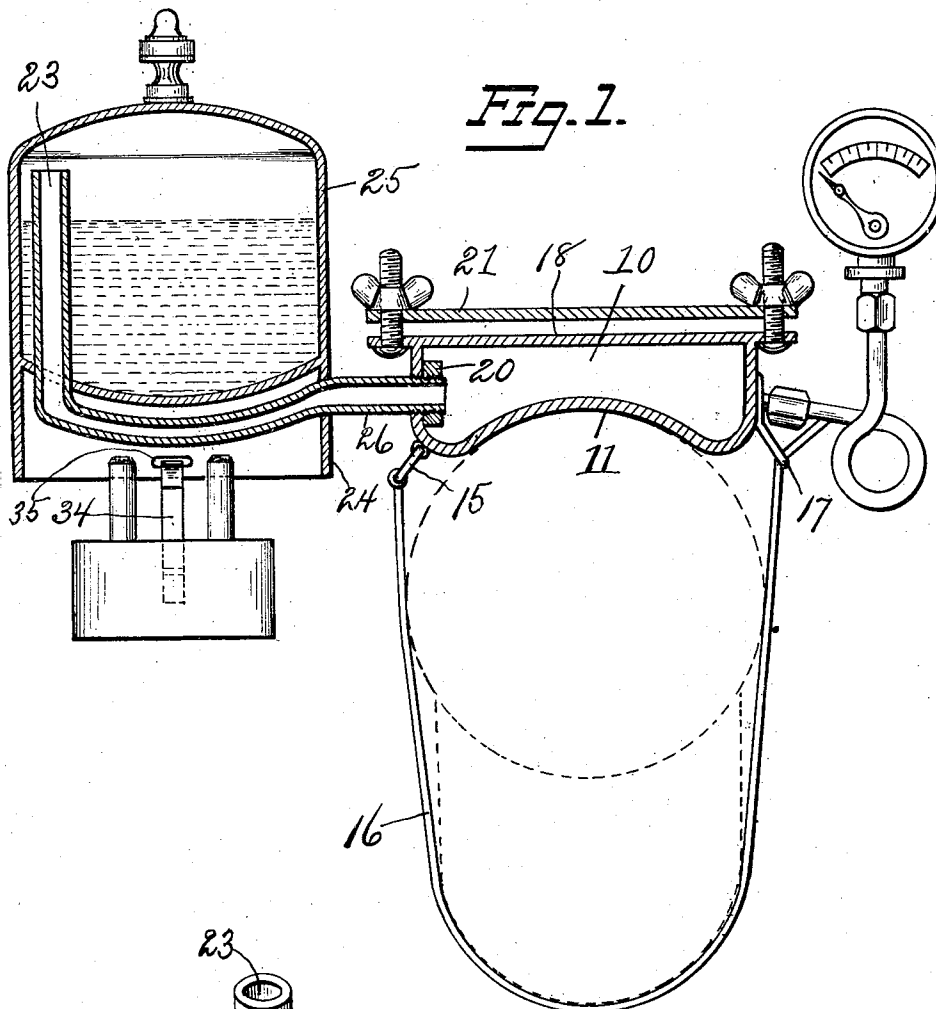


J. BERLINER.
 SUPERHEATER FOR USE IN CONNECTION WITH VULCANIZERS AND OTHER APPARATUS.
 APPLICATION FILED JULY 23, 1908.

939,956.

Patented Nov. 9, 1909.



Witnesses
 Albert Popkins.
 Grace P. Overton

Inventor
 Joseph Berliner
 By Sturtevant & Mason
 Attorneys

UNITED STATES PATENT OFFICE.

JOSEPH BERLINER, OF HANOVER, GERMANY, ASSIGNOR TO EMILE BERLINER, OF WASHINGTON, DISTRICT OF COLUMBIA.

SUPERHEATER FOR USE IN CONNECTION WITH VULCANIZERS AND OTHER APPARATUS.

939,956.

Specification of Letters Patent.

Patented Nov. 9, 1909.

Application filed July 23, 1908. Serial No. 444,999.

To all whom it may concern:

Be it known that I, JOSEPH BERLINER, a subject of the Emperor of Germany, residing at Hanover, Germany, have invented certain new and useful Improvements in Superheaters for Use in Connection with Vulcanizers and other Apparatus, of which the following is a description, reference being had to the accompanying drawing and to the figures of reference marked thereon.

In an application filed by Max Schiele in the United States Patent Office on the 12th day of October, 1907, Serial No. 397,158, is illustrated and described a portable vulcanizing apparatus which briefly includes a box or casing, a boiler, a superheating tube forming a connection between the box or casing and the boiler, a steam pipe leading from the steam space of the boiler to the superheating tube, and means for directing heating flames against the boiler and tube.

The present invention is designed primarily as an improvement on the invention set forth in the above entitled application, but as to the idea hereinafter referred to of running the superheater tube directly beneath the boiler and exposing it to the same flame which heats the water in the boiler, this may be useful also in other connections.

The present invention, therefore, consists of the matters hereinafter described and referred to in the appended claims.

The invention is illustrated in the accompanying drawings, in which,

Figure 1 is a side elevation partly in section, of a portable vulcanizer embodying my invention; and Fig. 2 is a perspective view of the superheater tube.

In these drawings, 10 represents the box or casing the bottom of which, 11, is concaved, following approximately the contour in cross section of the tread or outer tube of a tire, so that it may be snugly fitted to the latter in case of puncture. At one end of the casing is a link 15, to which is hung a strap 16, which may be passed under the wheel felly and then through a buckle or clip 17 at the opposite end of the casing to repair a tire *in situ*.

Above the flat top 18 of the casing is a detachable clamp plate 21, which plate may be removed or loosened to permit the placing of an inner tube on the top 18, after which the clamp plate is bolted down in order to

hold the tube against the heated surface during the vulcanizing operation. A tube 26 passes at one end into the vulcanizer box or casing, and is screwed into the wall thereof and held rigidly by the nut 20; it passes horizontally through the annular flange 24 of the boiler or generator 25, and below the bottom of the water receptacle thereof, and then passes vertically into the boiler or generator, the vertical part 23 thereof extending above the water line of the boiler.

At the point where the tube 26 passes into the boiler, it is rigidly secured thereto by brazing or soldering, so that the entire boiler or generator is supported on the tube.

The horizontal portion of the tube 26 below the water receptacle of the boiler, is flattened, as shown, or otherwise widened out, and is contained within the walls of the depending flange 24, which depending flange protects from the effect of external current the heating flame from the burner or burners of an alcohol or other lamp, supported by hangers or hooks 34, depending from openings 35 in the flange 24.

By this construction, it will be seen that the boiler is entirely supported by the superheating tube, and that the latter takes in the wet steam from the upper part of the boiler, and as it passes into the horizontal part is superheated, since said horizontal part is directly in the heating flame, which also heats the boiler, the flame being protected by the flange 24. By this arrangement, a separate flame for the superheating tube is rendered unnecessary, and the flange 24 acts as a shield for the flame.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a vulcanizer or the like, the combination with a boiler, a vulcanizing box or casing, a steam pipe leading from the steam space of the boiler into the vulcanizing box or casing and extending beneath the bottom of the boiler, said steam pipe beneath the boiler being exposed to the same heating flame which heats the boiler.

2. In a vulcanizer or the like, the combination with a boiler, a vulcanizing box or casing, a steam pipe leading from the steam space of the boiler into the vulcanizing box or casing and extending beneath the bottom of the boiler, said steam pipe beneath the

boiler being exposed to the same heating flame which heats the boiler, said boiler having a depending wall to protect the heating flame.

5 3. In a vulcanizer, a box or casing, a boiler, a steam tube supporting the boiler, connected at one end to the box or casing and at its other end opening into the steam space of the boiler, said steam tube from its point
10 of exit from the boiler extending adjacent the bottom thereof and being exposed to the same heating flame which heats the boiler.

4. In a vulcanizer, a box or casing, a boiler, a steam tube supporting the boiler
15 connected at one end to the box or casing and at its other end opening into the steam space of the boiler, said steam tube from its point of exit from the boiler extending adjacent the bottom thereof, a lamp suspended
20 from the boiler having a heating flame di-

rected against the boiler and that portion of the tube beneath the boiler.

5. In a vulcanizer, a box or casing, a boiler, a steam tube supporting the boiler connected at one end to the box or casing 25 and at its other end opening into the steam space of the boiler, said steam tube from its point of exit from the boiler extending adjacent the bottom thereof, a lamp suspended from the boiler having a heating flame di- 30 rected against the boiler and that portion of the tube beneath the boiler, said heating flame being inclosed within an annular wall depending from the boiler.

In testimony whereof I affix my signature, 35 in presence of two witnesses.

JOSEPH BERLINER.

Witnesses:

A. HENNOCQUE DE LA FAYETTE,
R. A. DU REY.