June 3, 1969 F. DOERNER 3,447,198

CHAIR CONTROL BACK BACK-PLATE WITH INTEGRALLY FORMED BEARINGS

Filed Sept. 28, 1966

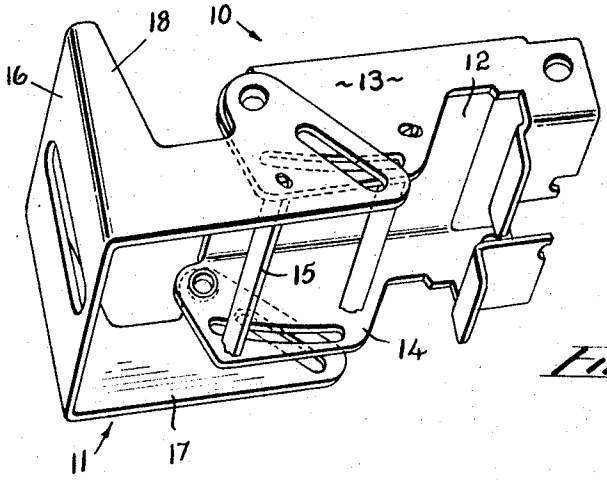


FIG 1.

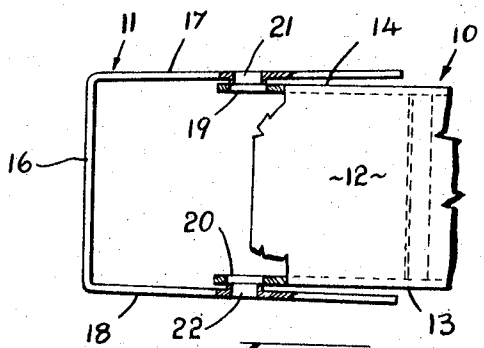
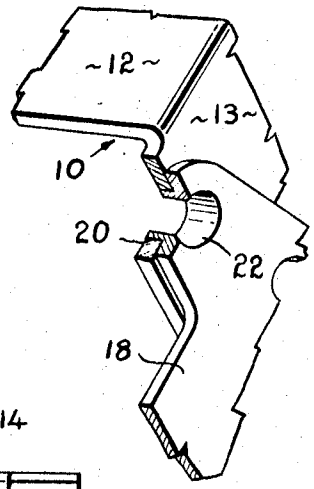


FIG 3.

FIG 2.



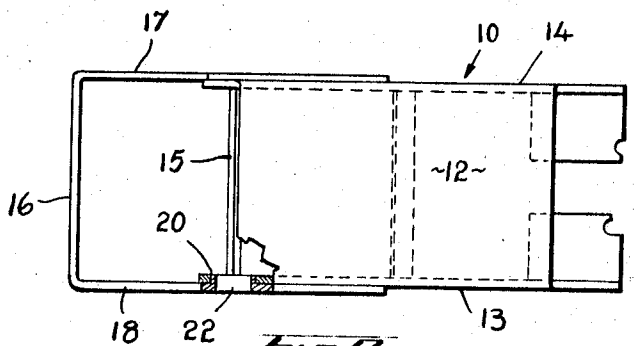


FIG 4.

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CHAIR CONTROL BACK BACK-PLATE WITH INTEGRALLY FORMED BEARINGS

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U.S. Cl. 16—128 1 Claim

ABSTRACT OF THE DISCLOSURE

A chair control for the posture type chair in which the back back-plate which supports the chair back and the back-plate are pivotally connected; pivotal connection being formed by punching the material from which the plates are formed to form oppositely disposed bearings in the back-plate and oppositely disposed annular bearing members in the back back-plate, which bearing members fit into the bearings; the back back-plate being sufficiently rigid to prevent the bearing members being accidentally dislodged from the bearings during use.

Background of invention

The chair controls presently in use have the back-plate and the back back-plate each in the form of an U-shaped channel which is formed with a base and a pair of upright sides, the plate sides being hingedly connected together by a hinge pin which is entered through coaxial holes formed in the sides. The hinge pin is permanently secured in place by riveting the projecting ends. A disadvantage of this structure is that the two plates are permanently secured together and can only be disconnected by severing the hinge pin which, of course, destroys the connection. Furthermore the foregoing construction requires special tools and jigs for permanently inserting the hinge pin of the chair control.

Description of invention

The present invention solves the foregoing problems and also simplifies the assembly of the back-plate and the back back-plate of a chair control and also reduces the manufacturing cost.

The chair control of the present invention and by which the foregoing disadvantages are solved, comprises a back-plate and a back back-plate in which: (a) said back-plate consists of a base plate and a pair of side members held in fixed spaced apart relationship by a rigid spacer bar and a bearing formed in each side member, and (b) said back back-plate consists of an U-shaped member having outwardly extending substantially rigid arms which embrace said side members therebetween and an annular bearing formed integrally with each arm, one of each of said bearing members being entered in its respective bearing.

FIGURE 1 which is a perspective view of the pair of plate members of a chair control consisting of a back plate and a back back-plate hingedly connected together according to the present invention;

FIGURE 2 which is a fragmentary perspective view showing the hinge connection, partly in cross section;

FIGURE 3 which is a fragmentary plan view illustrating the deflection of the sides of the back back-plate as the first step in assembling or separating the same; and

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FIGURE 4 which is a plan view with the sides in their normal position with the members hingedly connected together.

Referring now to the drawings, the back-plate, of conventional form, is generally indicated by the numeral **10** and the back back-plate, also of conventional form, by the numeral **11**. The back-plate **10** comprises a base **12** and a pair of side members **13**, **14** which are held in spaced relationship by a spacer bar **15**. The back back-plate is also of channel form and comprises a base **16** and side members **17**, **18**.

The hinge connection for hingedly connecting the back plate and the back back-plate comprises coaxail bearings **19**, **20** which form bearings for coaxial trunnions **21**, **22** formed integrally on the side members **17**, **18**. The bearings **19**, **20** are formed by a simple punching method and the trunnions are formed by any convenient conventional punching method.

It is quite simple to assemble the plates. This is done by means of a tool or jig which will separate or deflect the sides **17**, **18** sufficiently to allow the trunnions to be brought into registration with their respective bearings. When the trunnions are in registration the instrument is released and the sides will return to their normal position and thus engage the trunnions in the bearings **19**, **20**. When it is desired to separate the two plates, a deflecting tool is used to deflect the sides **17**, **18** to withdraw the trunnions **21**, **22** from the bearings **19**, **20** and permit the parts to be separated.

What I claim as new and desire to protect by Letters Patent of the United States is:

1. In a chair control having a generally U-shaped back-plate and a generally U-shaped back back-plate, in which:

(a) said back-plate comprises a flat base plate and a pair of integral side members held in fixed spaced apart parallel relationship by a rigid spacer bar and a bearing opening formed in each side member; and

(b) said back back-plate comprises a U-shaped member having a flat base plate for attachment to the back of said chair, said member having outwardly extending substantially flexible arms in spaced apart parallel relationship which embrace said side members, and an annular trunnion formed integrally with and projecting inwardly from each arm said trunnions being extending into and interfitting said bearing openings when said flexible arms are deflected laterally whereby said back and back back-plates are pivotally interconnected to permit of pivotal movement of the chair.

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BOBBY R. GAY, *Primary Examiner.*

U.S. Cl. X.R.

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