

(No Model.)

M. KRONHEIM.
BRACES.

No. 579,712.

Patented Mar. 30, 1897.

Fig. 1

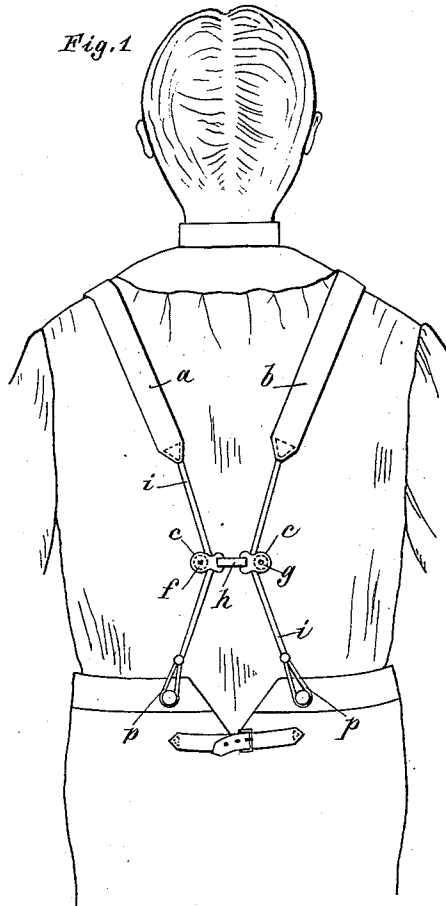


Fig. 2

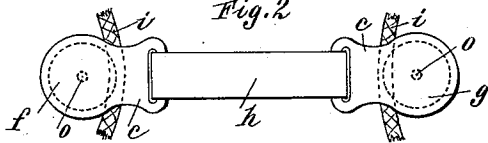


Fig. 3

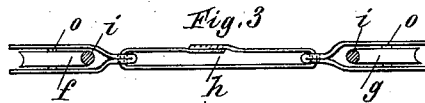
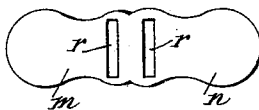


Fig. 4



Witnesses:

J. E. Hutchinson Jr.
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UNITED STATES PATENT OFFICE.

MAX KRONHEIM, OF BERLIN, GERMANY.

BRACES.

SPECIFICATION forming part of Letters Patent No. 579,712, dated March 30, 1897.

Application filed January 14, 1895. Serial No. 534,882. (No model.) Patented in England December 21, 1894, No. 24,923.

To all whom it may concern:

Be it known that I, MAX KRONHEIM, merchant, of 17 Eislebenerstrasse, Berlin, in the Empire of Germany, have invented certain new and useful Improvements in Braces, (patented in England December 21, 1894, No. 24,923,) of which the following is a specification, reference being had therein to the accompanying drawings.

Trousers-braces heretofore in use which are connected together at the back are generally subject to the objection that one part is so dependent upon the other that in adjusting one front brace, for example, the opposite back part is also drawn in sympathy with it.

The object of the present invention is to overcome this objection by so arranging that one part can be regulated at pleasure independently of the other, whereby the trousers-legs can be made quite even or either leg raised or lowered to suit any bodily requirement.

My invention is illustrated in the accompanying sheet of drawings, in which—

Figure 1 shows a pair of braces on a wearer with one form of my improvements applied thereto. Fig. 2 is an elevation of the connecting-piece shown in Fig. 1, but drawn to a larger scale. Fig. 3 is a corresponding plan. Fig. 4 is a view of the blank from which the roller-holding frame is formed.

The invention consists as follows: *c* indicates frames connected by a link *h* and formed of a bent piece *m n* of sheet metal, the two limbs of each piece being connected together by a pin *o*, on which pins are placed small pulleys or rollers *f g*. Between these pulleys or rollers and the inner part of the frames *c* spaces are left through which are passed the cords *i*, which form part of the trousers-braces. These cords are suitably connected at one end to the eyes *p*, which serve to fasten the braces to the back of the trousers, and at the other end are connected to the braces proper, *a* and *b*.

The carriages or frames *c* are conveniently made in the following manner: Each carriage or frame is stamped out of a piece of sheet

metal and perforated at *r*, as shown in Fig. 4, and the two parts *m* and *n* of this piece of metal are then bent together into the form shown in Figs. 2 and 3.

It is obvious that the arrangement of the pulleys or rollers in the back connecting-piece brings about an automatic adjustment of the two parts of the trousers-braces, and in connection therewith an equalization of the two ends of such braces, and the trousers buttoned thereto.

Trousers-braces furnished with the above-described connecting device adapt themselves automatically to every shape and to every movement of the body, because the pulleys or rollers enable the connecting-piece to take the most favorable position on the body, namely, in the hollow of the back, where pressure on the spine is avoided, and this is an important improvement.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In braces, the combination with the back parts, cords or connections, of a transverse connecting part having means for engaging said back parts free to adjust itself at its ends vertically on said cords and having interposed in it a loose link *h*, substantially as set forth.

2. In braces, the combination with the back parts, cords or connections, of a transverse connecting part free to adjust itself at its ends vertically on said cords and having rollers *g* and a loose link *h*, substantially as set forth.

3. In braces the combination with the back parts, cords or connections, of rollers engaging the same, separate frames each carrying pivotally one of said rollers and having an opening, and a loose link *h* engaging said openings, substantially as set forth.

In witness whereof I hereunto set my hand in presence of two witnesses.

MAX KRONHEIM.

Witnesses:

WILHELM SCHWIETHAL,
JOHN B. JACKSON.