

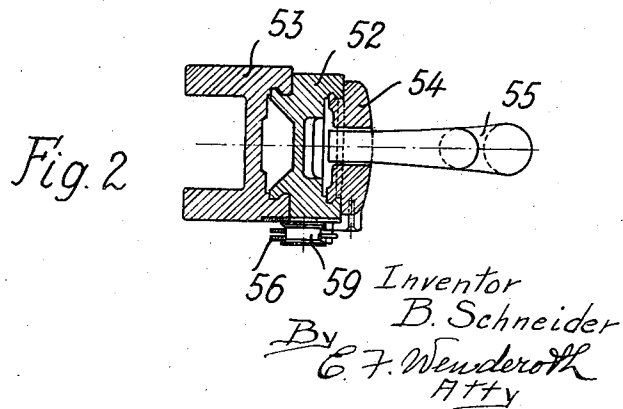
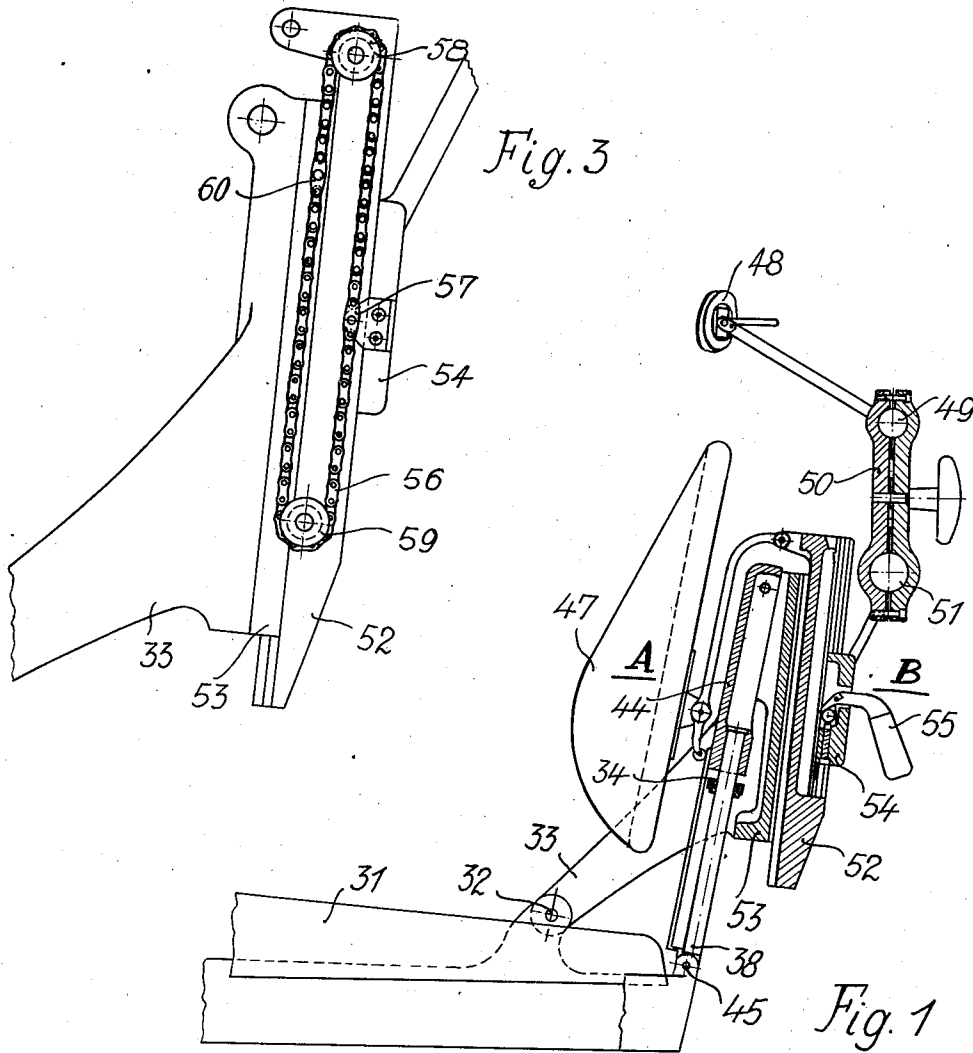
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B. SCHNEIDER

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CHAIR FOR DOCTORS, DENTISTS, HAIRDRESSERS, AND THE LIKE

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## UNITED STATES PATENT OFFICE

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## CHAIR FOR DOCTORS, DENTISTS, HAIRDRESSERS, AND THE LIKE

Berthold Schneider, Berlin, Germany

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3 Claims. (Cl. 155—158)

The present invention relates to an "operating" chair, particularly of the type adapted for use by doctors, dentists, hairdressers and the like.

A primary object of the present invention is to provide a novel and improved construction for lifting the back and head cushions of the chair, the essential characteristic of this improvement being the obviation of the necessity for using two separate actuating means for this purpose, as is now generally the case.

The foregoing and other objects and advantages are realized by the present invention as disclosed in the detailed description thereof which follows. Reference is had, in this connection, to the accompanying sheet of drawings which shows, solely by way of illustration, certain preferred exemplary embodiments.

On the said drawing:

Fig. 1 is a fragmentary representation, partly in section and partly in elevation, of the lifting and adjusting device as applied to the back of a chair, wherein the adjustment of the back and head cushions is effected by means of a single handle according to the present invention;

Fig. 2 is a cross-section, on an enlarged scale, along section line A—B of Fig. 1;

Fig. 3 is a side elevation of the lifting device.

The device in Figs. 1-3 is constructed as follows:

Reference numeral 31 designates the seat surface of the chair to which there is hinged by the pivot 32 the lever 33 which carries the entire back with the back cushion. A clamping device is provided for securely holding lever 33 in any of the various tilted positions which it may assume, depending upon the desired degree of inclination of the seated patient's body. The clamp is formed of a double-armed lever 34 pivoted to a lug which depends from the housing 44. The latter is connected to the lever 33 and surrounds a rod 38 which passes, with slight play, through an opening in the lever arm 34 and is fixed to the hinge bolt 45, while its upper end may cooperate with a spring enclosed in the housing 44.

Reference numeral 47 designates the back cushion and 48 the head cushion, which must both be adjusted when persons of different sizes are to sit on the chair. The head cushion may also be more accurately adjusted in known manner by a fine adjustment 49, 50, 51 after the main adjustment has been effected.

The back cushion 47 is provided with a slide 52 adapted to be moved up and down in the guide member 53. According to prior art construc-

tions, such movement was effected by means of a separate handle fixed to the slide. The latter was also provided with a second movable slide for effecting adjustment of the head cushion, a second separate handle being provided for this purpose. Accordingly, movements of the two slides were hitherto effected separately and entirely independently of each other. Two slides 52 and 54 are also provided according to the present invention, as shown in Figs. 1 and 3, but movement thereof to adjust members 47 and 48 is effected through the medium of a single handle 55 which, in the present case, is provided on the head cushion slide 54 of head cushion 48. To make this possible, a positive connection is provided, as hereinafter described with reference to Fig. 3.

One of the links of an endless chain 56 is rigidly connected at 57 to the slide of the head cushion. The chain passes over two rollers 58 and 59 which are provided at the top and bottom on the slide 52 for the back cushion 47, these rollers being journaled at one side of the slide 52. The other run of the chain is connected at 60 to the guide 53.

When the slide 54 is moved by means of the handle 55 the endless chain moves therewith. The slide 52 is raised or lowered through an amount which is half the amount through which the slide 54 is raised or lowered. This arrangement may be compared with a simple rope tackle with a loose roller. The roller 59 would correspond with the loose roller, from which the load is suspended, while the point 57 would correspond with the rope strand to which the force is applied. The force path in connection with the single loose roller is double the load path as is well known. From this it follows that the lifting of the back can be effected with less consumption of power than in the previous constructions.

Back cushion 47 and head cushion 48 are thus spread apart, according to the size of the person, always in predetermined proportion which corresponds substantially with the dimensions of persons of different size. By the fine adjustment of the head cushion 48 other differences can be compensated.

Instead of a link chain 56 there may also be used a rope; instead of rollers 58, 59, there may also be used sprockets. Fundamentally, the chain part located between the securing point 60, the roller 59 and the securing point 57 would suffice. It is, however, preferable to make the chain endless by the use of two rollers 59 and 58 as in this manner there is obtained an effective guiding and positive movement downwardly.

Various changes may, of course, be made in the devices as above disclosed in detail without, however, departing from the spirit and scope of the invention.

5 Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:

10 1. In an adjustable chair of the character described, a supporting frame, a back cushion and a head cushion mounted on said supporting frame, slide members vertically adjustably mounted on said frame and each carrying one of said cushions, means fixedly connected to the frame and to the head cushion slide and movably connected to the back cushion slide whereby said cushions are moved relative to the frame and to each other and unitary means arranged on one of the slides for simultaneously moving said slides.

20 2. In an adjustable chair of the character described, comprising a back cushion and a head cushion, and means for effecting adjustment of the positions of said cushions comprising a movable slide member associated with each of said cushions, an endless band, guide means for said slide members, said endless band being placed on the back cushion slide member and having one run secured to the guide means of said back cushion slide member, while the other run of the endless band is secured to the head cushion slide

member and is adapted to move the latter to double the extent of the movement of the back cushion slide member upon actuation thereof and means arranged on one of said slide members for moving both slide members simultaneously and relatively to one another. 5

3. In an adjustable chair of the character described, comprising a back cushion and a head cushion and means for effecting adjustment of the positions of said cushions comprising a movable slide member associated with each of said cushions, an endless band, guide means for said slide members, said endless band comprising a chain arranged between the head cushion slide member, the back cushion slide member and the guide means of the latter and being so constructed and arranged that the back cushion slide member moves to only half the extent of the movement of the head cushion slide member, upon actuation thereof, and rollers provided on said back cushion slide member, said chain passing over said rollers, one run of the chain being connected to the head cushion slide member, the latter being movable on the back cushion slide member, and the other run of the chain being connected to the guide means of the back cushion slide member and means arranged on one of said slide members for moving both slide members simultaneously and relatively to one another.

BERTHOLD SCHNEIDER.