

No. 704,187.

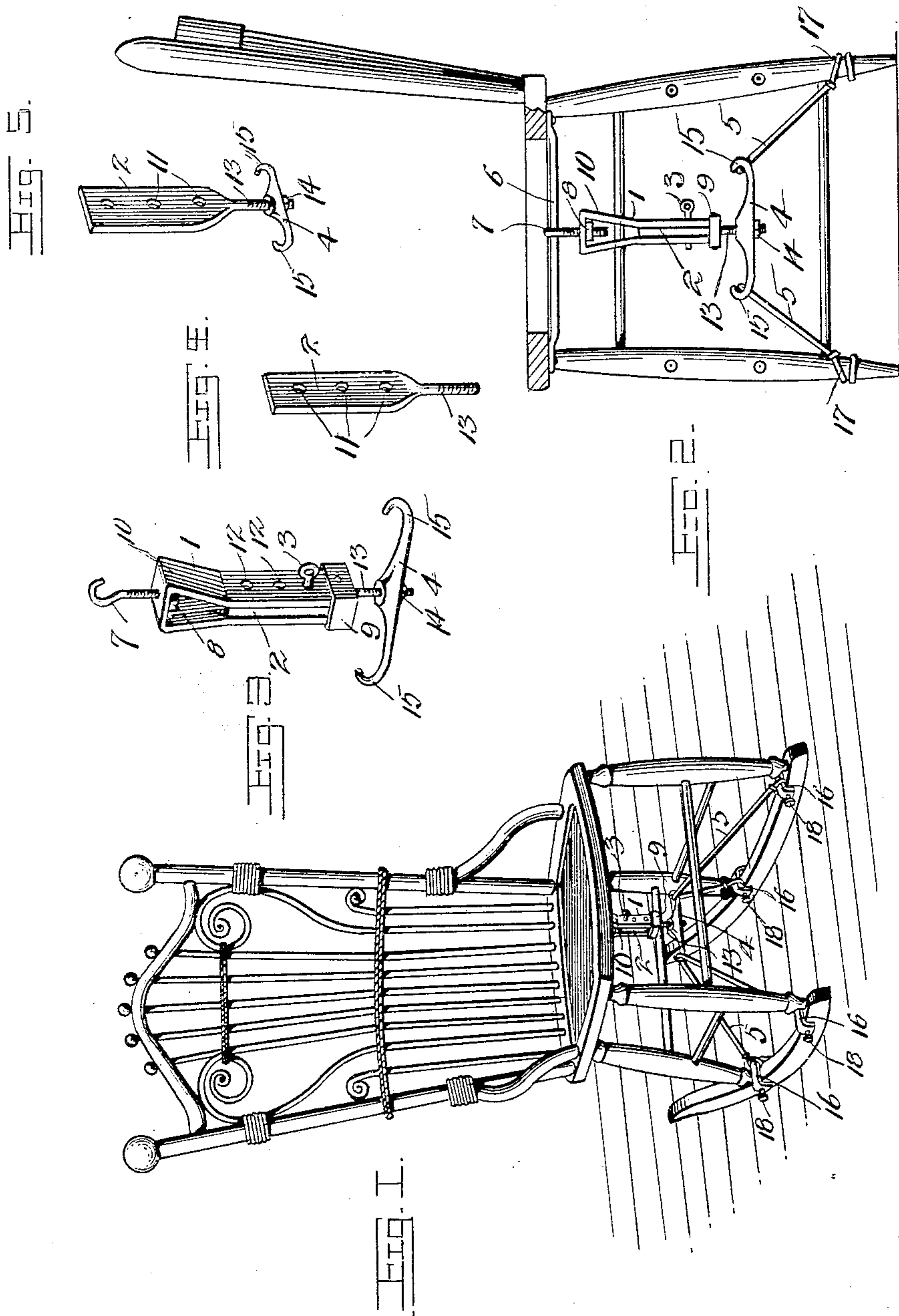
Patented July 8, 1902.

A. GRUENWALD.

CHAIR BRACE.

(Application filed July 16, 1901.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

AUGUST GRUENWALD, OF COLUMBIA, SOUTH DAKOTA.

## CHAIR-BRACE.

SPECIFICATION forming part of Letters Patent No. 704,187, dated July 8, 1902.

Application filed July 16, 1901. Serial No. 68,537. (No model.)

*To all whom it may concern:*

Be it known that I, AUGUST GRUENWALD, a citizen of the United States, residing at Columbia, in the county of Brown and State of South Dakota, have invented a new and useful Chair-Brace, of which the following is a specification.

The invention relates to braces for chairs and other articles of furniture, the object being to provide a device of this class which will effectually hold the legs, particularly of a rocking-chair, from spreading or becoming loose and either racking other portions of the structure or producing an annoying sound; and a particular object of the invention is to provide a device of this class which is capable of adjustment to adapt it to chairs of different sizes and styles.

Further objects and advantages of the invention will appear in the following description when considered in connection with the accompanying drawings, wherein similar reference characters represent corresponding parts in all the figures, and the novel features thereof will be particularly pointed out in the appended claims, it being understood that various changes in the form, proportion, size, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of the brace constructed in accordance with the invention applied in operative position to a rocking-chair. Fig. 2 is a side view of the same applied to an ordinary or straight chair. Fig. 3 is a detail view of the device detached. Fig. 4 is a similar view of the adjustable member of the attachment. Fig. 5 is a similar view of the adjustable member with the swivel attached.

The attachment is especially designed for use in connection with chairs wherein the upper ends of the legs are seated in sockets in the under side of the seat and wherein the legs are connected by rungs also usually fitted to the legs by having their extremities inserted in sockets therein and also to all forms of chairs wherein rockers are attached to the lower ends of the side legs by having the lower extremities of the latter inserted in sockets in the former. In all of these

cases there is a possibility of loosening by shrinkage or otherwise and a consequent creaking or racking of the chair, and therefore it is the object of the present invention to provide a brace of which the strain is applied in such directions as to prevent loosening of the parts and enable looseness thereof to be taken up after it has appeared.

The brace embodying the invention consists, essentially, of a hanger comprising a fixed member 1 and an adjustable member 2, the former preferably having parallel sides or cheeks in which the latter is movably fitted, means, such as a pin 3, for securing the adjustable member of the hanger in a fixed position with relation to the stationary member, a head 4, which is preferably swiveled upon the adjustable member of the hanger, and tensile connections 5 between said head and those elements of the chair structure which are to be braced and held firmly in their operative positions. Any suitable means may be employed for suspending the hanger, depending mainly upon the construction of the particular chair to which the attachment is to be applied, the only form of chair wherein any difference in the usual structure thereof is required in order to apply the attachment being that wherein the seat portion is centrally opened and provided with cane or other open-work filling. In a chair of this kind a cross-bar 6 may be extended transversely of and bridging the opening at the under side of the seat, and the hanger may, as illustrated, be provided with a suspending-hook 7, having its shank seated in a central opening in the upper end of the stationary member of the hanger and fitted at its lower end with a nut 8. In practice it is preferred to construct the stationary member of the hanger of a single sheet or plate of metal folded upon itself to form sides or cheeks, connected at their lower extremities by a clip 9, extended upward from said clip and parallel with each other to a point near the closed end of the loop and thence divergently disposed to form an enlarged hollow head 10 to give interior space for the manipulation of the nut 8. The adjustable member 2 of the hanger is fitted snugly in the interval between the sides or cheeks of the stationary member and may be provided with a plurality of open-



ings 11, either of which is adapted for registration with one of the corresponding openings 12 of the stationary member to receive the fastening-pin 3 to maintain said adjustable member at the desired elevation with relation to the stationary member. The lower end of the adjustable member of the hanger is reduced to form a spindle 13, upon which is swiveled the cross-head 4, held in place and adjustable by means of a nut 14, threaded upon the extremity of the spindle. The extremities of the cross-head are returned to form hooks 15, with which are engaged the loops of the bracing elements 5, terminally attached to clamps 16 when the attachment is applied to a rocking-chair, or otherwise provided with chair-engaging elements 17, as shown in Fig. 2, when the attachment is applied to a straight chair, said clamping means 17 being engaged with the chair-legs. The clamps 16 are of U shape and are provided with set-screws 18 to secure them in place, and in either case the strain of the connecting or bracing elements is upward and inward toward the center of the chair. By relatively adjusting the members of the hanger to arrange the bracing elements approximately in their normal position and then tightening the nut 14 or the nut 8 the desired tension may be secured to prevent the accidental displacement of the parts of the chair even should they become loosened by shrinkage.

What is claimed is—

1. A furniture-brace comprising a cross-head, tensile bracing elements for connecting the cross-head with an article of furniture, a hanger having a threaded stem adjustably connected with the cross-head, said hanger being composed of two sections arranged to

slide longitudinally on each other and provided with means for securing them at the desired adjustment, and means for swiveling the hanger to an article of furniture, whereby the hanger is adapted to be rotated bodily for adjusting the cross-head, substantially as described.

2. A furniture-brace composed of two sections arranged to slide longitudinally on each other, one of the sections being provided with a shank and the other being provided with parallel sides spaced apart to receive the section having the said shank, an adjustable cross-head mounted on the shank, means for swiveling the hanger to an article of furniture, whereby the hanger is adapted to be rotated bodily for adjusting the cross-head, and tensile bracing elements connecting the cross-head with the article of furniture, substantially as described.

3. A furniture-brace comprising a hanger having a stationary member provided with parallel sides or cheeks, an adjustable member fitted between said sides or cheeks for vertical adjustment, and means for securing the adjustable member at the desired adjustment on the stationary member, a cross-head swiveled upon the adjustable member, and looped tensile bracing means engaged with the cross-head and provided with terminal clamps for engagement with chair elements.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

AUGUST GRUENWALD.

Witnesses:

WILLIAM BEARD,  
WILLIAM YOUNG.