

# UNITED STATES PATENT OFFICE.

AUGUSTUS O. BOURN, OF PROVIDENCE, RHODE ISLAND.

## IMPROVEMENT IN STEAM-PACKINGS.

Specification forming part of Letters Patent No. 127,555, dated June 4, 1872.

*To all whom it may concern:*

Be it known that I, AUGUSTUS O. BOURN, of the city and county of Providence in the State of Rhode Island, have invented a certain new and useful Improvement in Steam-Packing.

My improvement relates generally to that class of packing which is composed of rubber or other vulcanizable gum and any suitable textile matter or fabric, and to that particular "rope-like" class which is provided with an interior core or central foundation of vulcanizable caoutchouc or rubber compounds, and which is built up therefrom with surrounding layers or strips of textile fabric, saturated in vulcanizable-gum solutions, and subsequently wholly vulcanized. My invention consists in a novel core composed, in whole or in part of any suitable unvulcanizable-gum compound, of such a character that it will remain soft or semi-elastic while the remaining portion of the packing is being vulcanized by the action of a requisite degree of heat. By this means the packing is rendered more pliable than any other kind known to me, and it is thereby rendered capable of being more readily made to assume any desired form or to fill any peculiar-shaped space in which the packing is to be inserted.

On account of its peculiar pliability it is practicable to make the packing of straight-cut sheets of cloth or duck, and have the practical results equally as satisfactory as if the same had been cut and laid in "biased-cut" strips as has heretofore been deemed essential; therefore the cost of manufacture is materially

lessened without deteriorating, in any manner, the practical value of the packing.

Persons skilled in the art of working gums are too familiar with the great variety of unvulcanizable-gum compounds to require any specific formula for use in this connection, as it is only essential that the core shall be soft and pliable enough to readily assume and retain any desired shape, and at the same time be sufficiently solid to properly back up or sustain the structure, and thus perform the required functions of a central foundation.

In practice I have found that a compound composed of eight pounds of new rubber, forty pounds of old or "waste" rubber that has once been vulcanized, eight pounds of whiting, and two pounds of litharge is well adapted to the use specified.

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

The improved steam-packing herein described, consisting of a central foundation or core, composed wholly or in part of an unvulcanizable-gum compound, surrounded by continuous layers of textile fabric saturated with vulcanizable-gum solutions, or combined with vulcanizable-gum compounds, and subsequently subjected to the hardening action of heat, as and for the purpose specified.

A. O. BOURN.

Witnesss:

ANDREW R. TROTTER,  
W. W. BROWN, Jr.