

No. 762,832.

PATENTED JUNE 14, 1904.

K. L. MINGES.
PHYSICAL DEVELOPMENT APPARATUS.

APPLICATION FILED SEPT. 23, 1903.

NO MODEL.

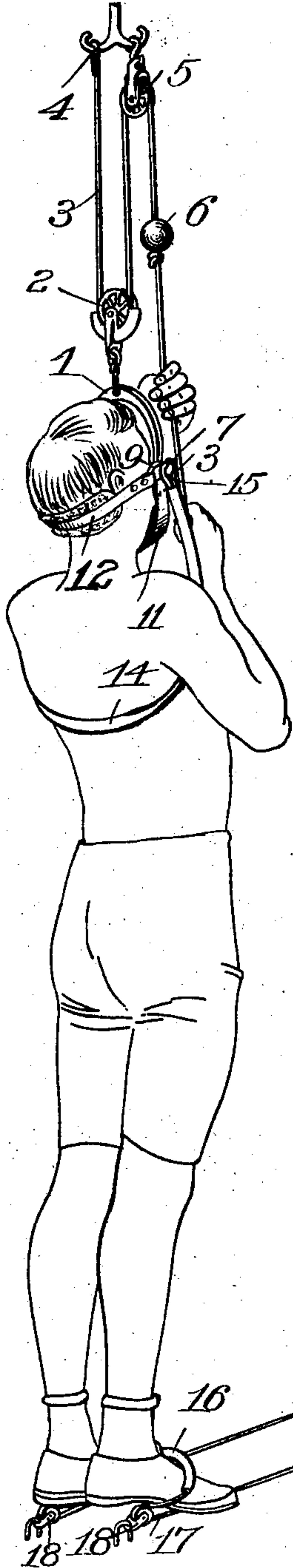


Fig. 1.

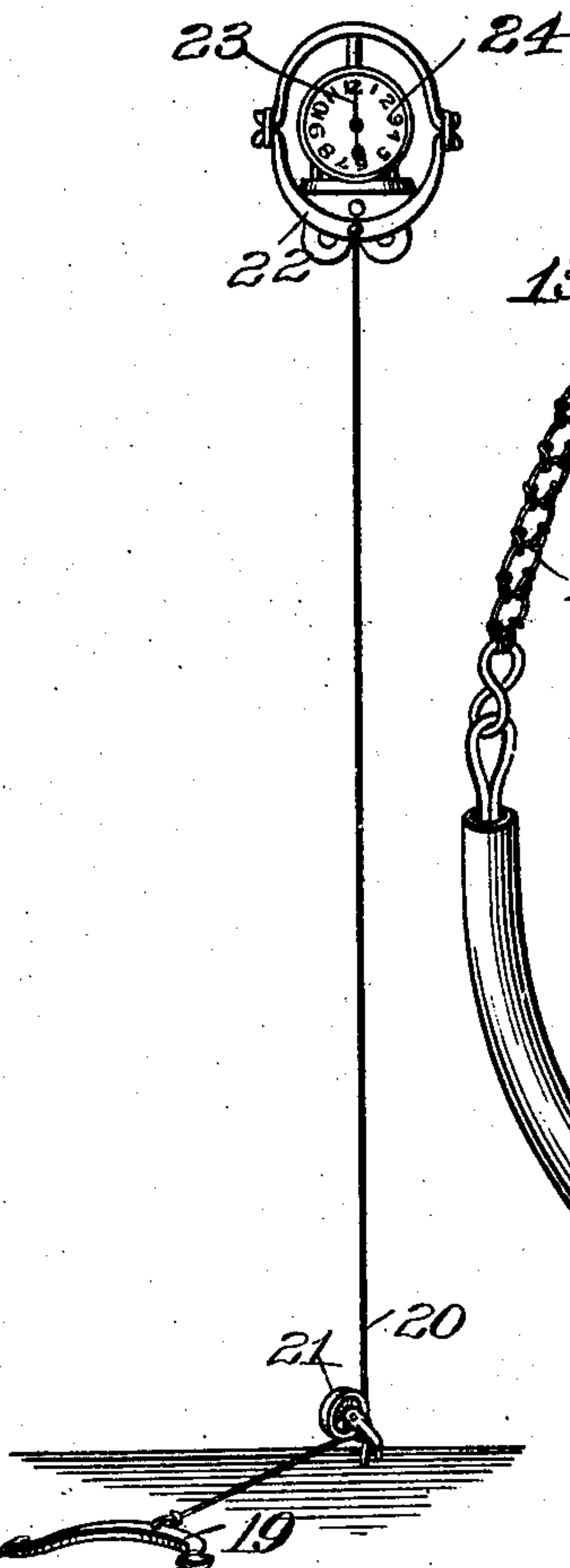
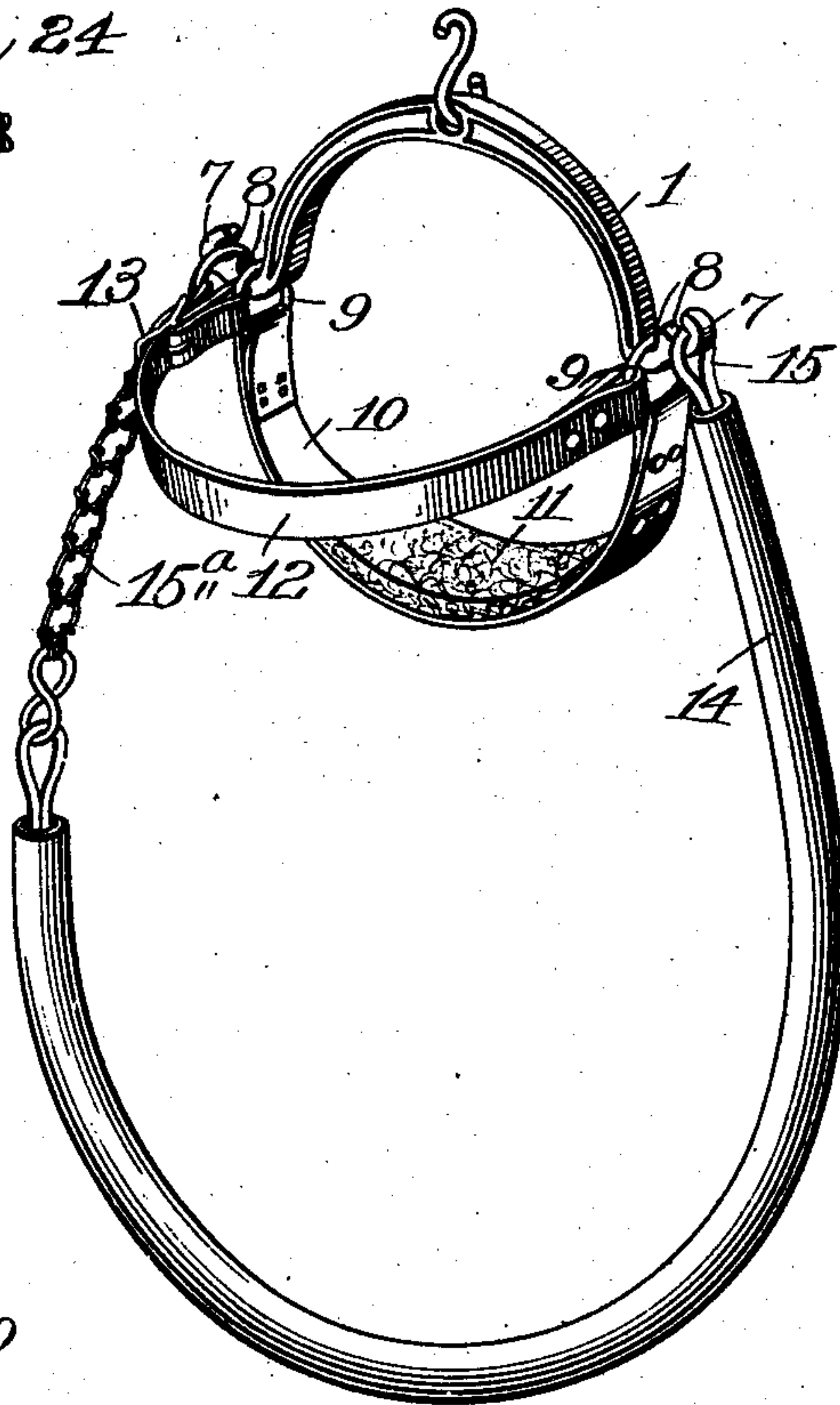


Fig. 2.



Witnesses

Walter B. Payne.
Carver A. Putnam

364

Inventor

Kilian L. Minges
Judson H. Church
his Attorney.

UNITED STATES PATENT OFFICE.

KILION L. MINGES, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE
CARTILAGE COMPANY, OF ROCHESTER, NEW YORK, A FIRM.

PHYSICAL DEVELOPMENT APPARATUS.

SPECIFICATION forming part of Letters Patent No. 762,832, dated June 14, 1904.

Application filed September 23, 1903. Serial No. 174,318. (No model.)

To all whom it may concern:

Be it known that I, KILION L. MINGES, of Rochester, in the county of Monroe and State of New York, have invented certain new and
5 useful Improvements in Physical Development Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the drawings forming a part of this specification
10 and to the numerals marked thereon.

My present invention is designed to provide an improved apparatus that is particularly useful in carrying out certain exercises formulated for the development and treatment of
15 the human body; and it consists in certain novel combinations and arrangements of parts to be hereinafter more fully described, and pointed out in the claims hereunto annexed.

In the accompanying drawings, Figure 1 is
20 a diagrammatic view illustrating one embodiment of my invention as applied to the body of a patient; and Fig. 2 is a detail view, enlarged, showing the head and body supports removed.

25 To facilitate an understanding of my present invention, reference will be had to the herein-shown embodiment, wherein 1 designates a supporting-yoke, carrying a pulley 2, through which is rove a cord 3, having one end thereof
30 fastened, as at 4, to a ceiling or other convenient support, its opposite end passing over a relatively stationary pulley 5 and terminating at a suitable distance below it, balls 6 or other devices for affording a firm and convenient grasp for the hand being provided at
35 predetermined intervals on said rope between the extremity thereof and the relatively fixed pulley 5. Both arms of the yoke 1 carry at their extremities an upturned or curved hook
40 7 7, each provided with a pair of recesses 8 8, and into the inner pair of recesses thus formed are adapted to rest the rings 9 9, carried upon the extremities of the band 10, that is arranged to rest beneath the chin of the patient, a binding, of felt or other suitable material 11, being
45 preferably provided to prevent abrasion of the skin. A head-strap 12, having one end thereof

fixed to one of the rings 9 and the opposite end free and passing through a buckle 13, attached to the ring at the opposite side of the
50 yoke, is also provided to cooperate with the band 10, perforations being provided in the free end of said strap at suitable intervals to receive the tongue of the buckle to enable the length of said strap to be adjusted to accom-
55 modate itself to the head of the particular patient under treatment. This device is adapted to be fitted to the head of the patient in the manner shown in Fig. 1, the band 10 being passed beneath the chin and the strap 12
60 passed around the rear of the head and tightened to the desired degree to firmly retain the device in position and, if desired, assist the band 10 in sustaining the weight imposed upon it.

A body-supporting strap 14, having a loop
15 at one end resting in one of the recesses 8 8 of the yoke 1, is adapted to be passed around the body and beneath the arms of the patient, the opposite end thereof being free and pro-
70 vided with a linked chain or other adjusting device 15^a, adapted to engage the hook at the opposite side of the yoke, whereby the length of said strap may be adjusted as desired by hooking different links of said chain upon the
75 hook of the yoke.

Each foot of the patient is adapted to be passed through a stirrup 16 16, each attached to a cord 17 17, passing through fixed staples or pulleys 18 18 and connected to the arms of
80 a yoke 19, which in turn is attached to a cord 20, passing through a pulley 21 and connected to a yoke 22, carried by the register or indicator 24, the parts being so arranged that the degree of tension upon the cord 20, and
85 consequently the amount of tension upon the body of the patient, will be indicated by the pointer 23 of the indicator 24, which latter may be any suitable device capable of registering the amount of force exerted upon it by
90 the cord 20.

An apparatus constructed in accordance with my invention may be advantageously applied in various ways to the body of the patient

undergoing a course of physical treatment to produce the desired effect in each particular case, and in the present embodiment I have illustrated one form of the appliance as usually employed to produce a stretching action throughout the entire body and limbs to induce growth in the height of the patient, the feet of the patient being inserted in the stirrups 16 16, attached to the cords 17 17, which in turn are connected by the yoke 19 and cord 20 to the indicating device 24 in such a manner that the amount of force exerted upon said stirrups by the patient's feet, tending to draw them upwardly, may be read upon the graduated dial of the indicator by the patient without assistance. The band 10, supported by the yoke 1, passing beneath the chin of the patient, is adjusted into position, and the strap 12, passing behind the head, is tightened until the desired adjustment has been secured, and as the looped end 15 of the body-support 14 is attached to one arm of the yoke the adjusting-chain 15^a may be brought up and hooked upon the opposite arm of the yoke in such a manner that a predetermined proportion of the patient's weight will be supported thereby when a lifting strain is exerted upon said supports.

In practice it is desirable that almost the entire weight of the patient should be sustained by the body-support at the beginning of the treatment, leaving the comparatively small amount of force remaining to be exerted upon the head to produce a tension upon the patient's neck and contiguous parts, the proportion of weight sustained by the body-support being gradually reduced at proper intervals during the treatment by adjusting different links of the chain thereof upon the hook of the yoke, as desired. As the cord 3, passing through the pulley 2 of the yoke, is so arranged that the end thereof is in a position to be conveniently grasped by the patient, it is obvious that the services of an attendant are rendered unnecessary in the manipulation of the appliance, the patient being enabled to haul upon the cord to any desired degree to produce the desired tension, and as the indicator 24 is so located that a reading thereof may be had at any time by the patient the resisting force exerted upon the legs of the patient may be regulated as required.

An appliance of this character is especially designed to assist physical exercises for the purpose of increasing the height or promoting growth in a person by acting upon the cartilage of the system by stretching or subjecting the body and limbs of the patient to a tension, and while I have illustrated the present embodiment as applied to such a purpose and including certain details in construction to obtain such an end it is to be understood that the same may be applied to the patient

in a different manner, or certain parts of the appliance may be omitted to obtain the desired results in any particular case, or a modified form of the appliance may be employed, if found desirable, to meet the requirements of varying conditions, all of which forms will come within the scope of my invention.

I claim as my invention—

1. An appliance of the character described, comprising a support attached to the upper portion of the patient's body, resistance devices attached to the lower portion thereof, a register connected to said devices and adapted to indicate the amount of force exerted thereon by said devices, and means attached to said support for producing a stretching action upon the patient's body.

2. An appliance of the character described, comprising a support to engage the head and a supplemental support to embrace the body of the patient, resistance devices adapted to be attached to the lower limbs of the patient and connected to a register for indicating the amount of force exerted thereon by said devices, means attached to said supports for producing a stretching action upon the body of the patient, and adjusting means carried by the body-support for permitting the relative proportion of force exerted by said head and body support to be varied as desired.

3. An appliance of the character described, comprising a support adapted to embrace the head and a supplemental support to embrace the body of the patient and assist the head-support in sustaining the weight of the patient's body, means for adjusting the relative proportion of weight sustained by each support, and means for sustaining the weight imposed upon said supports.

4. In a physical development appliance, the combination with a support having a band adapted to rest beneath the chin, and an adjustable strap attached thereto and adapted to be passed behind the head of the patient to cooperate with said band in exerting its force upon the patient's body, a supplemental support engaging the body of the patient and having an adjusting device thereon, means connected to said supports for lifting the body of the patient, and devices adapted to be attached to the lower limbs of the patient and connected to a register for producing a resistance to the lifting of the body and thereby exert a stretching action thereon, the amount of which will be indicated by said register.

5. An appliance of the character described, comprising a support adapted to engage the head, and a supplemental support embracing the body of the patient, lifting devices attached to said supports having a rope accessible to the patient for lifting himself, adjusting means carried by the body-support for

varying the relative proportions of the weight sustained by said head and body support, and devices attached to the lower limbs of the patient and connected to a register adapted to
5 indicate the amount of resistance exerted upon the patient's limbs while being lifted, and consequently the degree of tension or stretching action produced upon the body of the patient.

KILION L. MINGES.

Witnesses:

G. WILLARD RICH,
CLARENCE A. BATEMAN.