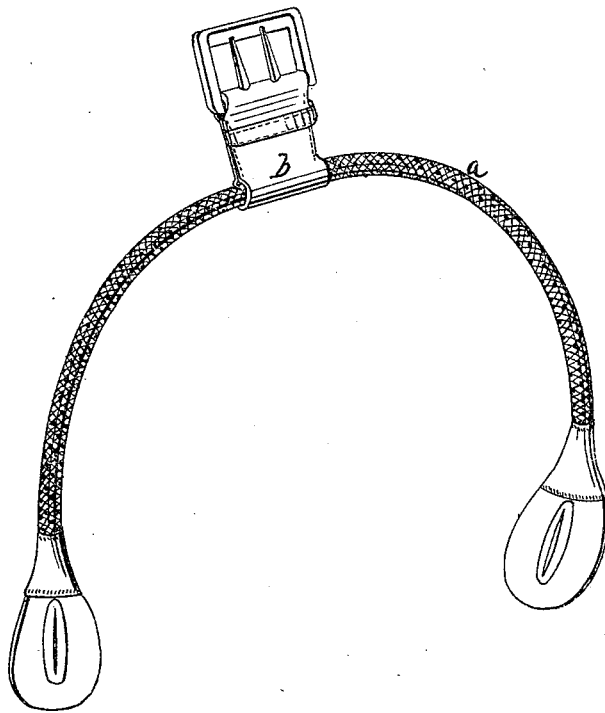


N. Goodyear.
Suspenders.

N^o 6786.

Patented Oct. 16. 1849



UNITED STATES PATENT OFFICE.

NELSON GOODYEAR, OF NEW YORK, N. Y.

ELASTIC CORD FOR SUSPENDERS.

Specification of Letters Patent No. 6,786, dated October 16, 1849.

To all whom it may concern:

Be it known that I, NELSON GOODYEAR, of the city, county, and State of New York, have invented certain new and useful Improvements in Elastic Suspenders, and that the following is a full, clear, and exact description of the principle or character which distinguishes them from all other things before known, and of the manner of making, constructing, and using the same, reference being had to the accompanying drawing, which represents a pair of suspenders on my improved plan.

The first part of my invention consists in making elastic cords for the ends of suspenders by braiding silk, cotton, or other threads around and over cords of what is known under the general appellation of metallic or vulcanized india rubber, while the said rubber cords are held under partial tension, so that when the said cords are liberated they shall by contracting draw together the threads forming the fabric, and present the appearance of a closely braided fabric, the india rubber being still held under partial tension by the threads braided over it, thus producing elastic cords that will resist a greater force for a given diameter than when made in any other way. And the second part of my invention consists in combining elastic cords made in the manner above described with the button holes and the shoulder straps of suspenders, by passing the said cords around rollers, or through loops secured to the ends of the shoulder straps.

I take cords made of vulcanized or metallic india rubber of about one eighth of an inch in diameter more or less, and stretch them to about half the distance that their elasticity will permit them to be stretched without breaking and while they are thus stretched, I cover them with braid made of silk, cotton, or other threads in the usual or any desired manner of braiding, taking care to secure the braid to the ends of the india rubber. When this is done the cords are liberated and the tension of the india rubber in contracting has the effect to draw together the threads of the braid to give the article thus produced the appearance of a very closely braided cord; but at the same

time the contact of the threads of the braid prevents the india rubber cord within from returning to its original length, and therefore it is held in a state of tension, thus requiring a greater force to stretch it and therefore presenting a greater resistance to the pull for a given diameter of cord than if the braid were put on india rubber cords not in a state of tension, as heretofore practiced for other purposes. The pieces of cord thus manufactured are represented at (a) in the accompanying drawing. They are passed through loops (b) at the ends of the shoulder straps and their ends are then properly secured to the buttons of pantaloons. The elasticity of the cords (a) will yield to the various pulls consequent on some of the motions of the body, while the slipping of these cords (a) in the loops will always keep an equal pull on all the buttons and thus give an equal support to the pantaloons. Instead of connecting the cords to the shoulder straps of the suspenders by passing them through loops, they may be passed around rollers in the same manner as suspenders have heretofore been made with non-elastic cords.

Suspenders made with the shoulder straps elastic are found to be objectionable for the reason that in yielding to the motions of the body they work on the shoulders and produce what is to most persons a disagreeable sensation; and when the elastic medium has been placed at the ends to avoid this, either the medium thus placed has been clumsy, or has not afforded sufficient resistance to give a comfortable support to the pantaloons. But by my improved plan I avoid all these objections.

It will be obvious that one part of my invention may be employed without the other by attaching my improved elastic cords to other parts of the suspenders, but the best result will be produced by applying them as specified.

I do not claim simply covering threads of metallic or vulcanized rubber with braid, as this has long since been done, but not while the india rubber is in a state of tension; nor do I claim simply combining non-elastic cords with the button hole pieces and with the shoulder straps of suspenders by

passing such cords through loops or around rollers attached to the shoulder straps, as this has also long been known, but,

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

The making of elastic cords for suspenders by braiding or winding silk, cotton, or other threads, around cords of metallic or vulcanized india rubber while in a partially dis-

tended state, substantially as described, 10 whereby springs of greater resisting force are produced than by any other known plan.

NELSON GOODYEAR.

In presence of—

O. P. BROWN,

C. W. M. RELIER.