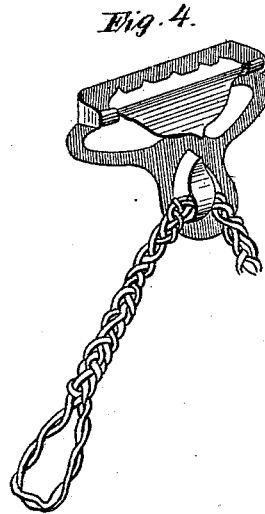
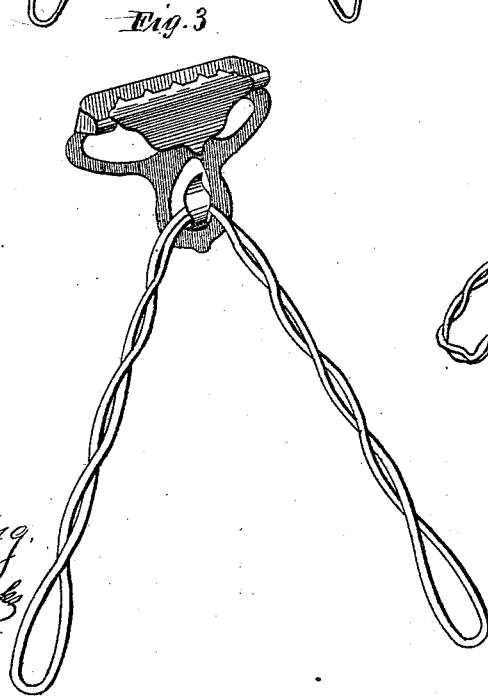
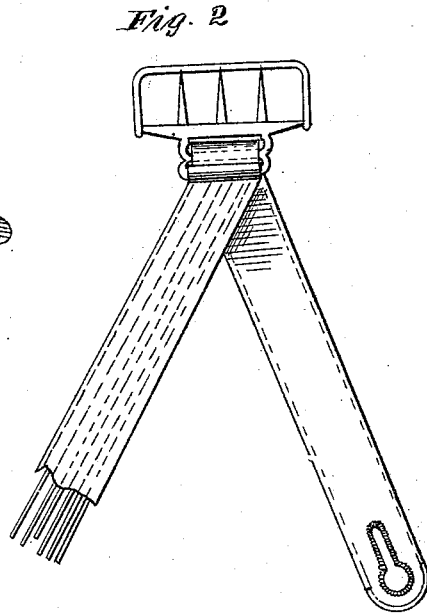
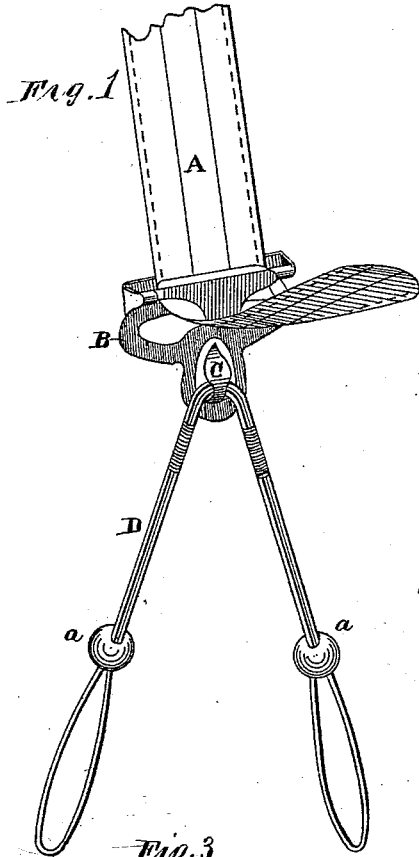


H. M. HEINEMAN.
Suspenders.

No. 211,999.

Patented Feb. 4, 1879.



Witnesses
Geo. H. Strong
Frank G. Brooks

Inventor
Harry M. Heineman

UNITED STATES PATENT OFFICE.

HARRY M. HEINEMAN, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN SUSPENDERS.

Specification forming part of Letters Patent No. **211,999**, dated February 4, 1879; application filed December 18, 1878.

To all whom it may concern:

Be it known that I, HARRY M. HEINEMAN, of the city and county of San Francisco, and State of California, have invented a new and useful Improvement in Suspenders; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings.

My invention relates to certain improvements in suspenders for gentlemen's or ladies' use, and that class of fabrics in which the parts which sustain the principal strain have hitherto been formed of webbing or leather; and it consists in the employment of round or flat steel or other wire, either covered or uncovered, or of a flat web composed partly or wholly of wire, in combination with the elastic or other webbing, whereby a strong and rigid connection is substituted for the yielding parts.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a view of my invention as applied to a suspender. Fig. 2 shows the application of a flat web in which the warp is composed of wire. Fig. 3 shows the application of twisted wires. Fig. 4 is a modification, showing braided work.

In ordinary elastic suspenders the straps attached to the buckles in front and to the meeting ends behind are made of leather or some textile fabric. Occasionally it is a combination of both, the button-holes in the cloth sometimes being edged with leather. These straps are usually the first thing to break or wear out, either by the button-holes breaking away or the strap separating where it is led over the catch on the buckle. No matter of what strength the suspender itself is made, these straps are sure to give out first, and even with the finest suspenders the straps soon give out. To obviate this difficulty I

propose to make these straps or connecting-pieces of wire, either covered or uncovered, and of braided or twisted strands, or flat web of wire, so that they will withstand the strain.

To the suspender A is buckled the usual buckle B, having a hook, C, by which the straps are secured to the buckle. These straps D, I form of round or flat steel or other wire, which may be covered, if necessary, with web or twist, and may be attached to the usual elastic suspender. By this means the elasticity of the suspender remains as before, while the strength of the straps is greatly increased.

When made of flat wire the bight is caught over the hook on the buckle and the ends hooked over the buttons. A runner or clasp, *a*, is then slid down, so as to keep the wire loop over the button.

When made of twisted wire the bight or center of the strap is wound around a ring, which may be attached to the hook. The two ends are then led down to the buttons.

If great neatness is required I can make a combination fabric, the warp of which is wire and the weft of fibrous material or cord, so woven in with the wire as to conceal it.

By this construction I provide a neat, strong, and serviceable fastening, which will outlast the suspender itself.

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

As a new article of manufacture, a suspender provided with pliable tensionally-inelastic metallic loop-fastenings, connecting the webbing with the garment, as set forth.

In witness whereof I have hereunto set my hand.

HARRY M. HEINEMAN.

Witnesses:

GEO. H. STRONG,
FRANK A. BROOKS.