L. H. KENNEDY.

ADJUSTABLE SUPPORTING DEVICE.

APPLICATION FILED FEB. 18, 1908.

906,893.

Patented Dec. 15, 1908

3 SHEETS—SHEET 1.

Fig. 1.

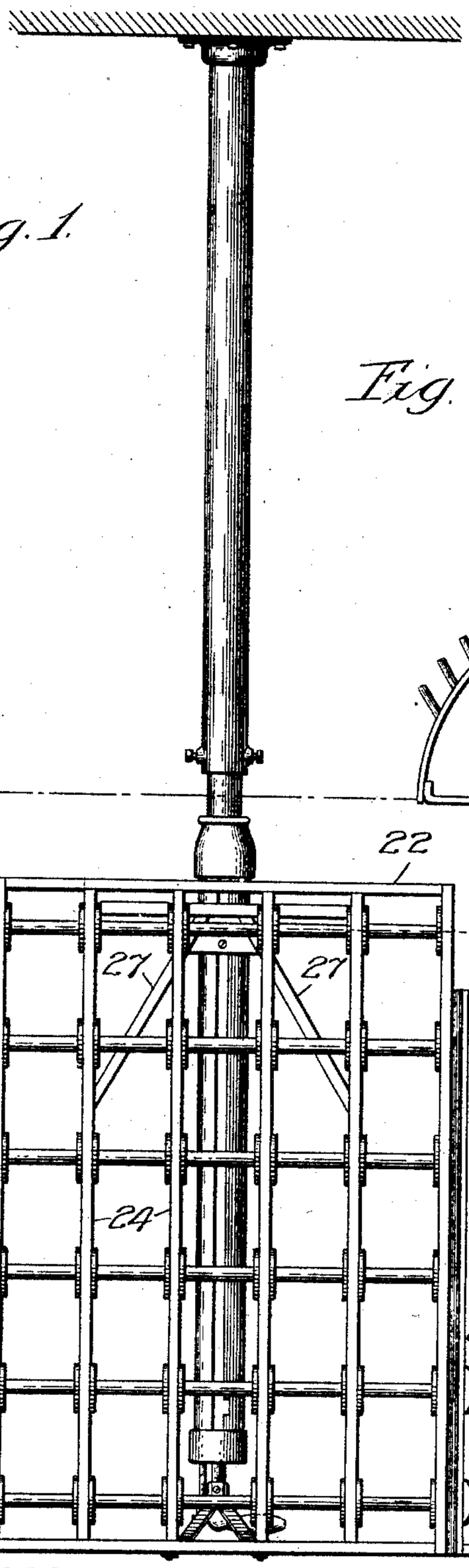
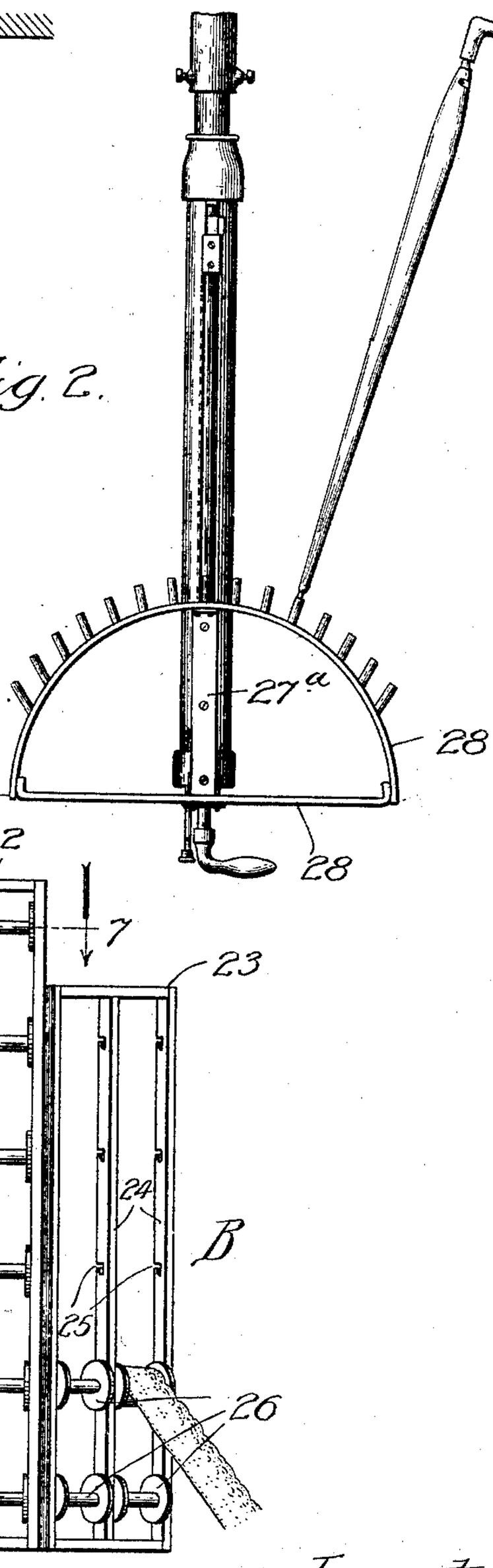


Fig. 2.



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3 SHEETS—SHEET 2.

Fig. 3. Fig. 4.

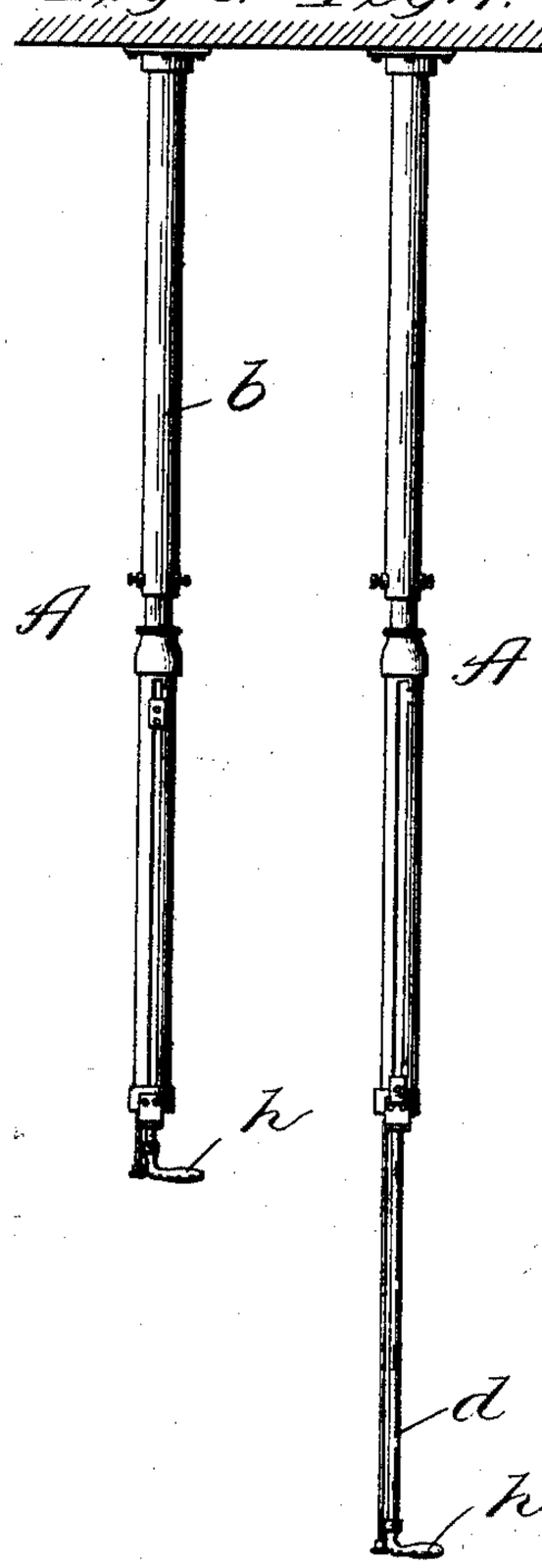


Fig 5.

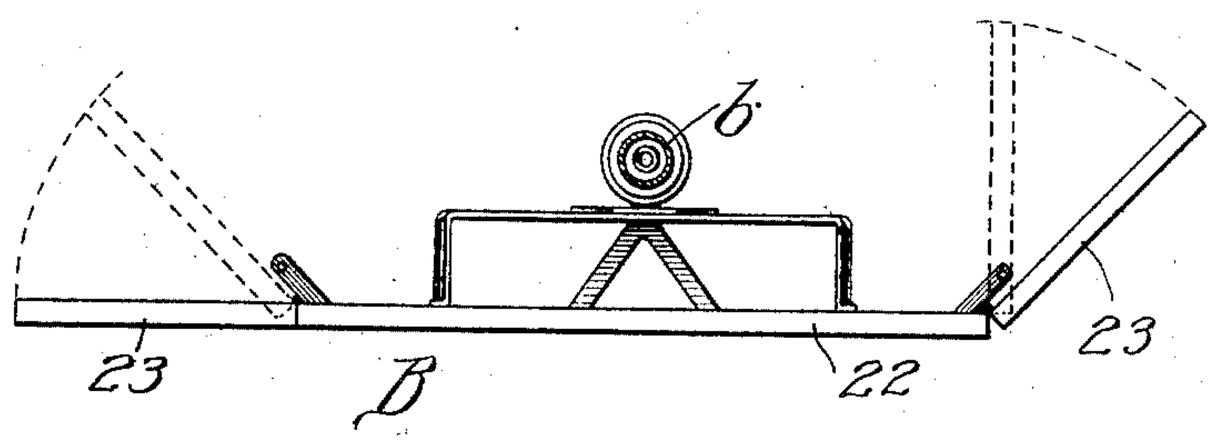


Fig. 6.

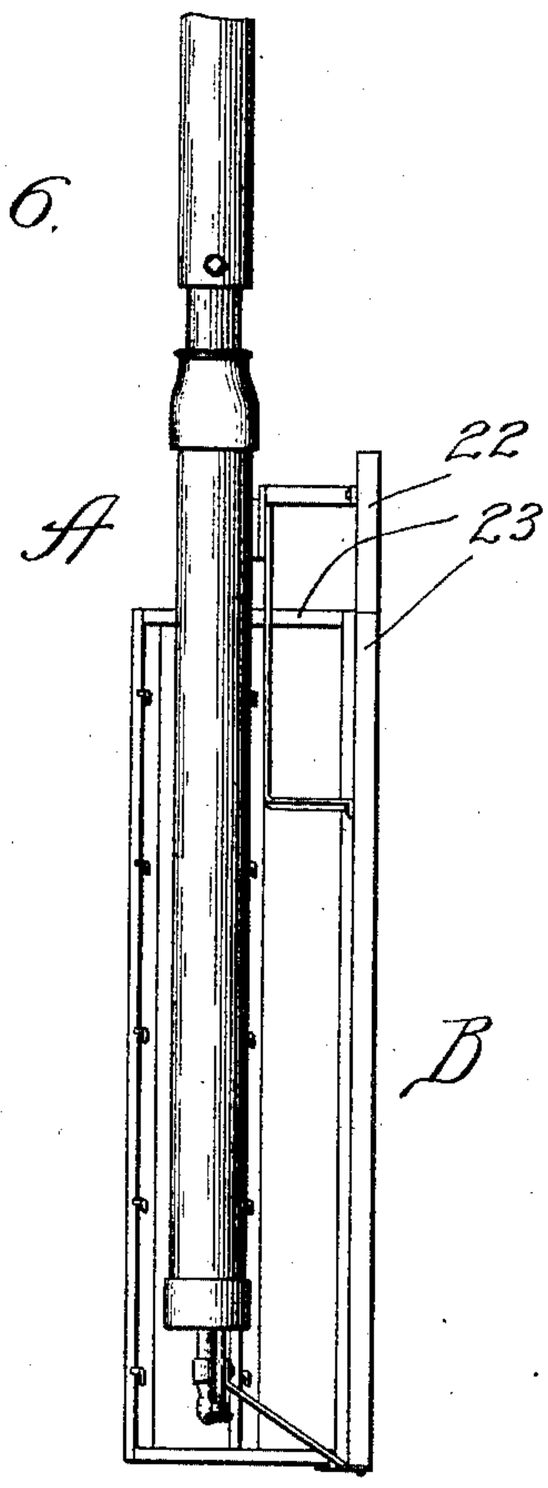
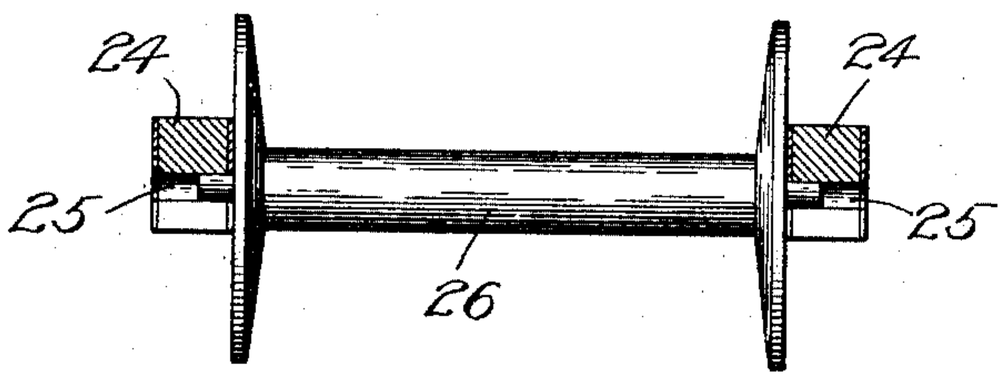


Fig. 7.



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3 SHEETS—SHEET 3.

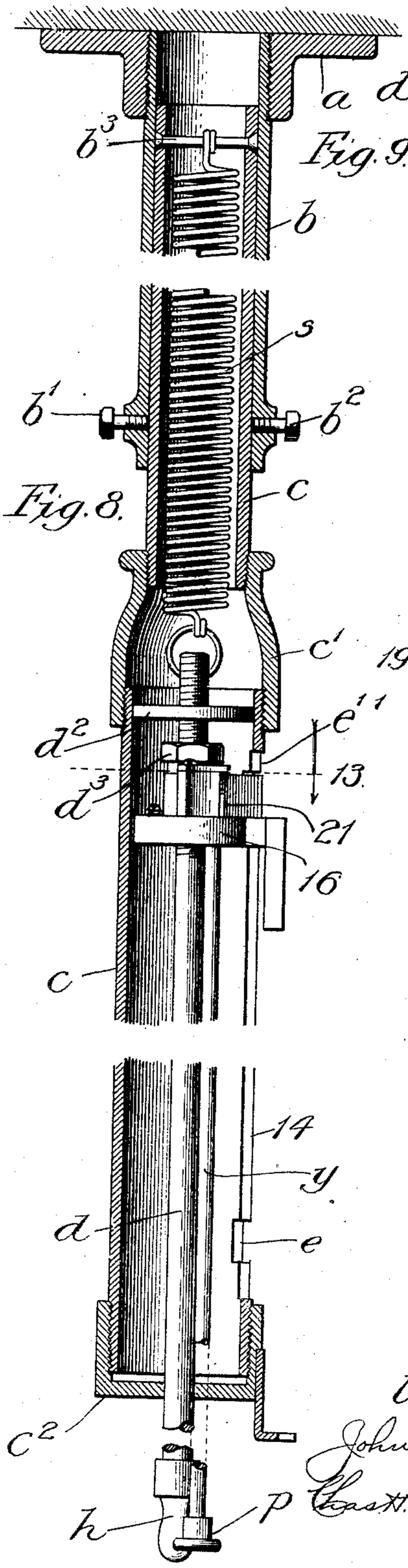


Fig. 9.

Fig. 8.

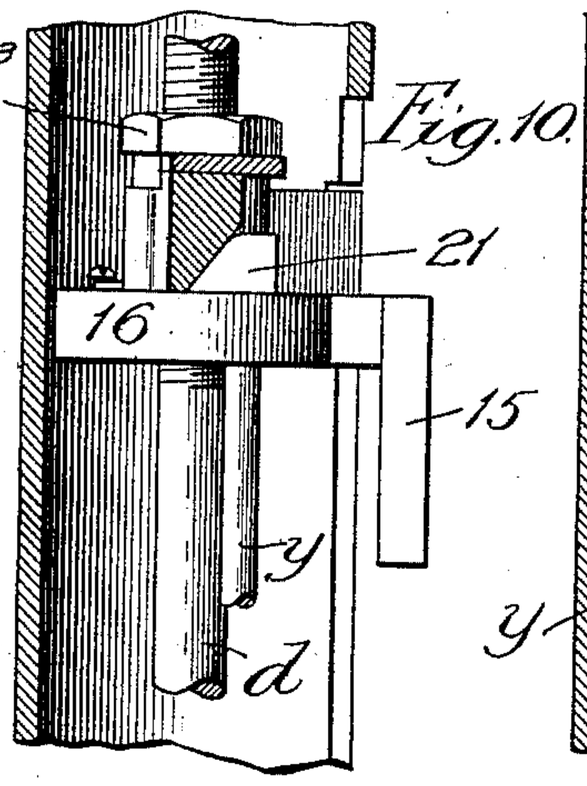


Fig. 10.

Fig. 11.

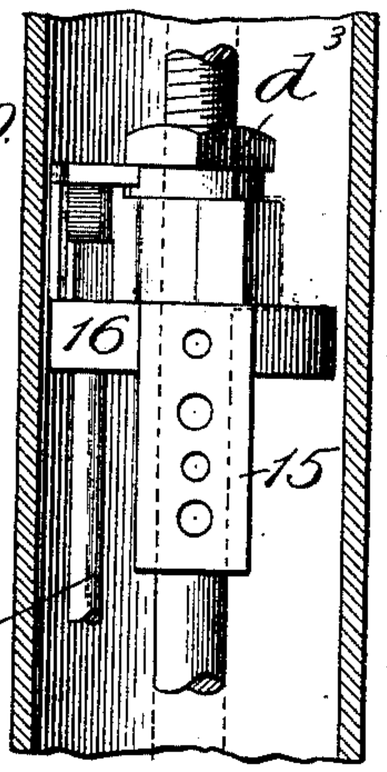


Fig. 12.

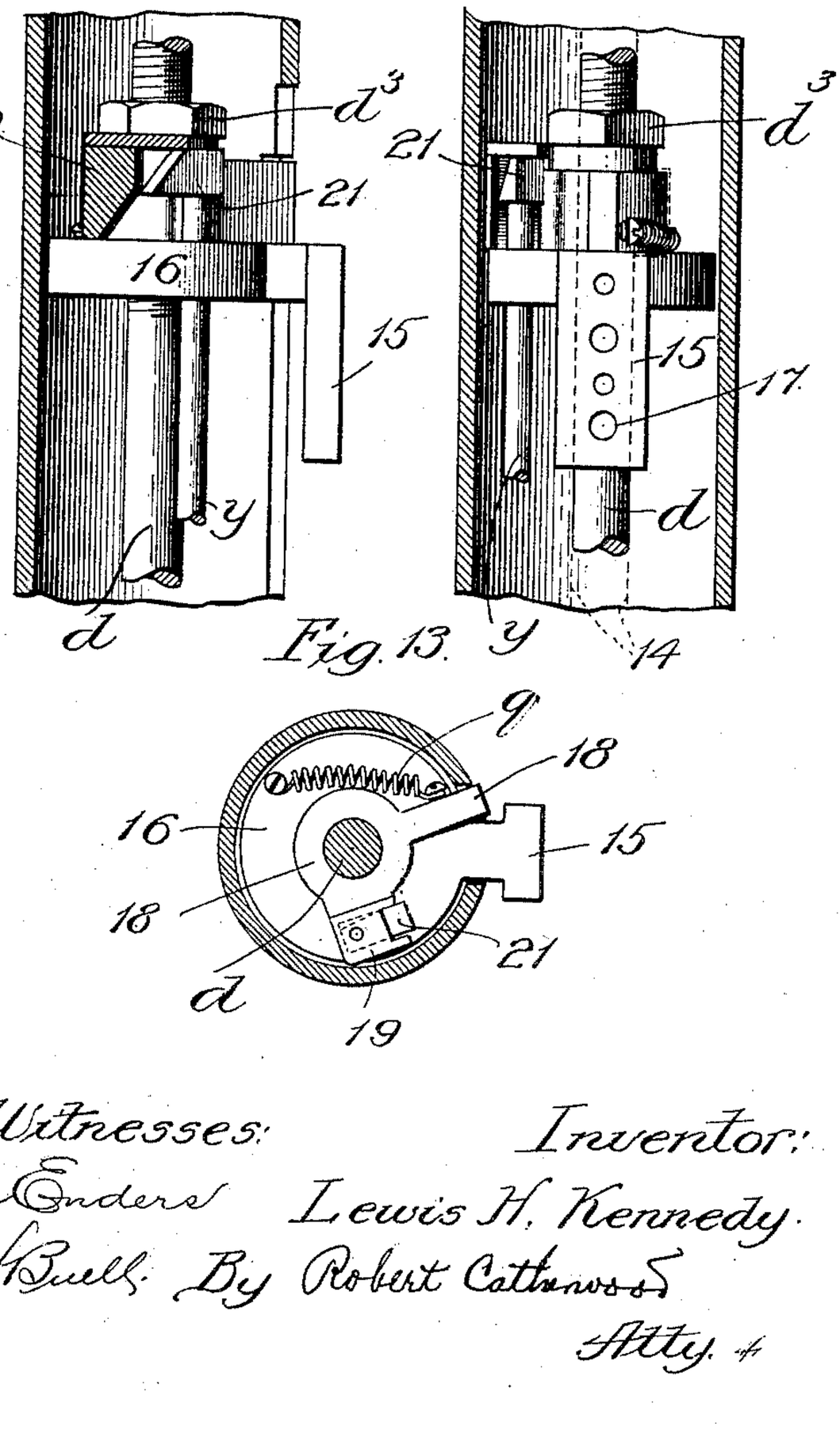
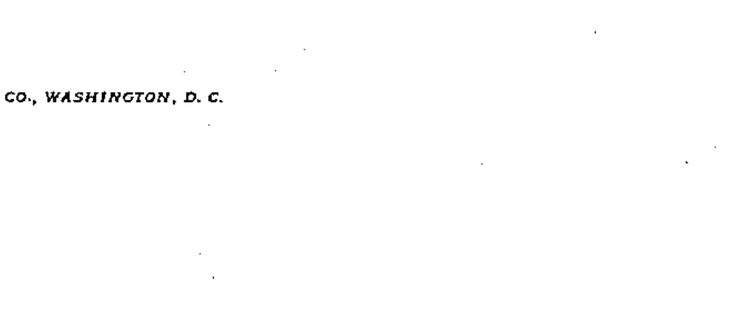


Fig. 13.



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UNITED STATES PATENT OFFICE.

LEWIS H. KENNEDY, OF SYCAMORE, ILLINOIS.

ADJUSTABLE SUPPORTING DEVICE.

No. 906,893. Specification of Letters Patent. Patented Dec. 15, 1908.

Application filed February 18, 1908. Serial No. 416,538.

To all whom it may concern:

Be it known that I, LEWIS H. KENNEDY, a citizen of the United States, residing at Sycamore, in the county of Dekalb and State of Illinois, have invented certain new and useful Improvements in Adjustable Supporting Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to devices for adjustably supporting merchandise display racks and other attachments in different positions. It is particularly adapted for use in shops and stores where a comprehensive display, with economy of space and the least possible handling and attendant soiling of stock, is important.

The object of the invention is to provide a simple, durable and economical device of this character, adapted to be readily secured to walls, ceilings or other rigid supports, which shall be easily operated by unskilled persons, not liable to injury or excessive wear, having capacity for shifting, raising and lowering the attachments secured thereto in and out of position for convenient inspection or examination of the goods contained therein.

The invention also contemplates improvements in the attachments adapted for use in connection with the adjustable supporting device.

In general, the invention contemplates a device comprising telescoping barrels or tubes adjustable to form a standard of any desired length rigidly supported at one end, in which a rod is suspended by a tension spring and to this rod the rack or attachment is secured, with means under control of the operator for locking and unlocking the rod in retracted and extended position alternately, according as the rack or attachment is moved towards or away from the rigid support.

In the accompanying drawings I have shown a device embodying my invention in its preferred form.

Figure 1 is a front plan view illustrating its use in connection with a lace display rack. Fig. 2 is a similar view illustrating its use in connection with an umbrella display rack. Figs. 3 and 4 are similar views showing the device in retracted and extended positions, respectively. Fig. 5 is a sectional view on line 5 of Fig. 1. Fig. 6 is an end view of the parts shown in the lower portion of Fig. 1, illustrating the folded position of the lace rack. Fig. 7 is a sectional view on line 7 of Fig. 1, showing one of the lace spools and the means of removably securing it to the rack. Fig. 8 is a vertical broken sectional view through the telescoping barrels, showing the extensible supporting and locking and unlocking mechanism. Fig. 9 is a broken vertical sectional view of the locking means. Fig. 10 is a similar section at right angles to the position shown in Fig. 9, the parts being illustrated in the locked position. Fig. 11 is a similar section to that shown in Fig. 9, illustrating the parts in unlocked position. Fig. 12 is a similar section to that illustrated in Fig. 10, showing the parts in unlocked position. Fig. 13 is a horizontal sectional view on line 13 of Fig. 8.

In the drawings, A indicates a hollow standard or support composed of tube sections or barrels, B the attachment or display rack. I prefer to construct a standard having an interiorly threaded cap *a* adapted to be secured by screws or other suitable fastenings to ceilings or rigid supports, with *b* a barrel or tube section exteriorly threaded to engage the threads of the cap and removably unite therewith, having near the lower end of *b* set screws b' b^2 oppositely disposed through the periphery of the barrel *b* and adapted to grasp the outer surface of an inner tube section or barrel *c* which telescopes or slides within section *b* and hold the same rigidly with capacity for adjustment. For convenience, section *c* may be made in a plurality of parts joined by suitable couplings c'. The standard or frame of my device may thus be adjusted to any desired length by means of the set screws b' b^2 and the sliding barrel or tube sections *b c*.

Within the upper portion of the barrel *b* is suspended in any convenient manner, preferably on the cross-piece b^3, a strong spring or tension device *s* adapted normally to hold the rack or attachment, which is suspended from it by means of the rod *d* and attached parts, in elevated or retracted position. The rod *d* projects through an opening in the cap c^2, which closes the lower end of the barrel *c*, and is provided with a suitable handle *h* at its lower end. It is limited to vertical movement by a disk d^2 fitting snugly within barrel *c* and a head 16 provided with an extension arm 15 projecting through a vertical slot 14 in *c*, both the disk and head being rigidly secured to the rod *d*. The rack or attachment is secured to the extension arm 15 in any suitable

manner, preferably by screwing a bracket attached thereto in the screw-holes 17 in the extension arm. Held between a collar d^3 on rod d and the head 16, is a swinging latch 18 pivotally secured to the rod and projecting through the slot 14. Arranged on one side of the slot 14 are a plurality of notches e e'. The topmost notch is arranged to register with the latch 18 when the spring s is in its retracted position, while the notches below may be arranged at any desired interval within the range of the spring s. In most cases but two notches will be required, one adapted to lock the rod and spring in lowered or extended position, and the other in elevated or retracted position. As the rod d moves vertically, a spring q, secured at one end to latch 18 and at the other to head 16, is adapted normally to draw the latch into one of these notches and thus interlock the rod, with its attached parts, and the hollow standard. To unlock the latch, a latch extension arm 19 is provided, beveled on its lower surface (Figs. 9 and 11) to ride alternately up and down upon a vertically movable head 21, having an inclined upper surface parallel to and in contact with the inclined surface 19, so that the rising movement of head 21 causes the latch to swing out of the notch against the tension of spring q into the slot 14, and thus free or unlock the rod d and its attachments from the standard; while the falling or release movement of head 21 permits the normal action of spring q to bring the latch into engagement with one of the notches and lock the rod d and its attachments to the standard. Head 21 is conveniently controlled by the operator by means of a rod y, to which it is secured, the rod projecting through head 16 and cap c^2, its lower extension being provided with a finger push p.

By an upward pressure on the rod y, the inclined surface of the head 21 will ride on the inclined surface of the head 19 and rotate the latter to release the latch from the notch in which it is interlocked, thus allowing the rack or display attachment to be elevated by the tension of the spring s or lowered by pulling down on the handle h, the latch spring q keeping the latch in engagement with the notch until deflected therefrom by the turning of the rod y, as above described, so that the device is locked and unlocked alternately in lowered or raised position.

The lace rack illustrated in Fig. 1, I prefer to construct with a light central frame 22, having hinged thereto the side frames 23. Both frames are provided with parallel vertical uprights 24, adjacent uprights of the same frame having oppositely disposed bayonet slots 25 in which spools 26 are removably journaled. These spools are adapted to have lace wound upon them and this form of display rack will be found a most convenient and comprehensive device in the exhibition of lace and similar fabrics. The central frame is provided with a bracket 27, which is secured to the extension arm 15 as above described.

In Fig. 2 an umbrella rack is shown, comprising a bracket 27^a and a semi-circular frame 28, the whole being likewise attached as above described to the extension arm 15.

I am aware that many modifications of my invention will suggest themselves to those skilled in the art, and I do not wish to be understood as limiting myself to the device herein described and shown; but

What I claim is:

1. The combination of a hollow support, a longitudinal slot therein having a plurality of notches on one side thereof, rack supporting means yieldingly suspended within said hollow support extending through said slot to project outside of said hollow support and means for alternately locking and unlocking said rack supporting means in said notches at different heights upon said hollow support.

2. The combination of a hollow support, a spring suspended therein, a longitudinal slot provided with notches, rack supporting means suspended on said spring and projecting through said slot and means for alternately locking and unlocking said rack supporting means in said notches to secure it at different heights upon said hollow support.

3. The combination of a hollow support, means for varying its length, a spring therein, adjustable supporting means, secured to said spring, for supporting a display rack or attachment, and means for alternately interlocking and unlocking said hollow support and said adjustable supporting means in different positions within the range of said spring, substantially as described.

4. In combination with a hollow support, a spring therein, a slot and a rod supported by said spring having an extension projecting through said slot, a notch in one side of said slot, a latch pivoted to said rod and projecting through said slot, a spring adapted normally to swing said latch into said notch, a latch extension having an inclined lower surface, a head having an inclined upper surface coöperating with said inclined lower surface to swing said latch out of said notch, and a push rod adapted to operate said head, substantially as described.

5. In a device of the class described, a hollow standard adapted to be secured to a rigid support, a spring therein, a rod suspended from said spring, a slot in said standard, a head having an extension projecting through said slot adapted to support a display rack or attachment, said head being secured on said rod, notches in said slot, a swinging latch secured to said rod and projecting through said slot, and a latch control whereby a display attachment secured to said extension may be

alternately raised and lowered and locked and unlocked in different positions on said standard.

6. In combination with a hollow standard having a spring secured therein, a rod suspended from said spring, a slot in said standard provided with notches, an extension on said rod projecting through said slot and adapted to support a display rack or attachment, a latch on said rod adapted to interlock it in said notches with said standard, and latch controlling means, substantially as described.

7. The combination of a hollow standard or support, a longitudinal slot therein, a spring hung at the top in said standard or support, a vertically movable rod suspended to said spring, a head rigidly secured to said rod, having an extension, adapted to support a display rack, projecting through said slot, notches in said slot, a swinging latch secured to said rod and projecting through said slot, a spring adapted to draw said latch into engagement with said notches, a latch extension having an inclined lower surface and a push rod having a head with an inclined upper surface coöperating with said inclined lower surface to free said latch from said notches substantially as described.

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

LEWIS H. KENNEDY.

Witnesses:
G. W. DUNTON,
JOHN FAISSLER.