Sept. 4, 1923. 1,466,859

E. D. SUTTON

ADJUSTING MECHANISM FOR CLOTHESRACKS AND SIMILAR DEVICES

Filed Jan. 3, 1922 2 Sheets-Sheet 1

Fig. 1

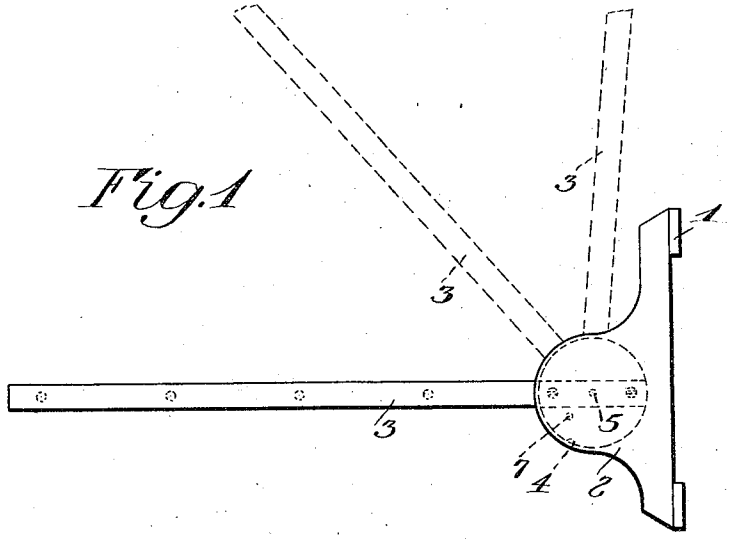
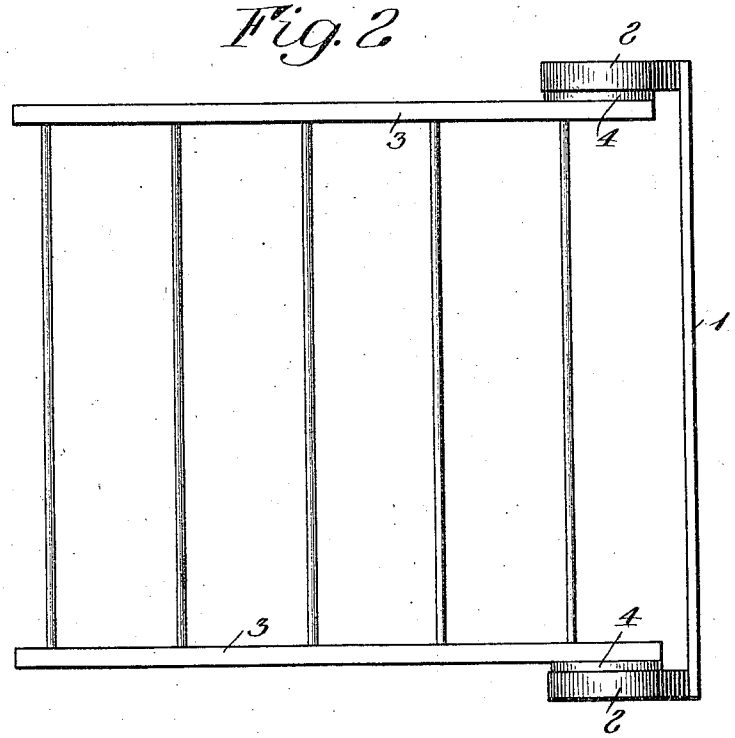


Fig. 2



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Fig. 3

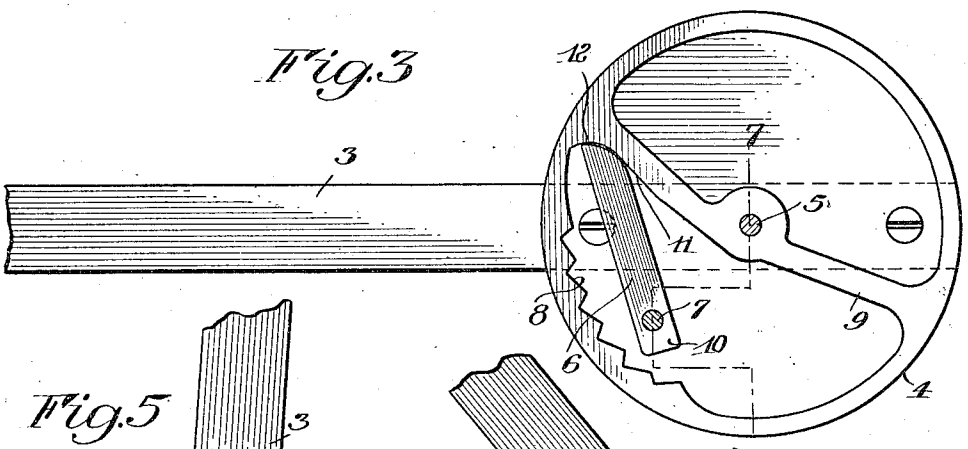


Fig. 5

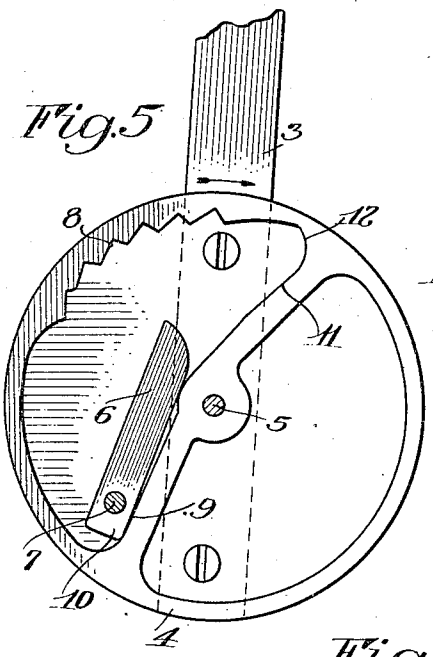


Fig. 4

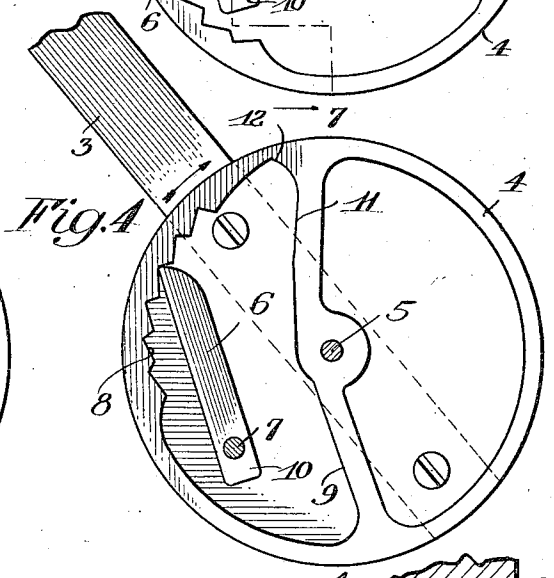


Fig. 6

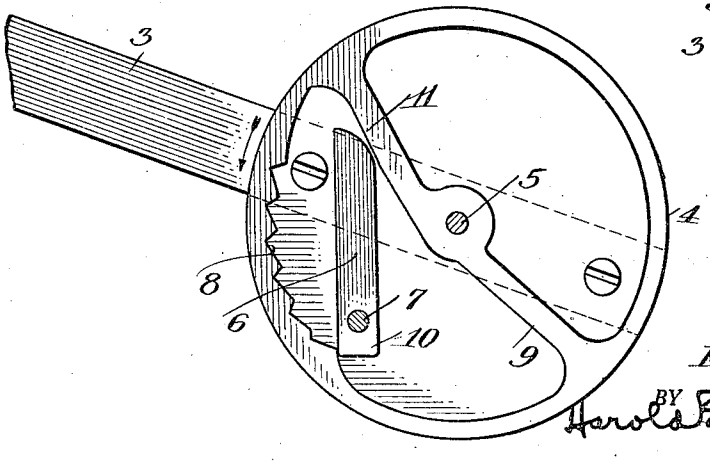
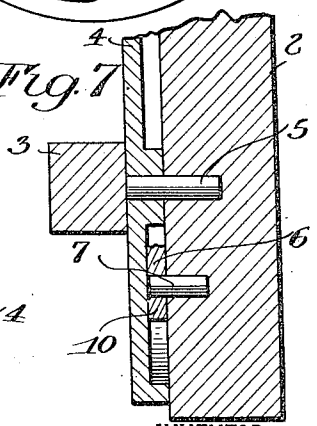


Fig. 7



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Patented Sept. 4, 1923. 1,466,859

UNITED STATES PATENT OFFICE.

ERNEST D. SUTTON, OF ROCHESTER, NEW YORK.

ADJUSTING MECHANISM FOR CLOTHESRACKS AND SIMILAR DEVICES.

Application filed January 3, 1922. Serial No. 526,644.

To all whom it may concern:

Be it known that I, ERNEST D. SUTTON, a citizen of the United States of America, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Adjusting Mechanism for Clothesracks and Similar Devices, of which the following is a specification.

My invention relates to clothes racks, and is also applicable to other structures where it is desirable to adjust a device to different positions, as for instance, either vertically, horizontally, or various angular arrangements between such limits.

The invention has for its purpose to afford a practicable and simplified mechanism by which a rack can be moved manually to any desired position, and is automatically locked in such adjusted position.

A further purpose of the improvement is to provide a construction in which the locking operation depends upon a gravity dog or other member that is automatically released when the adjustable device reaches its uppermost position so as to permit it to be returned to its lowermost position, the locking member also being automatically returned to its locking position as the adjustable device reaches its lowermost position, following which the adjustable device can be elevated and locked in any intermediate position.

To these ends, the invention consists in the arrangement and combination of parts that will appear clearly from the following description, in conjunction with the accompanying drawings, the novel features being pointed out in the claims following the specification.

In the drawings:

Figure 1 is a side elevation of a clothes rack with a preferred embodiment of the invention applied thereto, and showing, in dotted lines, different possible adjustments of the movable device or clothes carrying portion;

Figure 2 is a plan view of the parts illustrated in Figure 1;

Figure 3 is a side elevation of the locking mechanism, showing the position of the parts with the adjustable device in horizontal position;

Figure 4 is a similar view showing the adjustable device elevated and locked in an intermediate position;

Figure 5 is a similar view showing the position of the parts as the adjustable device reaches its uppermost position, causing the gravity dog to be moved to releasing position;

Figure 6 is a similar view illustrating the position of the parts as the adjustable device reaches its lowermost or horizontal position, the gravity dog being returned to its locking position, and

Figure 7 is a sectional view on line 7—7 of Figure 3.

The invention is susceptible of a variety of applications, having marked utility wherever it is desired to adjust and retain a clothes rack, carrier, or similar device, in different angular positions with reference to a stationary support, and for convenience of illustration I have shown the invention as applied to a towel or clothes rack, as an example of one practical embodiment.

Referring more in detail to the drawings, the structure comprises a support adapted to be attached to a wall, and comprising horizontal strips 1, and end pieces or brackets 2, while 3 designates the adjustable device or carrier that is pivotally mounted on the support and movable to different angular positions thereon.

To this end, the device 3 has fixedly attached to its side pieces the circular plates 4 which are journalled on arbors 5 mounted on the support, while 6 designate locking members consisting of gravity operated dogs that are pivoted at 7 to the brackets 2, and coopperate with the plates 4 so as to hold the adjustable device in any desired position, as will now be fully set forth.

Each of the plates 4 is provided with a series of ratchet teeth 8, and as the adjustable device is moved from its horizontal position upwardly, the dog 6 successively engages said teeth in the manner illustrated in Figure 4, and serves to retain the carrier 3 in any selected position, there being a suitable number of adjustments between the horizon-

tal and vertical positions, dependent upon the number of ratchet teeth. It is desirable to provide means for automatically releasing the locking dog, to permit the carrier 3 to be returned to its horizontal position, and this is accomplished in the following manner.

As the adjustable device travels upwardly, and preferably as it reaches its uppermost position, illustrated in Figure 5, the surface or portion 9 on the plate 4 engages the tail 10 of the dog, and shifts the dog from the position shown in Figure 4 to the position shown in Figure 5, whereby its weight serves to maintain it in releasing position until it is positively returned to locking position. When the operator has moved the adjustable device or carrier to the uppermost position shown in Figure 5, the dog has been released and the carrier can then be swung downwardly to its lowermost or horizontal position. As the carrier approaches its horizontal position, the surface or portion 11 on the plate 4 engages the front end of the dog 6 in the manner shown in Figure 6, and returns the dog by a positive action to the position of Figure 3, where it engages the pocket or surface 12 on the plate 4, and maintains the plate 4 in the position illustrated in Figure 3, thus retaining the carrier 3 in its lowermost or horizontal position.

To operate the carrier, it is engaged manually and moved upwardly, as shown by dotted lines in Figure 1, and can be left in any angular position by releasing it, whereupon the gravity dog 6 engages the nearest tooth 8 and prevents the carrier from lowering. To drop the carrier to its horizontal position, it is first elevated to its uppermost or vertical position, which movement automatically releases the dog 6, as illustrated in Figure 5, and the operator can then swing the carrier back to its lowermost or horizontal position, the latter operation serving automatically to bring the dog back to locking position, as indicated in Figures 6 and 3.

While I have disclosed the invention with reference to a particular type of mechanism, it is not limited to the precise embodiment set forth, but may be modified or otherwise adapted, this application being intended to cover any departures involving the same general relationship and automatic functioning of a locking member with reference to an adjustably supported device, or any mechanism coming within the scope of the following claims.

I claim:

1. The combination with a support, of an adjustable device pivoted thereon, and means for retaining said device in different positions including a member fixedly mounted on one of said elements and having a curved toothed locking member arranged concentrically of said adjustable device, a locking member having a locking portion at its front end cooperating with said toothed portion, and a tail portion at its rear end, and means carried by said member and located opposite the toothed portion for engagement with said tail portion of the locking member so as to move the latter to releasing position as the device travels upwardly.

2. The combination with a support, of an adjustable device pivoted thereon, and means for retaining said device in different positions including a member fixedly mounted on one of said elements and having a curved toothed portion arranged concentrically of said adjustable device, a locking member having a locking portion at its front end cooperating with said toothed portion and a tail portion at its rear end, means carried by said member and located opposite the toothed portion for engagement with said tail portion of the locking member to move the latter out of engagement with the toothed portion as the device travels upwardly, and additional means carried by said member and also located opposite the toothed portion for engagement with the front end of the locking member to return the latter to locking position as the device travels downwardly.

3. The combination with a support, of an adjustable device pivoted thereon, and means for retaining said device in different positions including a plate fixedly mounted on the device, said plate being recessed at one side thereof and having a series of teeth arranged interiorly, and a dog pivoted on the support and housed in said recessed portion of the plate for cooperation with the teeth, the plate having dog engaging surfaces arranged interiorly for cooperation with the tail and front end of the dog so as to release the latter when the device reaches its uppermost position and to return the dog when the device reaches its lowermost position.

4. The combination with a support, of an adjustable device pivoted thereon, and means for retaining the device in different positions including a plate fixedly mounted on the device, said plate being recessed on the side adjacent to the support, and having a series of teeth arranged around the outer edge of said recess, and a dog pivoted on the support and housed within said recessed portion of the plate, said plate having dog engaging surfaces formed at the opposite ends of the recess for cooperating with the dog to move it automatically to release it and to return it to locking position.

5. The combination with a support, of an adjustable device pivoted thereon, and means for retaining said device in different positions including a plate fixedly mounted on one of said elements, the plate being re-

cessed at one side thereof and having a series of teeth arranged interiorly, and a dog pivoted on the other of said elements and housed in said recessed portion of the plate for cooperation with the teeth, the plate having dog engaging surfaces arranged interiorly for cooperation with the tail and front end of the dog so as to release the latter when the device reaches its uppermost position, and to return the dog when the device reaches its lowermost position.

In witness whereof, I have hereunto signed my name.

ERNEST D. SUTTON.