

No. 702,304.

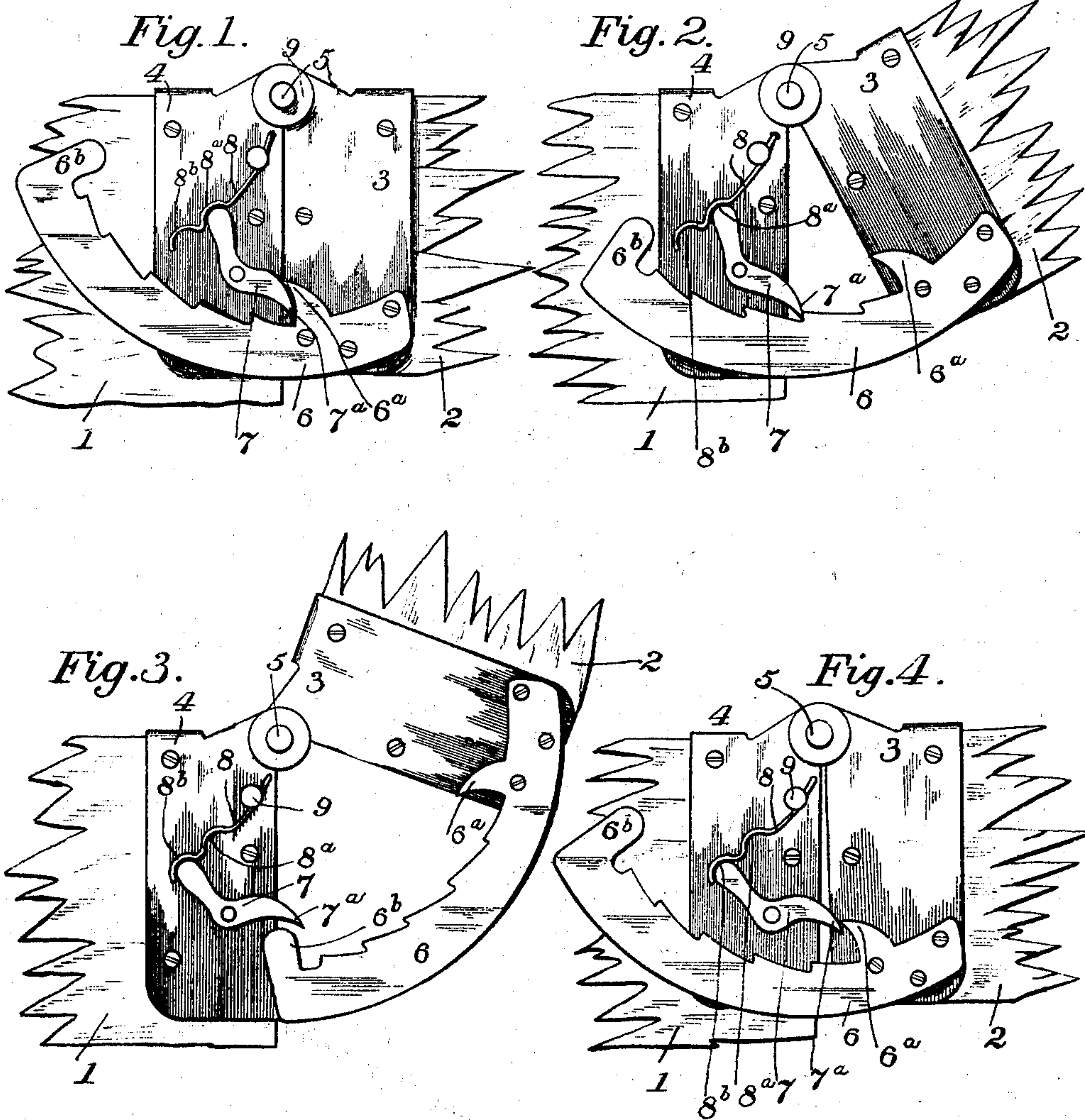
Patented June 10, 1902.

E. M. HULSE & J. B. HOOVER.

HINGE.

(Application filed Mar. 8, 1902.)

(No Model.)



WITNESSES:
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UNITED STATES PATENT OFFICE.

EDWIN M. HULSE AND JACOB B. HOOVER, OF COLUMBUS, OHIO; SAID
HOOVER ASSIGNOR TO SAID HULSE.

HINGE.

SPECIFICATION forming part of Letters Patent No. 702,304, dated June 10, 1902.

Application filed March 3, 1902. Serial No. 96,409. (No model.)

To all whom it may concern:

Be it known that we, EDWIN MORGAN HULSE and JACOB B. HOOVER, citizens of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Hinges; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates more particularly to devices for adjustably connecting rests to couches and other articles of furniture.

The object of the invention is to provide improved means whereby the rest can be adjusted to stand at different angles by manipulation of the rest only.

In the accompanying drawings, Figure 1 represents in side view fractions of a couch and head-rest therefor provided with the device, the head-rest being turned down to horizontal position. Fig. 2 shows the same parts, depicting the position of the pawl of the device when the rest is partially raised from the position indicated in Fig. 1. Fig. 3 illustrates the same parts, the rest being further raised to that position where the pawl is liberated from the teeth of the ratchet. Fig. 4 illustrates the same parts, the rest being lowered to nearly horizontal position, where the projection or lug on the ratchet-arm strikes the pawl to restore the latter to position to engage the teeth—that is, the position indicated in Fig. 1.

The invention will be described as used in connection with a couch having a head-rest.

In the several views, 1 designates the couch part proper, and 2 the head-rest part. The head-rest part is hinged to the couch part by an ordinary hinge, the leaves of which are designated 3 and 4, respectively. The pintle of this hinge is designated 5. Secured to the leaf 3 is an arm 6, shown to have on its upper edge a series of ratchet-teeth pointing generally toward the couch part, and these teeth are shown to lie in an arc of a circle, the center of which is the pintle 5 of the hinge.

Pivoted to the couch part or to the leaf of the hinge on the couch part below the hinge-

pintle 5 is a pawl 7, so positioned that its operative or tooth end 7^a can be projected into the path of movement of the teeth on the ratchet-arm 6. Fastened to the couch part above the pawl and bent around a pin 9 is a spring 8, having two seats 8^a and 8^b, each of which is adapted to yieldingly engage the upper end of the pawl. The seat 8^a holds the pawl in such a position that the active or tooth end thereof will slide against and engage the teeth of the ratchet-arm, and the seat 8^b will hold said tooth end away from said teeth. At the extremities of the toothed portion of the ratchet-arm and on the upper edge thereof are two projections of lugs 6^a and 6^b. The outer lug 6^a is adapted when the couch is lowered to nearly horizontal position to contact with the tooth end of the pawl and throw that end down into position to engage the teeth of the arm 6, as seen in Figs. 4 and 1, and the lug 6^b is adapted when the rest is raised to strike the pawl to lift the tooth end of the pawl out of that position, as seen in Fig. 3. When the pawl is shifted from one to the other of the seats 8^a and 8^b, it is there retained until shifted by the opposite lug 6^a or 6^b, and in either seat the end of the pawl is elastically held by the spring 8. When the upper end of the pawl is on the apex of the bend between the seats 8^a and 8^b, a very slight further movement effects the complete seating of that end. Hence the tooth end of the pawl when the opposite end is seated in the seat 8^a will be entirely free from the lug, as seen in Fig. 3.

The operation is as follows: When the parts are in the position indicated in Fig. 1, which can be called its "primary" position, the head-rest is level with the couch proper, and from this position the head-rest can be adjusted and supported in any position desired and permitted by any of the several teeth on the arm 6, as seen in Fig. 2. In these last-described positions the pawl is held in the seat 8^a. When it is desired to restore the head-rest to horizontal position, it is further lifted until the lug 6^b strikes the tooth end of the pawl and throws the same upward and the upper end of the pawl into the seat 8^b. When the pawl is in this position, the head-rest is free to be returned to horizontal position, the

lug 6^a throwing the tooth end of the pawl down into position to engage the teeth again.

The invention can also be used in adjustable chairs and other articles of furniture where one part is to be adjusted and held with respect to another.

It is obvious that the parts can be reversed—that is, the toothed arm 6 can be secured to the couch and the pawl 7 to the head-rest.

What we claim, and desire to secure by Letters Patent, is—

1. In combination with a rest and the part to which it is to be attached, a hinge connecting them, a toothed arm, having lugs projecting therefrom at the extremities of the toothed portion thereof, a pawl arranged to be shifted by said lugs into and out of position to be engaged by the toothed portion of said arm, and a catch independent of said arm for holding said pawl fixedly in each of the two positions to which it is shiftable.

2. In combination with a rest and the part to which it is to be attached, a hinge connecting them, a toothed arm, having lugs projecting therefrom at the extremities of the toothed portion thereof, a pawl arranged to be shifted by said lugs into and out of position to be en-

gaged by the toothed portion of said arm, and a spring-catch having two seats 8^a and 8^b to engage said pawl and into which said pawl is shifted from one to the other for holding said pawl in and out of position to be engaged by the teeth of said arm, substantially as described.

3. In combination with a rest and the part to which it is to be attached, a hinge connecting them, a curved arm toothed on its edge nearest the pintle of said hinge, and having lugs projecting therefrom at the extremities of the toothed portion thereof, a pawl arranged to be shifted by said lugs into and out of position to be engaged by the intermediate teeth, and a spring for engaging said pawl having two seats into one or the other of which said pawl is shifted by contact with said lugs to hold said pawl fixedly in the position to which it is shifted, substantially as described.

In testimony whereof we affix our signatures in presence of the same two witnesses.

EDWIN M. HULSE.
JACOB B. HOOVER.

Witnesses:

GEORGE LINN,
GEORGE M. FINCKEL.