

F. NORRIS & C. E. SWEET.

TRUSS.

No. 169,833.

Patented Nov. 9, 1875.

Fig. 1.

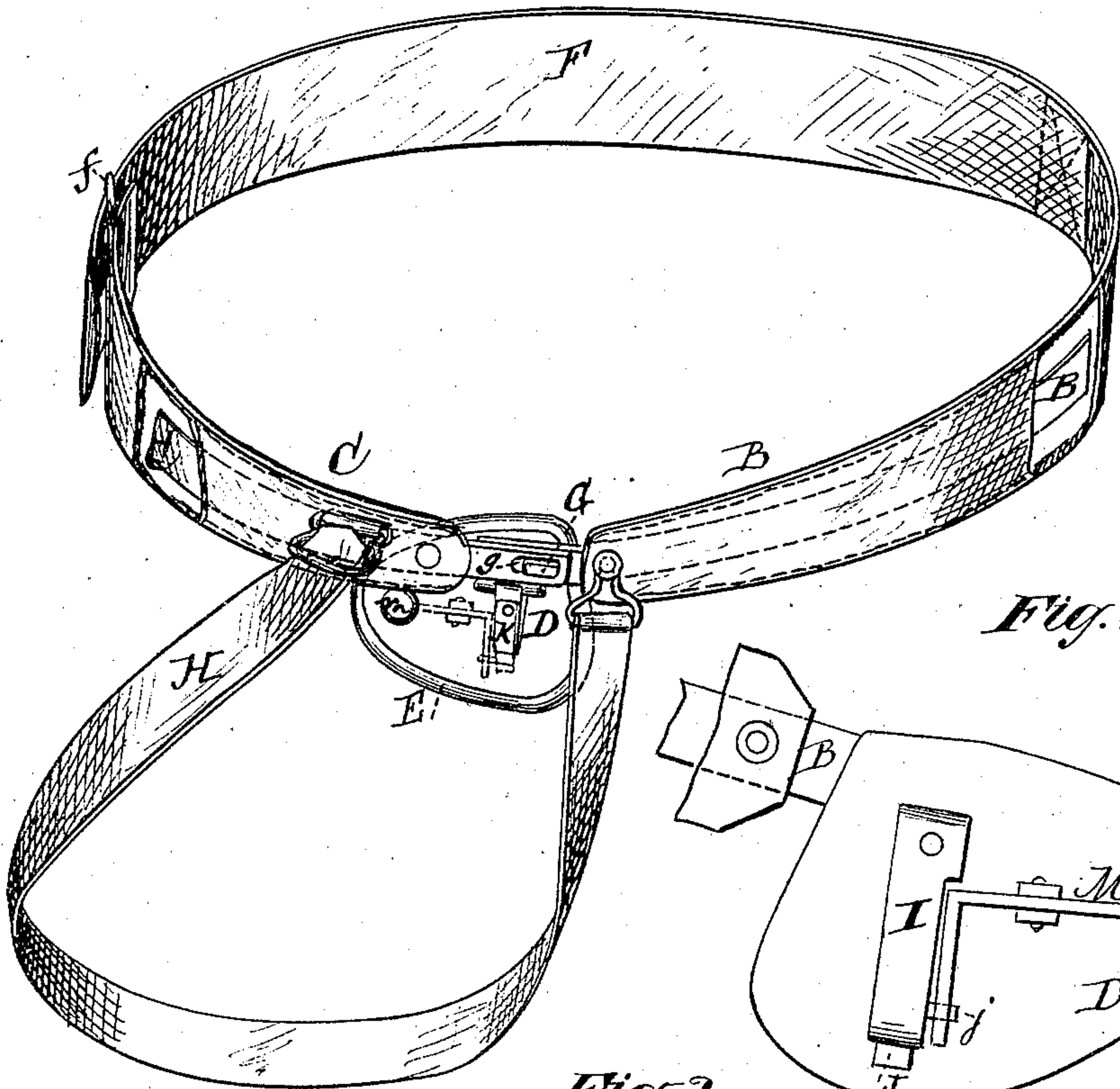


Fig. 2.

Fig. 3.

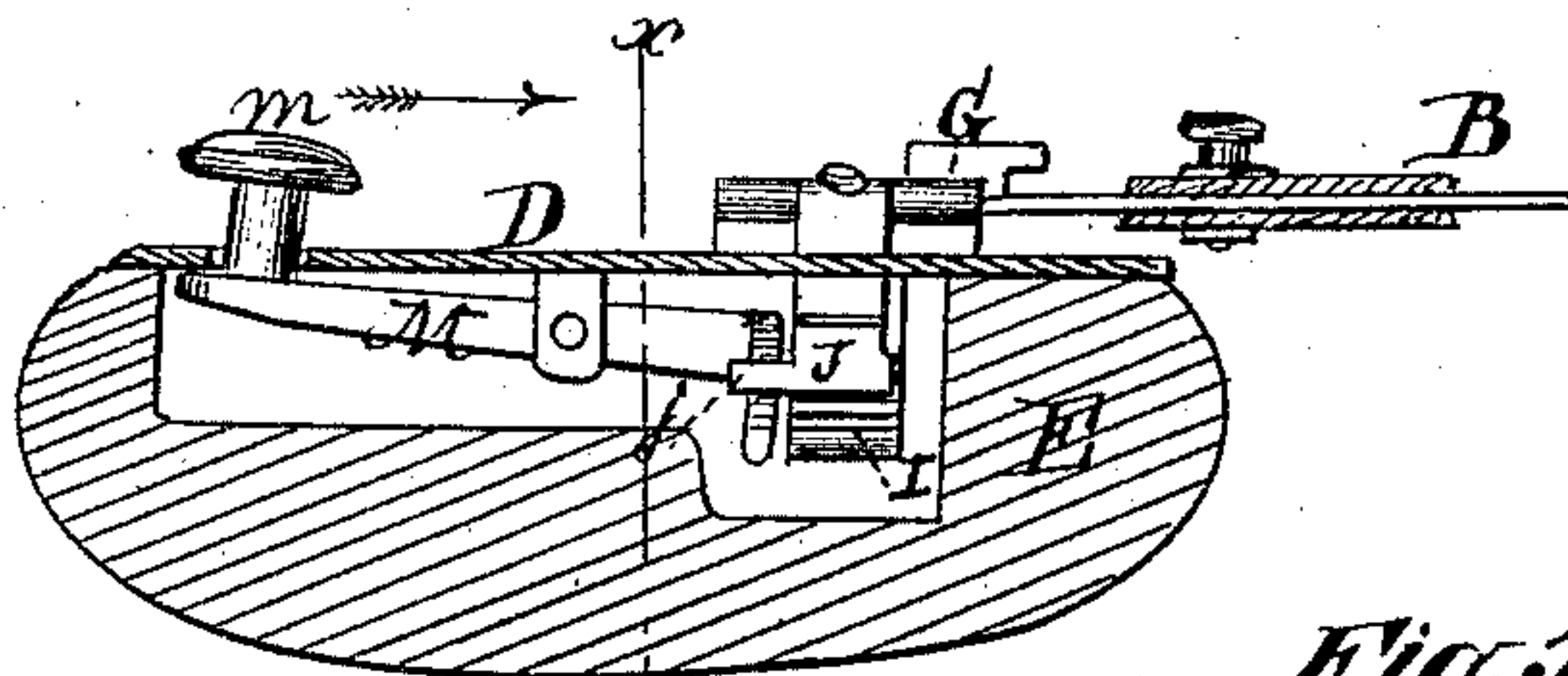
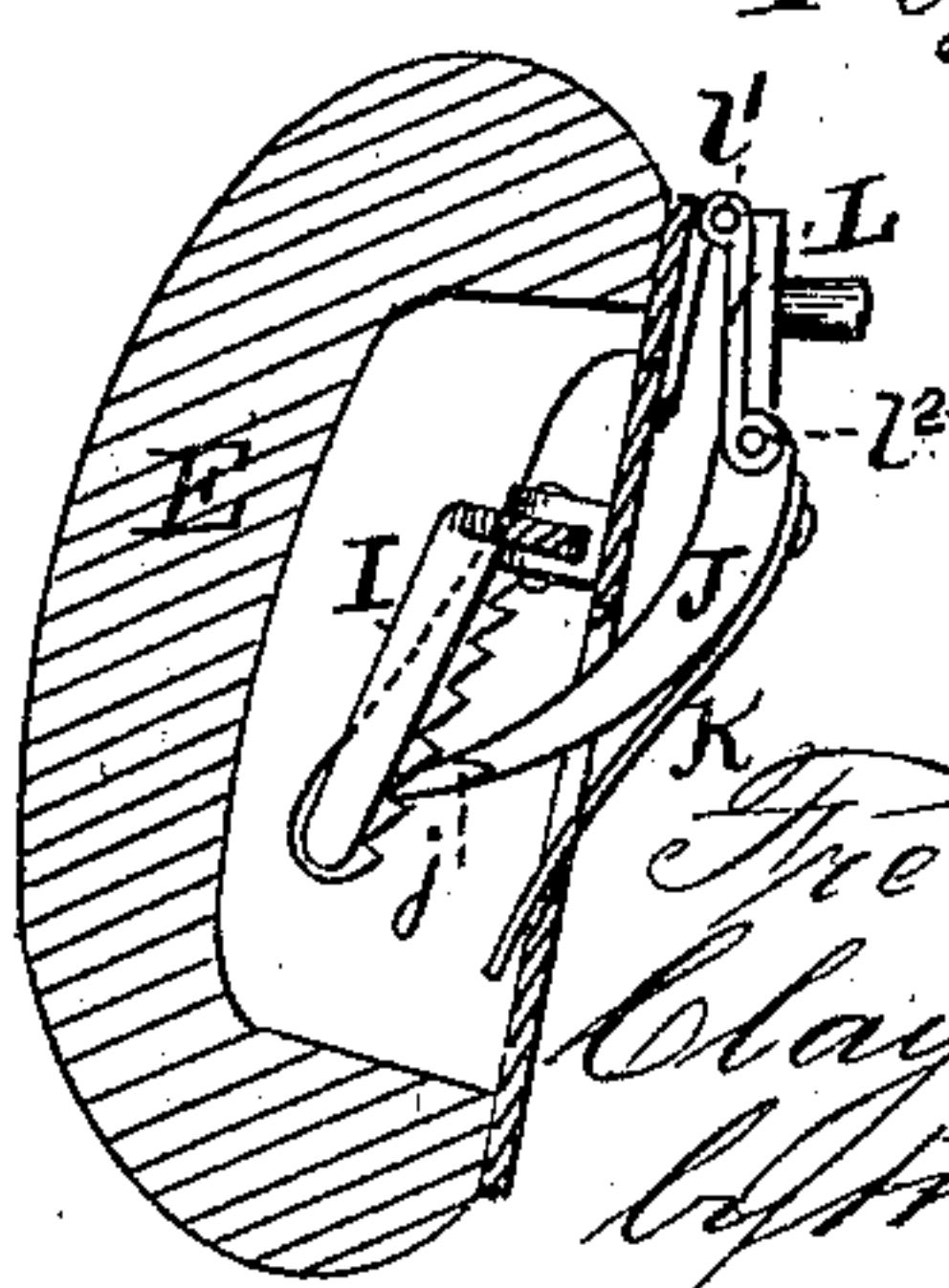
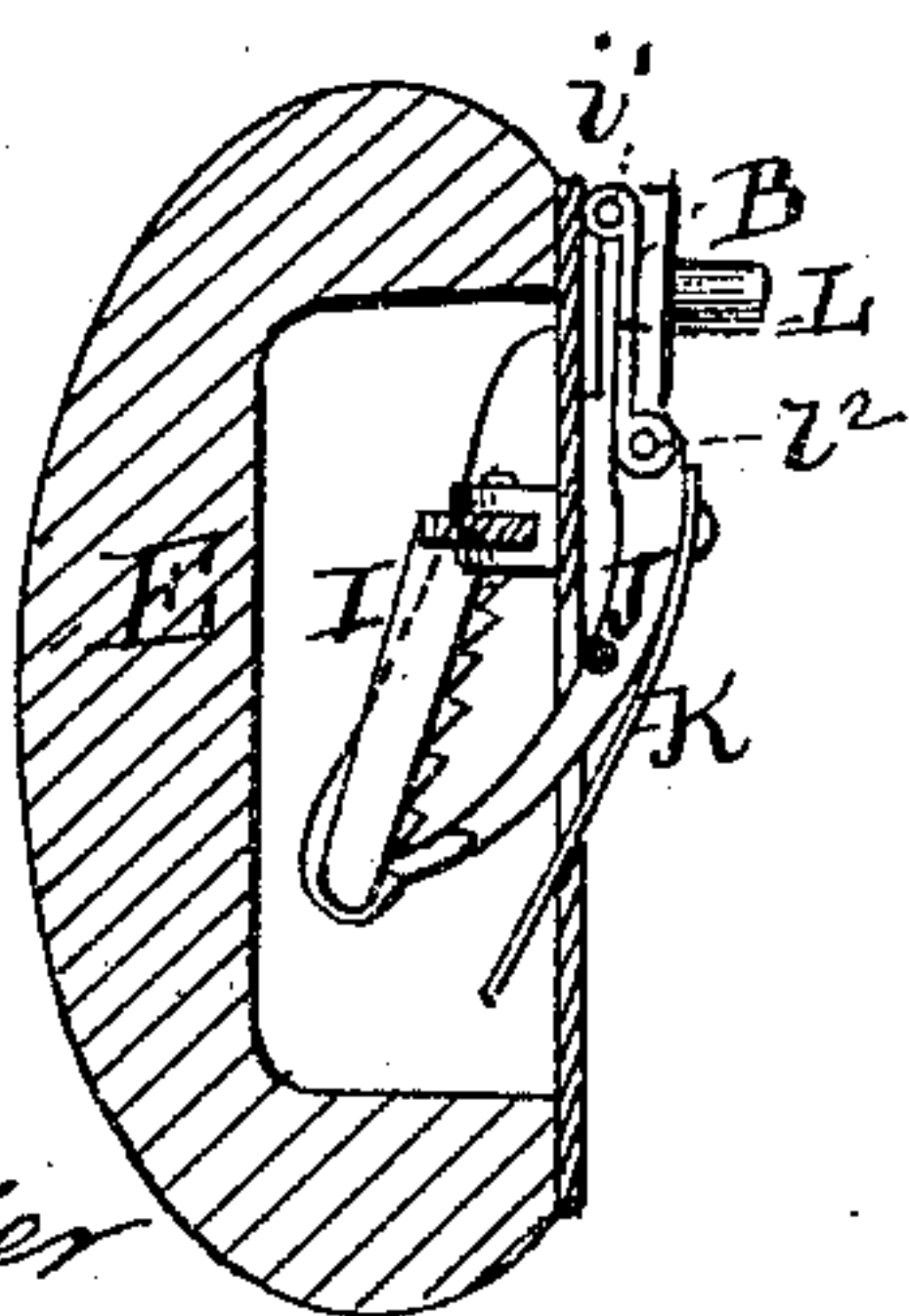


Fig. 4.

Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

FREDERICK NORRIS AND CLAYTON E. SWEET, OF WAPPINGER'S FALLS,
NEW YORK.

IMPROVEMENT IN TRUSSES.

Specification forming part of Letters Patent No. **169,833**, dated November 9, 1875; application filed
October 6, 1875.

To all whom it may concern:

Be it known that we, FREDERICK NORRIS and CLAYTON E. SWEET, of Wappinger's Falls, in the county of Dutchess and State of New York, have invented certain Improvements in Trusses; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention relates to certain improvements in trusses for the relief of hernia or rupture; and it consists in a novel construction of the pad and its plate, and in certain details of construction, arrangement, and combination of the various parts, whereby the pad may be readily adjusted to different angles of inclination at the pleasure of the wearer, the band may be adjusted to fit persons of different sizes, and the truss is rendered more comfortable to the wearer than those of the ordinary construction.

In the accompanying drawing, Figure 1 is a perspective view of a truss constructed according to our invention. Fig. 2 is a view of the rear side of the pad-plate. Fig. 3 is a longitudinal sectional view of the pad and pad-plate looking upward. Fig. 4 is a transverse sectional view, taken in the line *xx* of Fig. 3, showing the pad in a vertical position. Fig. 5 is a similar view, showing the pad in an inclined position.

The truss is provided with a band for securing it to the person of the wearer, which band, instead of being entirely of metal, consists of two pieces of metal, and a flexible strap of leather or fibrous material. These two pieces of metal B C I call bed-plates. To the front end of the plate B is secured the pad-plate D, and to the rear end is secured one end of a flexible strap, F, which may be of leather, webbing, or other suitable material. The front end of the plate C is constructed with a view to its connection with the plate B, and its rear end is provided with a buckle, *f*, for engagement of the free end of the flexible strap. The plates B C may be of about the same width as the spring used in trusses of the usual construction, and they are of such length as to extend only to the thighs without passing around them. They may be covered with leather in the usual manner, and

the strap and buckle may be attached to the leather covering. The plates may be sufficiently flexible to enable them to be bent to conform to the person of the wearer. By this construction and mode of connecting the plates a band for the truss is formed, which is comfortable for the wearer, and is readily adjusted to fit persons of different sizes. The plate B is provided with a hook, G, the body of which is straight and longer than its width; and the plate C is provided with a slot, *g*, corresponding in shape and size with the width and greatest length of said hook, so as to slip over and fit nicely thereon.

The truss is fastened on the person of the wearer by passing the hook G through the slot *g*, and allowing the two parts to engage after the manner of an ordinary hook and eye; and the elongated construction of the hook and slot causes the plates B C to be held steadily in place in line with each other when connected together, as shown in Fig. 1, and prevents any vibration thereof.

When a truss of the ordinary construction is provided with a leg-strap one end of said strap is usually attached to the rear portion of the spring near the middle of the wearer's back.

In this invention the leg-strap H has its fixed end attached to the plate C, near its front end; and the free end of the strap is connected, by a loop and button, with the plate B, near its front end, so that when the truss is in place upon the wearer the leg-strap H is about in the position shown in Fig. 1, passing only around the thigh, instead of partly around the hip, as heretofore.

By the construction and arrangement above described the truss is held steadily in place, and yet is allowed to yield to the motions of the body of the wearer, and thus may be worn with less inconvenience than a truss of the usual construction.

The pad E may be of wood, ivory, rubber, or any other suitable material, and, together with the pad-plate, may be of a nearly quadrantal shape in its profile, as shown, so as to enable it to fit more comfortably than a pad of circular or elliptical profile. The pad is attached to the pad-plate by means of screws

passing through the plate and into the pad, or by any other suitable means. In the back of the pad is a recess for the reception of devices attached to the pad-plate, by means of which the pad is adjusted to different angles of inclination with relation to the bed-plates. To the inner side of the pad-plate is attached a rigid bar, I, having ratchet-teeth on the side nearest the pad-plate, or, in lieu of an attached bar, there may be a depression in the plate provided with ratchet-teeth. The pad-plate is attached to the plate B by what may be called a double hinge—that is, a plate, L, with two hinge-joints at opposite edges; or, the hinge-joints may be formed on the plate B. The pad-plate is attached to the plate B by one of the hinge-joints, l^1 , so as to allow it to move from a vertical line, as shown in Fig. 5. To the other hinge-joint, l^2 , is attached a pawl, J, which passes through a slot, d , in the pad-plate, and has its point engaging with the ratchet I. The pawl J is provided with a spring, K, which has a tendency to keep the pawl engaged with the ratchet. From one side of the pawl J extends an arm or projection, j , with which a lever, M, engages. This lever is pivoted to the pad-plate with its short arm under or behind the arm j of the pawl J. The long arm of the lever protrudes through an opening in the pad-plate, and is provided with a button, m .

By this construction and arrangement of parts the pad may be inclined from a vertical position by simply pressing against its lower portion, and is held in whatever position in which it is placed by the engagement of the

pawl and ratchet, and may be again placed in a vertical or other position by pressing with one hand on the button m , so as to cause the lever M to raise the pawl from the ratchet, and with the other hand moving the pad to the desired position. By this means the person wearing the truss is enabled to adjust the pad so as to press with the desired amount of pressure and at the desired angle without the necessity for removing the truss or seriously deranging the clothing.

By arranging the pawl-and-ratchet mechanism as above described it is concealed from view and protected from injury, and is prevented from catching in the clothing or causing inconvenience to the wearer.

What we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the band or bed plate B, the pad-plate D, the hinge-joints l^1 l^2 , the spring-pawl J, and the ratchet I, all arranged and operating as herein shown and described.

2. The combination, with the pad and pad-plate and the pawl and ratchet, of the releasing-lever M, substantially as herein described.

3. The combination, with the pad E and its plate D, of the band composed of the plates B C and adjustable flexible strap F, the hook G on the plate B, and the slot g in the plate C, as herein shown and described.

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Witnesses:

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