2 Sheets--Sheet 1.

S. AYRES.
Truss.

No. 168,957. Patented Oct. 19, 1875.

Fig. 1.

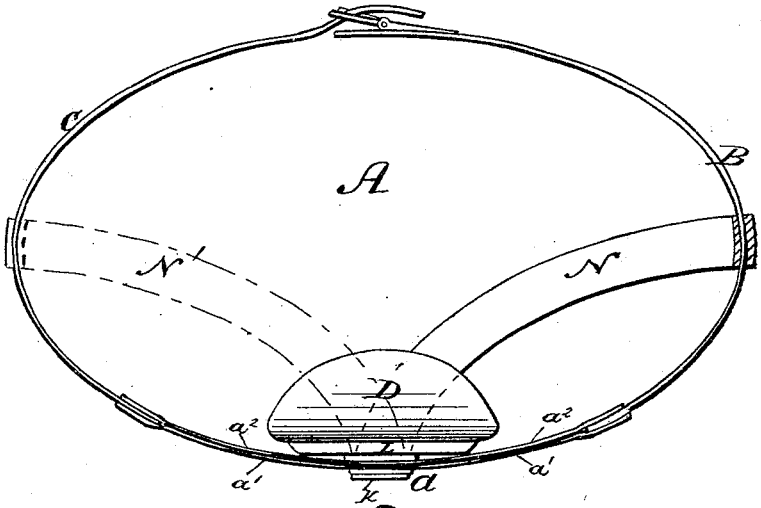


Fig. 4

Fig. 2.

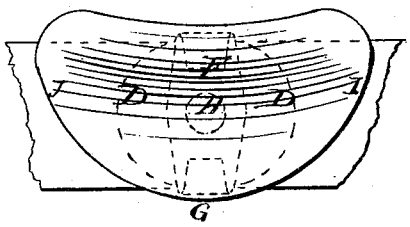


Fig. 3.

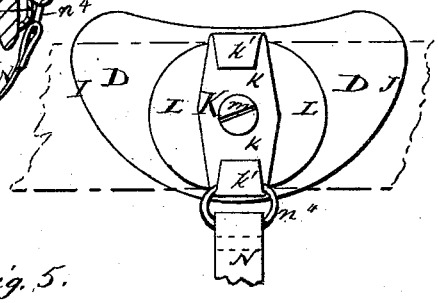
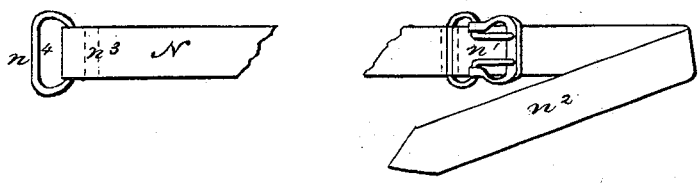


Fig. 5.



Witnesses:-
W. Morris Smith
Chas Hooch

Inventor
Samuel Ayres
by his attorney
Colborne Brookes

2 Sheets--Sheet 2.

S. AYRES.

Truss.

No. 168,957. Patented Oct. 19, 1875.

Fig. 6.

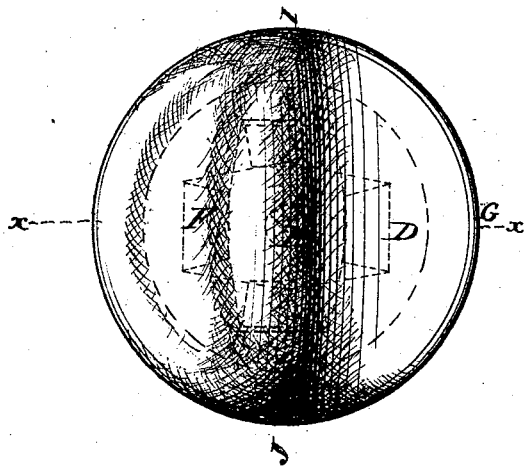


Fig. 7.

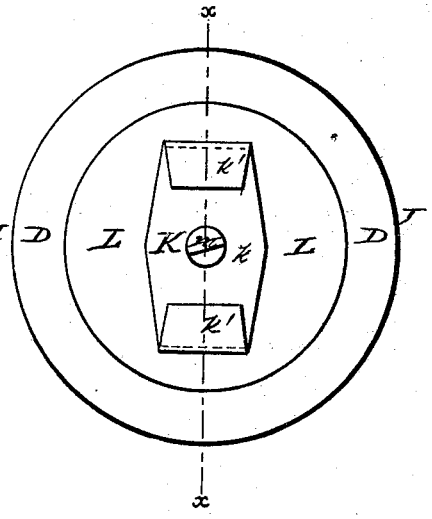


Fig. 8.

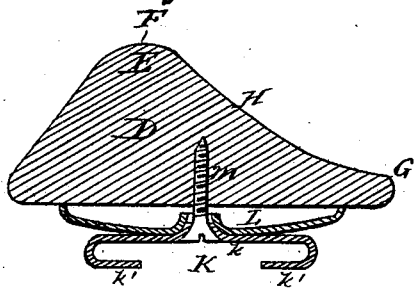


Fig. 9.

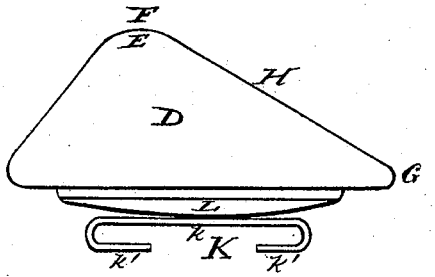
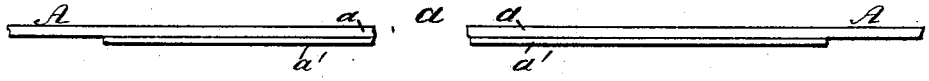


Fig. 10.



Witnesses
Wm. Morris Smith
Chas. Hosch

Inventor
Samuel Ayres
by his attorney
Colborne Brookes

UNITED STATES PATENT OFFICE.

SAMUEL AYRES, OF RICHMOND, VIRGINIA.

IMPROVEMENT IN TRUSSES.

Specification forming part of Letters Patent No. **168,957**, dated October 19, 1875; application filed November 28, 1874.

To all whom it may concern:

Be it known that I, SAMUEL AYRES, of the city of Richmond, in the county of Henrico and State of Virginia, have invented certain Improvements in Trusses, of which the following is a specification:

My invention relates to improvements in trusses, for the relief and cure of ruptures, such as described in the specification of Letters Patent granted to me bearing date the 19th day of May, 1868, No. 77,947, the object of which is to produce a truss which shall be thoroughly self-adjusting, and accommodate itself to every position of the body, the pad being supported with capability of revolution on an elastic belt or band by means of a peculiarly-constructed loop, the nature of which will be hereinafter fully explained by reference to the drawings.

Figure 1 represents a plan view of the belt or band with my improvements applied thereto. Figs. 2 and 3 represent opposite side views; Fig. 4, a section of one modification of my improved pad, and Fig. 5 a detached view of a perineal strap and attachments. Fig. 6 represents a plan, Fig. 7 an under side view, and Fig. 8 a section, of a slight modification of my improved pad. Fig. 9 shows another modification of my improved pad.

A represents the belt or band, the center portion *a* of which is composed of a layer of leather or other suitable substance, a^1, mounted upon a non-elastic backing of webbing, a^2. To each end of this non-elastic portion is connected an elastic strap, B C, the part B being provided with a buckle or other suitable means of attachment adapted to receive and hold the end of the part C with capability of adjustment, according to the size of the waist of the wearer. D is the pad, which is, by preference, formed of cork or some suitable hard wood. It may, however, be formed of other material, and is constructed with a raised pressing-surface, E, extending partially across the surface of the pad D, and having its apex at F, from which point it is gradually curved to the point G, and presents a concave surface, H, with a flange extending from the point I to the point J only, in place of all the way round, as described in my former specification herein referred to. K represents my improved loop, which, as shown, is constructed with a flat extended surface, *k*, the extremities k^1 of which are bent or otherwise formed to turn over the surface *k* in such manner as to be capable of embracing the belt A. On the under side of the extended surface of the loop K an annular projection, k^2, is formed, which fits into a correspondingly-formed bearing, *l*, in a plate, L. Through the hole in the center of the annular projection k^1 and the bearing *l* a stud or screw, *m*, is secured to the pad in such manner that the loop K may turn freely on the plate L. N, Fig. 1, represents an extra or perineal strap, of which there may be two, as indicated by dotted lines N′, adapted to pass between the limbs of the wearer of the truss, for the purpose of keeping the belt A and pad or pads D in correct position. The strap N at n^1 is provided with a buckle adapted to receive and hold the end n^2 after it has been passed over the belt A, while the opposite end n^3 of the strap N is provided with a stirrup or loop, n^4, adapted to pass over and be retained by one of the hooks or projections on the pad D.

In Figs. 2, 3, 4, 6, 7, 8 the surface H of the pad D is shown curved or concave, while in Fig. 9 the surface H is simply inclined.

Fig. 10 represents a slight modification of my improved belt, in which the elastic material is constructed all the way round, the center portion *a* being rendered non-elastic by the application of a layer of leather or other substance, a^1.

It will be readily seen by surgeons and others acquainted with the treatment and cure of hernia, that the greatest advantage of my peculiar construction of pad is that by means of the raised pressing-surface E and surface H the pad is exactly suited to fit the part of the inguinal region where pressure is necessary, and that when applied in proper position it will retain and cure hernia when all other trusses fail, by reason that the outside of the raised part or crest E has the curve of Poupart's ligament in its direction from the crest of the ilium to the pubes, with which it unites.

The raised pad or crest E is designed to

press upon and close the external and internal rings and inguinal canal, so that it is impossible for a hernia to escape.

The concave portion H with its flange is intended to rest upon the walls of the abdomen and form a fulcrum for the crest, and thereby keeping the pad from tilting and suffering the hernia to escape.

This tilting of the pad is an objection to all pads I have seen, but from which my pad is entirely free.

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

The combination, with a truss-pad, of a loop, K, having an annular projection, k^2, a bearing, l, plate L, stud or screw m, all constructed and operating substantially as described.

SAML. AYRES.

Witnesses:
JOHN H. GUY,
HENRY A. WISE.