

No. 798,767.

PATENTED SEPT. 5, 1905.

H. J. DOUGHTY.  
RUBBER SHOE.  
APPLICATION FILED NOV. 4, 1901.

Fig. 1.

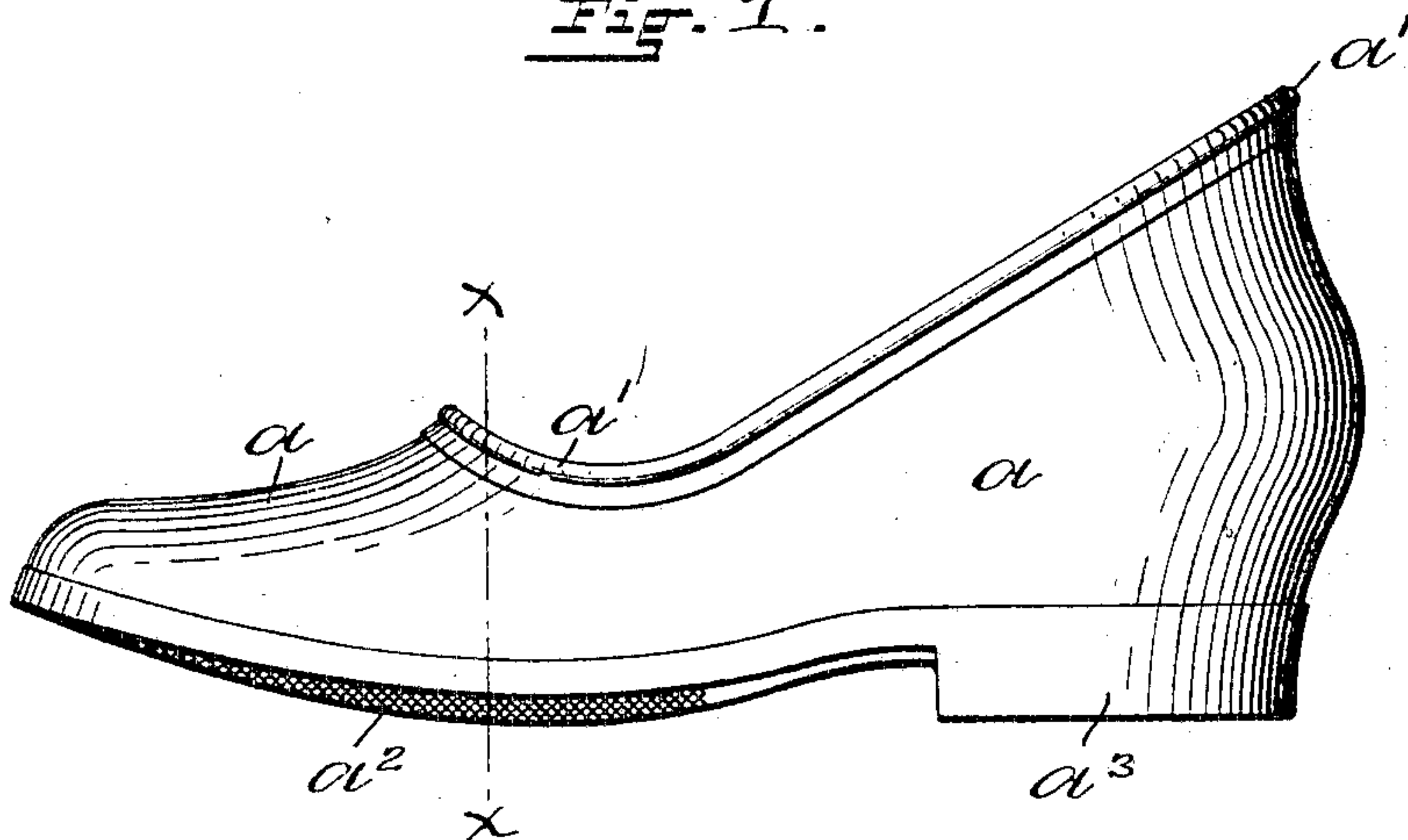
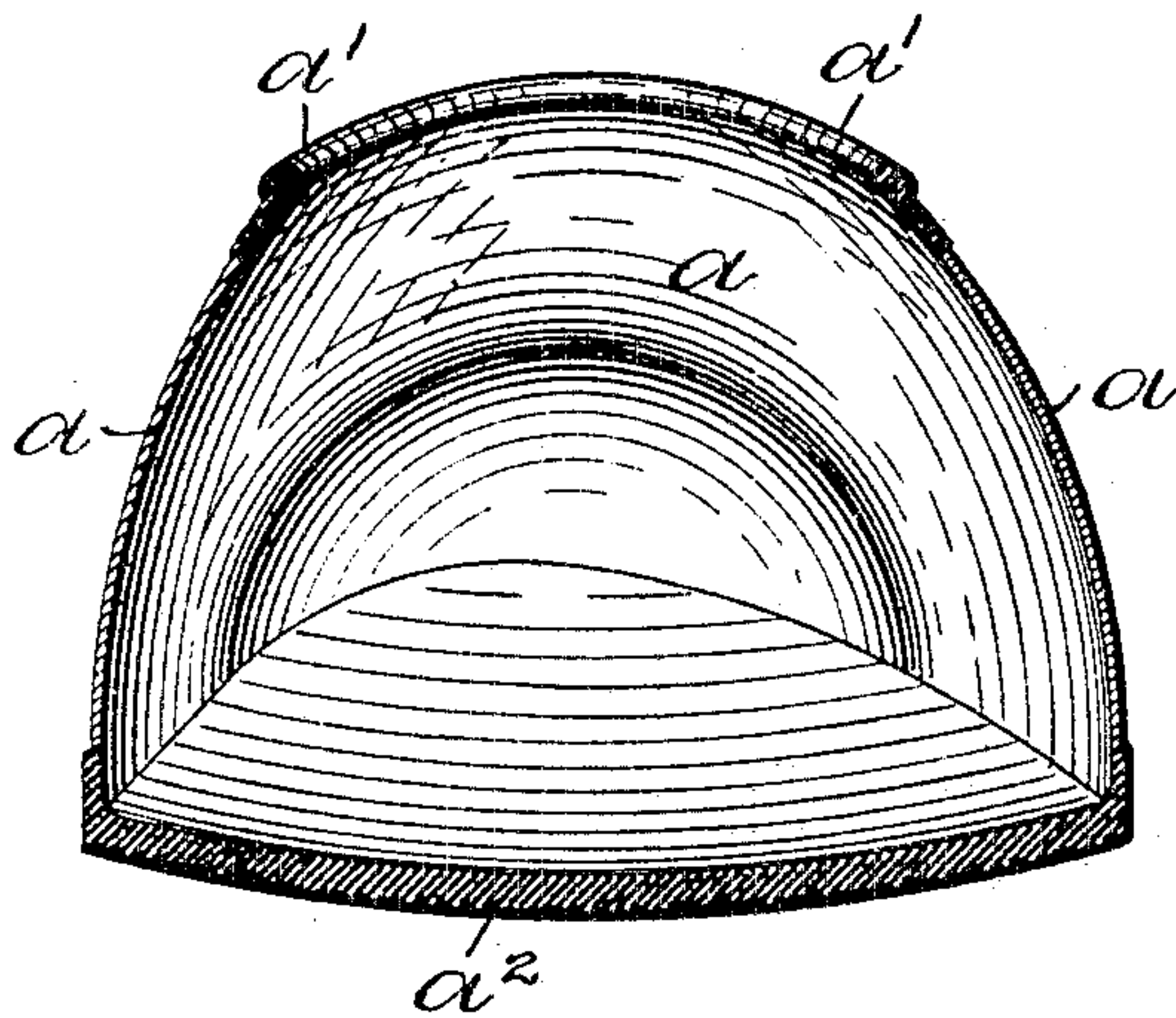


Fig. 2.



WITNESSES:

Chas. H. Luther Jr.  
Ada E. Hagerdy.

INVENTOR.

Henry J. Doughty  
by Joseph A. Miller & Co.  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

HENRY J. DOUGHTY, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO  
ATLANTIC RUBBER SHOE COMPANY, OF TRENTON, NEW JERSEY, A  
CORPORATION OF NEW JERSEY.

## RUBBER SHOE.

No. 798,767.

Specification of Letters Patent.

Patented Sept. 5, 1905.

Application filed November 4, 1901. Serial No. 81,010.

*To all whom it may concern:*

Be it known that I, HENRY J. DOUGHTY, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Rubber Shoes, of which the following is a specification.

Rubber shoes are usually designed for use as overshoes, worn over the shoe-clad foot. The margin of the shoe around the opening of the rubber shoe into which the shoe-clad foot is inserted, called the "mouth," is subjected to greater strain than other parts of the uppers of the shoe. The margin of the mouth must also fit tightly on the shoe-clad foot to prevent the admission of water, snow, or slush. The sole of a rubber shoe is subjected to greater wear than the uppers, which serve to cover and protect the uppers of the shoe-clad foot against moisture. A durable and practically waterproof rubber shoe should have dense durable soles, waterproof flexible uppers, and a strong durable margin adjoining the mouth of the shoe. Rubber shoes molded in heated dies have been subjected to practically uniform pressure and were of uniform density.

The object of this invention is to produce a molded rubber shoe in which part of the material is denser than the part forming the uppers of the shoe.

Figure 1 is a side view of my improved rubber shoe; and Fig. 2 is a transverse sectional view of the same, taken on line X X of Fig. 1.

Similar marks of reference indicate corresponding parts in both figures.

In the drawings, *a* indicates the upper of

the shoe; *a'*, the margin of the upper inclosing the mouth of the shoe; *a''*, the sole, and *a'''* the heel of the shoe.

By practical tests I have ascertained that rubber compounds when molded between two rigid surfaces while subjected to heat and pressure form when vulcanized a denser and stronger fabric than when the compound is not subjected to pressure or to a yielding pressure. It appears that the fumes of the vulcanizing agent in the compound more intimately unite with the particles of the compound when held between rigid surfaces. In carrying out my invention I therefore employ certain molds and forms whereby the margin of the upper inclosing the mouth of the shoe and also the sole are vulcanized under pressure, as is fully illustrated and described in Letters Patent issued to me March 17, 1903, and numbered 722,822.

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

1. A molded rubber shoe having the margin inclosing the mouth of the shoe and the sole portion denser than the uppers, as described.

2. A homogeneous rubber shoe having flexible uppers, the sole portion and the margin inclosing the mouth of the shoe being denser than the uppers, as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY J. DOUGHTY.

Witnesses:

ADA E. HAGERTY,  
JOSEPH A. MILLER, Jr.