

# UNITED STATES PATENT OFFICE.

GEORGE H. FOWLER, OF NEW HAVEN, CONNECTICUT.

## IMPROVEMENT IN THE MANUFACTURE OF INDIA-RUBBER SHOES.

Specification forming part of Letters Patent No. 54,883, dated May 22, 1866.

### *To all whom it may concern:*

Be it known that I, GEORGE H. FOWLER, of the city and county of New Haven, in the State of Connecticut, have invented a new and useful Improvement in Elastic and Ventilating India-Rubber Overshoes, &c.; and I do hereby declare that the following is a full, clear, and exact description of the construction, character, and operation of the same.

My improvement consists in making the shoe of three thicknesses—to wit, one of napped or furry woolenet or other analogous substance, one of plain or smooth cottonet or other analogous substance, and one of india-rubber—in such a manner that the india-rubber will retain its elasticity and smoothness, while the nap or pile on the woolenet will allow of ventilation, as well as tend to keep the feet warm.

I coat the plain or smooth side of the woolenet with india-rubber or cement, and coat both sides of the plain cottonet, so that it will adhere to both the woolenet lining and to the india-rubber outside or external part. I then make up the shoe by fitting the woolenet onto the last, both as sole and uppers, with the napped, furry, or piled side toward the last. I then fit on the cottonet, which, by reason of the rubber or cement, will adhere to the plain or smooth surface of the woolenet lining, and forms on its outer side a plain or smooth surface, on which I fit the india-rubber (sole and uppers) in the usual way. I then subject the whole to heat in the vulcanizing-oven, and finish the shoe in the usual way, when it will exhibit all of the yielding and elastic character due to the india-rubber, and possess the ventilating principle and warmth which are due to the napped or shaggy woolenet.

If the napped woolenet lining is omitted,

the benefit of the ventilation is not secured, and if the plain cottonet is omitted a smooth surface cannot be given to the outer surface of the india-rubber, as it will conform to the inequalities of the napped or shaggy surface of the woolenet; but with the plain cottonet between the woolenet lining and the india-rubber outside I can make as neat and smooth a finish as though the napped or furry woolenet had not been used, and as both the cottonet and woolenet are elastic I preserve all of the yielding and elastic character of the india-rubber.

Instead of the napped woolenet I may use any other analogous substance for the ventilating-lining which is knit or woven so loosely as to possess the elasticity, and has a nap or pile on one side sufficient for insuring suitable ventilation; and instead of the plain cottonet I may use any other fabric which is sufficiently smooth and elastic; but I prefer the napped woolenet and plain cottonet, as before described. And instead of putting on the three thicknesses separately, any two or all three of them may be put together and then put onto the last; but I prefer putting each part on separately, as before described.

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

The napped woolenet or its equivalent, in combination with the cottonet or its equivalent and the india-rubber, for making an elastic ventilating-shoe, when they are prepared, fitted together, and finished substantially as herein described.

GEORGE H. FOWLER.

Witnesses:

A. LE TRAIN,  
R. FITZGERALD.