

J. W. DAWKINS.  
SHELF ATTACHMENT FOR LADDERS.  
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929,291.

Patented July 27, 1909.

Fig. 1.

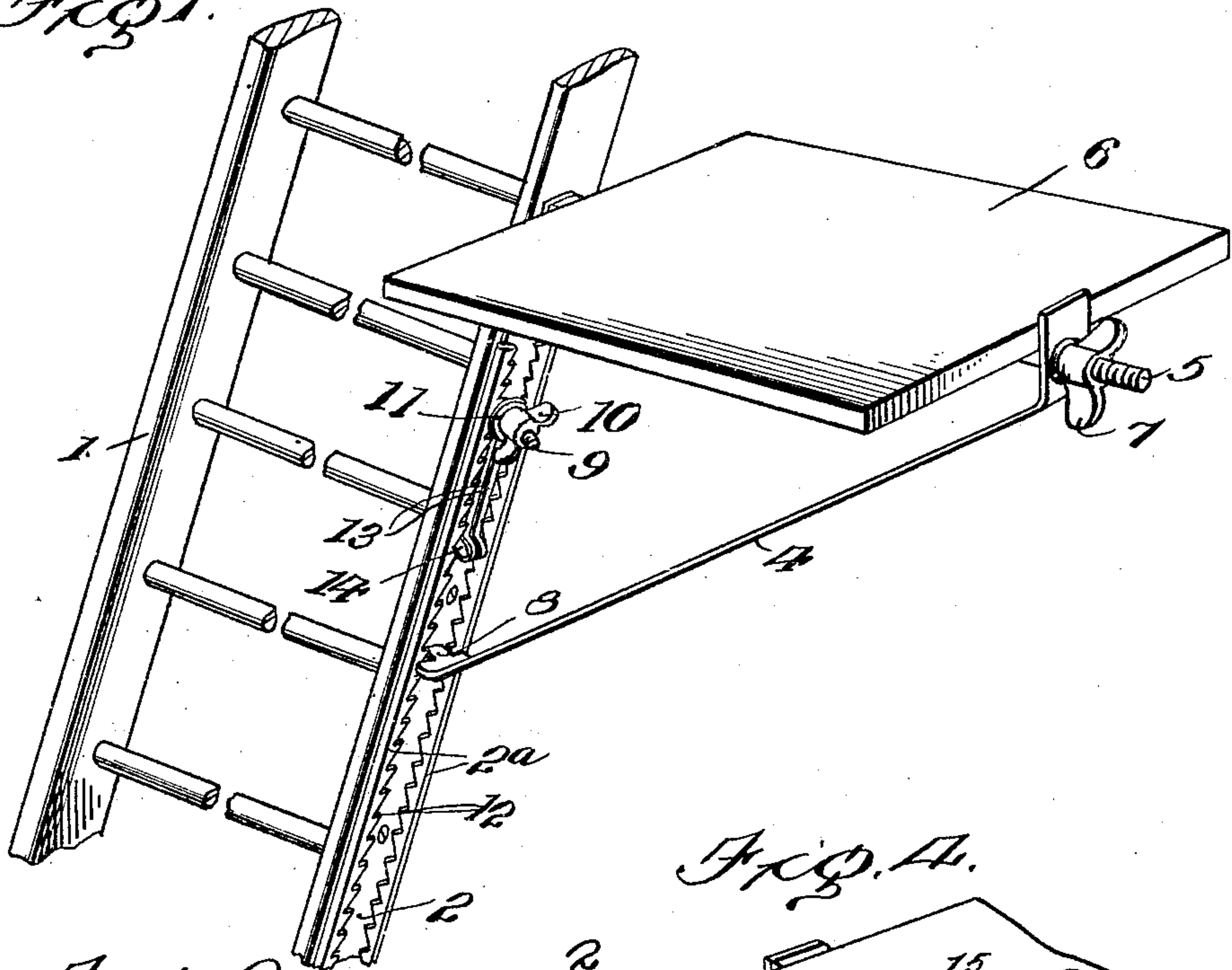


Fig. 4.

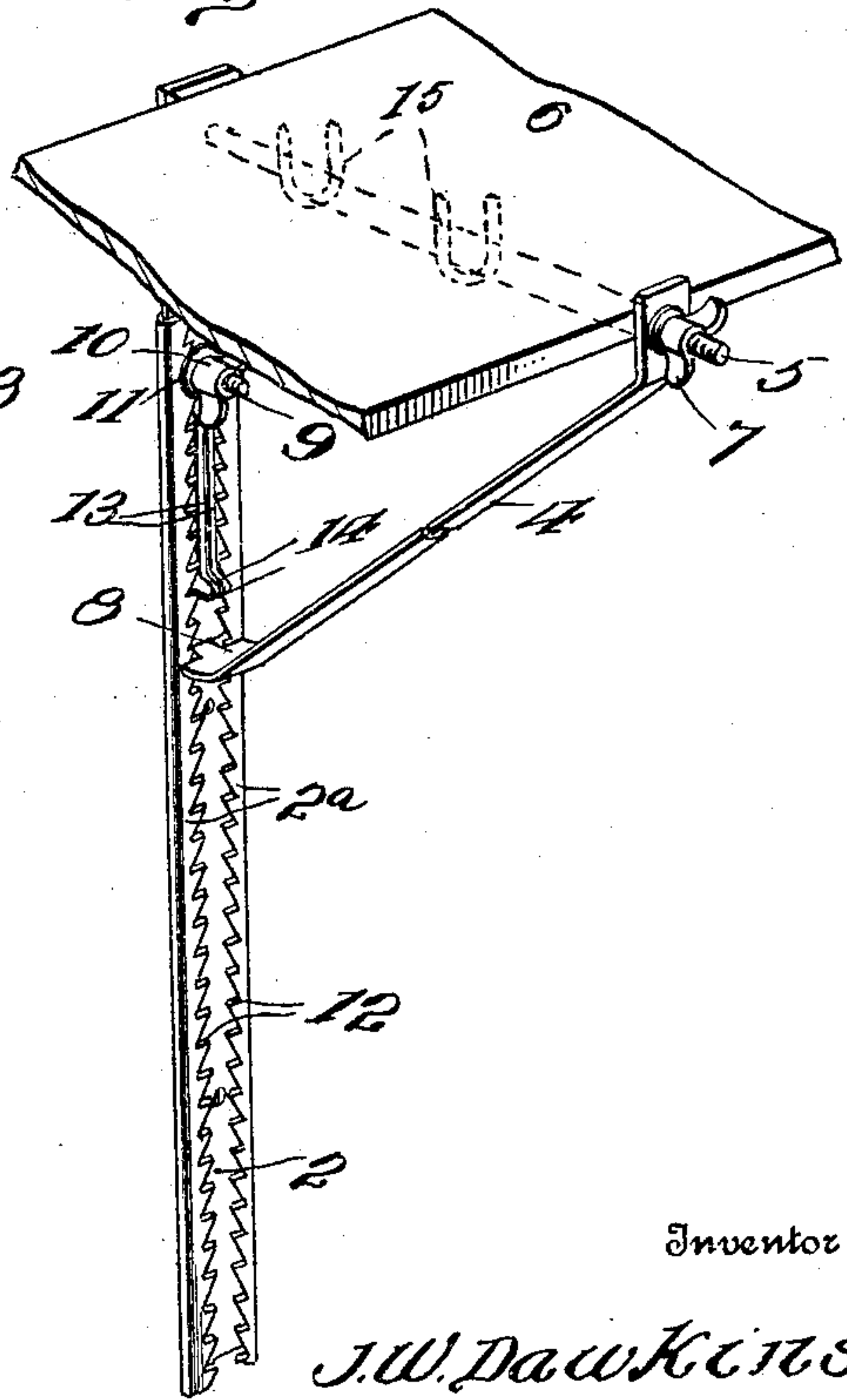


Fig. 2.

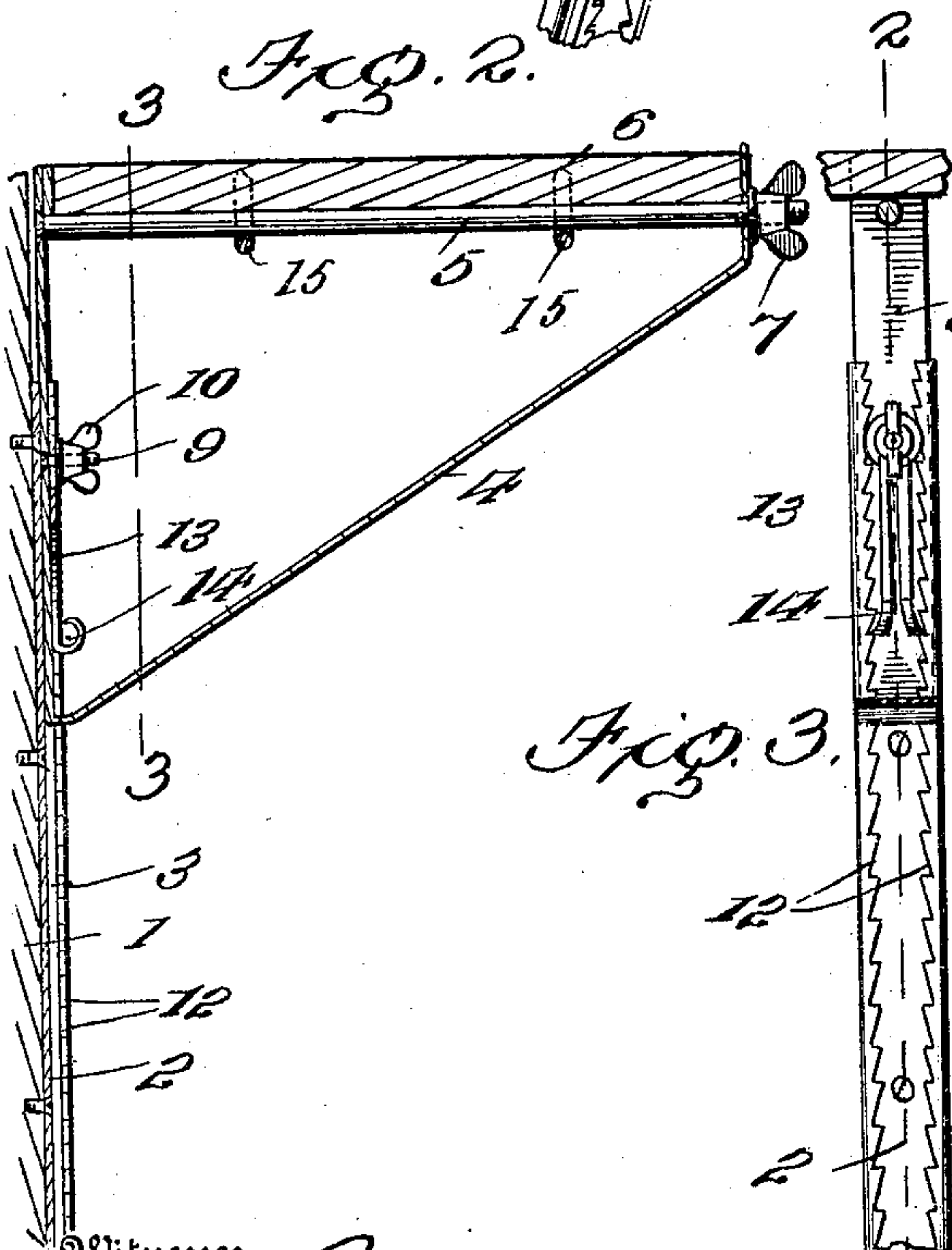
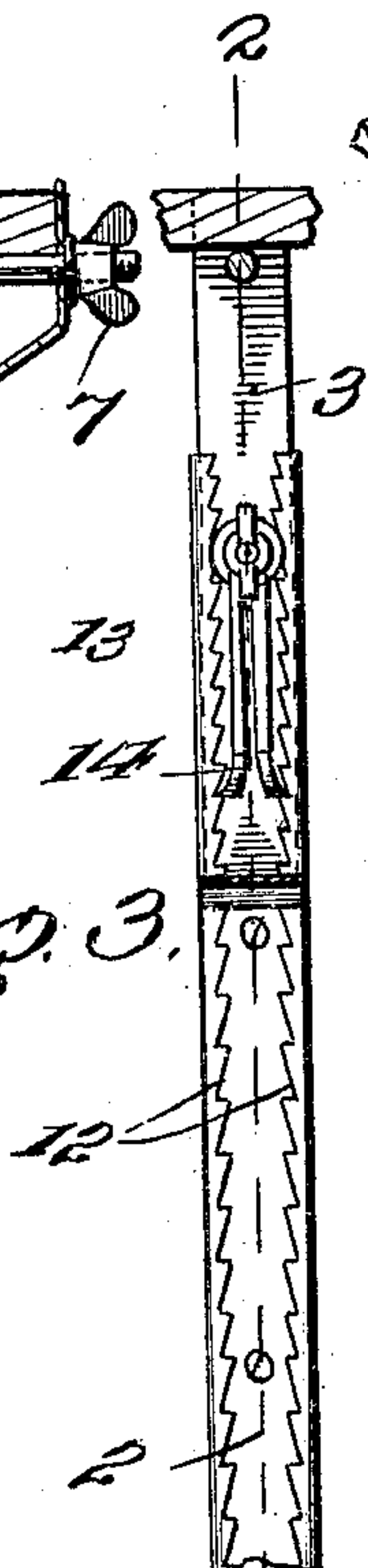


Fig. 3.



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Witnesses

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By

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# UNITED STATES PATENT OFFICE.

JAMES WM. DAWKINS, OF SPOKANE, WASHINGTON.

## SHELF ATTACHMENT FOR LADDERS.

No. 929,291.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed October 5, 1908. Serial No. 456,194.

*To all whom it may concern:*

Be it known that I, JAMES WM. DAWKINS, citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Shelf Attachments for Ladders, of which the following is a specification.

The present invention relates to an improved shelf which is designed to be attached to ladders such as are employed in stores or similar places to obtain access to goods upon a tier of shelves, and the object of the invention is the provision of a shelf of this character which embodies a novel construction whereby it can be readily moved up and down upon the ladder as desired, and turned about a horizontal axis so as to be clamped in a horizontal position regardless of the inclination of the ladder.

The invention further contemplates a shelf attachment for ladders which is simple and inexpensive in its construction and can be readily applied to the side bar of an ordinary ladder.

With these and other objects in view that will more fully appear as the description proceeds, the invention consists in certain constructions and arrangements of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention and the merits thereof, and to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a perspective view showing the shelf attachment as applied to a ladder; Fig. 2 is a vertical sectional view on the line 2—2 of Fig. 3; Fig. 3 is a vertical sectional view on the line 3—3 of Fig. 2; and, Fig. 4 is a detail perspective view of the attachment, portions of the shelf being broken away.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

For the purpose of illustration, the invention is shown as applied to a ladder 1 which is of the usual construction and is formed with a pair of side bars between which the steps are located. Secured to one of the side bars of the ladder and extending longitudinally along the same is a guideway 2 upon which is mounted a slide 3. In the present instance, the guideway 2 is formed

of a strip of sheet material, the longitudinal edges of which are returned upon themselves at 2<sup>a</sup> to receive the slide 3 which is mounted to have an up-and-down movement. Inclined upwardly from the bottom of the slide 3 is an arm 4, the upper end of the arm being connected with the upper end of the slide by means of a rod 5 upon which the shelf 6 rests. Both the slide and the arm extend upwardly above the rod so as to engage opposite edges of the shelf, and the outer end of the rod passes loosely through the arm and is threaded to receive a thumb nut 7. When this thumb nut is loosened, the shelf 6 can be rocked upon the rod 5 and turned about a horizontal axis so as to assume a horizontal position regardless of the inclination of the ladder. However, when the thumb nut 7 is tightened, the shelf is securely clamped between the plate and the arm, and is held against any rocking movement. As shown on the drawing, the arm 4 and the slide 3 are formed from a single piece of material, notches 8 being provided at the junction of the two members to receive the returned edges 2<sup>a</sup> of the guideway.

Projecting outwardly from the slide 3 is a clamping bolt 9 upon which a thumb nut 10 is mounted, a washer 11 being fitted upon the bolt under the thumb nut, and the washer being of such a size as to extend over the returned edges of the guideway. It will be obvious that by tightening the thumb nut the slide can be drawn outwardly and securely clamped against the returned edges of the guideway so as to lock the same against any vertical movement.

The invention further contemplates a pawl and ratchet arrangement for preventing downward movement of the slide, and for this purpose, the edges of the returned sides 2<sup>a</sup> of the guideway are formed with the upwardly inclined teeth 12, and the slide is provided with the spring arms 13 for engaging the teeth. When the slide is moved upwardly, these spring arms slip freely over the inclined sides of the teeth, while should an attempt be made to move the slide downwardly, the spring arms would engage the straight sides of the teeth to prevent such movement. In the present instance, these two spring arms 13 are formed by bifurcating the lower end of a spring strip secured to the slide, and the extremities of the spring arms are extended outwardly at 14 to provide finger pieces. Should it be desired to lower the



shelf, it is merely necessary to loosen the thumb nut 10 upon the clamping bolt 9 and then grasp the finger pieces 14 and press them inwardly toward each other to release the spring arms from engagement with the teeth 12. The shelf can be readily moved upwardly at any time when the thumb nut 10 is loosened, and can be securely clamped against either an up or down movement by tightening this thumb nut 10. The shelf 6 is preferably loosely connected to the rod 5 by means of staples 15 so that while it is entirely free to swing about a horizontal axis it is securely held against displacement when the thumb nut 7 is loosened.

Having thus described the invention, what I claim is:

1. In a shelf attachment of the character described, the combination of a guideway provided with inclined teeth, a slide mounted upon the guideway, a spring arm upon the slide for engaging the inclined teeth to prevent downward movement of the slide, means for clamping the slide against movement upon the guideway, a shelf carried by the slide and mounted to turn about a horizontal axis, and means for clamping the shelf in an adjusted position.

2. In a shelf attachment of the character described, the combination of a guideway, a slide mounted upon the guideway, an arm projecting from the slide, a shelf mounted between the arm and slide to be turned about a horizontal axis, and means for clamping the shelf against movement.

3. In a shelf attachment of the character described, the combination of a guideway, a slide mounted upon the guideway, an arm projecting from the slide, a rod connecting the plate and the slide and passing loosely through one of the members, the end of the

rod being provided with a clamping nut, and a shelf resting upon the rod so as to rock thereon and adapted to be clamped between the plate and the arm.

4. In a shelf attachment of the character described, the combination of a guideway formed with returned sides, a slide mounted between the returned sides of the guideway, an arm projecting from the slide and integral therewith, a shelf adjustably clamped between the slide and the arm, and a clamping nut carried by the slide for cooperation with the returned sides of the guideway to lock the slide against movement.

5. In a shelf attachment of the character described, the combination of a guideway provided with oppositely disposed sets of teeth, a slide mounted upon the guideway, a shelf carried by the slide, and a pair of spring arms upon the slide for engaging the teeth to lock the slide against movement, the said spring arms being adapted to be forced together to release them from engagement with the teeth.

6. In a shelf attachment of the character described, the combination of a guideway formed with returned sides, the edges of which are toothed, a slide mounted between the returned sides of the guideway, a pair of spring arms upon the slide for engagement with the toothed edges of the returned sides of the guideway, finger pieces upon the spring arms whereby they can be forced together to release the slide, and a shelf carried by the slide.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES WM. DAWKINS. [L. s.]

Witnesses:

D. RYRIE,

L. GENTRY.