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A. W. SCHRAM

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CHAIR

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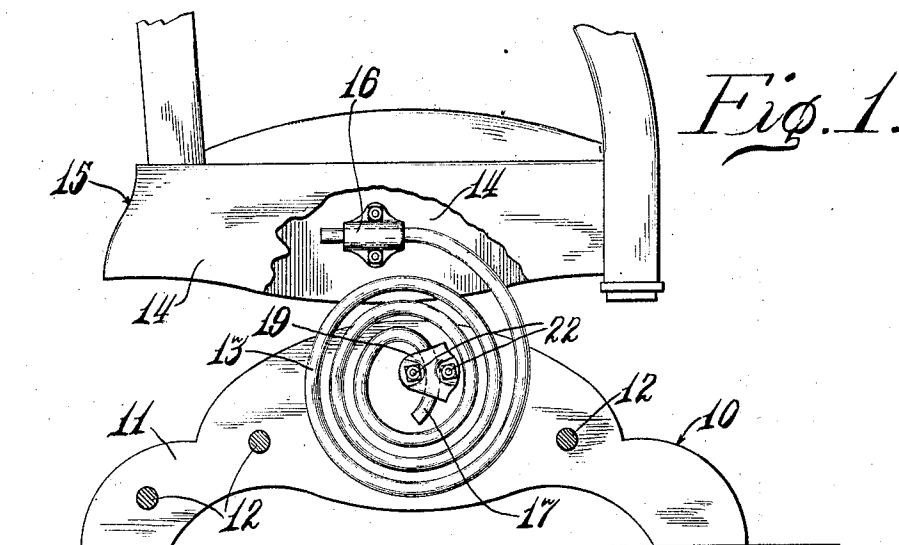
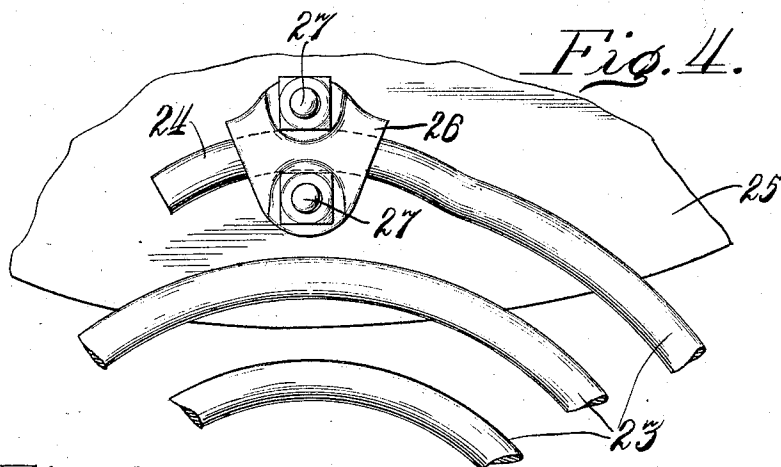


Fig. 2.

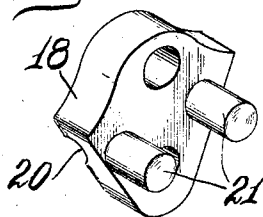
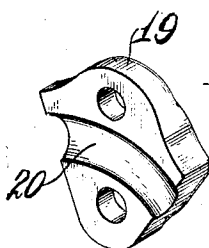


Fig. 3.



Inventor,
Adolph W. Schram,
By Fricke & DeBusk,
Attorneys

UNITED STATES PATENT OFFICE

ADOLPH W. SCHRAM, OF CHICAGO, ILLINOIS

CHAIR

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My invention relates to chairs of the type in which the chair body is supported by two spiral springs above a base, and it is the object of my invention to provide a new and improved form and arrangement of parts whereby the chair body can be adjusted readily in the assembly of the chair at the factory to the desired position with respect to the base, and whereby further adjustments may easily and quickly be made by the user to accommodate varying conditions of use.

In chairs of this type, it has been customary heretofore to employ spiral springs having straight end portions standing in angular position with respect to each other, one end portion being preferably at right angles with respect to the other end portion. In the manufacture of such springs, however, it has been found utterly impossible to secure uniform results with respect to the angular positions of the straight end portions. In view of this difficulty, it has been the custom to match the springs by selection of pairs from stock whereby each chair might be equipped with substantially similar springs even though such springs might differ from the corresponding parts of other chairs.

It is one of the objects of my invention to provide a new construction of spring and cooperating parts whereby the necessity for careful selection of the springs in matched pairs may be eliminated. It is another object of my invention to improve devices of this type in sundry details hereinafter pointed out. The preferred means by which I have accomplished my several objects are illustrated in the drawings and are hereinafter specifically described. That which I believe to be new and desire to cover by Letters Patent is set forth in the claims.

In the drawings,—

Fig. 1 is a view partly in side elevation and partly in cross section showing one of my improved springs in position for supporting a chair body at one side from a base, the upper portion of the chair body being broken away;

Fig. 2 is an enlarged detail view of one of the clamps by which the spring is held in position;

Fig. 3 is a perspective view of the cooperating clamp; and

Fig. 4 is a view similar to a portion of Fig. 1 but showing a modified form of construction.

Referring now to Figs. 1, 2 and 3, in which corresponding parts are indicated by the same reference characters, 10 indicates a base of any appropriate type, comprising in the construction shown a pair of heavy plates 11 held rigidly in suitable spaced relation to each other by means of cross bars 12. On the inner face of the plate 11 at each side of the base 10, I have provided a spiral spring 13 connected at its inner end with said plate 11 and connected at its outer end with a side plate 14 of the chair body 15.

In the construction shown in Fig. 1, the upper end of the spring 13 is straight and stands in substantially horizontal position. being connected with the chair body by means of brackets or clamps 16 of any suitable type. At its inner end, the spring 13 is provided with a curved bearing portion 17 which has its free end directed away from the straight outer end portion of the spring, with the chord connecting the ends of said curved bearing portion standing substantially at right angles with respect to said straight outer end portion. The curved bearing portion 17 is secured rigidly in position upon the plate 11 by means of clamps or brackets 18 and 19 (see Figs. 2 and 3), said clamps 18 and 19 being provided upon their inner faces with grooves 20 curved to correspond with the curvature of the bearing portion 17. The clamp 18 is provided with horizontally extending bars 21 on its outer face adapted to engage suitable openings in the plate 11 of the base, the clamps 18 and 19 being held in operative position upon the plate 11 so as to hold the curved bearing portion 17 against slippage by means of bolts 22.

As will be readily appreciated, in case the straight bearing portion at the outer end of the spring 13 should stand at a different angle with respect to the curved portion 17 from that illustrated in the drawings, such difference could be compensated for by a slightly different adjustment of the curved bearing

portion 17 longitudinally thereof with respect to the brackets 18 and 19. By the use of this construction, I am enabled to employ to advantage unmatched springs without regard to their being or not being similar with respect to the angles between the two bearing portions. I have found in practice that in the use of a chair arranged as shown in Fig. 1 the spring 13 is held very rigidly in the desired adjusted position.

In the construction shown in Fig. 4, fragmentary portions only of a spring 23 are shown, such spring having a curved bearing portion 24 upon its outer end portion in lieu of the straight bearing portion as shown in connection with the spring 13. The spring 23 is secured in position upon the chair body 25, only a fragmentary portion of which is shown, by means of clamps or brackets 26 similar to the clamps 18 and 19 as shown in Figs. 2 and 3, such clamps 26 being secured rigidly in position by means of bolts 27. While I contemplate the use of a spring such as that shown in Fig. 4, with either a curved bearing portion or a straight bearing portion at the inner end of the spring, I prefer to employ the form of spring as shown in Fig. 1 in the use of which the desired angular adjustment can be effected as above described, and in which the position of the chair body with respect to the spring as a whole can be adjusted by shifting the brackets 16 along the horizontally disposed outer end portion without changing the angular position of the chair body. It will be understood also that other changes may be made in the structure from that shown in the drawing without departing from my invention, and my invention is not to be limited to the form shown except so far as the claims may be so limited by the prior art.

I claim:—

1. A chair comprising in combination a base member, a body member, two spiral springs each having a curved bearing portion at one end, brackets clamping said curved bearing portions adapted to be adjusted therealong and serving to hold such bearing portions in fixed position on one of said members, and other means for holding the other ends of said springs in fixed position on the other of said members.

2. A chair comprising in combination a base member, a body member, two spiral springs each having a curved bearing portion at one end, brackets having curved grooves substantially corresponding to the curvature of said curved bearing portions of the springs for clamping said bearing portions adapted to be adjusted therealong and serving to hold said bearing portions in fixed position on one of said members, and other means for holding the other ends of said springs in fixed position on the other of said members.

3. A chair comprising in combination a

base member, a body member, two spiral springs each having a substantially straight bearing portion at its outer end and a curved bearing portion at its inner end, with the free end of the curved bearing portion directed away from the straight bearing portion at the outer end of the spring, brackets having curved grooves substantially corresponding to the curvature of said curved bearing portions of the spring for clamping said curved bearing portions in adjusted positions therealong and serving to hold such bearing portions in fixed position on said base member, and other brackets for holding the straight bearing portions of said springs fixedly in horizontally adjusted position on said body member.

ADOLPH W. SCHRAM.

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