

G. H. HOUGHTON.  
 SURGICAL APPARATUS.  
 APPLICATION FILED AUG. 12, 1907.

1,055,462.

Patented Mar. 11, 1913.

2 SHEETS—SHEET 1.

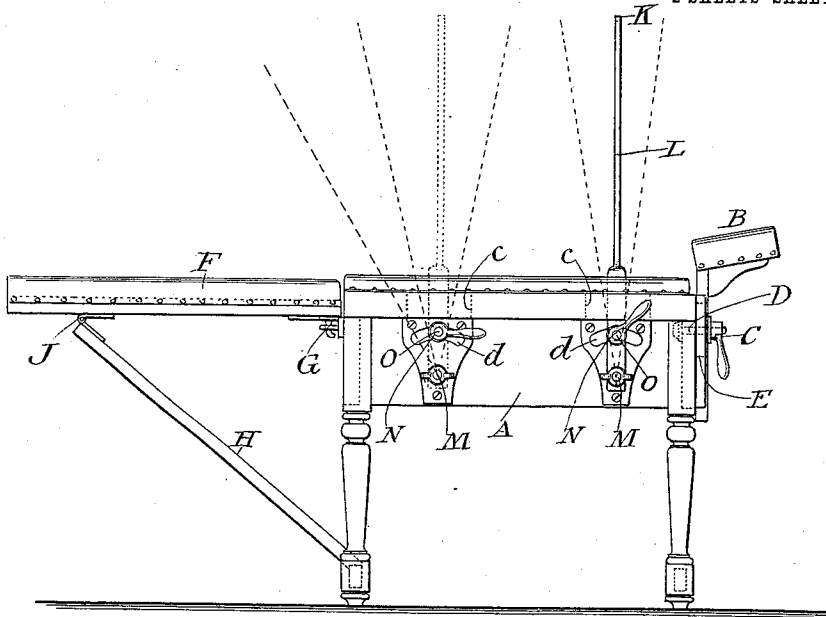


Fig. 1.

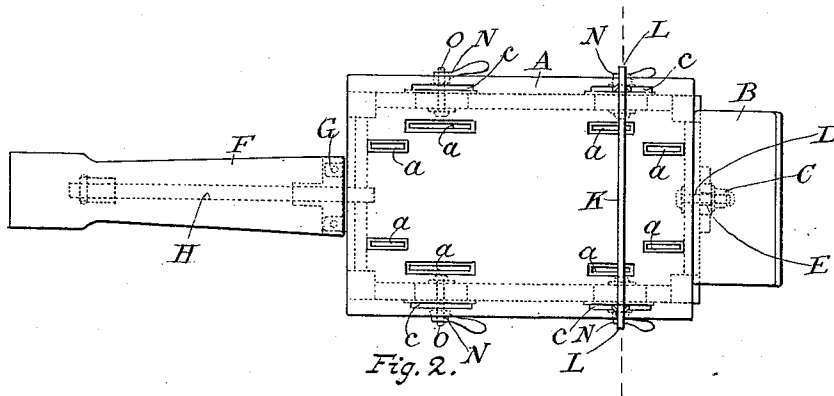


Fig. 2.

Witnesses,  
 Newton W. Thompson  
 Charles Seckwitz

George H. Houghton  
 Inventor,  
 Gaylord Logan  
 Attorney

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2 SHEETS—SHEET 2.

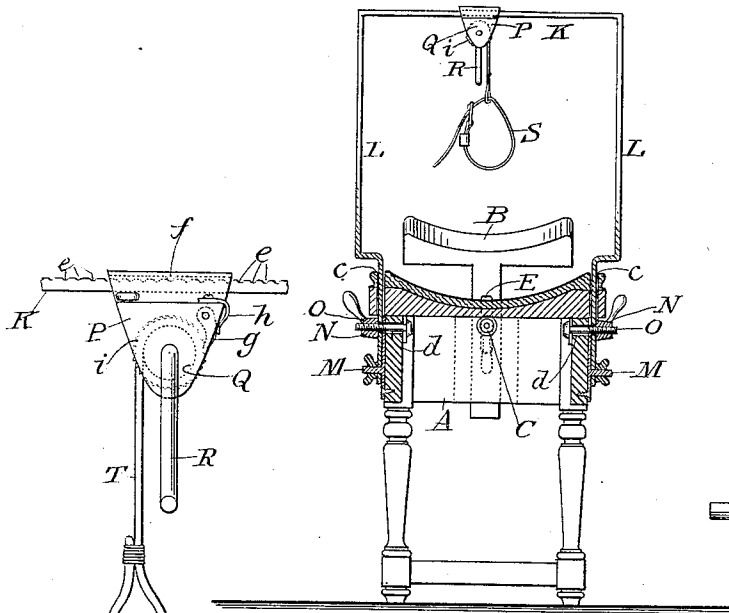


Fig. 3.

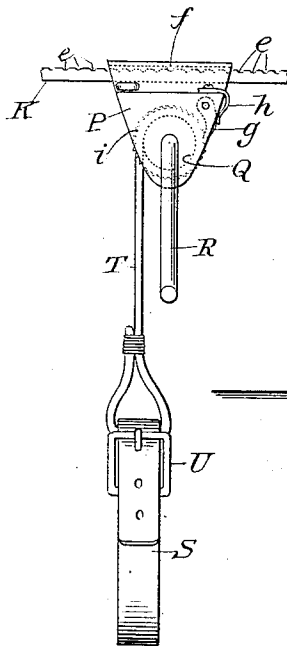


Fig. 4.

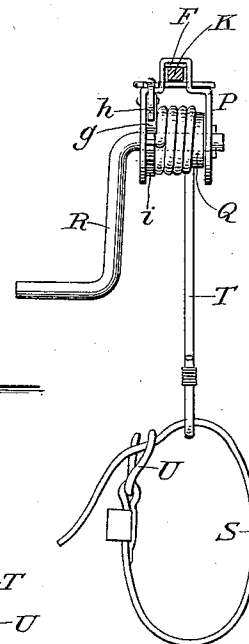


Fig. 5.

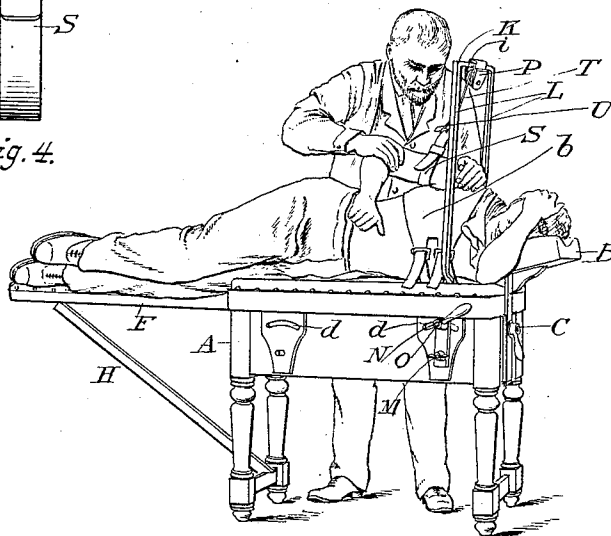


Fig. 6.

Witnesses,  
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# UNITED STATES PATENT OFFICE.

GEORGE H. HOUGHTON, OF ALBANY, NEW YORK.

## SURGICAL APPARATUS.

1,055,462.

Specification of Letters Patent.

Patented Mar. 11, 1913.

Application filed August 12, 1907. Serial No. 388,091.

*To all whom it may concern:*

Be it known that I, GEORGE H. HOUGHTON, physician and surgeon, a citizen of the United States, residing in the city and county of Albany, State of New York, have invented new and useful Improvements in Surgical Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to surgical apparatus adapted for the reduction of dislocations, particularly of shoulder joints and of hip joints, providing a positive, direct, mechanical power to be used in place of manipulation now most generally depended upon; and the objects of my improvement are to save the patient from most of the pain and time heretofore incident thereto, and to make direct and certain the operation which as usually practiced has been largely haphazard and uncertain. I attain these objects by the apparatus illustrated in the accompanying drawing, in which—

Figure 1 is a side elevation of a device embodying my invention; Fig. 2 is a plan; Fig. 3 is a vertical transverse section; Fig. 4 is a detailed front view of the stirrup and its adjusting mechanism; Fig. 5 is a detailed side view of the stirrup and its adjusting mechanism; and Fig. 6 is a perspective view of the whole apparatus in use.

Similar letters refer to similar parts throughout the several views.

A represents a table or support having its upper surface curved transversely, forming a trough-like support adapted to receive the body of the patient operated upon.

The table A, is preferably provided with a head rest B, held at any desired height by the handle screw nut C, operated on the bolt D, fixed in the end of the table and passing through the slot E, and with the leg rest extension F extending along the central longitudinal line of the table, attached to the end of the table opposite the head rest by a hinge or joint G, and held in position by the support H, which is attached to the extension by hinge J. By the removal of the support H, the extension F, can be dropped out of place, thereby requiring less space when not extended. I make this leg rest extension narrower than the table and preferably of just sufficient width to support the

legs of the patient in order to provide for dropping the leg on either side of the narrow extension while it still supports the other leg and together with the table securely holds and supports the patient. The table is provided with holes *a, a, a, a*, for the passage of straps or bands *b*, used to firmly secure the body of the patient to the table. An overhanging yoke K, is formed with a supporting bar extending transversely of the table and with uprights L, L, preferably pivotally secured to the table by the bolts M, M. To enable the upper portion of the yoke K to be adjustable longitudinally of the table, I prefer to provide the table with slots *c* adapted to receive the lower portion of the uprights L, L, and permit a limited movement of said uprights in said slots. Arc slots *d* are also preferably formed in the sides of the table or in the side plates secured to said table for the purpose of receiving bolts O, O which are secured to the uprights L, L, and enable said bolts O, O, to move in said slots to a limited extent. When the yoke K and upright L are in the desired position they are locked immovably in place by means of the screw nuts N, N. Means for receiving the uprights L, L are preferably provided near each end of the table so as to enable the yoke to be readily removed and used for either an arm or hip luxation. The yoke K, is also provided with notches *e*, to engage the tooth *f*, in the drum case P, and hold it in place on the bar. The drum Q, secured in the drum case P, is operated by the crank R, and held at any desired point by the ratchet tooth *g*, operated by the spring *h* and engaging the teeth of the ratchet wheel *i*, which is affixed to the drum. The fulcrum band or stirrup S, is suspended from the yoke, K, by the cord T, attached to the drum Q. The stirrup S is adjustable to any desired size by the buckle U, and to any desired height by the rolling of the cord T, on to or off from the drum.

In the construction herein shown and described I have embodied my invention in its preferable form. I do not desire to be limited to such construction however, as other means of same capabilities may be used without departing from my invention.

In use for the reduction of a shoulder dislocation the patient is secured to the table by means of the strap or band *b* with the dislocated joint uppermost, the stirrup S is

adjusted to the arm at a point between the elbow and the dislocation and by the means shown is adjustable to any desired position and to any relative height, and when suitably adjusted the arm, in the hands of the operator, is used as a lever and the stirrup S as a fulcrum to pry the dislocated humerus bone into the socket. Similar adjustment and use by the means provided as shown readily and quickly reduce a hip dislocation.

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

1. The combination with a table, of a yoke arranged transversely of said table and having upright side portions with a transverse central connecting portion, means adapted to connect the lower ends of said uprights with said table, comprising a pivotal connection, and arc slots adapted to permit said uprights to be held in an inclined position, means for locking said uprights immovably on said table, a stirrup

supported on said yoke, and means for raising and lowering said stirrup.

2. The combination with a table, of a yoke arranged transversely of said table, comprising uprights secured to the opposite sides of said table, and a central transverse connecting portion, a pulley frame movably mounted on said central transverse connecting portion, and adapted to be held in engagement with said portion, by means of notches and an engaging lug formed on said bar and frame respectively, a stirrup mounted on said frame, and means for raising and lowering said stirrup.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE H. HOUGHTON.

Witnesses:

MARY P. ADAMS,  
GAYLORD LOGAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."