A. S. HEGGEN.

TRACTION FRAME.

APPLICATION FILED JULY 30, 1910.

1,070,467. Patented Aug. 19, 1913.

FIG. 1.

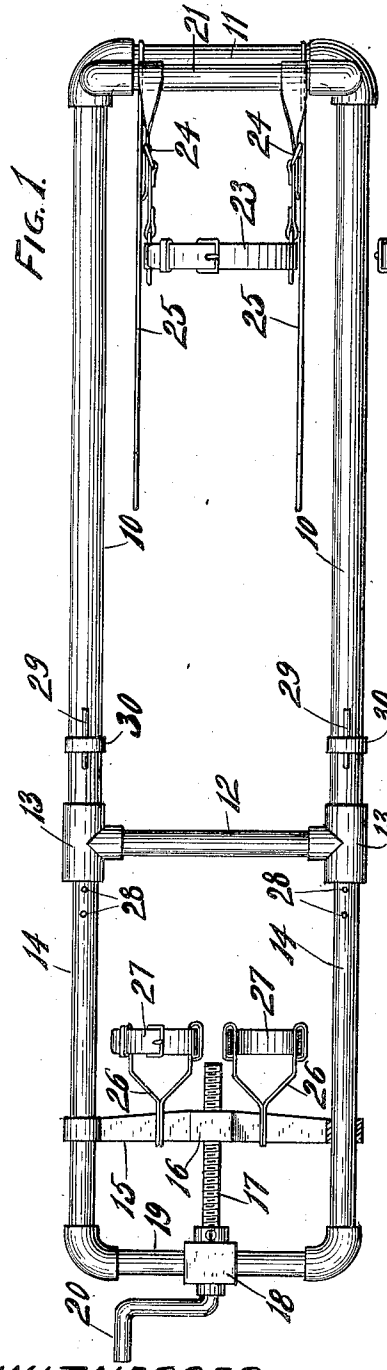


FIG. 2.

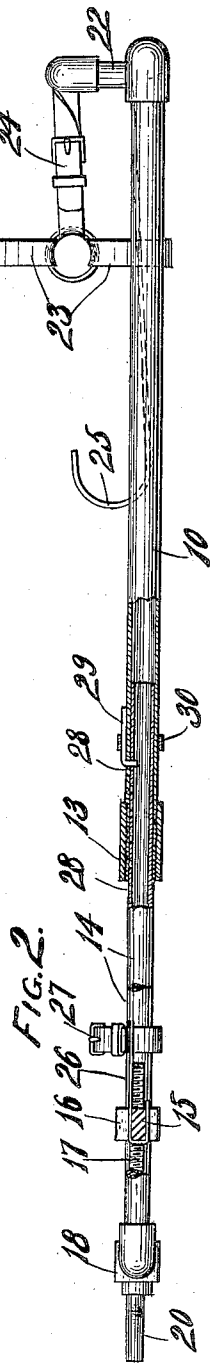


FIG. 4.

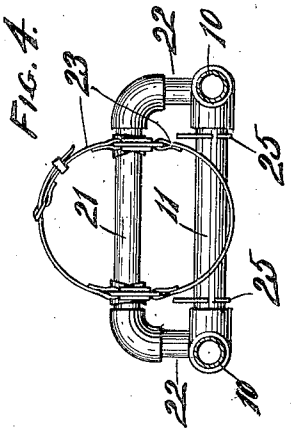
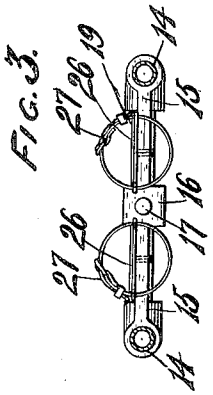


FIG. 3.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

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## TRACTION-FRAME.

1,070,467. Specification of Letters Patent. Patented Aug. 19, 1913.

Application filed July 30, 1910. Serial No. 574,644.

*To all whom it may concern:*

Be it known that I, ANFIN S. HEGGEN, a citizen of the United States, resident of Madison, county of Dane, and State of Wisconsin, have invented new and useful Improvements in Traction-Frames, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention has for its object to provide a traction apparatus in the form of a light, collapsible, portable frame which may be placed upon an operating table or other support for the patient and without mechanical connection with such support will exert traction upon the limbs and body of the patient, particularly for correcting spinal deformities.

With the above and other objects in view the invention consists in the traction frame herein claimed and all equivalents.

Referring to the accompanying drawings in which like characters of reference indicate the same parts in the different views: Figure 1 is a plan view of a traction frame constructed in accordance with this invention. Fig. 2 is a side elevation thereof with parts broken away; Fig. 3 is a sectional elevation of the foot end of the frame; and, Fig. 4 is a similar view of the head end thereof.

In these drawings the frame is shown as comprising a main frame and an adjustable frame. The main frame is preferably rectangular and oblong, as shown, and is made up of metal pipe or tubes connected by the usual elbows and T's, the long side tubes 10 being connected to the end tube 11 by elbows and being connected by a cross tube 12 through T's 13 which have the side tubes 14 of the adjustable frame loosely fitting therethrough and through the side tubes of the main frame so as to telescope within said side tubes of the main frame. The adjustable frame is constructed similarly to the main frame with the exception that it has no rigidly connected cross bar, though it does have an adjustable cross piece 15 with sleeves on its end slidably fitting on the side tubes 14 and forced in either direction by means of a nut 16 formed at its middle part and threaded on a screw 17 which is loosely mounted in a bearing block 18 on the end tube 19 of the adjustable frame and provided with a crank handle 20 for turning it.

The end tube 11 of the main frame has a supplemental tube 21 parallel therewith and supported at a higher elevation by nipples 22 threading into the elbows thereof at the corners of the main frame. This supplemental tube 21 forms a support for a head strap 23 which is adapted to be tightly fastened around the forehead of the patient, and is connected with the tube 21 by means of straps 24. The end tube 11 forms a support for hook members 25 which are passed therearound and are then adapted to engage the arms of the patient. On the adjustable cross piece 15 are a pair of yoked hooks 26 which have ankle straps 27 mounted thereon and adapted to be tightly secured to the ankles of the patient while the patient lies upon the operating table or other support upon which the frame rests. The side tubes 14 of the adjustable frame are provided with a series of openings 28 adapted to be engaged by bent pins 29 which pass through openings in the side tubes 10 of the main frame and are held in engagement by metal rings 30 sliding on the tubes 10.

In operation, the telescoping frame sections are placed upon an operating table or the like and are extended to the desired adjustment and are then locked by means of the pins 29 and the patient lies upon the frame with his head tightly bound within the head strap 23 and the hooks 25 engaging the arms at the arm pits and the ankle straps 27 firmly clamped around the ankles, and is subjected to traction by turning the crank 20 and thereby feeding the cross piece 15 along the tubes 14 toward the foot end of the frame.

It is known that orthopedic apparatus has heretofore been constructed in which the traction device is in the form of a table for supporting the patient and in which attachments have been made to operating tables for producing traction, but the object of the present invention is to provide a traction apparatus complete in itself and not requiring to be connected with and disconnected from an operating table, but serving the purpose intended by merely being placed upon the operating table or upon an ordinary lounge or even upon the floor.

The entire device is light in weight though strong and durable in construction and by reason of its collapsible feature, it can be stored away in a small space when not in use.

What I claim as new and desire to secure by Letters Patent is:

1. A portable traction frame for exerting tension upon the spinal column of a patient, comprising a tubular main frame consisting of side tubes connected by elbows with an end tube and connected by T's with a cross tube, a supplemental tube parallel with the end tube and connected with the elbows thereof, an adjusting frame consisting of side tubes connected by elbows with an end tube, said side tubes of the adjusting frame telescoping within the side tubes of the main frame, means for locking the adjusting frame in its adjustments with relation to the main frame, and body clamping and extending devices secured to the outer end of the adjusting frame and to the supplemental tube of the main frame.

2. A portable traction frame, comprising a main frame consisting of side tubes connected with an end tube by elbows and with a cross tube by T's, a supplemental tube parallel with the end tube of the main frame and connected with the elbows thereof, an adjusting frame consisting of side tubes connected with an end tube by means of elbows, said side tubes of the adjusting frame telescoping within the side tubes of the main frame, there being adjustment openings in the side tubes of the adjusting frame and locking openings in the side tubes of the main frame, pins passing through the said openings, rings sliding on the side tubes of the main frame for locking the pins, a bearing carried by the end tube of the adjusting frame, a screw loosely mounted in the bearing and provided with a crank handle, a cross piece having sleeves slidably fitting on the side tubes of the adjusting frame, a nut on the cross piece through which a screw is threaded, ankle straps detachably connected with the cross piece, a head strap secured to the supplemental tube of the main frame, and arm hooks connected with the end tube of the main frame.

In testimony whereof, I affix my signature, in presence of two witnesses.

ANFIN S. HEGGEN.

Witnesses:
GEORGE KROUCHE,
LEWIS LUNSTRUM.

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