

No. 803,286.

PATENTED OCT. 31, 1905.

J. W. HINGSTON.  
CLAVICLE DRESSING.  
APPLICATION FILED JAN. 6, 1905.

2 SHEETS—SHEET 1.

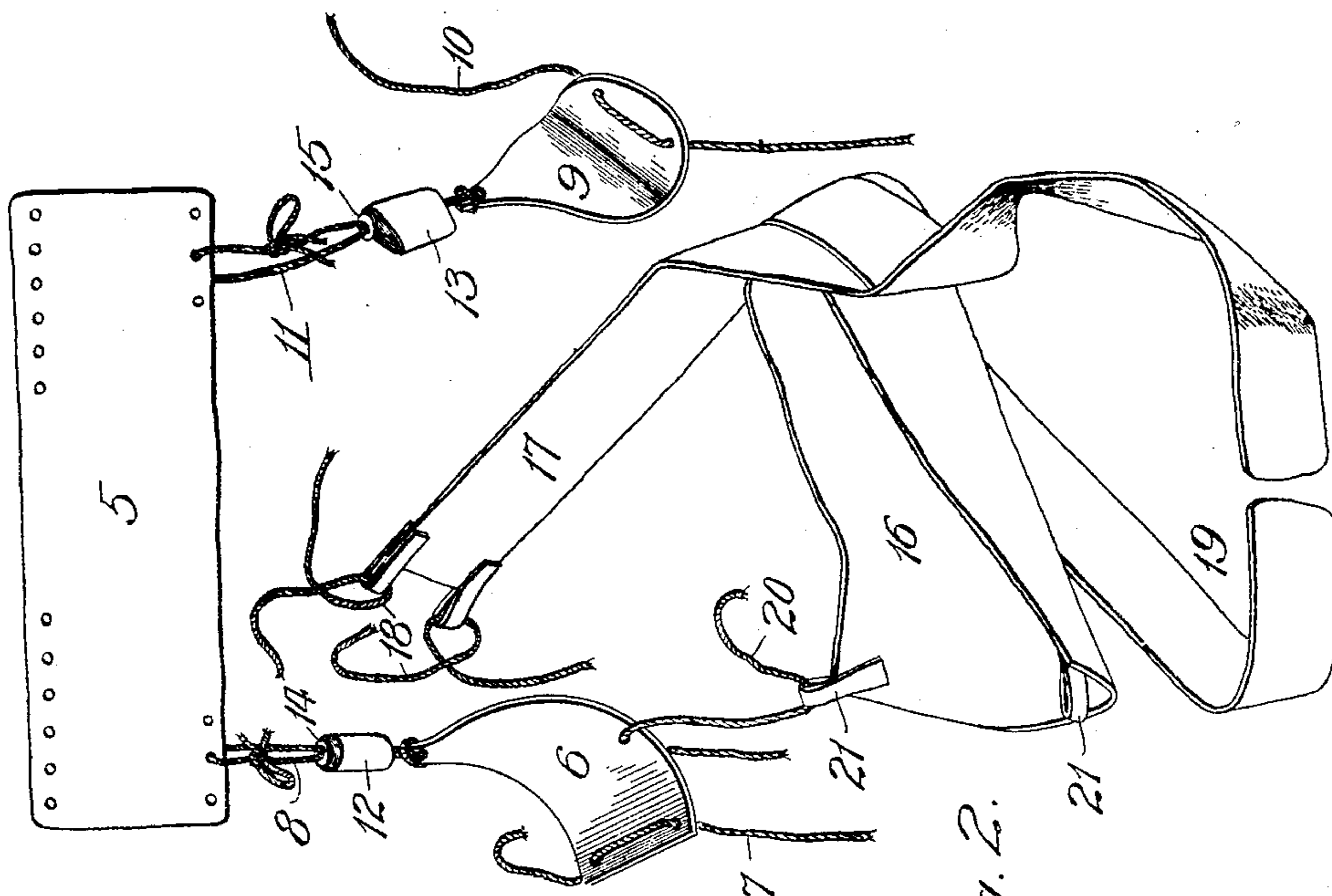


Fig. 2.

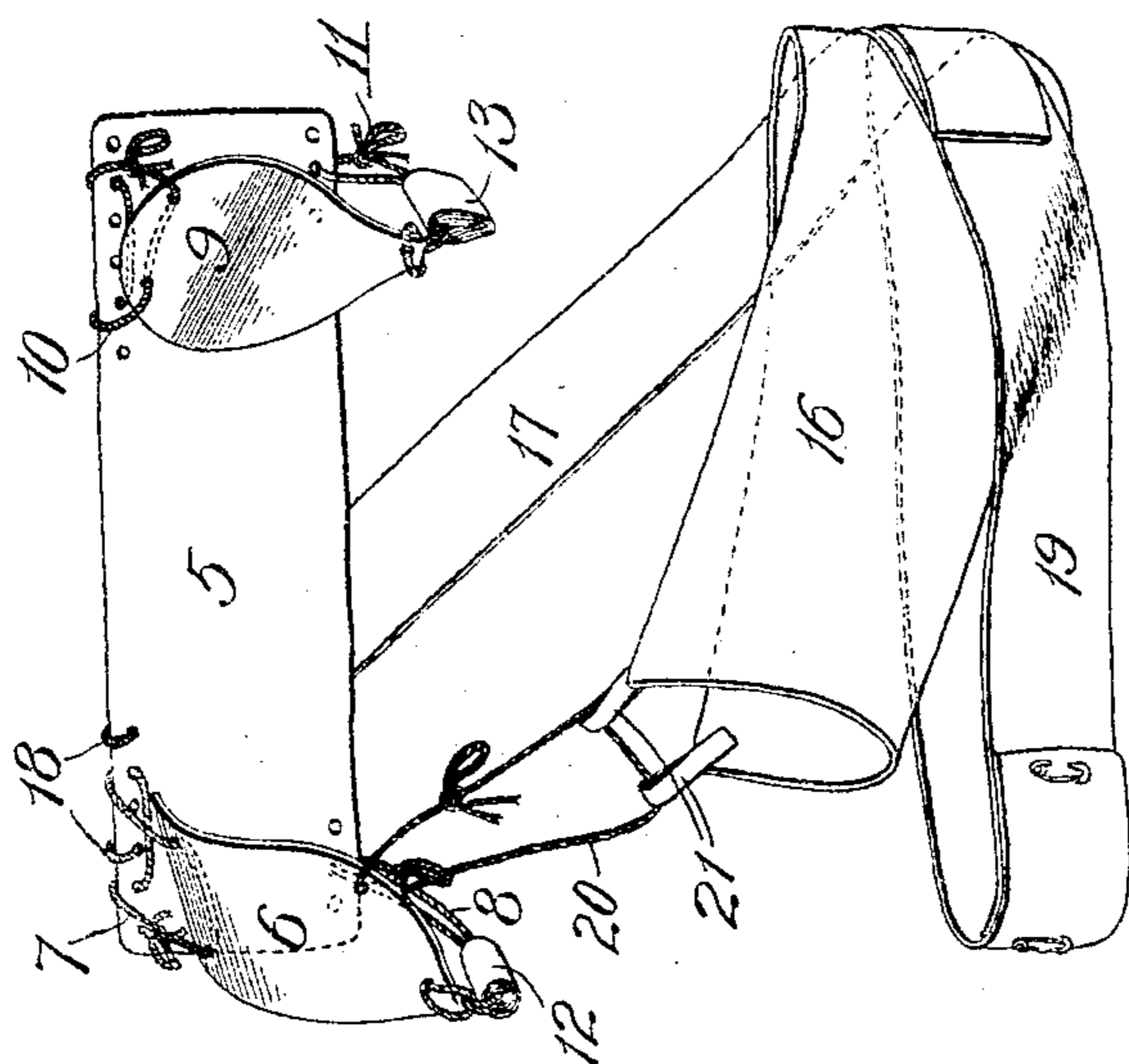


Fig. 1.

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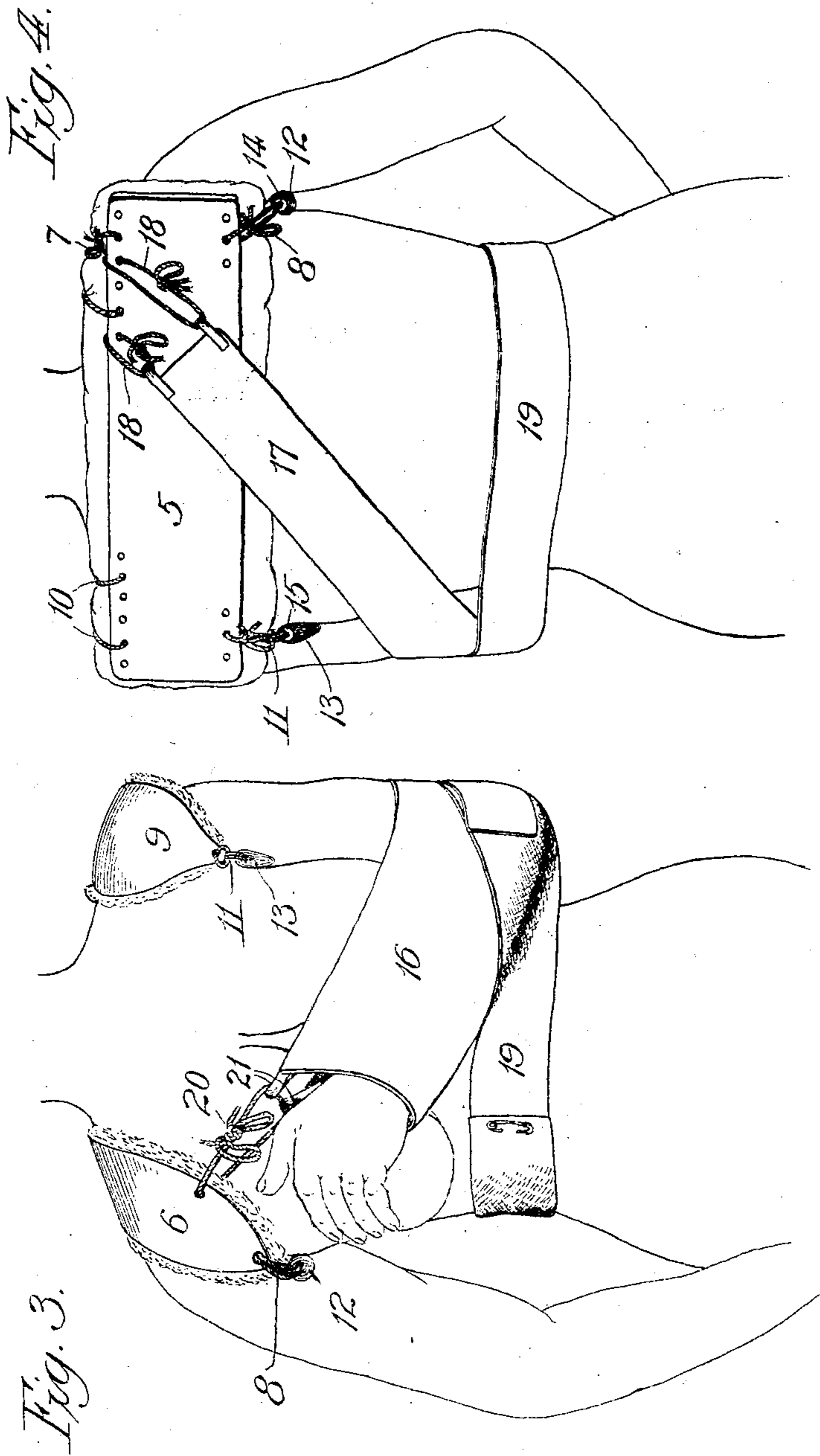
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# UNITED STATES PATENT OFFICE.

JAMES W. HINGSTON, OF CHICAGO, ILLINOIS.

## CLAVICLE-DRESSING.

No. 803,286.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed January 6, 1905. Serial No. 239,881.

*To all whom it may concern:*

Be it known that I, JAMES W. HINGSTON, a citizen of the United States, residing at Chicago, Illinois, have invented a certain new and useful Improvement in Clavicle-Dressings, of which the following is a specification.

My invention relates to surgical appliances such as are employed in the resetting of broken, splintered, or fractured bones of the human body, and pertains more particularly to an appliance for use in the treatment of breaks, fractures, or dislocations of the clavicle or collar-bone.

In all fractures and dislocations of the clavicle the displacement of the shoulder is downward, forward, and inward, while in the case of fractures the fractured ends of the bone override each other or knuckle up at angles of various degrees, or both. In case of dislocation of either end the dislocated end of the clavicle overrides or pushes beyond the articular portion of the bone with which it is normally in joint contact. In order to retain the fractured ends of the bone in apposition in case of break or to retain the disjointed end of the bone in proper place after the fracture or dislocation has been reduced, it is evident that the shoulder must be held upward, backward, and outward—that is, in opposite position to that assumed as a result of the injury.

My invention has for its general and principal object to afford an effective dressing for injuries of the classes specified, and more specifically to maintain the shoulder during the process of convalescence in the relative positions above specified and to retain the fractured or dislocated parts in proper anatomical relation.

The invention generally stated comprises in substance a posterior splint disposed across the back substantially opposite the shoulder-blades, an anterior splint upon the uninjured side connected above and below with one end of said posterior splint, and another anterior splint applied to the injured side and also connected above and below with the opposite end of the posterior splint. In the preferred and most complete form of the invention the dressing also includes axillary pads underlying both shoulders and a support for the forearm designed to hold the latter snugly against and across the breast. In their preferred forms the posterior splint is a substantially rectangular flat member, the anterior splints

lar, respectively, both being concavo-convex in surface formation to approximately fit the contour of the front part of the shoulder, and the axillary pads are preferably substantially cylindrical in form and mounted upon the lower connection between the posterior and anterior splints. Preferably also where the sleeve for supporting the forearm is employed this is positioned at the elbow by means of a transverse bandage overlying or secured thereto and encircling the body, a posterior diagonal bandage connecting the same to the posterior splint and a lacing connecting the forward end of said sleeve to the anterior splint on the uninjured side.

My invention in its preferred and most complete form is illustrated in the accompanying drawings, wherein—

Figure 1 is a front or face view of the dressing, showing the parts connected and in substantially the form assumed when applied to the body. Fig. 2 is a similar view, but showing the elements partly detached and spread apart to more clearly illustrate their individual form and construction. Fig. 3 is a front elevational view of the dressing shown as applied to the human body, and Fig. 4 is a posterior view of the dressing as applied to the body.

Referring to the drawings, 5 designates the posterior splint, which is preferably a flat rectangular strip substantially rigid and adapted to lie squarely across the back of the patient behind the shoulders, as shown in Fig. 4.

6 is an anterior splint of substantially rigid material having a concavo-convex form, adapting it to overlies the anterior portion of the uninjured shoulder, said splint being connected at its upper and wider ends by lacings or the like 7 to the upper edge of the posterior splint and being similarly connected at its lower and narrower end by lacings 8 to the lower edge of the posterior splint.

9 designates the anterior splint, designed to overlies the anterior surface of the outer portion of the injured shoulder. This splint is a concavo-convex member of substantially inverted pear shape in outline, the same being connected by lacings 10 at its upper and wider end to the upper edge of the posterior splint and by lacings 11 from its lower and narrower end to the lower edge of the posterior splint.

12 and 13 designate axillary pads mounted on the lacings 8 and 11, respectively, and designed to lie in the armpits of the patient, as clearly shown in Figs. 3 and 4. The axillary

pads are properly positioned on their respective supports in any suitable way, as by means of buttons 14 and 15.

16 designates a sleeve conveniently, though not necessarily, open on its upper side, as shown, designed to support the forearm of the injured side. This sleeve is preferably connected at its proximal or elbow end to the lower end of a diagonal bandage 17, which latter is connected at its upper end, as shown, by suitable lacings 18 to the posterior splint. (See Fig. 4.)

19 designates a transverse bandage which encircles the body approximately at the waist and overlies or is connected to the sleeve 16 at its elbow end.

20 designates a lacing or the like which connects the wrist end of the sleeve, preferably through loops or straps 21, connected thereto across the chest to the proximate edge of the anterior splint 6.

Having described the cooperating elements of the dressing as to their preferred form, construction, and relative arrangement, I will next describe their manner of application to the body and the respective functions performed by each.

The relative positions occupied by the several parts of the dressing when in service are clearly indicated in Figs. 3 and 4. The rectangular posterior splint 5 serves in connection with the anterior splint 6 upon the uninjured side to act as a counter-pressure member for the anterior splint 9, that is applied to the injured side. The curved anterior splint 6 applied to the uninjured side affords an anchorage to the posterior splint 5 in transmitting the counter-pressure to the anterior splint 9 and is preferably so positioned as to afford free use of the arm. It is to be understood that both of the anterior splints are curved both superficially and marginally to conform as closely as possible to those portions of the body which they respectively cover, and all three splints are of course provided with suitable underlying padding, as indicated in Figs. 3 and 4, to prevent chafing and render the dressing comfortable, as also to add greater pressure when needed, such padding varying according to the lack or abundance of flesh and to the contour of the body. It will of course be understood also that the sizes of the splints are varied to conform to the size of the patient in each case treated. The function of the anterior splint 9 applied to the anterior aspect of the outer portion of the injured shoulder is to hold the shoulder back, thus overcoming one of the abnormal positions assumed as the result of the injury. The axillary pad 12 under the arm of the uninjured side aids in holding the anterior splint upon that side and the posterior splint in proper position, being itself held in position by the under lacings 8 on which it is supported and by its endwise confining mem-

ber or members 14. The pad 13 that goes in the axilla of the injured side is designed, primarily, to act as a fulcrum to extend the shoulder outward from the base of the neck when acted upon through the arm by the transverse bandage 19, that encircles the body, said pad having also the functions of the pad 12. This pad is likewise held in position by the under lacings 11 or other suitable fastenings that unite the anterior splint with the posterior splint, whereby the pad is held well up and comfortably in the axilla.

The sleeve 16 may be made of any suitable cloth and is designed, primarily, to act in conjunction with the posterior diagonal bandage 17 to elevate the shoulder of the injured side by acting through the arm from the elbow. The diagonal bandage 17 cooperates with the sleeve 16, as above stated, in elevating the shoulder of the injured side and is conveniently attached to the sleeve at the elbow, as shown. The transverse bandage 19, that encircles the body, passing over the arm and forearm at the elbow, is designed by binding the distal end of the arm to the side and acting upon the humerus as a lever and upon the axillary pad as a fulcrum to force the shoulder outward. The lacing or other suitable connection 20 between the wrist end of the sleeve and the anterior splint 6 through the weight of the arm assists in holding the splint 6 in proper position.

It will be observed that the posterior diagonal bandage, the sleeve, the anterior splint upon the uninjured side, the posterior splint, and the upper lacings which unite the anterior and posterior splints on that side unitedly form a continuous support for the elbow of the injured side to the shoulder of the uninjured side. For greater convenience in the application and removal of the dressing the posterior diagonal bandage, the sleeve, and the transverse body-encircling bandage are permanently united at their point of conjunction at the elbow, although, of course, said parts might be made separate and temporarily united in the application of the dressing.

From the foregoing it will be seen that my invention provides a surgical dressing for clavicle injuries which when applied compels and maintains an upward, outward, and backward position of the injured shoulder, which threefold position is antagonistic to the position which the shoulder tends to assume as a result of the injury and favorable to the position essential to the restoration of the fractured or dislocated parts.

An important feature of the present dressing is the perfect immobilization of the injured parts secured thereby, the dressing holding them fixedly in perfect coaptation, thus favoring more rapid recovery. The dressing is perfectly comfortable to the wearer, is adjustable without removal, is so fashioned and adjusted as to be incapable of derangement, and

is capable of partial removal after the first few days of wear for the purpose of cleanliness of the body without danger of displacing the injured parts.

5 It is evident that the particular forms and structures of the coöperating parts and their manner and means of connection with each other might be considerably varied by those skilled in the art without departing from the spirit or sacrificing any of the benefits and  
10 advantages of the invention. Hence I do not limit the invention to the particular device herein shown and described except to the extent that the latter is made the subject of  
15 specific claims.

I claim—

1. A clavicle-dressing comprising a substantially rigid posterior splint adapted to lie across and against the shoulders, an anterior splint connected to one end of said posterior splint and adapted to overlie the injured  
20 shoulder, and a counter-pressure anterior splint connected to the opposite end of said posterior splint and adapted to overlie the uninjured shoulder, substantially as described.

2. A clavicle-dressing comprising a posterior splint, a broad, shield-like concavo-convex anterior splint connected to one end of said posterior splint and adapted to overlie the  
30 injured shoulder, and a broad, shield-like concavo-convex counter-pressure anterior splint connected to the opposite end of said posterior splint and adapted to overlie the uninjured shoulder, substantially as described.

3. A clavicle-dressing comprising a posterior splint, an anterior splint connected to one end of said posterior splint and adapted to overlie the injured shoulder, a counter-pressure anterior splint connected to the opposite  
40 end of said posterior splint and adapted to overlie the uninjured shoulder, and axillary pads between the lower ends of said anterior splints and the posterior splint, substantially as described.

4. A clavicle-dressing comprising a posterior splint, an anterior splint adapted to overlie the injured shoulder, a counter-pressure anterior splint adapted to overlie the uninjured shoulder, upper and under connections  
50 between said anterior splints and the proximate ends of said posterior splint, and a sling for the arm of the injured side suspended from said posterior splint, substantially as described.

5. A clavicle-dressing comprising a posterior splint, an anterior splint adapted to overlie the injured shoulder, a counter-pressure anterior splint adapted to overlie the uninjured shoulder, lacings connecting the upper and lower ends of said anterior splints with  
60 the proximate ends of said posterior splint, axillary pads mounted on the under lacings connecting said anterior and posterior splints, a sleeve to support the arm of the injured side, and a diagonal bandage connecting said  
65 sleeve at the elbow to the remote end of the posterior splint, substantially as described.

6. A clavicle-dressing comprising a posterior splint, an anterior splint connected to one end of said posterior splint and adapted to overlie the injured shoulder, a counter-pressure anterior splint connected to the other end of said posterior splint and adapted to overlie the uninjured shoulder, a sling to support the forearm of the injured side suspended  
70 from said posterior splint, and a bandage connected to said sling and encircling the body to hold the arm closely against the latter, substantially as described.

7. A clavicle-dressing comprising a posterior splint, two anterior splints adapted to overlie the injured and uninjured shoulders, respectively, lacings connecting the upper and lower portions of said splints to the respective proximate ends of said posterior  
80 splint, axillary pads carried by the lower lacings, a sleeve adapted to support the forearm of the injured side, a diagonal posterior bandage connecting the elbow end of said sleeve to the remote end of said posterior splint, a  
90 bandage connected to the elbow end of said sleeve and adapted to encircle the body, and a lacing connecting the wrist end of said sleeve to the anterior splint overlying the uninjured shoulder, substantially as described.

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Witnesses:

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