

(No Model.)

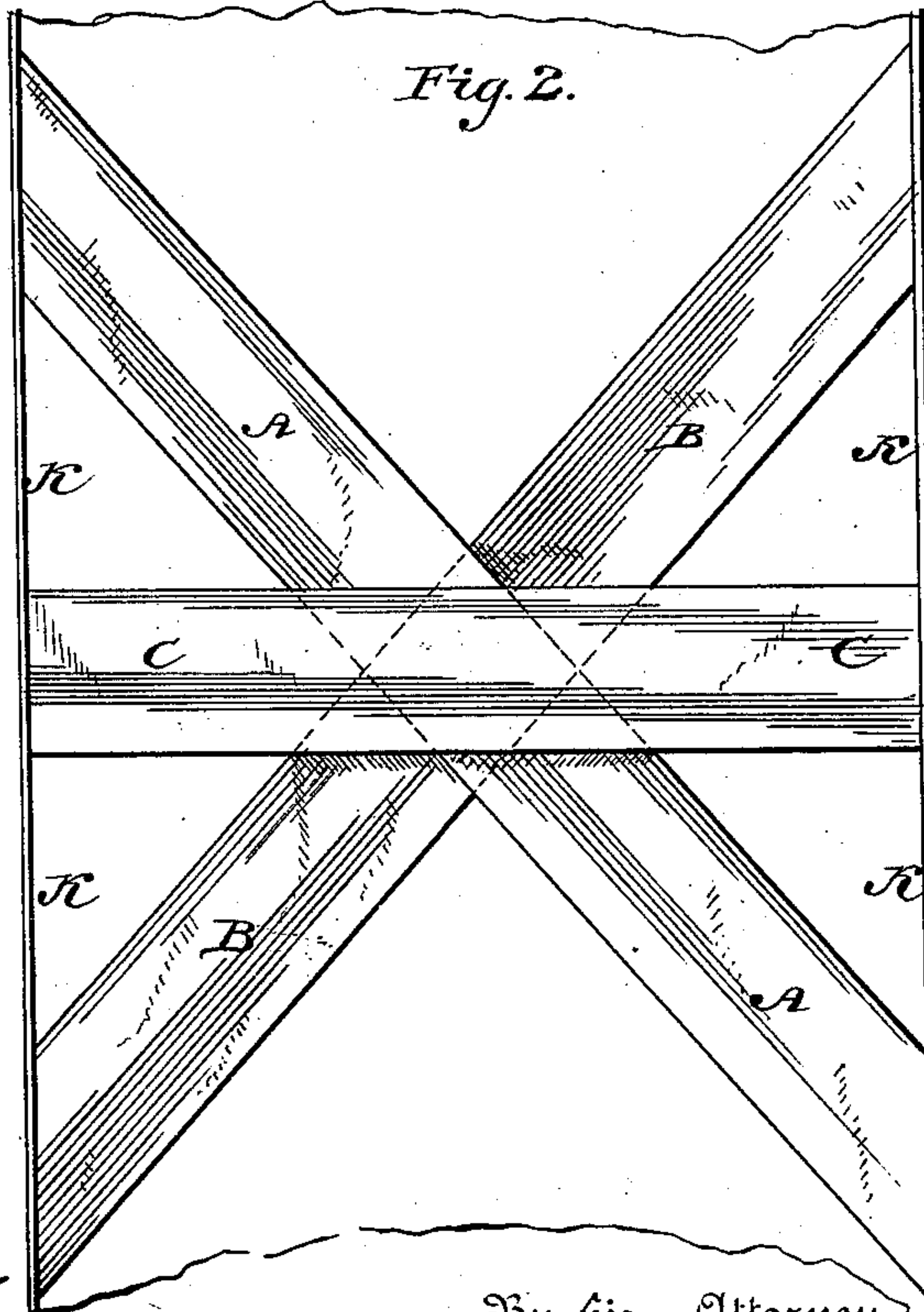
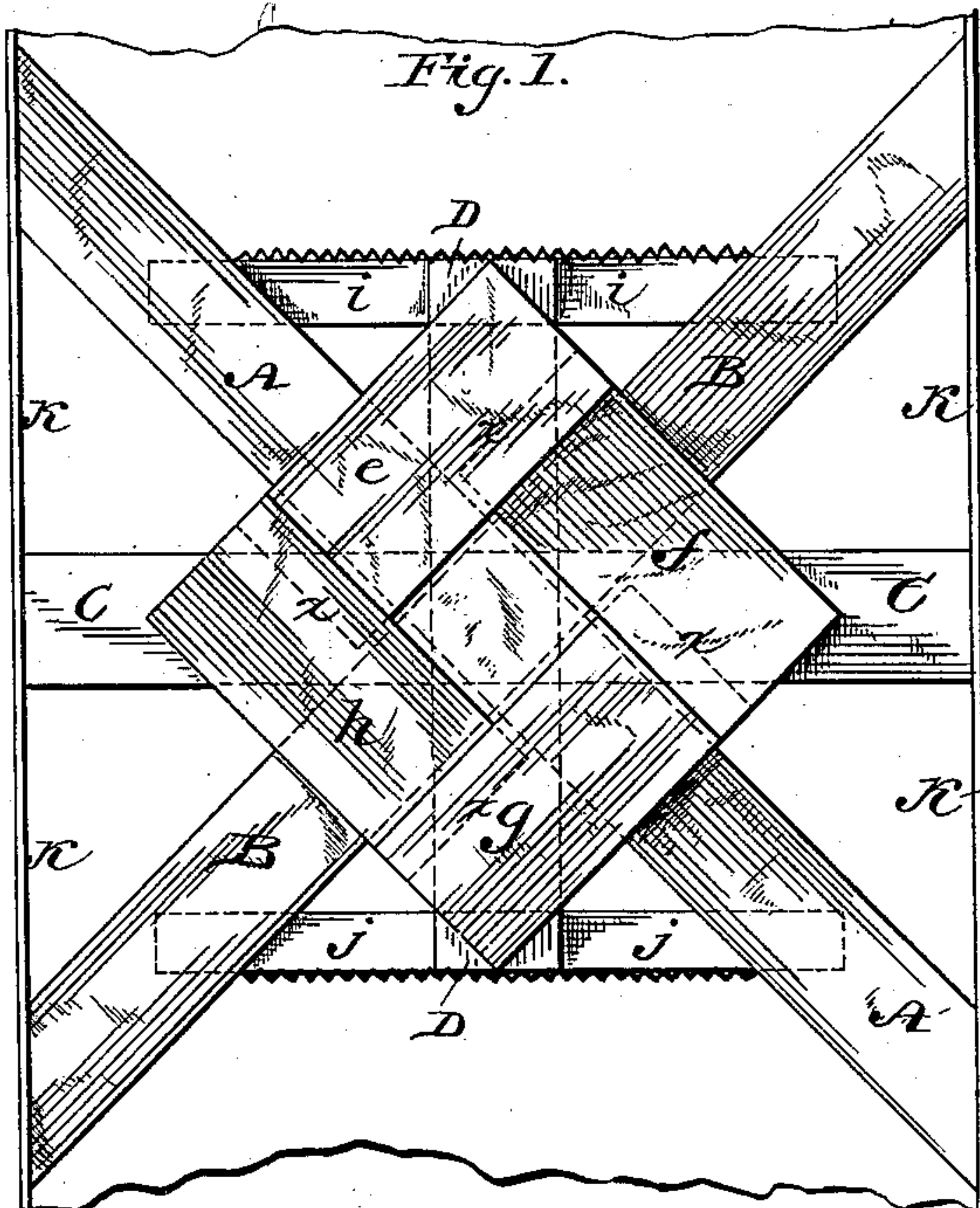
2 Sheets—Sheet 1.

H. T. CAULLET.

PANTALOONS.

No. 365,296.

Patented June 21, 1887.



Witnesses

H. M. Elworth,
Edu. S. Hutchins.

Inventor
Henry T. Caullet.

By his Attorney

J. C. Lowthorpe

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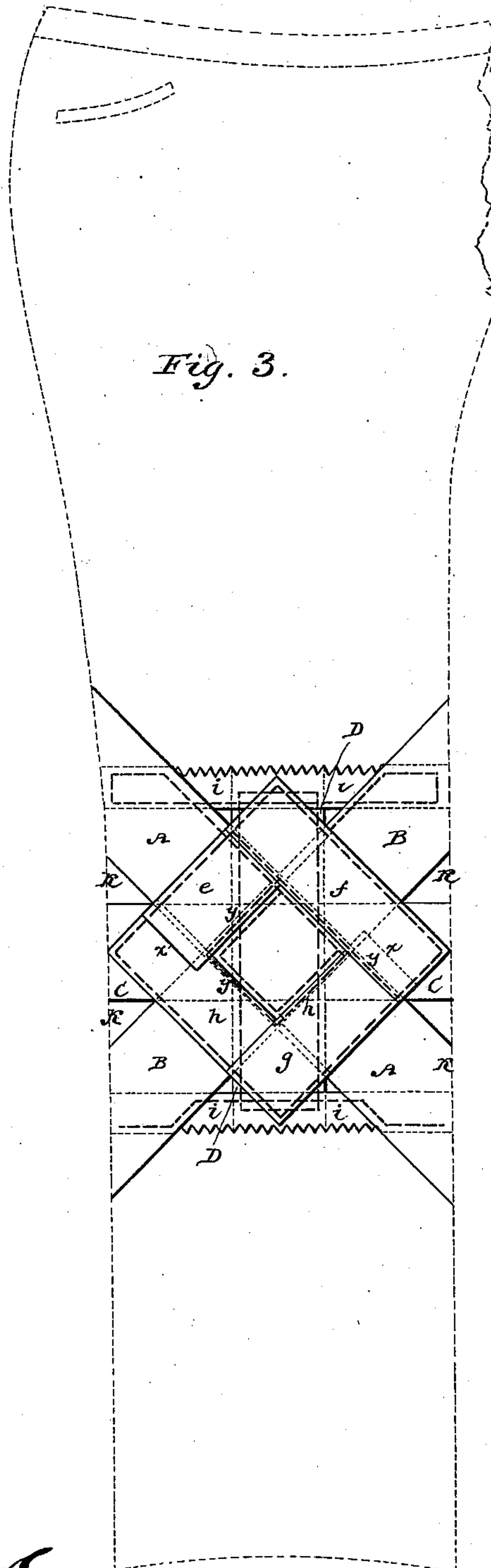
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H. W. Elmore,
Geo. G. D. Mitchell,

Inventor
H. T. CAULLET.

By his Attorney

J. C. Lowthorpe

UNITED STATES PATENT OFFICE.

HENRY T. CAULLET, OF TRENTON, NEW JERSEY.

PANTALOONS.

SPECIFICATION forming part of Letters Patent No. 365,296, dated June 21, 1887.

Application filed March 9, 1887. Serial No. 230,173. (No model.)

To all whom it may concern:

Be it known that I, HENRY T. CAULLET, a citizen of the United States, residing at Trenton, in the county of Mercer and State of New Jersey, have invented certain new and useful Improvements in Knee-Protected Pantaloons; and I do hereby declare the following to be such a full, clear, and exact description of my invention as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in knee-protectors for pantaloons, and is designed for furnishing a flexible, light, and inelastic bearing-surface for the knee, thus relieving the cloth of which the garment is made from all strain at the knee when the limb is bent.

Heretofore there has been universal complaint of the stretching and bagging of pantaloons at the knees. This stretching and bagging often results from a few hours' wear, and gives the cloth a permanent set, and is due to the elasticity of the cloth of which the garment is made and to the fact that the strain produced by the knee acts in several directions upon the threads running and crossing each other in lines diagonal to the direction of the strain. By means of my invention I am enabled to remove the strain at the knee entirely from the cloth, excepting at the side seams of the leg, where there is much less chance for giving way or stretching, and throw it upon bands placed so as to sustain the strain by threads running in the direction of the strain. This result I accomplish by means of the devices shown in the accompanying drawings, in which—

Figure 1 represents a plan view of a knee-protector with main and supplementary bands, and Fig. 2 a modification thereof. Fig. 3 indicates the location of my knee-protector with respect to the trousers-leg.

In the drawings, A A, B B, C C, and D D represent main bands; *e, f, g, and h*, supplementary bands; *i i* and *j j*, guard-bands, and K K K K the side seams of the leg N of the garment.

The bands of the protector are made of any light, strong, flexible, and inelastic material, such as holland, silesia, &c. This material is cut in bands of two inches or more in width,

the cuts being made parallel to the warp-threads of the band. Two of these bands, A A and B B, are cut of a sufficient length to cross each other at about right angles and reach with their ends the side seams of the leg of the garment, into which they are stitched, and the band C C is cut of a length a little greater than the piece of cloth forming the front side of the leg of the garment. The band C C is placed relatively to the bands A A and B B, as shown in Figs. 1 and 2. The band D D is placed at right angles with the band C C, and is stitched at its ends to the guard-bands *i i* and *j j*, which guard-bands are attached at their ends to the bands A A and B B, as shown in Fig. 1.

In order to equalize all irregular and cross strains and throw them upon the main bands to the best advantage, I introduce the supplementary bands *e, f, g, and h*. These are short bands, stitched to each other and to the main bands A A, B B, C C, and D D, and so arranged as to make as few thicknesses of material as possible together at any one point.

The dotted lines *x x x x* show the ends of the supplementary bands lying under the sides of the supplementary bands next to them and at right angles therewith. The bands being arranged as shown in Fig. 1, and above described, they are stitched together at all their contiguous sides and edges. They are then laid upon the cloth of the garment over that part which will cover the knee, and the bands A A, B B, and C C are stitched at their ends in the side seams of the leg of the garment K K K K. The supplementary bands *i i* and *j j* are notched or scalloped on their outer edges, to enable the foot to pass the bands without catching in them when the garment is being drawn on or off the leg. When the garment is worn, the bands being next to the knee take the strain from the cloth of the garment where it is weakest and draw always upon the seams K K K K, where the elasticity is very slight and not sufficient to allow the garment to lose its shape. The various bands being so arranged as to give the necessary strength in every direction without undue multiplication of plies of material at any one point, discomfort from heat is obviated.

The supplementary bands *e, f, g, and h* and

the main band D D and guard-bands *i i* and *j j* may be dispensed with, and only the main bands A A, B B, and C C used with beneficial results in the manner shown in Fig. 2 of the drawings; but in my experiments I have found that the best results are obtained from the construction shown in Fig. 1.

In Fig. 3 I have shown in dotted outline one leg of a pair of pantaloons and my improved knee-protector located at the knee portion thereof. It will of course be understood that the knee-protector is located within the pantaloons-leg.

The heavy dotted lines in Fig. 3 indicate the stitches whereby the several parts of the knee-protector are united.

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

1. A pair of pantaloons provided with a knee-protector, consisting of bands of light, strong, and inelastic woven fabric cut parallel to the lines of the long threads thereof, said bands crossing each other and connected with the legs of the pantaloons at the side seams, substantially as described.

2. A pair of pantaloons provided with a

knee-protector, consisting of main bands of light, strong, and inelastic woven fabric cut parallel to the lines of the long threads thereof, said main bands crossing each other and connected with the legs of the pantaloons at the side seams, and supplementary bands stitched across and uniting the main bands, substantially as described.

3. A pair of pantaloons provided with a knee-protector, consisting of bands of inelastic material, said bands crossing each other and connected with the legs of the pantaloons at the side seams, substantially as described.

4. A pair of pantaloons provided with a knee-protector, consisting of intersecting main bands sewed into the side seams of the pantaloons and supplementary pieces sewed across and upon said main bands, the upper and lower of said supplementary bands being provided with scalloped edges, substantially as described.

In testimony whereof I have hereto affixed my signature in the presence of two witnesses.

HENRY T. CAULLET.

Witnesses:

EDWIN ROBT. WALKER,

G. D. W. VROOM.