E. A. GAY.

FURNITURE ATTACHMENT.

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979,149. Patented Dec. 20, 1910.

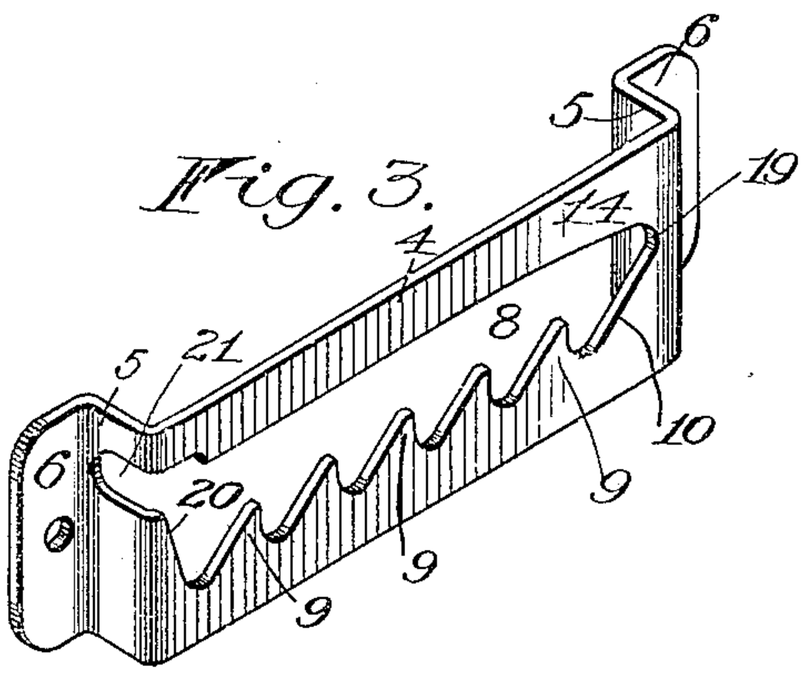

Fig. 3.

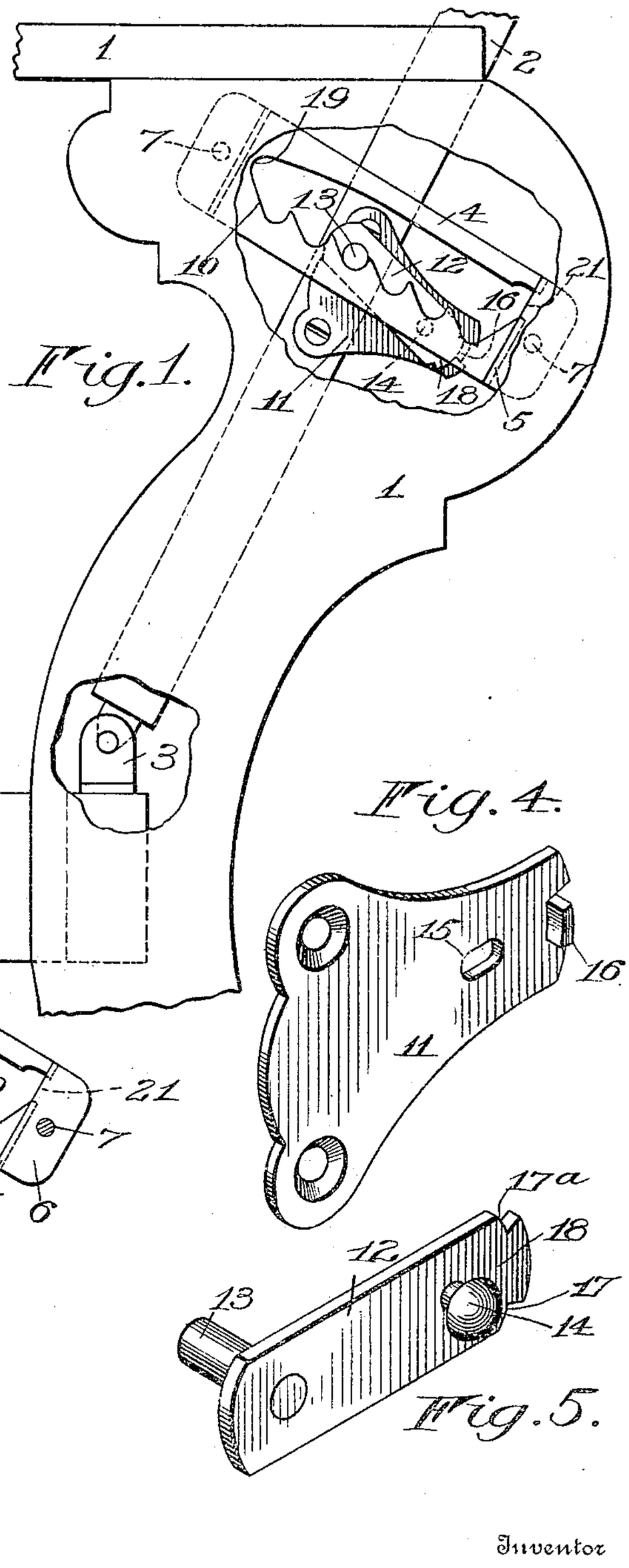

Fig. 1.

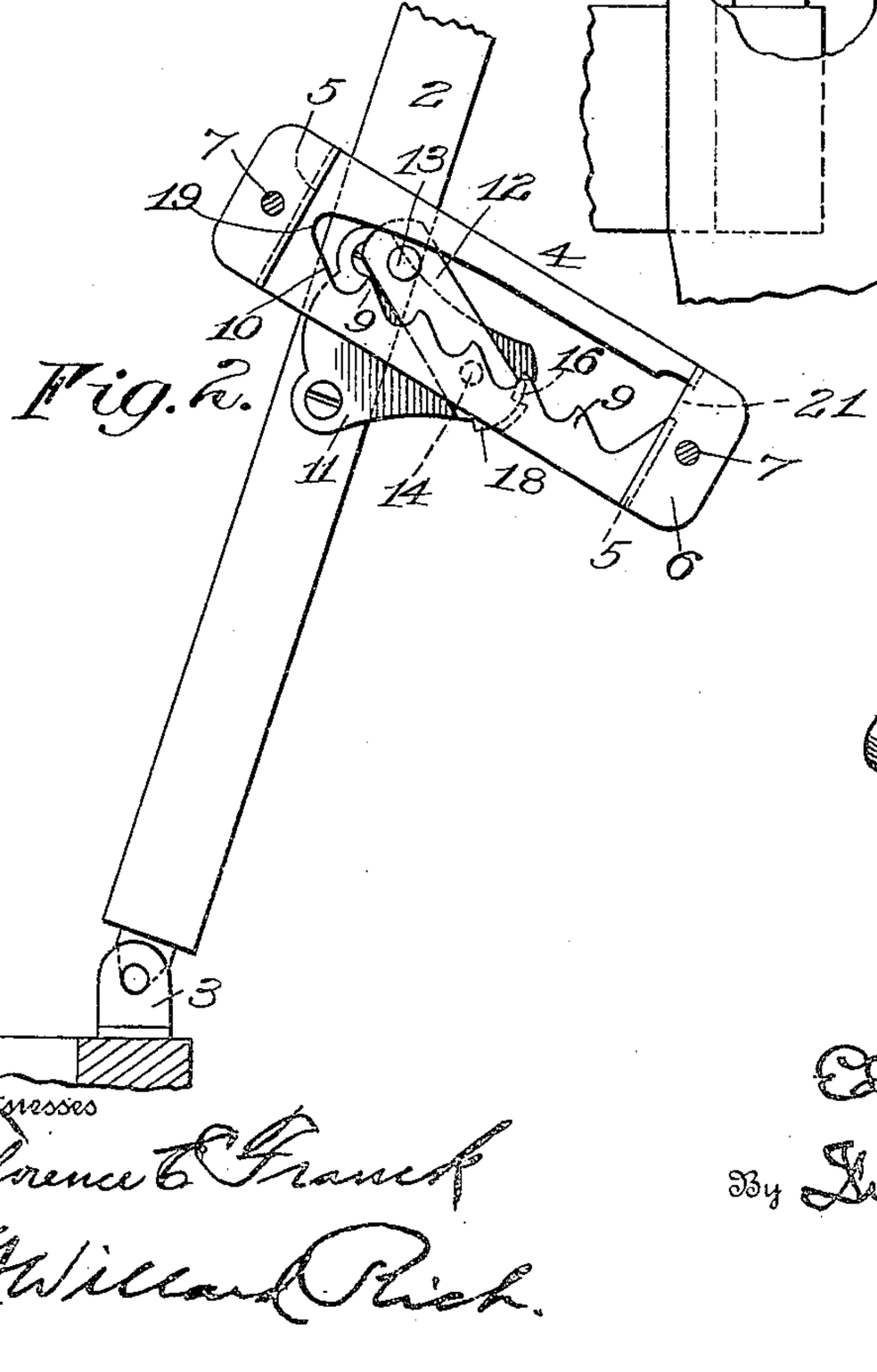

Fig. 2.

Fig. 4.

Fig. 5.

Witnesses

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FURNITURE ATTACHMENT.

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To all whom it may concern:

Be it known that I, EDGAR A. GAY, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Furniture Attachments; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of the specification, and to the reference-numerals marked thereon.

My present invention relates to furniture having movable portions that are adapted to be held in different fixed positions in relation to their support, or other parts, such as the hinged back of a Morris chair, or a lounge head, to which articles my improvements are particularly directed, although capable of other use, and it has for its object to provide a device for securing the movable part in different positions of adjustment which is capable of automatic disengagement to permit said part to be secured at various positions of intermediate adjustment and to be moved from one extreme to the other.

To these and other ends the invention consists in certain improvements and combinations of parts all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawings: Figure 1 is a side elevation of a portion of a chair, parts thereof being broken away and showing a device embodying my invention applied thereto. Fig. 2 is a similar view showing the pawl locked in the inoperative position. Figs. 3 and 4 and 5 are detached perspective views of the several parts of the device.

Similar reference numerals in the several figures indicate similar parts.

A device embodying my invention comprises generally two relatively movable members, adapted to be fastened to a stationary portion or member of a chair, or other article of furniture, and the relatively movable part or back respectively, one consisting of a rack having a series of inclined teeth and the other comprising a pivoted link or pawl adapted to coöperate with the rack during its forward movement which is held out of engagement with the rack by a locking or retaining device actuated when the pawl is at one extreme of its movement and is released when the pawl reaches its limit of travel in the other direction.

In illustrating my invention I have shown it applied to a chair having the arms 1 and the back 2 pivotally connected to the seat frame by hinges 3. The devices embodying my invention when attached to a chair or other article of furniture are arranged in pairs one at each side of the chair and as they are similar in construction a description of one will suffice for both.

Secured to the inner faces of each side of the stationary member or chair arms 1 is a bracket comprising a central portion 4 supported at its ends by legs 5 having feet 6 which are perforated to receive screws or other fastening devices 7 by means of which the bracket is rigidly secured to the stationary member. Part 4 of the bracket is provided with a longitudinally extending slot or aperture 8 at the lower side of which is provided a plurality of teeth 9 and at its forward end is provided with a cam surface 10 which leads upwardly above the plane of the teeth 9. Secured to the adjacent edge of the chair back 2 and projecting rearwardly therefrom is a plate 11 and pivoted thereto and lying between it and the bracket is a finger or pawl plate 12 provided at its outer end with a laterally projecting pin or stud 13 which forms the nose of the pawl to coöperate with the teeth 9 of the rack. The pivotal connection between the finger or pawl and the plate 11 is formed by a laterally projecting headed pivot pin 14 which projects through an elongated slot or aperture 15 which permits a relative movement of the finger or pawl in a longitudinal direction on the plate. In rear of the aperture 15 is a laterally extending projection 16, preferably formed by striking a portion of the end of the plate in alinement with the slot. The rear end of the finger or pawl 12 is cut away, as indicated at 17, forming a short rearward extension 18 which may be engaged beneath the projections 16 to lock the finger in an inoperative position, as will be further described. In order to adapt this part of the device for use at either side of a chair, a similar notch 17ª is also arranged at the lower rear end of the finger. At the forward end of the cam surface 10 on the bracket is a shoulder or stop 19 with which the pin 13 engages to move its supporting finger 12 rearwardly to engage the extension

18 beneath the projection 16 at the completion of the travel of the movable member or back 2 in a forward direction, and at the rear end of the slot is an abutment or shoulder 20 which engages the pin 13 and serves to release the finger when the movable member or chair back has been rotated to its lowermost position by drawing it forwardly out of engagement with the projection 16. In order to facilitate applying the parts of the attachment and also to permit the parts of an article of furniture to be disengaged after the attachment has been applied, the rear end of the slot 8 in the bracket is extended into one of the legs 5 and is made sufficient in size to permit the pin 13 to be passed therethrough. This extension of the slot lies above the plane of the teeth 9 and the shoulder 20, as indicated at 21 in Figs. 1 and 3, so that accidental disengagement of the parts is prevented.

The operation of the attachment will now be readily understood. Assuming the parts to be in the position shown in Fig. 1, the operator may adjust the movable member or back 2 into a more upright position by drawing it forwardly causing the pin 13 to pass successively into engagement with the several teeth of the rack. When it is desired to turn the chair back to a reclining position, it is drawn forwardly to the limit of its movement, this action causing the pin 13 to engage the cam 10 and to be elevated above the points of the teeth 9, when the notch 17 at the rear end of the pawl or finger 12 is in alinement with the relatively stationary projection 16. In this position the pin engages the stop or shoulder 19 and the pawl or finger 12 is operated rearwardly to carry its extension 18 beneath said stop, which locks it in the inoperative position shown in Fig. 2 until its release by the engagement of the pin with the shoulder or abutment 20.

An attachment, such as I have described, is simple and consists of few parts which may be readily constructed from sheet metal and applied to articles of furniture heretofore manufactured.

I claim as my invention.

1. In an adjusting device the combination with two relatively movable members, of a rack on one of said members, a plate pivoted to the other member having a sliding movement thereon, a laterally extending stud on said plate engaging the rack, a detent on the plate to coöperate with the member by which the plate is carried to lock the stud out of the path of the rack, and a device located at one end of the path of movement of the plate and engaging the stud to effect the interlocking of the detent on the stud carrying plate with the member on which the latter is pivoted.

2. In an adjusting device, the combination with a member, a pawl pivotally connected thereto provided with shoulders on opposite sides, the pivotal connection being formed by a straight slot in one and a pivot point on the other working in the slot, a detent on said member having a pair of shoulders each adapted to coöperate with one of the shoulders on the pawl, of a second member carrying a rack adapted to coöperate with the pawl, and means located at both limits of movement of the pawl for coöperating with the latter to move it into and out of coöperative engagement with the detent.

3. In an adjusting device, the combination with two relatively movable members, of a rack on one of them, a detent on the other, a pawl for coöperation with the rack pivoted on the detent carrying member and also slidable thereon, said pawl lying out of engagement with the detent when the pawl is slid to one position and into such engagement when the pawl is slid to another position, means arranged at one end of the rack for slidably moving the pawl into engagement with the detent, and means at the other end of the rack for slidably moving the pawl out of engagement with the detent.

4. In an adjusting device, the combination with two relatively movable members and a pawl carried by one of them, of a rack on the other with which said pawl is adapted to engage embodying a bracket having offset portions at its ends provided with a longitudinal slot one of the edges of which is serrated to form teeth and having a cut away portion in the offset portion at the end thereof by means of which the pawl is entered into the slot to lie in the plane of the teeth.

5. A chair back adjusting device comprising a ratchet plate adapted to be secured to a fixed part of the chair and formed with front and rear stop arms, a pawl plate movably secured to the chair back and having a stud adapted for engagement with the teeth of the ratchet plate, and means whereby engagement of said stud with one of the stop arms of the ratchet plate will normally lock said stud arm beyond the normal operative path.

6. A chair back adjusting device comprising a ratchet plate adapted to be secured to the fixed part of the chair and formed with stop arms, a pawl plate movably secured to the chair back, and a stud carried by said plate and adapted to engage the teeth of the ratchet plate in the normal adjustment of the chair back, said stud being arranged for engagement with the respective stop arms to change the position of the pawl plate.

7. An adjusting device for chairs comprising a ratchet plate formed with a series of ratchet teeth and with front and rear stop arms, a pawl plate pivotally supported on

the chair back and adapted for an independent longitudinal movement relative thereto, a stud carried by said pawl plate and adapted for engagement with the teeth in the ratchet plate, and means for holding the stud free of contact with the ratchet plate upon engagement of said stud with the forward stop arm of said ratchet plate.

8. An adjusting device for chairs comprising a ratchet plate formed with a series of ratchet teeth and with front and rear stop arms, a pawl plate pivotally supported on the chair back and adapted for an independent longitudinal movement relative thereto, a stud carried by said pawl plate, and adapted for engagement with the teeth in the ratchet plate, and means for holding the stud free of contact with the ratchet plate upon engagement of said stud with the forward stop arm of said ratchet plate, the contact of said stud with the rear stop arm of the ratchet plate releasing said holding means and permitting engagement of the stud with the ratchet teeth.

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