

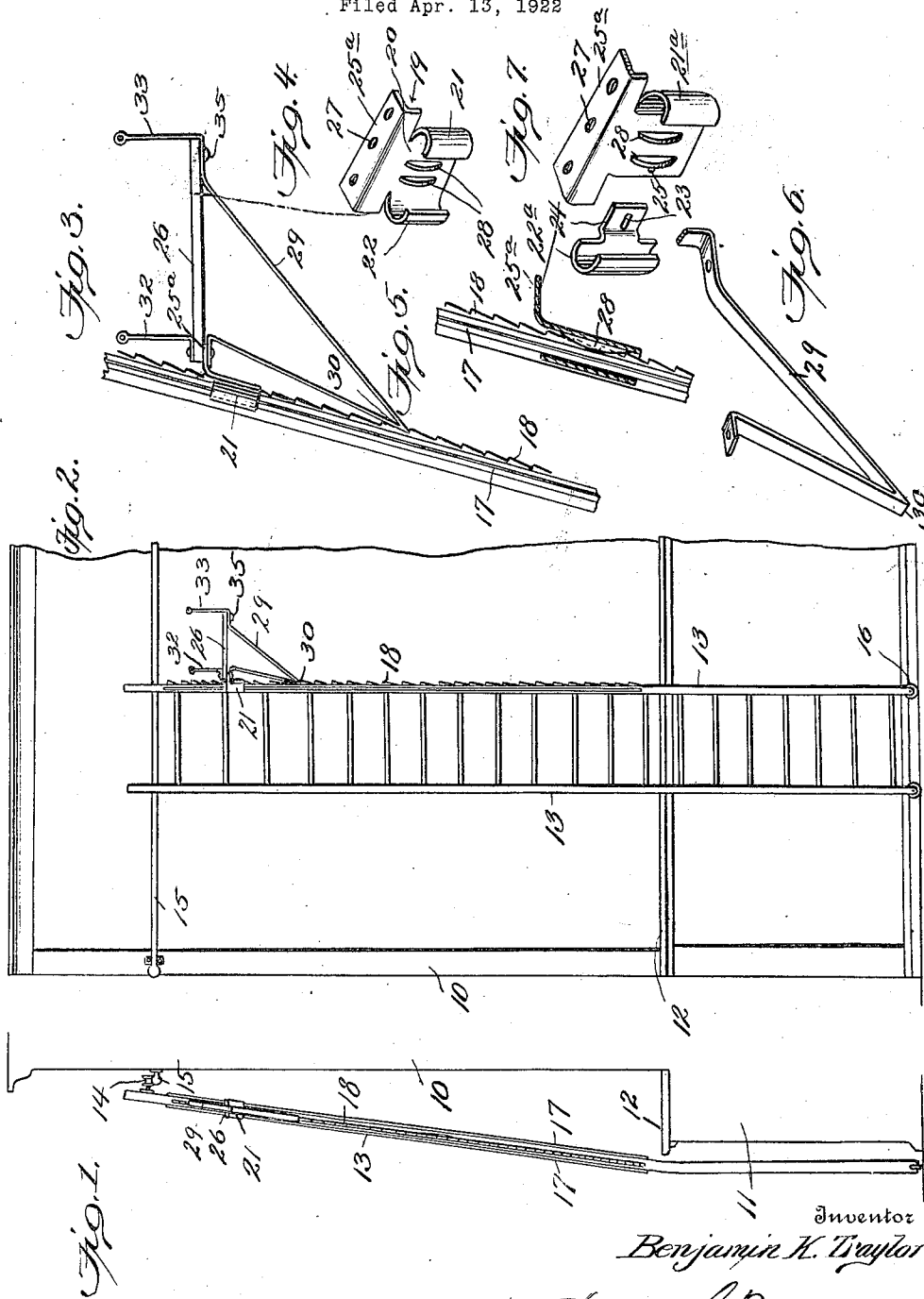
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B. K. TRAYLOR

LADDER

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UNITED STATES PATENT OFFICE.

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LADDER.

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To all whom it may concern:

Be it known that I, BENJAMIN K. TRAYLOR, a citizen of the United States, residing at El Campo, in the county of Wharton and State of Texas, have invented new and useful Improvements in Ladders, of which the following is a specification.

The present invention relates to ladders of the type used in stores, libraries and the like, where goods, books or boxes are filed or stacked on shelves out of reach of a person standing on the floor.

An object of the invention is to provide a ladder of the above described type with a shelf which may be adjusted to various heights along the side of the ladder for supporting articles removed from the shelf, and which with little manipulation may be secured at any given height against movement downward and easily disengaged and permitted to slide along the sides of the ladder.

Further objects are, simplicity and cheapness of construction.

Other objects and advantages will appear in the course of the following specification and claims.

In the accompanying drawings, which illustrate one embodiment of my invention:

Fig. 1 shows the invention applied to a store ladder movable along the front of a cabinet or filing case, the case being shown in side elevation;

Fig. 2 is a fragmentary elevation of a filing case, showing a ladder carrying the improved device in relation to said case;

Fig. 3 is a view of one of the side bars of the ladder with the invention applied thereto;

Fig. 4 is a perspective view of the carrier; Figs. 5 and 6 are details of construction; and

Fig. 7 is a slightly different form of the carrier from that shown in Fig. 4.

Referring to the drawings in detail by reference numerals, 10 designates a cabinet or case; 11 is a base therefor; 12 the usual ledge or shelf at the top of the base, and 13 designates the side bars of a ladder of a type in common use in stores, libraries and the like and which is movable along the shelves or files by means of a roller 14 at the top traveling on a track 15 and rollers

or wheels 16 at the bottom traveling along the floor.

To one side bar of the ladder is applied the mechanism constituting the present invention, although it may be applied to an upright extending perpendicularly downward from the ladder, or in any other suitable manner. However, I prefer to apply it directly to the side bar.

The mechanism of the invention comprises, among other things, a pair of guide-ways or tracks 17 secured to the side bar by any suitable means if the ladder is of wood, or which may be cast therewith or secured thereto if the side bars are of metal. Between the guideways 17 is a rack bar 18, the rack bar and tracks extending in parallel relation along the side bar from near the top of the ladder to a position a short distance above the ledge 12.

Slidably mounted on the guideways 17 is a carrier 19 having a flat portion 20, and a pair of slides 21 and 22 formed integral with the flat portion 19. As shown in Fig. 7, the slide 21^a is formed integral with the flat portion 20 and the slide 22^a is made adjustable relative thereto by means of a slot 23 formed in a tongue 24 extending from the slide 22^a and a set screw cooperating therewith and extending through the aperture 25 in the flat portion 20. By this arrangement the carrier may be made applicable to side bars of varying width.

The carrier is provided at the top with a flange 25^a extending at an angle to the flat portion 20 and to which a shelf 26 may be attached in any suitable manner as by screws or bolts passing through apertures 27 in the flange 25^a.

The flat portion of the carrier is provided with guide members 28 adapted to fit on either side of the rack bar 18 to prevent wobbling and to properly center the carrier, and the flange 25 is preferably tilted at an angle to the line of the rack in order to compensate for the tilt of the ladder and so as to always position the shelf 26 in a horizontal plane.

On the underside of the shelf is a bracket 29, preferably of spring metal, and having a sharp angular portion 30 adapted to contact with teeth of the rack for holding the shelf in various positions of adjustment

along the ladder. Extending upward from the shelf are arms 32 and 33 to which a rope or bail may be attached for drawing the shelf along after an operator ascending the ladder. These arms also serve to prevent articles from falling off of the shelf.

In operation the carrier may be moved along the guideways and secured in any desired position by means of the bracket 29 coacting with the teeth of the rack, the angular portion 30 being readily moved into and out of the notches on account of the resiliency of the bracket. The guide members 28 of the carrier may be made to fit somewhat loosely on the guideways 17, in which case the bracket 29 may, if desired, be made of more rigid material. The screw 35 for securing the outer end of the bracket 29 to the shelf may fit loosely in an aperture in the bracket, whereby the angular portion 30 may be sprung out of contact with the teeth of the rack.

It will be understood that various modifications and changes may be made in the above construction within the scope of the appended claims.

What is claimed as new is:

1. In combination with a ladder, an adjustable shelf slidably mounted thereon, slideways and a rack secured directly to and extending longitudinally of a side bar of said ladder, slides on said shelf fitting about said slideways, and a resilient bracket having a sharp angular portion adapted to cooperate with the teeth of said rack for holding the shelf in adjusted position.

2. In combination with a ladder, a rack and slideways secured to and extending parallel to one of the side bars of the ladder, a carrier having slides adapted to traverse said slideways, a bracket comprising a pair of arms connected at their upper ends to said carrier with their lower ends joined at a sharp angle inclined toward said rack and adapted to engage the teeth of the latter.

3. A store ladder having side bars, slideways and a rack secured longitudinally to

one of the side bars, a carrier having slides movable on said slideways, a spring metal bracket having two arms joined together at their lower ends and secured at their upper ends to said carrier in spaced relation to said rack, said arms extending angularly downward toward said rack and having the jointure at their lower ends adapted to engage the teeth of said rack.

4. In combination with a ladder, slideways on said ladder and a rack between said slideways, a shelf, slides on said shelf adapted to traverse said slideways and adjustable toward and away from each other, guides disposed between said slides adapted, respectively, to fit the opposite edges of said rack and a bracket comprising downwardly converging arms secured to said shelf, said arms being spaced from said rack at their upper ends and sloping downwardly toward said rack and having their convergent ends adapted to engage the teeth of said rack.

5. In combination with a ladder, slideways secured to one of the side bars thereof, having a rack therebetween, a shelf, slides adapted to traverse said slideways and carried by said shelf, said slides being adjustable toward and away from each other, and means associated with said shelf and cooperating with said rack for holding said shelf in adjusted position along said side bar.

6. An attachment for store ladders, comprising a rack for attachment to a side bar of a ladder, a shelf having a pair of slides adjustable toward and away from one another to embrace and slide along said side bar, and a resilient detent also carried by said shelf for engagement with the teeth of said rack.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

BENJAMIN K. TRAYLOR.

Witnesses:

H. T. KLEIN,
E. J. IRWIN.