Feb. 7, 1961 W. W. GOOD 2,970,639

CHAIR

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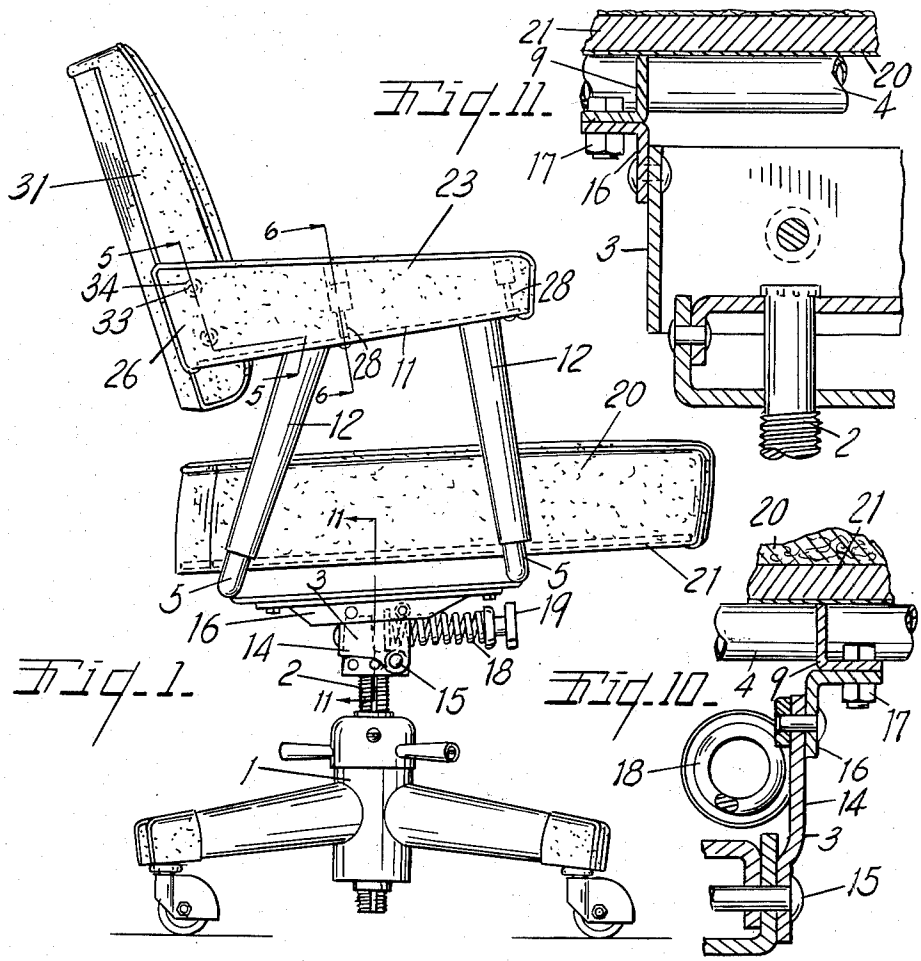


Fig. 1.

Fig. 11.

Fig. 10.

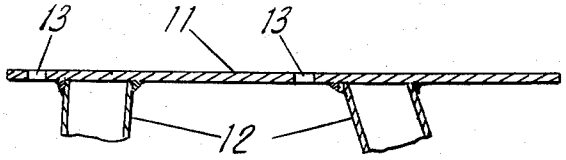


Fig. 4.

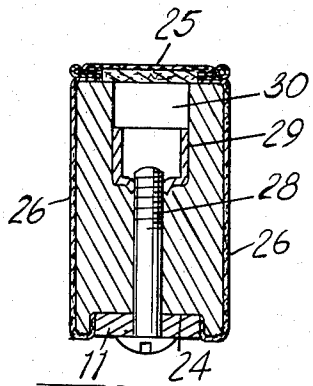


Fig. 6.

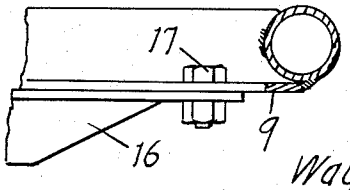


Fig. 7.

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CHAIR

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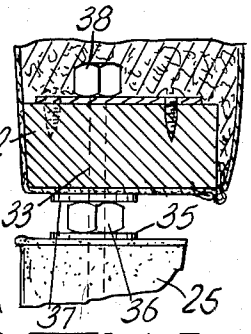


Fig. 0.

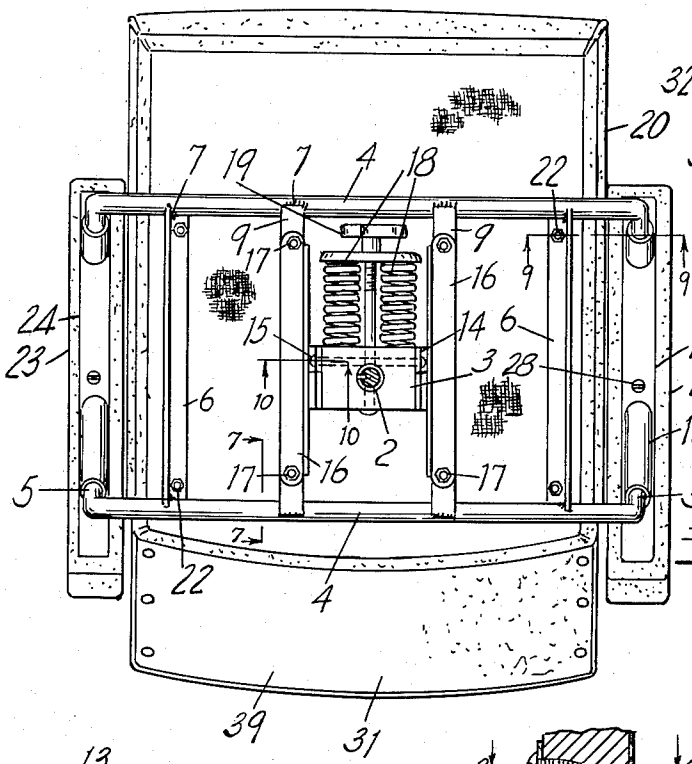


Fig. 2.

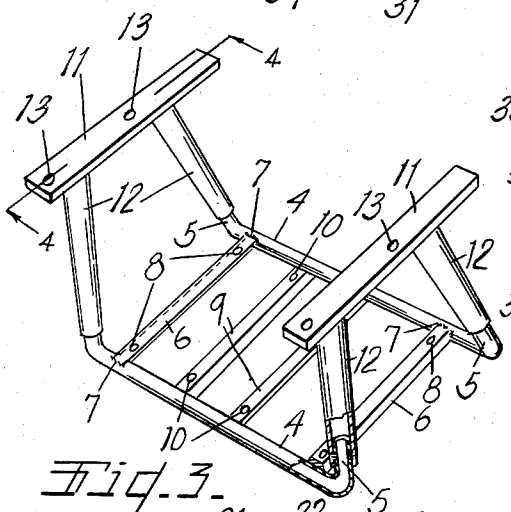


Fig. 3.

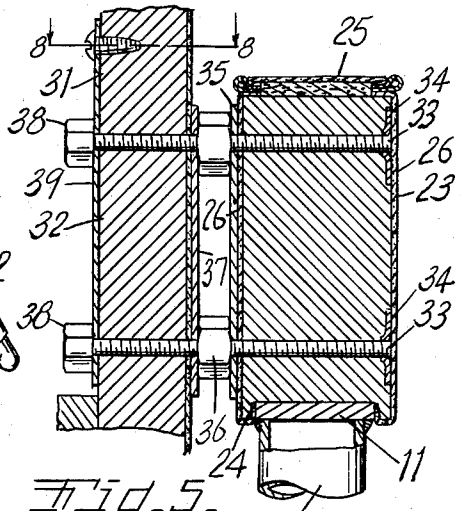


Fig. 5.

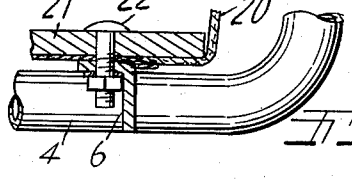


Fig. 9.

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2,970,639

CHAIR

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Filed Mar. 21, 1958, Ser. No. 723,014

3 Claims. (Cl. 155—191)

This invention relates to a type of chair commonly designated as office chairs.

The main objects of this invention are:

First, to provide a tiltable and swiveled chair which may be economically produced and at the same time is structurally strong and highly attractive in appearance.

Second, to provide a chair frame unit on which the seat, arms and back are readily mounted and which permits a wide variation of upholstering and the renewal of upholstered parts should occasion require.

Third, to provide a chair structure having these advantages in which the parts may be very economically produced.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is defined and pointed out in the claims.

A preferred embodiment of the invention is illustrated in the accompanying drawing, in which:

Fig. 1 is a side elevational view of a chair embodying my invention.

Fig. 2 is a bottom or inverted view with the post shown in horizontal section.

Fig. 3 is a front perspective view of the unitary seat, back and arm supporting frame.

Fig. 4 is a fragmentary view in vertical section on a line corresponding to line 4—4 of Fig. 3.

Fig. 5 is an enlarged fragmentary view partially in section on a line corresponding to line 5—5 of Fig. 1, illustrating certain details of the arm and back member and of the mounting of the back upon the arms.

Fig. 6 is an enlarged view partially in section on a line corresponding to line 6—6 of Fig. 1 showing details of the mounting of the arm members upon the supporting frame.

Fig. 7 is an enlarged fragmentary view in section on a line corresponding to line 7—7 of Fig. 2, illustrating certain details of the frame unit and of the mounting thereof.

Fig. 8 is a fragmentary view in section on a line corresponding to line 8—8 of Fig. 5 illustrating details of the back structure.

Fig. 9 is an enlarged fragmentary view in section on a line corresponding to line 9—9 of Fig. 2, illustrating certain features or details of the seat and the mounting thereof upon the supporting frame.

Fig. 10 is an enlarged fragmentary view in section on a line corresponding to line 10—10 of Fig. 2 illustrating details of the seat structure and the manner of attaching to the supporting frame.

Fig. 11 is an enlarged fragmentary view in section on a line corresponding to line 11—11 of Fig. 1 illustrating certain details of the mounting of the seat, arm and back assemblies upon the post.

The base or pedestal unit designated generally by the numeral 1 is desirably that of my copending application Serial No. 723,012, filed March 21, 1958, but as such forms no part of my present invention. This application is a continuation in part of said application, now Patent No. 2,935,121 granted May 3, 1960. The post 2 is

rotatably or swivelly mounted on the base and is provided with a head portion 3 upon which the chair seat, arm and back assembly is mounted, as will later be pointed out.

The combined seat, back and arm supporting frame of my invention, illustrated in Fig. 3, comprises laterally spaced front and rear members 4—4 disposed transversely of the chair and terminating in upturned upwardly converging arm and back upright supporting end portions 5. These front and rear members 4 are preferably formed of tubing or pipe stock and are rigidly connected by the outer pair of cross pieces 6 of angled section disposed between the front and rear members to face downwardly and inwardly with their ends welded to the front and rear members, as is conventionally indicated at 7.

The horizontal arms of these cross pieces are provided with holes 8 spaced longitudinally thereof. Intermediate cross pieces 9 of angled section are disposed in laterally spaced relation and facing upwardly and outwardly. The cross pieces 9 have holes 10 in their horizontal flanges. The arm supporting bars 11, preferably of flat section, are provided with downwardly projecting, downwardly diverging and downwardly tapering tubular uprights 12 which are sleeved upon and fixedly secured to the upturned ends 5 of the front and rear frame members 4. The bars 11 are provided with longitudinally spaced holes 13. This provides a unitary frame structure to which the supported seat, arms and back may be readily attached and one which may be readily mounted upon the post. The connection to the post comprises the coupling member 14 pivotally mounted at 15 upon the post head member 3 and attaching bars 16 disposed on the under-sides of the intermediate frame cross pieces 9 and secured thereto by bolts 17 arranged through the holes 10 in the cross pieces, see Figs. 1 and 2.

The biasing springs 18 are disposed in thrust supported relation to support member 3, the adjusting screw 19 being in threaded engagement with the coupling member 14. Details of this spring biasing means form no part of my present invention therefore are not further described.

The seat designated by the numeral 20 is provided with a base 21 having downwardly projecting studs 22 which engage the holes 8 in the outer frame cross pieces 6 which permits the seat being formed as an upholstered unit and attached to the frame, see Fig. 10.

The arm members 23 are desirably formed of wood and of flat cross section and forwardly tapered. These arm members have longitudinal grooves or recesses 24 in their bottom edges receiving the arm supporting bars 11, the grooves being desirably of such depth as to entirely conceal the bars 11. In the embodiment illustrated, the arm members 23 are provided with a cushioned top upholstery 25 and side coverings 26, the lower edges of which are folded into the groove 24 and concealed and retained by the support member 11. The arms are secured upon the bars 11 by the bolts 28 disposed upwardly through the holes 13 and provided with the nuts 29 preferably disposed in the recesses 30 opening to the top of the arm member so there are no projecting fastener portions at the tops of the arm members and the openings 30 are covered by the upholstery 25.

The back 31 comprises an upholstered frame including side pieces 32. The back is fixedly mounted on the arms by the bolts 33 which are preferably threaded throughout the length thereof and provided with disc-like heads 34 at their outer ends countersunk into the outer sides of the arm members and convered by the upholstery covering 26, see Fig. 5. Reinforcing plates 35 are disposed on these bolts at the inner sides of the arms and

clampingly secured thereto by the nuts 36 threaded upon the bolts 33. The back side members 32 are provided with clamping plates 37 on their outer sides and through which the bolts are arranged. The bolts are passed through the back frame side members and the frame members are clamped upon the bolts by nuts 38. An upholstery or covering for the back frame members is shown at 39. This provides a very simple and effective mounting for the back upon the arms. The plates 35 and 37 serve to distribute stresses and minimize splitting of the wood parts.

In assembling it is desirable to assemble the back and arms before the arms are mounted on the supporting frame. This structure and arrangement of parts permits the seat, arms and back and supporting frame all being manufactured as units and readily assembled as occasion may require, permitting the frame, seat, back and arm parts being manufactured in separate divisions particularly equipped for such work and with various types and colors of coverings or upholstery.

I have illustrated and described my invention in a highly practical embodiment thereof. I have not attempted to illustrate or describe other embodiments or adaptations as it is believed this disclosure will enable those skilled in the art to embody or adapt my invention as may be desired.

Having thus described the invention, what is claimed as new and is desired to be secured by Letters Patent is:

1. In a chair, a seat, back and arm supporting frame comprising laterally spaced front and rear members disposed transversely of the chair and having upwardly projecting arm uprights on the ends thereof, outer crosspieces fixedly secured to said front and rear members adjacent said uprights, intermediate crosspieces fixedly secured to said front and rear members and having fastener receiving openings therein, a support for said frame mounted under said intermediate crosspieces, arm supporting bars fixedly secured to the upper ends of said arm uprights and having fastener receiving openings therein, a seat comprising a bottom panel mounted on said supporting frame between said arm uprights and provided with fasteners engaged with said outer crosspieces thereof, and bar-like arm members having longitudinal grooves in their bottom edges engaged with said arm supporting bars, said arm members being secured to said arm supporting bars by fasteners engaged in said holes thereof.

2. In a chair, a seat, back and arm supporting frame comprising laterally spaced front and rear members disposed transversely of the chair and having upwardly projecting arm uprights on the ends thereof, crosspieces fixedly secured to said front and rear members, arm supporting bars fixedly secured to the upper ends of said arm uprights, a seat comprising a bottom panel mounted on said supporting frame between said arm uprights and provided with fasteners engaged with said crosspieces thereof, bar-like arm members disposed on and secured to said arm supporting bars, a back disposed between the rear ends of said arm members and including side members, pairs of vertically spaced bolts disposed horizontally through said arm members adjacent the rear ends thereof, clamping nuts threaded upon said bolts in supported relation to the inner sides of said arm members, said bolts being disposed through said back side members, and back securing nuts disposed on said bolts on the inner sides of said back side members whereby said back frame members are clamped against said nuts on the inner sides of said arm members which constitute spacers for said arm members and said back.

3. A unitary chair seat, back and arm supporting frame including laterally spaced front and rear members disposed transversely of the chair and each having upwardly projecting arm uprights on the ends thereof, crosspieces fixedly secured to said front and rear members, arm supporting bars fixedly secured to the upper ends of said arm uprights, said front and rear members, said arm uprights and said arm supporting bars being fixedly connected and constituting an integral unit, a seat bottom panel mounted on said supporting frame between said uprights in supported relation to said front and rear frame members and projecting forwardly and rearwardly therefrom and secured to the said crosspieces, arm members disposed on and secured to said arm supporting bars, and a back disposed between the rear ends of said arm members and supportedly connected thereto.

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