

D.H.B. Allen,

Leg Supporter.

N<sup>o</sup> 44,499.

Patented Oct. 4, 1864.

Fig. 1

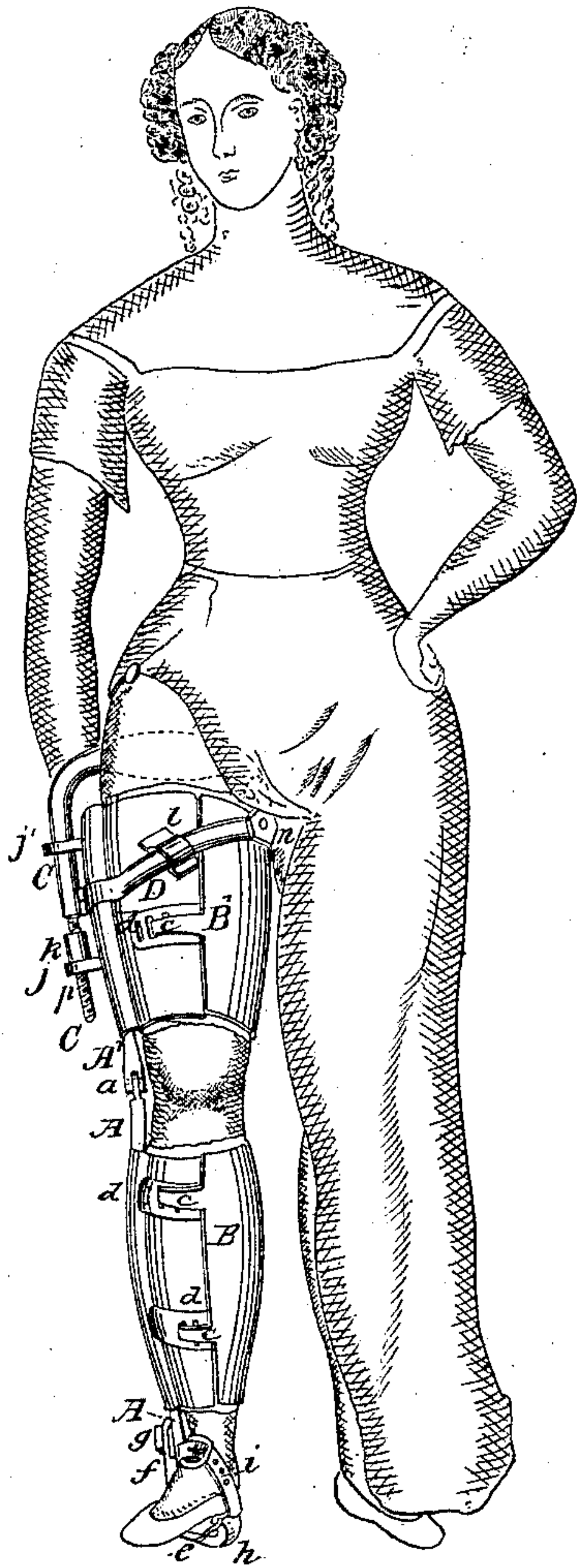


Fig. 2

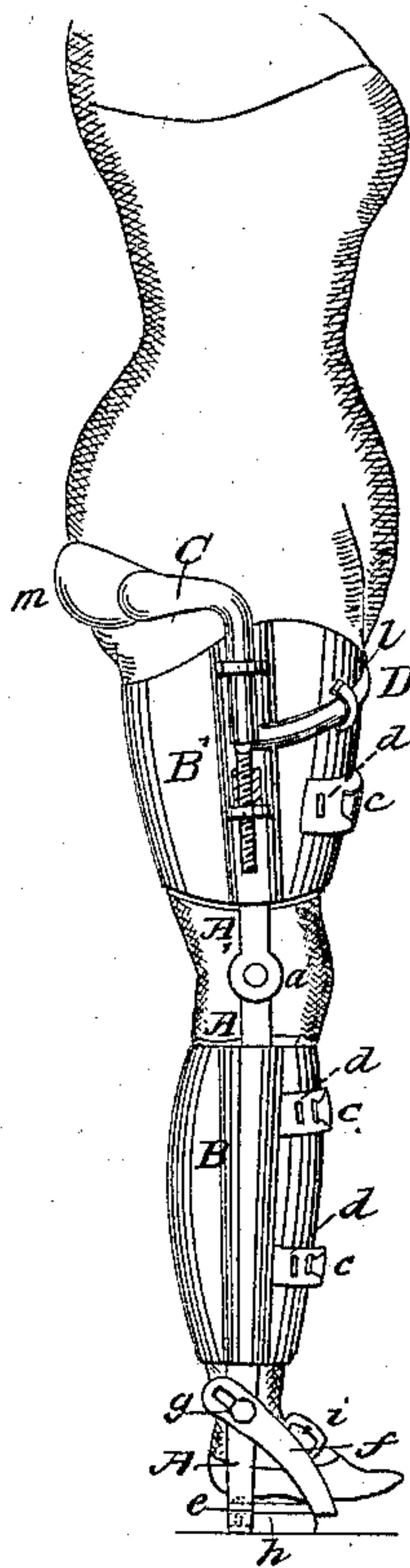


Fig. 3

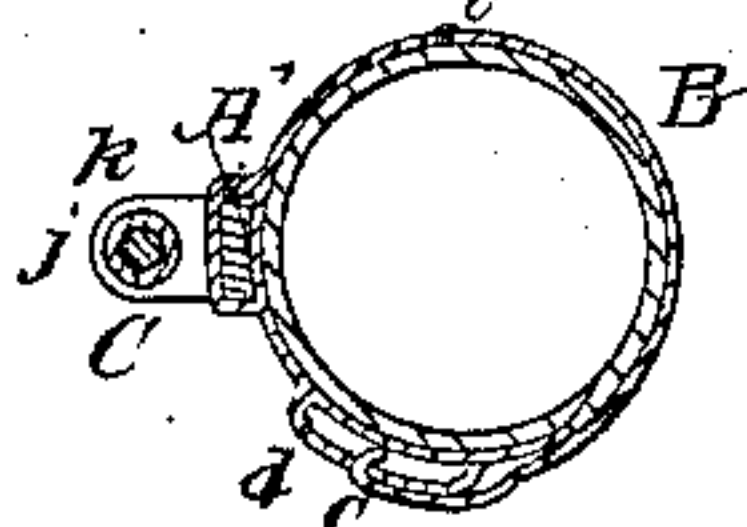
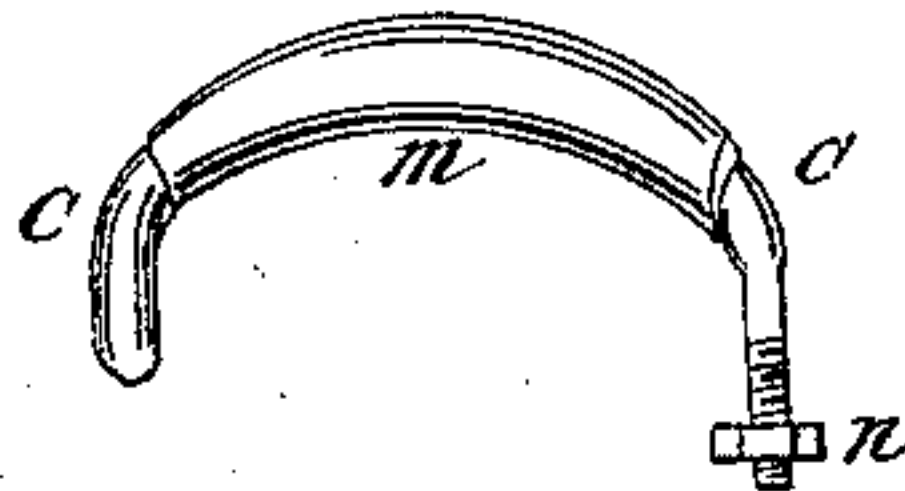


Fig. 4



Witnesses

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## IMPROVEMENT IN LIMB-SUPPORTERS.

Specification forming part of Letters Patent No. 44,499, dated October 4, 1864.

*To all whom it may concern:*

Be it known that I, D. HENRY B. ALLEN, of Chelsea, in the county of Orange and State of Vermont, have invented a new and Improved Supporter for a Person with a Fractured Leg; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front view of the supporter, showing its application. Fig. 2 is a side view of the same. Fig. 3 is a transverse section of the upper portion of the same. Fig. 4 is a top view of the pad-piece which supports the weight of the body.

Similar letters of reference indicate like parts.

The object of this invention is to relieve a fractured leg of the weight of the body, and to enable a person, as soon as he or she is able to hold the foot down, to walk about without crutches, and to follow his or her usual avocations without danger; and to this end it consists in a supporting-rod secured to the upper and lower portions of the limb by suitable clamps, jointed at the knee and furnished at the bottom with a foot-piece to bear on the ground and at the top with a pad-piece which comes under the buttock and supports the body at that point.

A A' is the supporting-rod, of iron or steel, made in two pieces, jointed at *a* in such manner as to bend at the knee. The lower piece, A, is attached firmly to a light metal clasp, B, which fits around the lower limb, and the upper piece, A', is attached firmly to a similar but larger clasp, B', which fits around the thigh, the said clamps being suitably padded inside and being divided longitudinally and made with hinges *b* at the back, as shown in Fig. 3, to enable them to be put on and taken off the limb, and with hooks and eyes *c d*, or other suitable fastenings in front, to enable them to be secured upon the limb.

The supporting-bar comes upon the outer side of the limb. The lower piece, A, of the said bar has its lower end turned inward at a right angle for the attachment of a foot-piece, *e*, which comes under the foot, and which is also connected with A by means of an oblique slotted brace, *f*, and screw *g*, which permits

the adjustment of the foot-piece to elevate or depress the front end thereof. Under the foot-piece there is secured a pad, *h*, of vulcanized india-rubber, to enable the foot-piece to come down easily on the ground. The piece A, with foot-piece and pad attached, should be of such length that with the joint *a* opposite the center of the knee-joint of the limb, the sole of the foot will just come in contact with the foot-piece, which is kept in place relatively to the foot by means of a buckled strap, *i*, coming across the instep. The exact length of the upper portion, A', of the supporting-rod is not of great importance, but it should reach nearly to the upper part of the thigh. It has attached to it the adjustable iron or steel pad-piece, C, which forms the bearing for the body.

The lower part of the pad-piece consists of a straight rod, which passes through two fixed sockets, *j j'*, secured firmly to the outside of the piece A, and the upper part is so formed substantially, as shown in Figs. 2 and 4, as to fit around the back of the thigh and close under the buttock, and is padded, as shown at *m*, to make an easy bearing for the buttock. The straight portion of the pad-piece has a screw-thread, *p*, on its lower part, and this screw-thread is fitted with a nut, *k*, which rests upon the lower socket, *j*, and which thus forms the principal support of the pad-piece. The piece A is also connected with the upper extremity of the pad-piece C, which comes round the inner side of the thigh to the front, by means of an iron or steel brace, D, which passes obliquely across the front of the upper clasp, B', the said brace being bolted to the piece A, passing through a metal strap, *l*, on the front of the clasp, and having an eye at its upper end which receives the screwed upper end of the pad-piece C. A nut, *n*, placed on the screw of the pad-piece in front of the brace D, serves to draw the back of the pad-piece forward as close against the thigh and under the buttock as may be desired.

The nut *k* serves to extend the supporter vertically, and by raising the pad-piece under the buttock to relieve the leg of the whole weight of the body by throwing all on the foot-piece of the supporter. As the limb gains strength the nut *k* may be turned to lower the pad-piece a little, and so bring a portion of the weight of the body on the limb, and as



the strength increases the nut may be further turned in the same way from time to time to bring more and more of the weight of the body upon the limb until the supporter can be dispensed with altogether.

When the person is going to sit down for any length of time, the pad-piece should be removed, which is permitted by unscrewing and taking off the nuts *n* and *k*, but for sitting down for a short time only the pad-piece need not be removed.

This supporter allows the necessary flexure of the limb in walking, stooping, and all ordinary movements of the body, and gives a support only before obtained by a crutch. It is, however, more convenient than a crutch.

The instrument may be worn next the limb or outside of under-drawers, or on males may be worn outside of the pantaloons.

There should be a strap applied around the

heel to prevent the foot-piece from working forward.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The supporter composed of a jointed supporting-rod, *A A'*, a foot-piece, *e*, two clasps, *B B*, and a pad-piece, *C*, the whole combined substantially as and for the purpose herein specified.

2. Combining the pad-piece *C* with the upper part, *A*, of the supporting-bar by means of sockets *j j*, a screw, *j'*, and a nut, *k*, substantially as and for the purpose herein specified.

3. The front brace, *D*, combined with the upper part, *A'*, of the supporting-bar, and with the pad-piece *C*, substantially as and for the purpose herein specified.

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