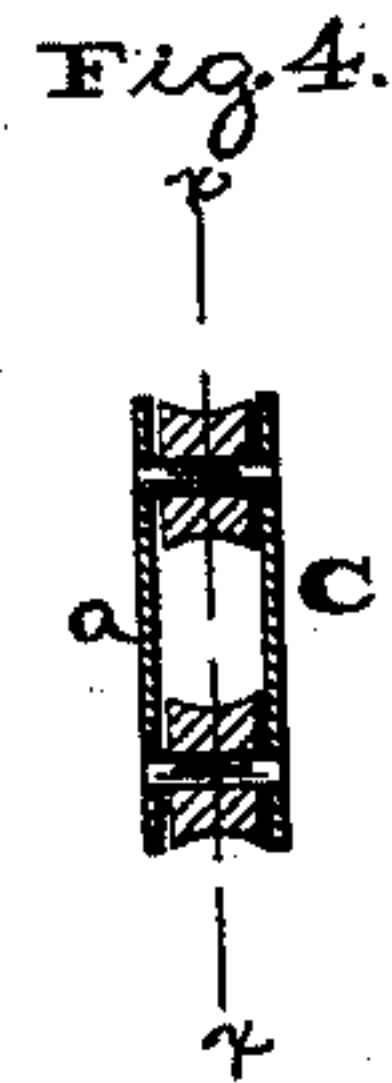
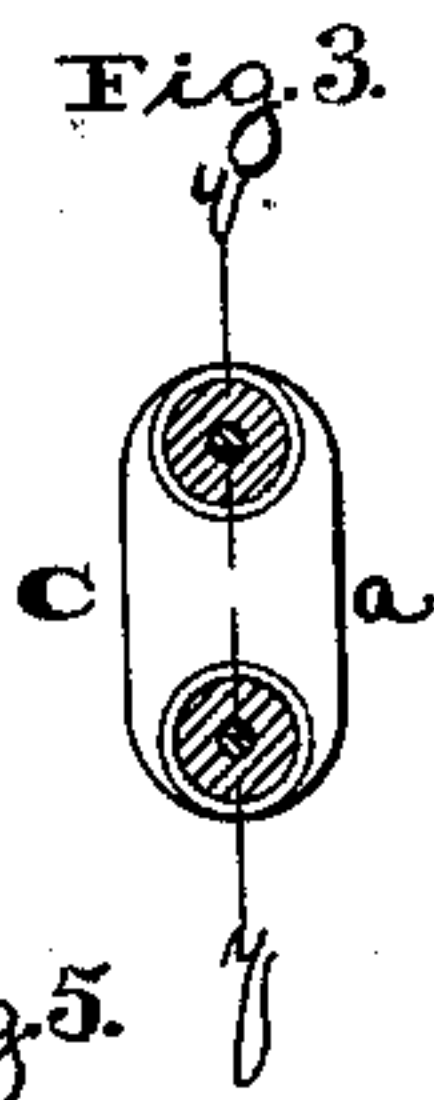
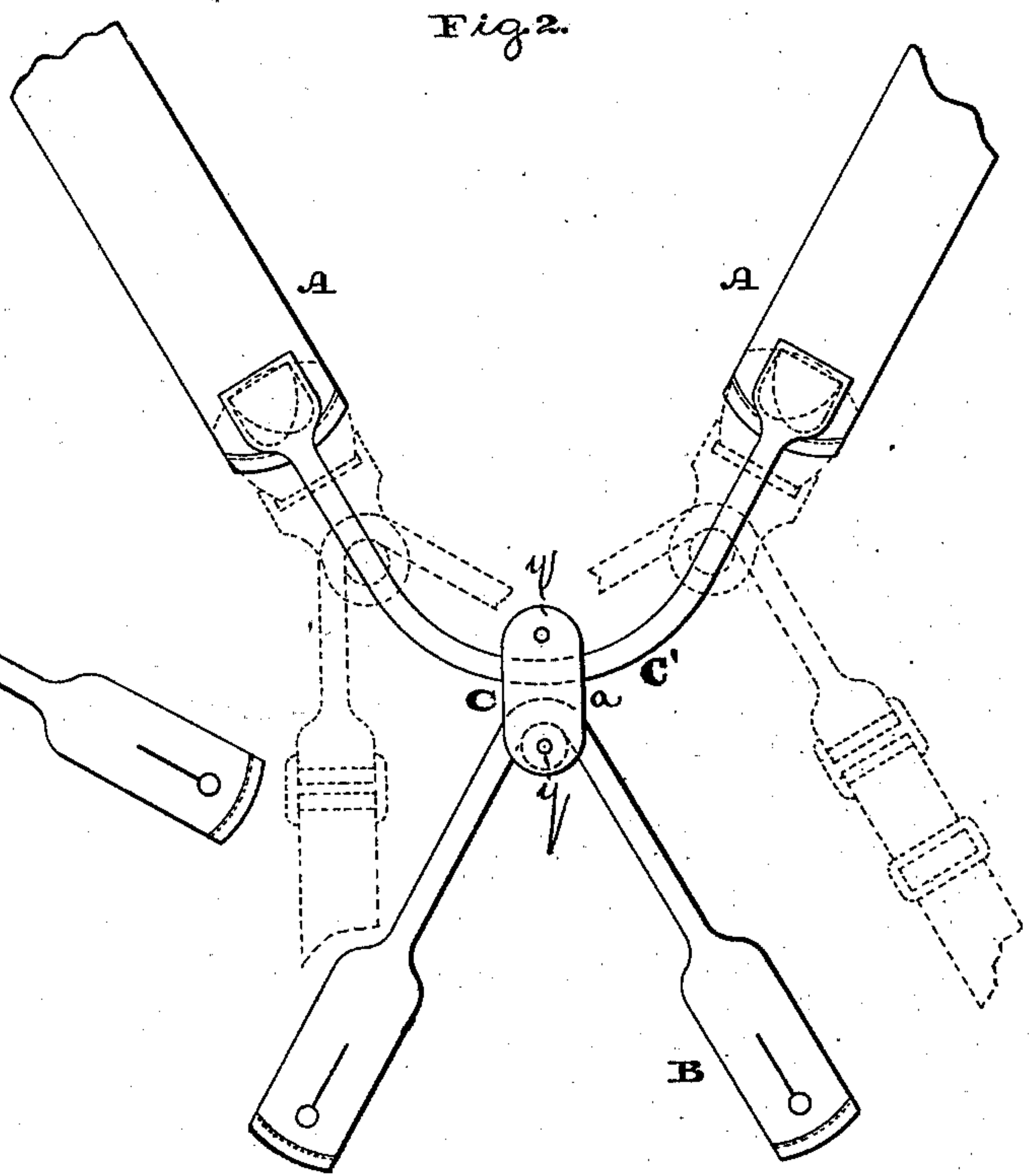
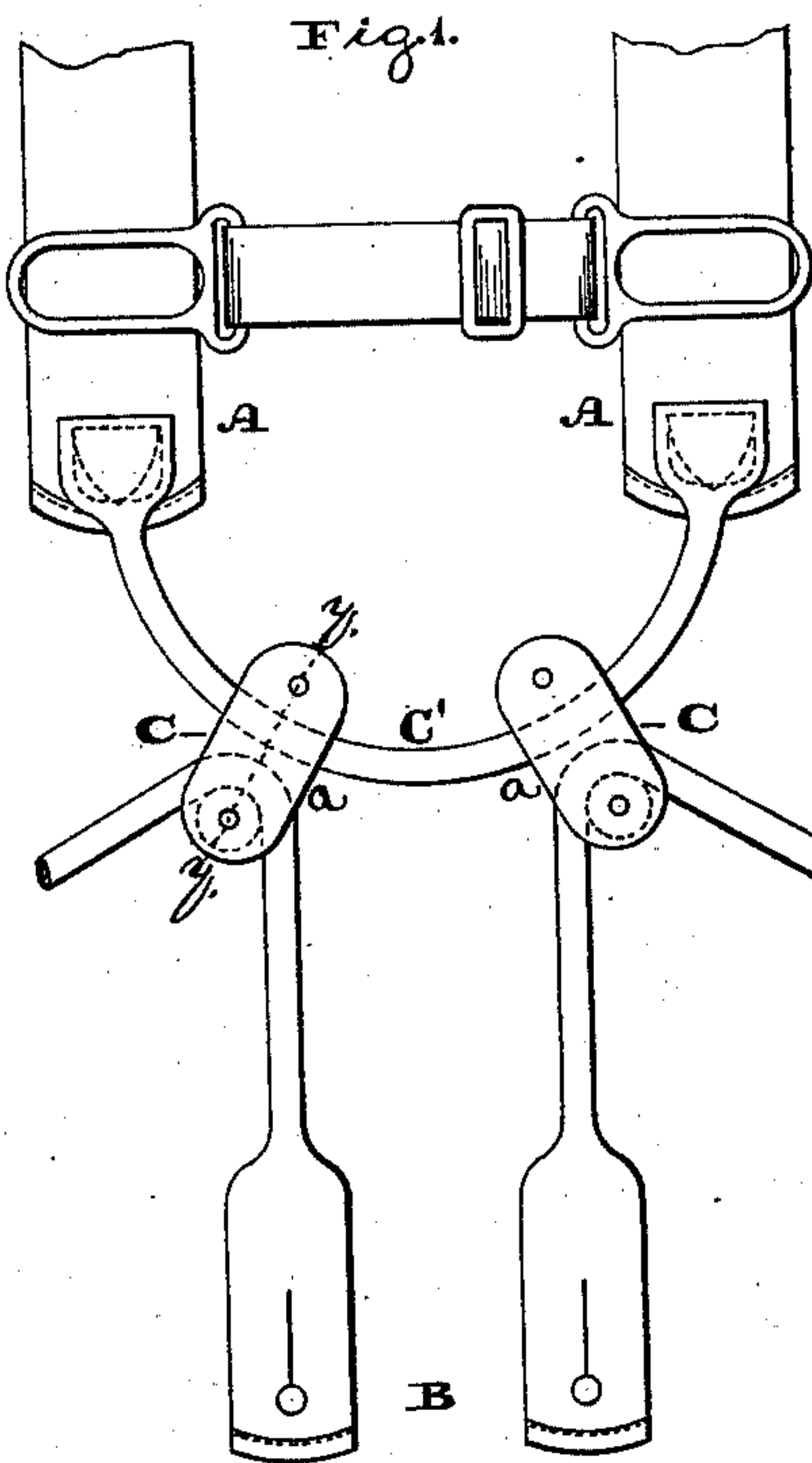


H. ANDRES.
Suspender.

No. 216,368.

Patented June 10, 1879.



Witnesses:

A. P. Grant,

W. F. Kircher

Inventor:

H. Andres,

by

John A. Diederheine

ATTORNEY.

UNITED STATES PATENT OFFICE.

HIRAM ANDRES, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SUSPENDERS.

Specification forming part of Letters Patent No. **216,368**, dated June 10, 1879; application filed October 8, 1878.

To all whom it may concern:

Be it known that I, HIRAM ANDRES, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Suspenders, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figures 1 and 2 are face views of portions of suspenders embodying my invention. Fig. 3 is a sectional view of a double sheave in line *x x*, Fig. 4. Fig. 4 is a sectional view of the same in lines *y y*, Figs. 1 and 2. Fig. 5 is a section of a modification, and Fig. 6 is a top view thereof.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of the main straps, connected at the back by webs, in combination with the buttoning-webs, and with sheaves located intermediate of said connecting and buttoning webs, whereby the greatest freedom and ease of motion are permitted to the back of the suspender.

It also consists of two or more sheaves attached to side plates common thereto, and engaging with the connecting and buttoning webs, whereby the latter provide doubly yielding connections between the back of the suspender and garment.

Referring to the drawings, A represents the main straps, and B the webs for attaching the suspenders to the buttons of the garment. C' represents a web connecting the back of the main straps, and C represents a sheave which is suspended from said web.

In Fig. 1 two double sheaves are mounted on side plates, *a a*, common to both, and suspended from the connecting-web C' of the straps A, and around each lower sheave is passed a web whose ends are properly buttoned on the garment.

In Fig. 2 one double sheave is suspended from the connecting-web of the straps A, and a single buttoning-web is passed around the lower sheave, said sheaves being attached to common side plates, *a a*.

In Figs. 5 and 6 two sheaves are shown at the upper side of the supporting-plate, and in Fig. 5 a single sheave at the lower side; but two sheaves may also be placed at said lower side, said sheaves being attached to common side plates, *a a*.

It will be seen that the web C' rides on the sheave when the body of the wearer moves, so that the suspender yields, and there is no rigid connections between the main straps and buttoning-webs. Again, when the upper sheave or sheaves roll or ride on the connecting-web C', the buttoning-webs B have free motions on the lower sheave or sheaves, thus allowing many free motions and great flexibility of the back connections of the main straps and buttoning-webs, and causing the suspender to fit properly on the wearer, set easy, and wear comfortably.

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

1. The main straps A, connected by the web C', in combination with the sheave C and buttoning-web B, substantially as and for the purpose set forth.

2. Two or more sheaves, C, attached to side plates, *a a*, common to them, in combination with the main straps A, connecting-web C', and the buttoning-web B, substantially as and for the purpose set forth.

HIRAM ANDRES.

Witnesses:

JOHN A. WIEDERSHEIM,
SAML. M. GRICE.