Feb. 22, 1927. 1,618,609

G. C. TAPLIN

OPERATING TABLE ATTACHMENT

Filed June 26 1925

Fig. 2.

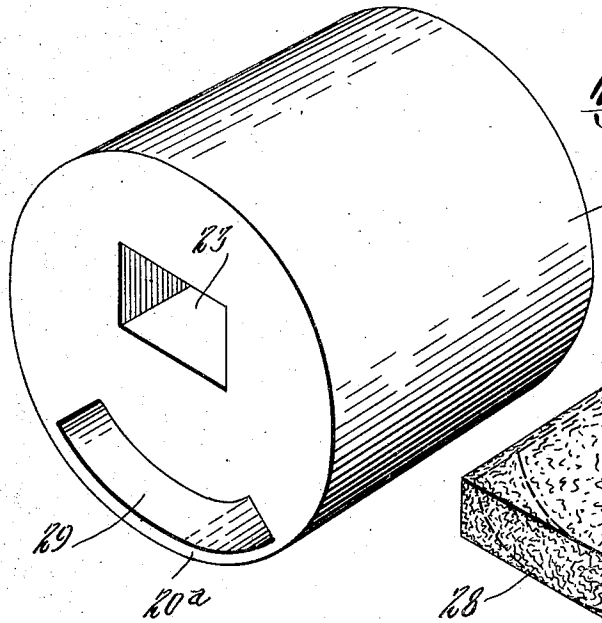
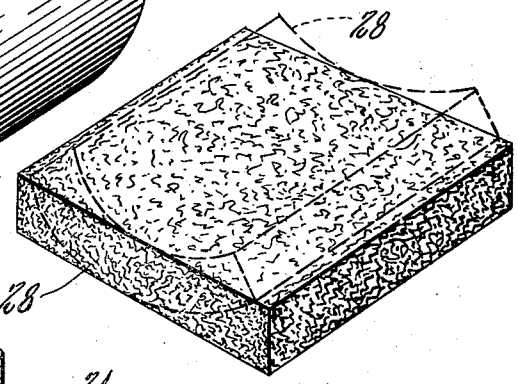


Fig. 3.



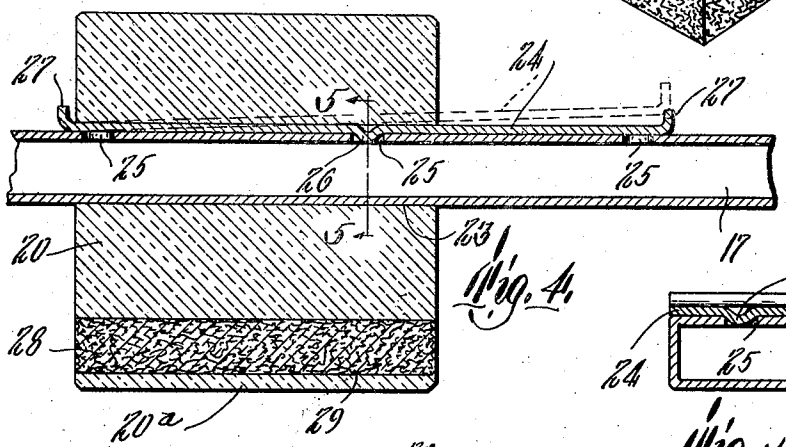
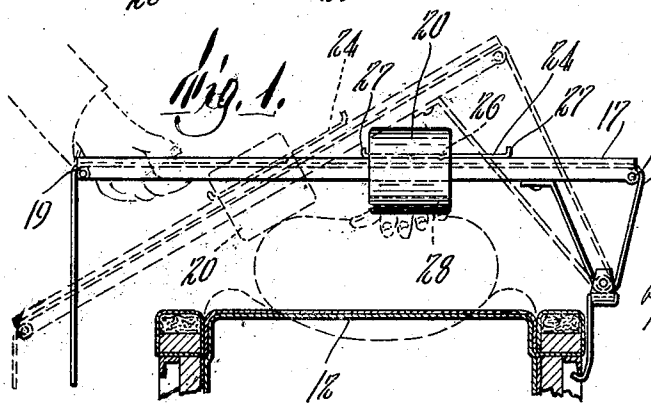


Fig. 4.

Fig. 5.

Fig. 1.



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UNITED STATES PATENT OFFICE.

GEORGE C. TAPLIN, OF BOSTON, MASSACHUSETTS.

OPERATING-TABLE ATTACHMENT.

Application filed June 26, 1925. Serial No. 39,852.

This invention relates to operating tables used by osteopaths, and other practitioners, who exert pressure in various directions on the recumbent body of a patient, the body usually lying on a cushioned horizontal operating table.

Lettters Patent granted to me December 6, 1921, No. 1,399,034, discloses an operating table having means for exerting pressure in various direction and in various locations on the patient's body, and enabling the operator to utilize foot power, as well as manual power, in exerting such pressure.

Letters Patent granted to me May 29, 1923, No. 1,457,093, discloses other means whereby the operator is enabled to apply pressure to the patient's body.

The invention is embodied in the improvements hereinafter described and claimed on the pressure-applying means disclosed by the last mentioned patent.

Of the accompanying drawings forming a part of this specification,—

Figure 1 shows in transverse section a portion of an operating table, and in side elevation, a pressure-applying attachment embodying the present improvements, as it appears when in operation.

Figure 2 is a perspective view showing the body portion of my improved pressure-applying pad.

Figure 3 shows in perspective, the elastic cushion hereinafter described, the cushion being shown by full lines in its original form, and by dotted lines, its form when in use.

Figure 4 shows in longitudinal section a portion of the pad-carrying bar, a shoe movable thereon and the pad in an operative position on the bar and shoe.

Figure 5 is a section on line 5—5 of Figure 4.

The same reference characters indicate the same parts in all of the figures.

The operating table shown by Figure 1, may be of any suitable construction, and may include a flexible body support 12, formed by the top of a pneumatic mattress and a frame supporting the mattress, as shown in my above-mentioned Patent No. 1,399,034.

The pressure-applying attachment is adapted to operate as shown by my Patent No. 1,457,093, and includes an elongated bar 17, having pulleys 18 and 19 at its opposite end portions, and a pressure pad 20 between its ends. One end of a strap 21 is connected with the bar 17, at a point near the inner pulley 18. From the connected end the strap 21 extends partly around the inner pulley 18, and from thence to the outer pulley 19, from which it depends, as shown by Figure 1. For a more complete description of the construction and operation of the attachement, reference may be had to the last mentioned patent.

The pad 20 is preferably cylindrical and composed of vulcanized rubber having a limited degree of elasticity, such for example, as that possessed by ordinary rubber heels, and is provided with a passage 23 through which the bar 17 extends, the periphery of the pad being preferably eccentric to the passage.

24 designates a shoe or strip of resilient metal slidable on the bar 17 and interposed between the bar and one side of the passage 23. The bar is provided with a series of spaced apart detent members 25 which are preferably the margins of orifices formed in the bar, as shown by Figures 4 and 5. The shoe is provided with a complemental detent member 26, preferably a boss adapted to engage either of the members 25, and thus confine the shoe against movement on the bar. The resilience of the pad 20 normally holds the detent member 26 in engagement with a member 25, and the resilience of the shoe permits it to be sprung outward as shown by dotted lines in Figure 4, to separate the detent members. The shoe is provided at its opposite ends with stops 27 adapted to bear on the ends of the pad. The shoe is preferably of greater length than the pad, as shown by Figure 2, so that the pad may be adjusted on the bar and the shoe to an extent limited by the distance between the stops. It will now be seen that the pad may be given movements of minor amplitude when the shoe is locked on the bar, and may be given movements of greater amplitude by sliding the shoe on the bar.

The resilience of the pressure-applying portion of the pad may be increased by a cushion 28 of resilient material of greater resilience or compressibility than that of the pad. To this end, I provide the pad with a preferably arcuate socket 29 extending from end to end of the pad, the curved sides of the slot being substantially concentric with the periphery of the pad. The cushion is preferably composed of a strip or block of sponge rubber so proportioned than when flexed as shown by dotted lines in Figure 1, it may be inserted in and closely fit the

socket. The effort of the cushion to assume its flat form causes its sides to frictionally engage the sides of the socket and thus prevent liability of endwise displacement of the cushion in the socket. The arrangement of the socket is such that its outer side is separated from the periphery of the pad by a thin pressure-applying portion 20ª of the pad, which is much more flexible than the other portions and is yieldingly backed by the cushion. Crepe rubber or other suitably resilient and compressible material may be employed as the material of the cushion, but I have found that the best results are obtained by using sponge rubber.

It will be seen that the portion of the pad containing the passage 23 and the pocket 29, constitutes a solid body portion which, when made of a material such as semi-hard vulcanized rubber, has a limited elasticity, and is sufficiently dense to cause the walls of the passage 23 to prevent the body from turning on the bar, so that one side of the body is maintained below the bar when the attachment is in use, this side constituting the pressure-applying portion of the pad. The pocket 29 is formed between the pressure-applying portion and the passage 23, so that the cushion 28 yieldingly backs the pressure-applying portion. The solid body portion is adapted to sustain long continued wear incidental to its contact with the bar, and to contact of its pressure-applying portion with the patient's body or the operator's hand.

I claim:

1. An operating-table attachment of the character stated, comprising an elongated bar having spaced apart detent members, a resilient shoe slidable on the bar and provided with a complemental detent member, and an elastic pressure pad surrounding the bar and the shoe and adapted by its elasticity to hold the said detent member of the shoe in yielding engagement with a detent member of the bar, the shoe being displaceable to separate the detent members, and permit movement of the pad and shoe on the bar.

2. An operating-table attachment as specified by claim 1, the shoe being provided with stops arranged to bear on the ends of the pad.

3. An operating-table attachment as specified by claim 1, the shoe being longer than the pad and provided with stops arranged to permit limited movements of the pad on the bar and shoe.

4. For use with an elongated bar constituting an element of an operating attachment of the character stated, a pressure pad comprising a solid body of elastic material having a limited elasticity and provided with a longitudinal bar-receiving passage, formed to permit sliding movements of the body on the bar and prevent the body from turning, so that one side of the body is maintained below the bar and constitutes the pressure-applying portion of the pad, the body being provided also with a longitudinal socket between the said passage and pressure-applying portion, and an elastic cushion of greater elasticity than the body inserted in said pocket and backing the pressure-applying portion.

5. For use with an elongated bar constituting an element of an operating attachment of the character stated, a pressure pad composed of elastic material of limited elasticity and formed to surround said bar, and provided with a socket containing an elastic cushion of greater elasticity, backing the pressure-applying portion of the pad, the pad being cylindrical and the sides of the pocket being arcuate and concentric with the periphery of the pad, the cushion being normally flat and flexed from its normal form to enter the socket.

In testimony whereof I have affixed my signature.

GEORGE C. TAPLIN.