

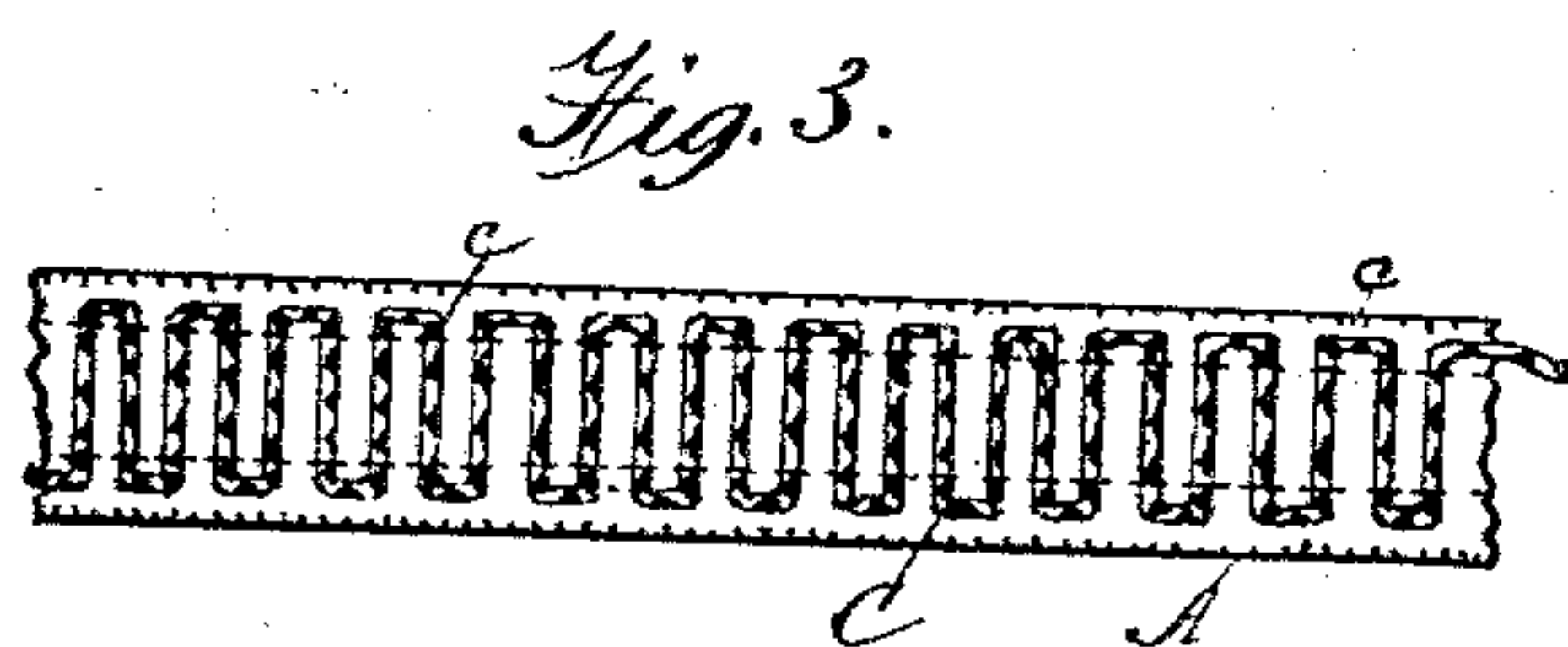
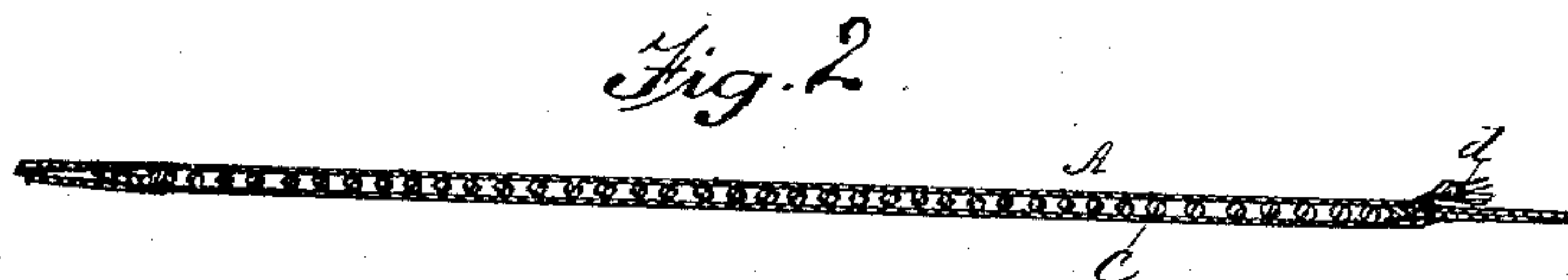
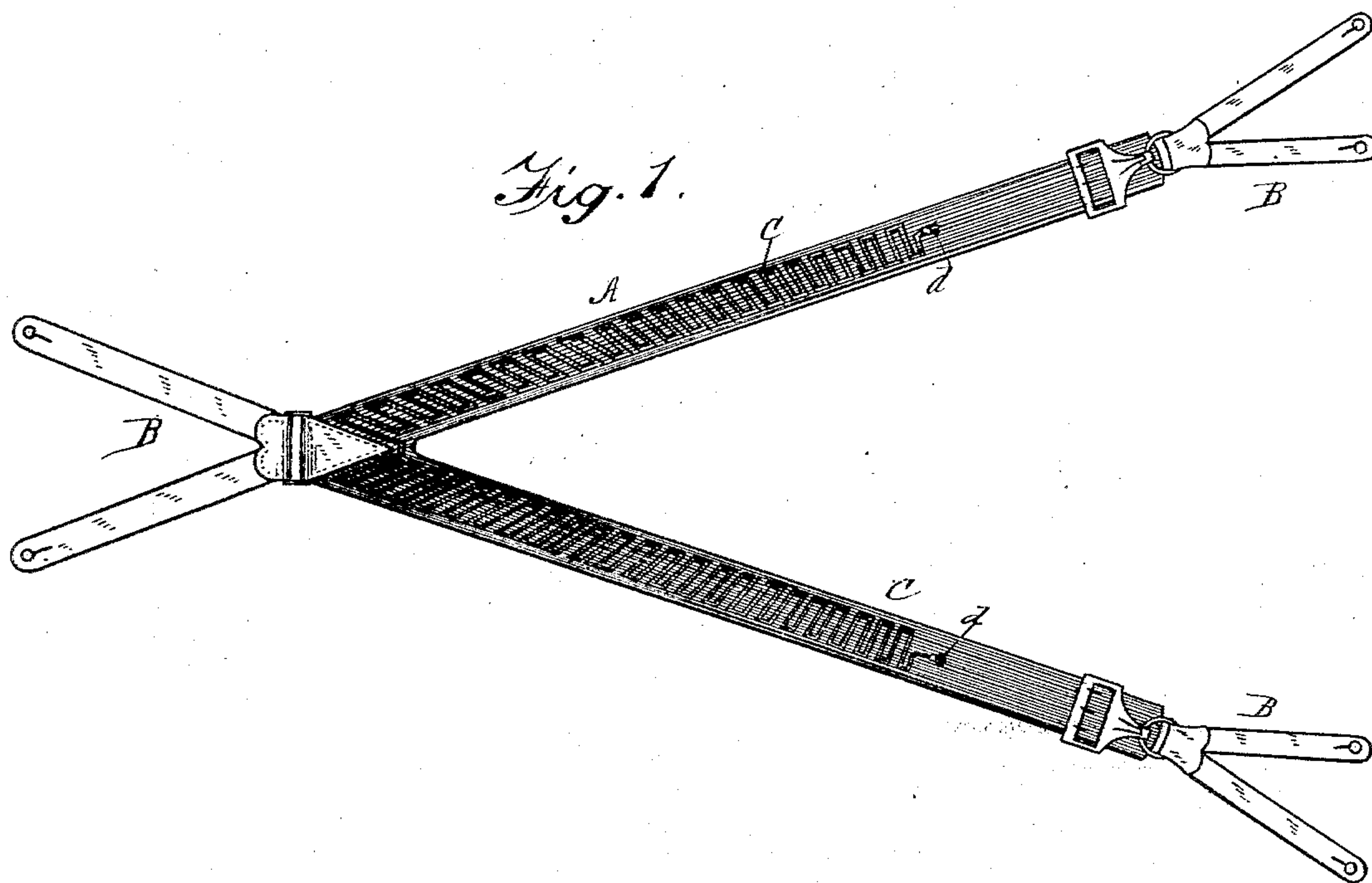
(No Model.)

G. C. HALE.

SUSPENDERS.

No. 323,416.

Patented Aug. 4, 1885.



Attest:  
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# UNITED STATES PATENT OFFICE.

GEORGE C. HALE, OF KANSAS CITY, MISSOURI.

## SUSPENDERS.

SPECIFICATION forming part of Letters Patent No. 323,416, dated August 4, 1885.

Application filed February 3, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE C. HALE, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Suspenders, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in suspenders, having for its object to provide a suspender with a cord so secured thereto or formed therewith as to constitute a part of the same, and to be readily and easily detached therefrom, whereby, in the event of a person being confined to a burning building and having all of the usual means of escape cut off, the cords can be disengaged from the suspenders and lowered to the ground to receive a rope, and thus enable the person to effect his escape, all as hereinafter fully set forth and claimed.

In the drawings hereto attached, which form a part of this specification, Figure 1 is a plan view of a suspender spread apart and having my improvement applied thereto. Fig. 2 is a longitudinal section of one of the shoulder-straps, having the cord woven among the threads composing the suspenders. Fig. 3 is a detached plan view of a portion of one of the supporting-straps having the cords arranged in zigzag lines and stitched thereto.

Referring to the drawings, in which like letters of reference indicate like parts, A A designate the supporting or shoulder straps, having the ends B B, of any preferred or suitable construction, either rigidly or detachably secured thereto.

C designates a cord of silk, hemp, or any other preferred strong material, folded or woven in among the longitudinal threads or warp of the suspender during the process of weaving thereof, in curved, zigzag, or waved lines; or the said cord may be secured to the exterior surface of an ordinary suspender in curved or zigzag lines by stitches c, as shown in Fig. 3. The cord is secured or folded in among the warp of the suspender from a point near the juncture of the strap with the buckle of the end, and is in one piece, running along the length and from side to side, or transversely across in curved or zigzag lines of one of the straps of the suspender until it reaches the

point of juncture with its fellow strap, where said cord is extended to the said fellow strap in a manner similar to that just described. The extremities or ends of the cords project through the fibers of the suspender, and are provided with a knob, d, of any suitable or preferred design.

The cord, before being secured or woven in the suspender, is treated chemically to render it non-combustible and fire-proof, thus obviating the danger of the burning of the cord when passed through fire issuing from the windows of the building from which escape is sought.

I have found by experimenting that from fifty to one hundred feet, or even more, of the cord can be secured to the suspender in the manner heretofore described.

The cord can be secured or woven in the suspender after fanciful designs or patterns which individual taste may dictate, and when it is desired to detach the cord it is only necessary to pull upon the knob or handle thereof.

It is obvious that the cord can be detached with equal facility from the stitches when secured to a suspender by that means, it being only necessary to pull upon the cord with sufficient force to break the stitches.

The operation of my invention is obvious from the foregoing description, and need not be further described.

I am aware that modifications in the form and proportion of parts and of the means for securing the cord to the suspender can be made without departing from the principle or sacrificing the advantages of my invention—as, for instance, the strap may be made in the form of a hollow sheath and adapted to receive and inclose the cords, the ends thereof being exposed, as described.

It will be observed that by securing the cord to the suspender as heretofore described the necessary degree of elasticity thereof is not interfered with, owing to the tortuous course of the cord when combined with or secured to the suspender.

It is obvious that the cord may be needed for various other uses than that heretofore stated.

The cord is in different colors at intervals along its length, or in one continuous color, as preferred, and is secured to the exterior



surface of the straps in preferably zigzag lines in the shape of series of figures or initial letters, thus giving the straps an ornamental and beautiful appearance. The cord also serves  
5 to increase the strength and durability of the straps, owing to the tortuous course and the wear they receive.

The cord can be so shaped and secured to the suspender as to present an ornamental external appearance, and any preferred design or  
10 figure can be made.

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

As an improved article of manufacture, a 15 suspender provided with a cord secured to or housed within the strap of the suspender in a curved or folded position and adapted to be withdrawn therefrom, substantially as and for  
20 the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE C. HALE.

Witnesses:

L. B. EVELAND,  
H. G. CRAIN.