

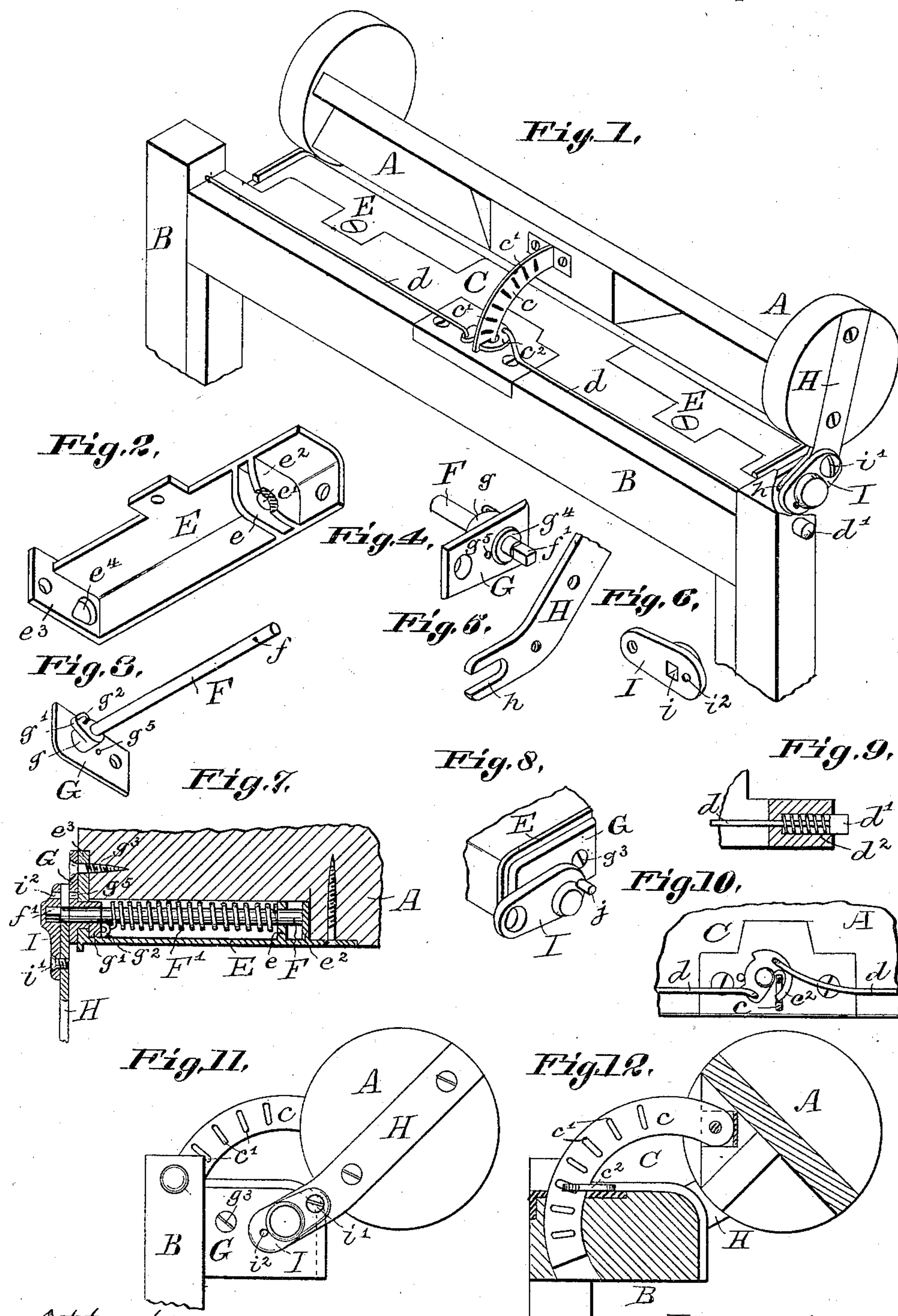
(No Model.)

J. HOGAN.

HEAD REST FOR CHAIRS.

No. 369,854.

Patented Sept. 13, 1887.



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HEAD-REST FOR CHAIRS.

SPECIFICATION forming part of Letters Patent No. 369,854, dated September 13, 1887.

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To all whom it may concern:

Be it known that I, JOHN HOGAN, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Head-Rests for Chairs, of which the following is a specification.

My invention relates to head-rests which are placed on the top of the back of chairs, and especially reclining and easy chairs, and it has special reference to the construction and arrangement of a spring or springs for adjusting the head-rest. The whole also relates to a former patent granted to me June 1, 1886, No. 342,830.

The main object of my invention consists in the improvement of means whereby the head-rest will move of itself to the desired position when released from the locking devices.

My improvements consist, first, in the construction and arrangement of a spring or springs for adjusting the head-rest to the desired position when released from the locking devices; secondly, in the novel manner of combining the spring with the chair-back and head-rest; thirdly, in the novel means employed for giving the spring more or less tension; fourthly, in the peculiar construction of the box for incasing the spring, so as to permit of the upholstering of the chair, and so that the spring is concealed at all times; and, lastly, in the minor features relating to the specific construction of the parts, all of which will hereinafter more fully appear and be claimed.

Of the drawings, Figure 1 is a perspective view of the upper portion of a chair-back provided with a movable head-rest with my improved spring-hinge in use. Fig. 2 is a perspective view of a metal box or casing for inclosing the spring. Fig. 3 is a perspective view of a rod or shaft on which the coil-spring is placed and fastened at one end, a cover-plate being also shown, through which the outer end of the shaft passes. Fig. 4 is a perspective view of the same from the other side. Fig. 5 is a perspective view of a forked arm to which the head-rest is secured. Fig. 6 is a perspective view of a wrench-plate for winding the spring to give it tension, as well as for keeping the arm in place and establishing the connection between the arm and spring. Fig.

7 is a plan section of the spring-hinge complete and all its parts in position. Fig. 8 is a perspective view of the wrench-plate, showing manner of keeping the spring in tension and preventing its unwinding when the head-rest is removed. Fig. 9 is a detail view showing the spring for the push-rods of the locking devices. Fig. 10 is a plan view of the locking pin or pawl and its rods. Fig. 11 is a side view of Fig. 1. Fig. 12 is a cross-section through the center of Fig. 1.

Similar letters indicate similar parts in all views.

A represents the head-rest, hinged to the top of a chair-back, B, so as to be adjustable to the head of the occupant of the chair.

C is a locking mechanism consisting of an arc lever, *c*, provided with a series of slots, *c'*, into which a pawl, *c''*, engages, the pawl *c''* being actuated by a rod or rods, *d*, extending to the side or sides of the chair-back and operated by a push-button, *d'*, and spring *d''*. This locking device is similar in construction and operation to that shown in my former patent cited above, and I do not therefore lay much importance upon the same, as one or the other or any locking device can be used to lock the head-rest.

Countersunk within the chair-back top rail is a box, E, the construction of which is clearly shown in Figs. 2 and 7. This box has within it a bearing, *e*, for receiving one end of a shaft or rod, F, around which a coil-spring, F', is slipped. This bearing consists of a wall or partition through which a hole, *e'*, is bored, and into this hole the end of the shaft is inserted. A second partition, *e''*, back of the partition *e*, serves to limit the insertion of the shaft F into the hole *e'*, thus avoiding the necessity of having a shoulder on the shaft, and simplifying its construction.

e''' is the front or end wall of the box or casing, which fits flush against the end of the top rail of the chair-back, as shown in Fig. 7. The shape of the box in cross-section is L-shaped, or it may be made a hollow cylinder. The rear or inner end of the spring F' is secured to the inner end of the shaft F at the hole *f*. The other end of the shaft extends out through a hole, *e''*, in the end wall, *e'''*. (See Figs. 2 and 7.)

G is a metal plate provided with a collar, *g*,

on its inner face, and g' is a lug on said collar; or a pin or similar means may be provided on the collar instead of a lug. This plate G fits flush against the end wall of the box by passing its collar and lug through the hole e^4 , which corresponds in shape to the collar and its lug, and by turning the plate round to its required position brings the lug around behind the end wall and locks the rod F and its spring F' within the box. (See Fig. 7.) A staple, g^2 , on the lug, or a hole bored in it, serves as a fastening for the other end of the coil-spring F'. The shaft F passes through the plate G and its collar (see Figs. 3, 4, and 7) and turns in same. A screw, g^3 , passing through the plate G and end wall of the box into the top rail of the chair-back, holds the plate G in position. (See Figs. 7 and 11.)

H is an arm secured to the head-rest, and has an angle near its lower end, which is forked at h . (See Fig. 5.) This fork sets over and straddles the shaft F, thus avoiding the necessity of unscrewing and removing the arm from the head-rest.

The plate G may be provided with an annular rim, g^4 , on its outer face, (see Fig. 4,) which rim serves as a washer between the plate G and arm H to lessen the friction between them. This annular rim g^4 , however, is not absolutely necessary, as the same may well be dispensed with, if desired, when the plate G and arm H of the head-rest will fit flush against each other, as shown in Fig. 7, and the operation of the hinge not materially be effected.

I is a wrench-plate having a square hole, i , fitted to receive the square end f' of the spring-shaft F, (see Figs. 6 and 7,) and by turning this plate the shaft is turned to give the spring more or less tension. To keep the spring from uncoiling and the wrench from turning back, a screw, i' , secures it to the arm H of the head-rest. (See Figs. 1, 7, and 11.)

In case it is desired to remove the head-rest from the chair-back a wire or nail, j , (see Fig. 8,) is inserted through the hole i^2 of the wrench-plate into a hole, g^5 , in the plate G, thus holding the wrench-plate in place and the spring from loosing its tension after the screw i' is removed and the arm and head-rest released, owing to the arm being slotted, allowing same to be lifted off the rod.

Should it be required to remove the spring for any reason whatsoever, the same can be taken out without removing the upholstery or any part thereof, and without removing the head-rest from the chair-back, for the reason

that the spring and hinge are duplicated, one being on each side of the chair-back. The wrench-cap is removed and one arm of the head-rest released, as before stated. Next the plate G is released by removing the screw which holds it, and, by turning the plate around, bringing its lug in line with the notch in the hole of the end wall of the box, the plate, together with the rod and spring, is withdrawn from the box.

Having thus fully described the construction of my improved spring-hinge and its attachment to the head-rest, the operation of same is as follows: The parts being put together as described and as shown in Fig. 7, the screw i' is removed from the wrench plate or cap I, and the latter is turned to give the spring the required tension. This done, the screw is placed back in position, thus securing the plate I to the arm H of the head-rest. Upon releasing the head-rest from the locking devices the spring, through its tension, turns the shaft F, which in turn, through its square end f' , acts on the wrench-plate I, which latter, being secured to the arm H of the head-rest, brings the latter forward, adjusting same as desired, where the same is locked by the locking devices C. Upon again unlocking the head-rest the latter is pushed back again as far as desired by means of the head of the occupant of the chair.

What I claim is—

1. In a spring-hinge for head-rests, the box or casing E, constructed with the partition e , having a hole, e' , the partition e^2 , and the end wall, e^3 , having the hole e^4 , in combination with the spring-shaft F, substantially as and for the purpose set forth.

2. The combination of the casing or box E, having partitions e and e^2 , the shaft F, spring F', and plate G, provided with a collar, g , having a lug, g' , and the correspondingly-shaped hole e^4 in the end wall of the box E, substantially as and for the purpose set forth.

3. The combination of the casing or box E, having partitions e and e^2 , the shaft F, provided with a square end, f , spring F', plate G, provided with the collar g and lug g' , the hole e^4 in the end wall of the box E, arm H of the head-rest, the wrench-plate I, screw i' , and pin-hole i^2 , substantially as herein shown and described, and for the purpose set forth.

JOHN HOGAN.

Witnesses:

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CHAS. F. MEISNER.