

No. 780,140.

PATENTED JAN. 17, 1905.

J. R. TAYLOR.
AIR TUBE FOR PNEUMATIC TIRES.
APPLICATION FILED APR. 16, 1904.

FIG. 1.

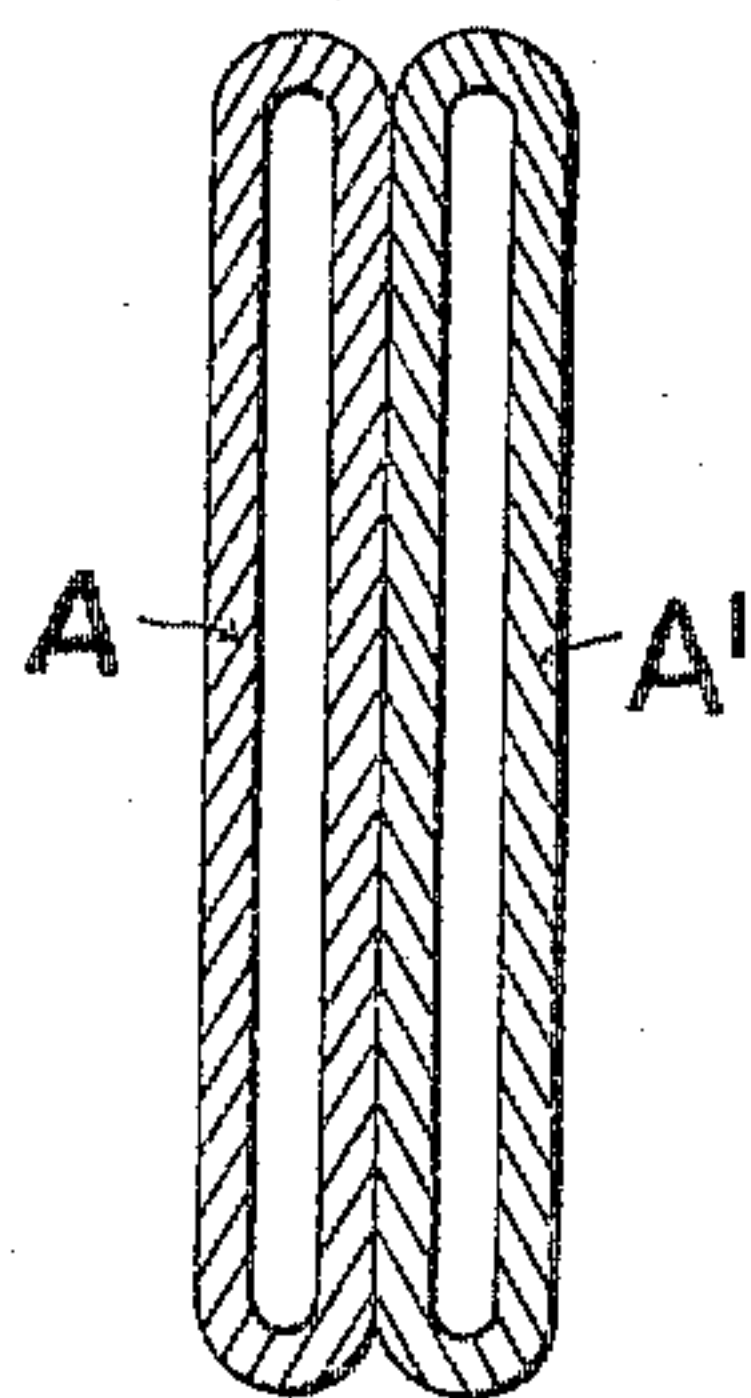
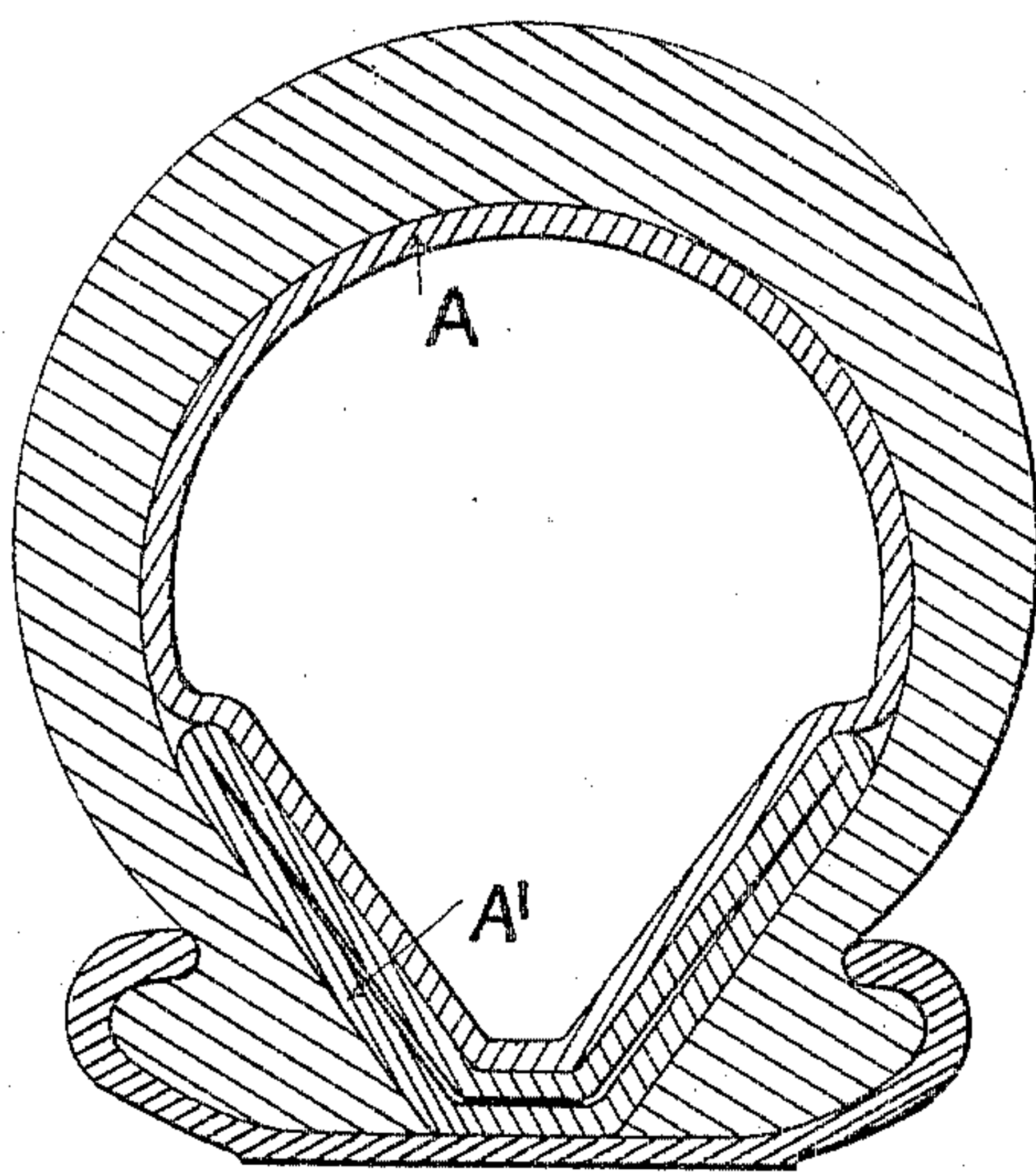


FIG. 2.



WITNESSES:

G. V. Symes.
Hedley J. Harrop.

INVENTOR

J. R. Taylor.

Per

Robert B. Phillips.

Attorney.

UNITED STATES PATENT OFFICE.

JOHN ROOTS TAYLOR, OF WANDSWORTH COMMON, ENGLAND.

AIR-TUBE FOR PNEUMATIC TIRES.

SPECIFICATION forming part of Letters Patent No. 780,140, dated January 17, 1905.

Application filed April 16, 1904. Serial No. 203,481.

To all whom it may concern:

Be it known that I, JOHN ROOTS TAYLOR, a subject of the King of Great Britain, residing at 75 Broomwood road, Wandsworth Common, in the county of Surrey, England, have invented a certain new and useful Improvement in Air-Tubes for Pneumatic Tires, (for which I have applied for Letters Patent in Great Britain, No. 6,358, bearing date March 17, 1904,) of which the following is a full and complete specification.

This invention relates to pneumatic tires; and it consists of an improved form and construction of air-tube for retaining the air-pressure in such tires, the object being to provide a duplex or double air-tube so constructed that on inflation of one of the compartments the said compartment, whichever it is, will always be exterior to the other compartment, with the result that the reserve compartment is retained in the position most secure from the liability to be punctured.

In the accompanying drawings, which illustrate this invention, Figure 1 is a view in transverse section of the improved tube deflated, and Fig. 2 is a view in transverse section of a pneumatic tire fitted with one of these improved tubes.

Throughout the views similar parts are marked with like letters of reference.

According to this invention the duplex air-tube is made of two distinct tubes A and A', which are attached to one another, as shown in Fig. 1, by cementation, solutioning, or other methods, preferably before they are subjected to the process of vulcanization, so that the wall between the two compartments is of double thickness and the superficial area of the said wall is not less than that of the remaining part of each tube. This duplex or double tube may be made up into an annular hoop either before or after the two parts are attached to one another. Each compartment or chamber of the double tube is provided with an air-valve of any suitable type, the

valves being arranged in close proximity to one another.

It is essential that when duplex or double air-tubes are used in pneumatic tires the one in use should be exterior to the one in reserve, which should lie next to the rim of the wheel in order that it may, as far as possible, be removed from the possibility of puncture, and it is owing to the fact that with duplex tubes as hitherto constructed there was no certainty as to the position the tube in use would occupy after inflation, both with respect to the uninflated tube and also with respect to the wheel-rim, that this type of air-tube has not heretofore been a success in practice. With a tube constructed according to my invention when either compartment is inflated it will form the exterior part of the hoop formed by the double tube, and the other compartment will always lie on the inner side of the said hoop, as shown in Fig. 2, owing to the fact that by reason of the material being elastic the annular hoop expands both transversely and circumferentially toward the point of least resistance—i. e., from the point of greatest resistance—which in this case is always the uninflated compartment of the tube, owing to the double thickness of the wall between the two compartments.

What I claim, and desire to secure by Letters Patent, is—

A duplex or double air-tube for pneumatic tires, each compartment of which is a complete tube, the two compartments being attached to one another throughout their lengths so that the wall between them is of double thickness and the superficial area of the said wall is not less than that of the remaining part of each tube, as and for the purpose set forth.

JOHN ROOTS TAYLOR.

Witnesses:

ROBERT E. PHILLIPS,
HEDLEY J. HARROP.