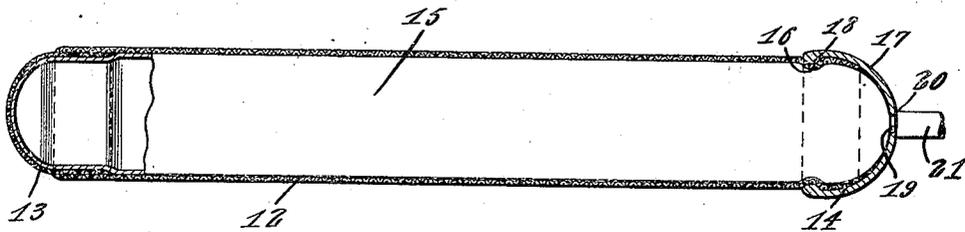


Jan. 2, 1923.

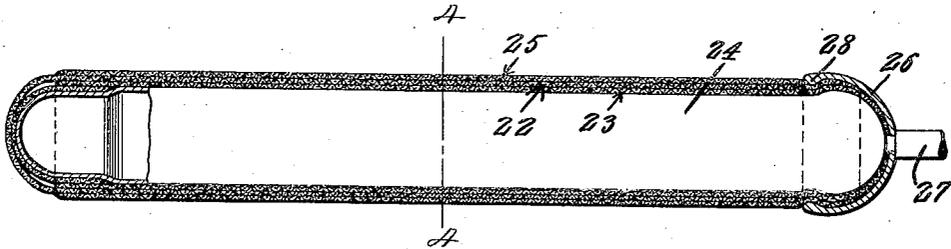
1,440,751.

J. H. SMITH,  
AIR BAG,  
FILED JAN. 6, 1922.

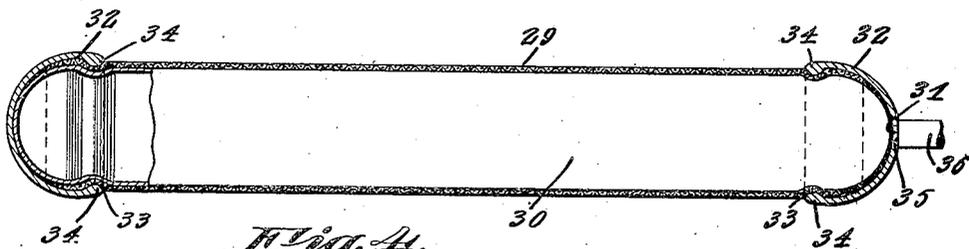
*Fig. 1.*



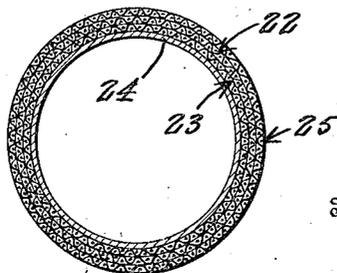
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*J. H. Smith, Inventor*

By *Chas. H. Snow & Co.*

Attorneys

## UNITED STATES PATENT OFFICE.

JAY H. SMITH, OF SAN FRANCISCO, CALIFORNIA.

## AIR BAG.

Application filed January 6, 1922. Serial No. 527,353.

*To all whom it may concern:*

Be it known that I, JAY H. SMITH, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented a new and useful Air Bag, of which the following is a specification.

This invention relates to air bags for use in connection with tire vulcanizing machines, one of the objects of the invention being to provide a bag consisting of an outer casing of any suitable material provided with a removable inner tube or air container which can be easily placed in or removed from position, the same being securely held in place when in use.

Another object is to provide an outer casing which does not require the use of metal fastening means and which presents a smooth surface to the article being vulcanized.

A still further object is to provide a bag of this character the parts of which are easily interchangeable so that either the casing or the inner tube can be replaced with a new one in the event of wear or deterioration.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that, within the scope of what is claimed, changes in the precise embodiment of the invention shown can be made without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings

Figure 1 is a longitudinal section through the device, the inner tube being shown partly in section and partly in elevation.

Figure 2 is a longitudinal section through another form of device.

Figure 3 is a longitudinal section through another modification.

Figure 4 is a section on line 4—4, Figure 2.

Referring to the figures by characters of reference, 12 designates a fabric casing closed at one end as shown at 13 while the other end is left open. An airtight inner tube 15 is insertible into the open end of the casing 12 so as to completely fill the casing and to project beyond the open end thereof

and, as shown in Figure 1 the casing may be provided near its open end with an annular depression 16. A rigid cap 17 is adapted to be placed over the exposed end of the inner tube and over the open end portion of the casing, this cap being provided at its margin with an inwardly extending continuous rib 18 adapted to be placed in the depression 16. A nipple 19 is extended from the projecting end of the inner tube 15 and is adapted to extend through a central opening 20 in the cap 17 so as to be engaged by an air tube 21.

In using this form of device the inner tube is placed in position in the casing. The cap 17 is then placed over the nipple 19 so that its rib 18 will extend into the depression 16. The inner tube 15 is then inflated by means of air directed through the tube 21 and when this inner tube is inflated it will distend the casing 12 and also cause the open end portion of the casing as well as the projecting end of the inner tube 15 to bind tightly upon the inner surface of the cap 17, holding the rib 18 firmly interlocked with the depressed portion 16. Thus the parts will be held properly assembled as long as the inner tube is inflated.

Instead of using a single casing open at one end two similar opposed casings such as shown at 22 and 23 can be telescoped one into the other so as to completely house the inner tube 24. Another casing, closed at one end, can be slipped over the telescoping casings 22 and 23, as shown at 25. The open end portion of this outer casing 25 is adapted to project into a cap 26 corresponding with the cap 17 and through which the nipple 27 extends from the inner tube 24. Thus when the inner tube is inflated the parts of the casing will be distended, the open end portion of the outer casing binding tightly against the cap so as to properly engage the inwardly extending rib 28 at the edge of the cap.

Another form of the device, shown in Figure 3 consists of a casing 29 open at both ends. An airtight inner tube 30 is insertible into either open end of the casing 29 so as to completely fill the casing and to project beyond the open ends thereof and, as shown in Figure 6 the casing may be provided near its open ends, with annular depressions 33. Rigid caps 32 are adapted to be placed over the open portions of the casing; these caps are provided at

their margins with inwardly extending continuous ribs 34 adapted to be placed in the depressions 33. A nipple 31 is extended from either projecting end of the inner tube 5 30 and is adapted to extend through a central opening 35 in cap 32 so as to be engaged by an air tube for inflating the inner tube 30.

In using this form of device the inner 10 tube is placed in position in the casing, the cap 32 is placed over the nipple 36 so that its rib 34 will extend into the depression 33 and the other cap 32 is then placed so that its rib 34 will also extend into the 15 depression 33. The inner tube is then inflated by means of air directed through the tube 36 and when the inner tube 30 is inflated it will distend the casing 29 and also cause the open end portions of the casing as well 20 as the inner surfaces of caps 32, holding the ribs 34 firmly interlocked with the depressed portions 33. Thus the parts will be held properly assembled as long as the inner tube is inflated.

25 What is claimed is:

1. An air bag including a casing having an open end, there being an annular depression in the casing and adjacent said end, an airtight inner tube insertible into the 30 casing, a cap for housing the open end of the casing, an interior annular rib within and integral with the cap, said inner tube when inflated constituting means for distending the casing to grip the cap the de-

pression forming a seat for the rib, and a 35 nipple extending from the tube and through the cap for engagement by an air tube.

2. An air bag including telescopic casings each open at one end, said casings being oppositely disposed, an airtight inner tube 40 housed by the casings, a cap housing the open end of one of the casings, an interior annular rib within the cap, said inner tube when inflated constituting means for distending the casings to hold them assembled 45 with the cap, and a nipple extending from the inner tube and through the cap for engagement by an air tube.

3. An air bag including a casing having two open ends, there being depressions in 50 the casing and adjacent said ends, an airtight inner tube inserted into the casing, and caps for housing the open ends of the casing, means within the cap for seating in the depressions, said inner tube when inflated 55 constituting means for distending the casing to grip the caps, and a nipple extending from the air tight inner tube and through one of the caps for engagement by an air tube. 60

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAY H. SMITH.

Witnesses:

JOHN H. CRAEBES,  
FLOYD N. SMITH.