

(No Model.)

E. W. WALTHER & A. W. STREET.
TROUSERS.

No. 514,576.

Patented Feb. 13, 1894.

Fig. 1.

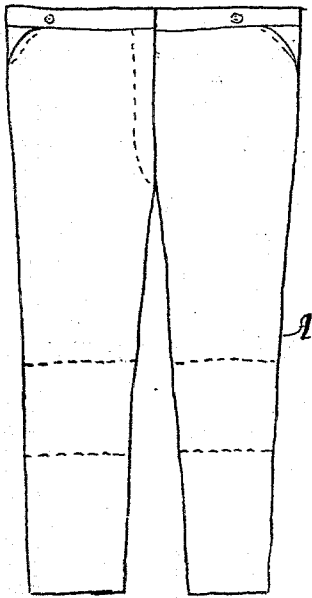


Fig. 2.

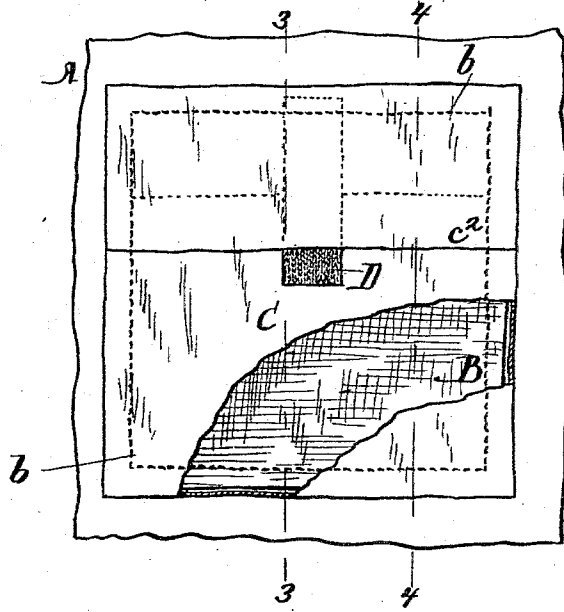


Fig. 3.

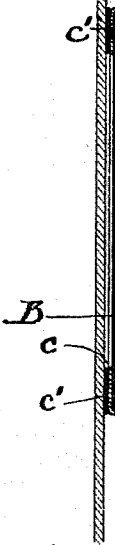


Fig. 4.



Fig. 5.

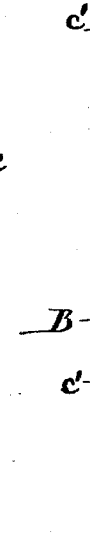
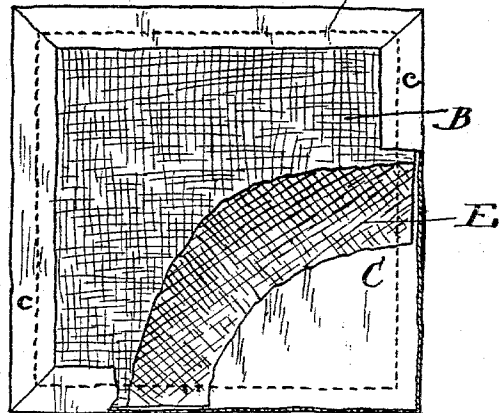


Fig. 6.



Witnesses:

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UNITED STATES PATENT OFFICE.

EMIL W. WALTHER AND ARTHUR W. STREET, OF CHICAGO, ILLINOIS.

TROUSERS.

SPECIFICATION forming part of Letters Patent No. 514,576, dated February 13, 1894.

Application filed February 27, 1893. Serial No. 463,912. (No model.)

To all whom it may concern:

Be it known that we, EMIL W. WALTHER and ARTHUR W. STREET, citizens of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Trousers, of which we do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

In the manufacture of trousers it has been heretofore proposed to provide each of the knee portions with a stay strip of stout fabric extending a slight distance above and below the knee so as to receive the strain incident to the bending of the wearer's knees. In practice, it is found that with such construction, the stay strip binds over the knee as the wearer sits down and after short wear such stay strip, even if made of very stout material, becomes distended so as to be of no further use. We have found that this objection to the old style of stay strips can be in great measure overcome by placing upon the inner face of such strip a strip of fabric attached in such manner that it is free to slip upon the face of said stay strip, said inner fabric being adapted to first receive the strain incident to the bending of the wearer's knee and being provided with a piece of elastic material which while yielding to the bending of the knee will serve to draw upward the portion of the trousers below the knee and so relieve the strain, it being well understood that by drawing up such lower portion of the trousers as the knee is bent the strain upon the cloth is greatly lessened.

Our invention consists in the novel features of construction hereinafter described, illustrated in the accompanying drawings and particularly defined in the claims at the end of this specification.

Figure 1 is a view of a pair of trousers, the improved means for preventing the stretching of the trousers being indicated in dotted lines. Fig. 2 is an inside view of the knee portion of the trousers from our improved means attached thereto parts being broken away for better illustration. Fig. 3 is a sectional view on line 3—3, Fig. 2. Fig. 4 is a sectional view on line 4—4, Fig. 2. Fig. 5 is a sectional

view showing the form of our invention illustrated in Fig. 6. Fig. 6 is a face view of the form of our invention, illustrated in Fig. 5, parts being broken away for better illustration.

A designates the cloth of which the trousers are made, each of the legs of the trousers being provided about the knee portion with a strip of fabric B, preferably of oiled silk or like impervious material and with an inner strip C of muslin or like cloth.

In the form of the invention illustrated in Figs. 1, 2, 3, and 4, the strip B of impervious material will also serve as the stay strip and should be of very stout quality of oiled silk or of like material. In practice, we prefer to connect the strips B and C together by a seam *b* extending around their four edges and preferably also the strip C will have a hem *c* to inclose the edges of the strip B. The strips B and C thus united together, will be attached to the cloth A by means of rubber or other suitable cement applied at the top and bottom hems or folds of the strip C as shown in *c'*. The strip C will be formed of greater fullness than the strip B, this fullness being produced preferably by a plait or tuck *c''*. By preference also, a strip of elastic material D will be attached to the strip C below the plait or fold *c''*, the upper portion of this elastic strip D extending between the strips B and C and being fastened adjacent the tops thereof by the seam *b*. In this form of our invention, the strip of material B will serve when the wearer of the trousers bends his knee to receive the strain upon the knee portion of the trousers and as this strip B is formed of impervious material (as we prefer it should be), it will prevent the heated moisture arising from the wearer's leg from passing to the cloth A and so aid in preventing the strain upon the cloth. So also it will be seen that inasmuch as the material C is of greater fullness than the strip B and is free to slip with respect thereto, when the wearer bends his knee, the strain will come in the first instance upon the material C but the fullness of this material, and its freedom to slip upon the strip B will prevent the binding of the strip B across the knee cap, the trousers being thus allowed in a measure to draw upward under

the bending strain. So also, it will be seen that when the wearer bends his knee, the elastic strip D will be stretched, but inasmuch as the top of this strip is fixed to the part of the trousers above the knee which is not free to be drawn down, the strain upon the elastic will serve to lift slightly the lower portion of the trousers' leg and so relieve the knee portion from strain.

10 In the form of our invention illustrated in Figs. 5 and 6 (which is the preferred form), we have interposed between the strip B and the strip C an intermediate strip E of bolting cloth or like strong material, the purpose of
15 this cloth being mainly to act as a stay strip and relieve the strip of impervious material B from the strain incident to the bending of the wearer's knee. Obviously, when the intermediate strip E is employed, the imper-
20 vious material B need not be so stout or heavy as is necessary when it serves to receive the entire strain. A further advantage of this intermediate strip E is that the inner strip C can slip freely upon its surface as the wearer
25 bends his knee. In some instances, we have employed additional intermediate strips of silk or like material and it is manifest that such additional strips can be employed with-
30 out departing from the spirit of the invention, and that the details of construction above set out may be varied within scope of our claims.

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

35 1. Trousers, each of the legs of which is provided with a stay strip attached thereto and extending across the front of the knee portion, and is provided with a strip of fabric
40 upon the inner side of said stay strip, said inner strip being provided with greater fullness lengthwise than said stay strip, substantially as described.

45 2. Trousers, each of the legs of which is provided with a strip of impervious fabric extending across the front of the knee portion and with a strip of fabric attached to the trousers upon the inner side of said impervious fabric, said inner strip being provided

with greater fullness lengthwise than said impervious strip, substantially as described. 50

3. Trousers, each of the legs of which is provided with a strip of fabric attached to the trousers and provided also with an inner strip of fabric attached to the trousers, said inner strip being provided with a transverse plait or fold, substantially as described. 55

4. Trousers, each of the legs of which is provided with a strip of impervious fabric attached to the trousers and extending across the front of the knee portion and with a strip of fabric upon the inner side of said impervious fabric, said inner strip being provided with greater fullness lengthwise than said impervious fabric, and an additional strip of smooth fabric arranged intermediate said impervious fabric and said inner strip, whereby said inner strip is permitted to slip freely with respect to said impervious fabric, substantially as described. 60
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5. Trousers, each of the legs of which is provided with a stay strip of fabric attached to the trousers and extending across the front of the knee portion, and is provided also with an inner strip of fabric attached to and extending across the front of the knee portions of the trousers and movably held with respect to the main body of the stay strip whereby said inner strip is permitted to slip freely with respect to said stay strip, said inner strip being provided with a strip of elastic material for contracting the same length-wise, substantially as described. 75
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6. Trousers, each of the legs of which is provided with a strip of impervious fabric extending across the front of the knee portion and with a strip of fabric upon the inner side of said impervious fabric, said inner strip being provided with greater fullness lengthwise than said impervious fabric and being provided also with a strip of elastic material whereby it will be contracted, substantially as described. 85
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