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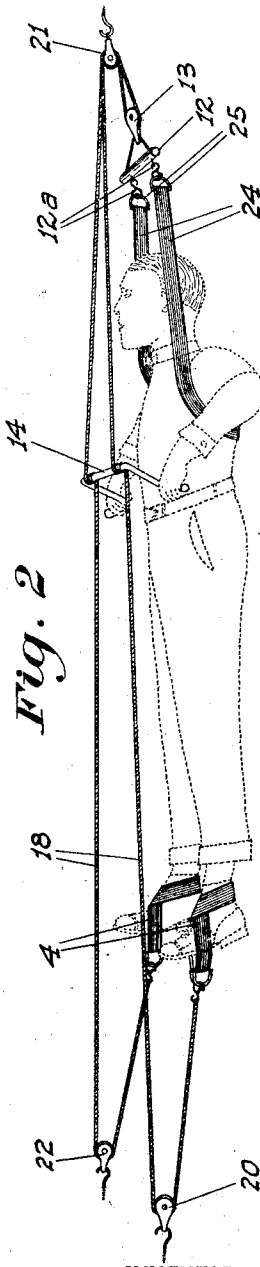
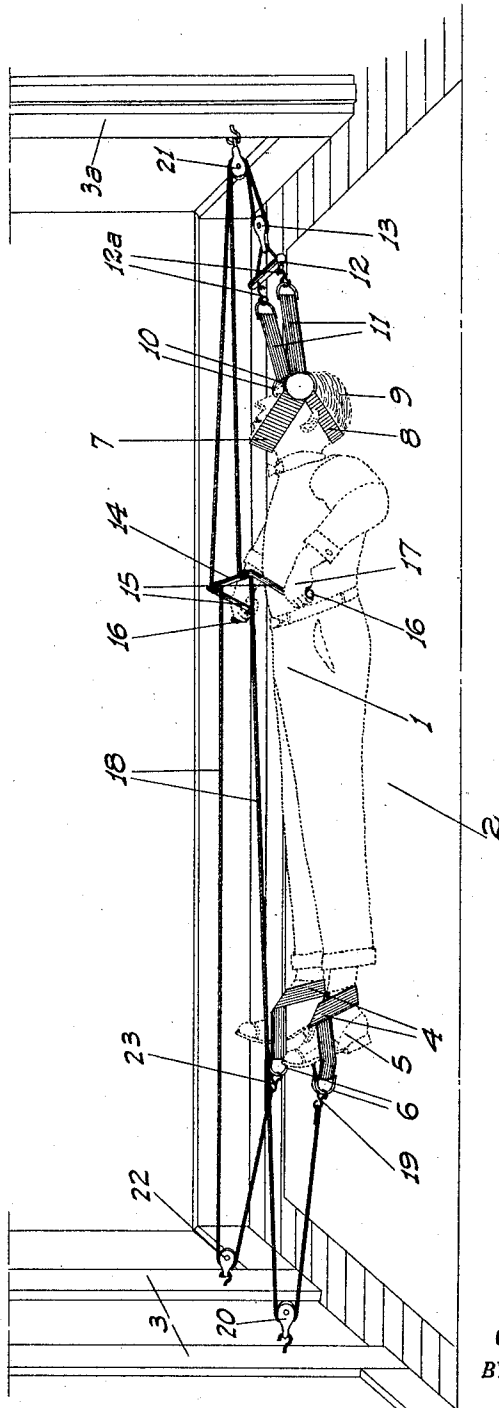
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BODY STRETCHER

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1,701,747

Fig. 1



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BODY STRETCHER.

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This invention relates to improvements in mechanical stretching devices such as are used in the science or theory of tension therapy for health giving purposes; and particularly represents an improvement over the self-actuated type of body stretcher shown in my Patent No. 1,612,496 dated December 28th, 1926.

In this previous device the pull cords were so connected to the crank or windlass member and the extremities of the body, that if for any reason one length of cord was longer or had greater initial slack than the other, such slack would never be taken up. The result was that a greater pull would be exerted on one member of the body than on the other, with a detrimental rather than a beneficial result. Further such slack would very likely be present if great care was not taken in making the initial adjustment of parts.

The principal object of the present invention therefore is to provide a body stretching apparatus of the above described general type having a stretching mechanism so arranged that the pull on the body with the turning of the crank handles will be thoroughly equalized to all parts of the body regardless of any difference of pressure which the operator may exert on the opposed crank handles, or of any initial difference in length or amount of slack in the opposed runs of the pull cords.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views:

Fig. 1 is a fanciful outline of a human body showing my improved form of stretching apparatus applied thereto, and using the head gear.

Fig. 2 is a similar view, showing the body strap in use in place of the head gear.

In using my improved apparatus the patient 1 preferably reclines in an outstretched position on his back on the floor 2 of a room, in longitudinal alinement with opposed door frames 3 and 3^a, or some similar solid parts. 55

In the type of device shown in Figure 1, the stretching apparatus comprises head and ankle attachments and a mechanism for tending to pull the attachments away from each other, when they are applied to the body. 60 Each ankle attachment preferably consists of a length of flexible but non-elastic strap 4, adapted to be placed about and crossed over an ankle 5, so that the ends of the strap extend beyond the sole of the foot and are transversely alined with each other. 65 At said ends rings 6 are mounted on the strap, said rings being of course separated from each other, but in transverse alinement when the strap is thus applied. The head attachment comprises a chin strap 7, another strap 8 to extend around the back of the head 9 adjacent the plane of the ears and transversely spaced rings 10 to which the ends of both straps are connected. 70 Also attached to the rings 10 and projecting longitudinally of the body and above the head are separate straps 11, the upper ends of which are connected to a cross bar or single-tree 12 by snap-hooks 12^a at the ends thereof. 75 Connected to this bar centrally of its length is a pulley 13. The bar not only forms a convenient means for attaching the pulley, but prevents a pull on the attachment from causing the chin strap to be contracted so that the rings 10 will bind against the sides of the face and head. 80 85

The mechanism for pulling the ankles and head attachments away from each other and consequently imparting a stretching action to the body comprises a windlass consisting of a rod 14 to extend across and over the body, symmetrically disposed crank arms 15 at the ends of the rod, and parallel and oppositely alined handles 16 projecting outwardly from the ends of the arms. 90 The handle are adapted to be grasped by the hands 17 of the patient and being both in the same position relative to the rod an equal pressure is easily exerted on both handles to turn the rod 100

evenly and without any tendency to lateral twisting of the same.

Extending between the rings 6, the windlass rod 14, and the pulley 13, is a finger cord 18. This cord is doubled intermediate its ends so as to have two runs, and one end of the cord has a snap hook 19 thereon which detachably engages one pair of the rings 6. The cord then extends in longitudinal alinement with the adjacent leg of the body to the adjacent door frame 3, about a direction changing pulley 20 permanently or detachably secured to the frame, and thence to the windlass rod 14 to the corresponding end of which said cord is adjustably connected, as shown in the aforementioned patent. The cord then extends over the remainder of the body and beyond the head and passes about one groove of a double pulley 21, which is secured to the adjacent door frame 3^a beyond and in line with the pulley 13. The cord then extends to and around said pulley 13 (which forms the point of doubling of the cord) back to and around the other groove of the pulley 21, thence to a connection with the opposite end of the rod 14, and thence to a pulley 22 secured on that member of the door frame 3 opposite to the one to which the pulley 20 is connected. Passing around said pulley 22 the cord extends to the adjacent pair of rings 6, said end of the cord having a snap hook 23 to detachably engage said rings.

It will therefore be seen that owing to the use of a single cord and the equalizing pulley 13 about which said cord passes intermediate its ends, that a pull on one run of the cord (caused by the rotation of the windlass and the winding of the cord about the rod 14) will always cause an equal pull in the same direction to be exerted on the other run of the cord regardless of any initial difference in slack between the two runs. In other words if for any reason one run should have considerable initial slack while the other run is initially taut, no stretching pull will be exerted on the taut run until the slack on the other run has been taken up. The stretching action on the legs and other parts of the body is therefore fully equalized and the operator does not have to spend any time in making initial adjustments to insure such proper and equalized operation, as was the case with the previous device.

In Fig. 2, the parts of the apparatus are the same as above described, except that the head gear is removed, and its place taken by a strap 24, which extends about the back of the body and then up and over the arm pits. The ends of this strap carry rings 25 for attachment to the snap-hooks of the bar 12. This arrangement is operated the same as with the use of the head gear, and its use follows that of the head gear.

From the foregoing description it will be readily seen that I have produced such a de-

vice as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

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

1. A body stretcher comprising a flexible element doubled to form two runs arranged to extend lengthwise of a patient, means for attaching the ends of the element to the adjacent extremities of a patient, a pulley about which the element passes at its point of doubling, means for attaching the pulley to the head of the patient, fixed members beyond the patient at both ends and about which the runs of the element pass intermediate their ends, and means applied to one run of the element for shortening the same at will.

2. A body stretcher comprising ankle and head attachments to be applied to a patient, head and foot pulleys arranged to be mounted in a fixed position beyond the patient at both ends and substantially in longitudinal alinement with the respective attachments, a flexible element doubled to form two runs passing over the pulleys intermediate the ends of said runs, means connecting the ends of the element to the ankle attachments, means applied to one run of said element for altering the length of the same at will, and means for operatively connecting the element beyond the head pulley to the head attachment in a manner to cause a shortening action applied to said one run of the element to impart a corresponding shortening to the other run.

3. A body stretcher comprising ankle and head attachments to be applied to a patient, head and foot pulleys arranged to be mounted in a fixed position beyond the patient at both ends and substantially in longitudinal alinement with the respective attachments, a flexible element doubled to form two runs passing over the pulleys intermediate the ends of said runs, means connecting the ends of the element to the ankle attachments, means applied to one run of said element for altering the length of the same at will, and a pulley connected to the head attachment and disposed between such attachment and the head pulley; the element passing about the attachment pulley and the latter forming the location of the doubling of said element.

4. A body stretcher comprising separate attachments to be applied both to the adjacent and opposite extremities of the body, connecting means between the attachments, means for shortening said connecting means, means applied to the connecting means to cause the functioning of the shortening means to impart a pull on all the attachments in opposite

directions and further means for causing such pull to be transmitted with equal force to all the attachments.

5 5. A body stretcher comprising separate attachments to be applied both to the adjacent and opposite extremities of the body, means applied to the attachments for enabling the same to be pulled in opposite directions,

means acting on said first named means for imparting a pulling force thereto, and further 10 means for causing such pulling force to be automatically transmitted with equal intensity to all the attachments.

In testimony whereof I affix my signature.

GEORGE DOBBINS.