

(No Model.)

H. D. THATCHER.

ADJUSTABLE SHELF FASTENER.

No. 379,252.

Patented Mar. 13, 1888.

FIG. 1.

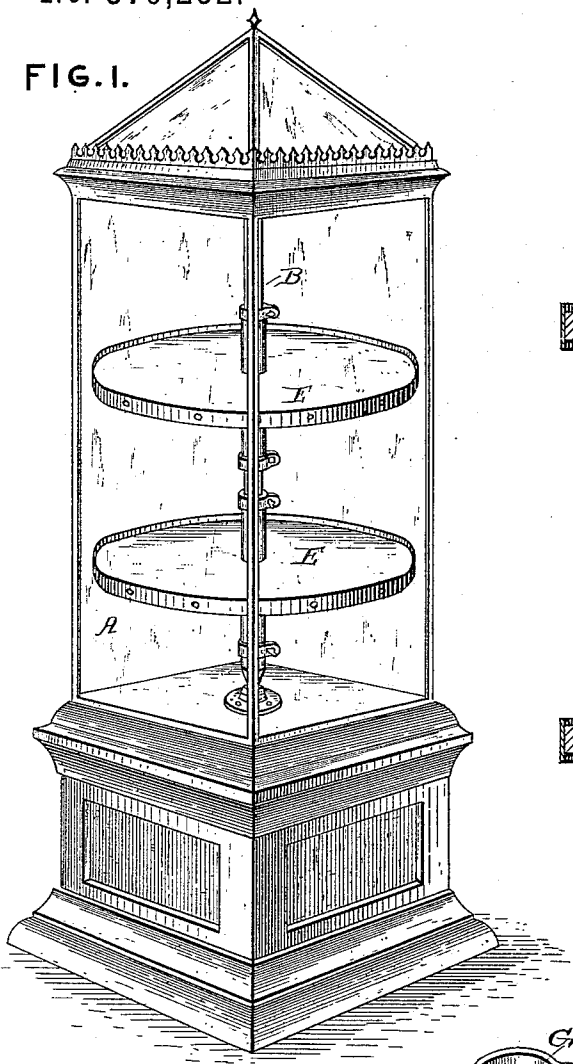


FIG. 2.

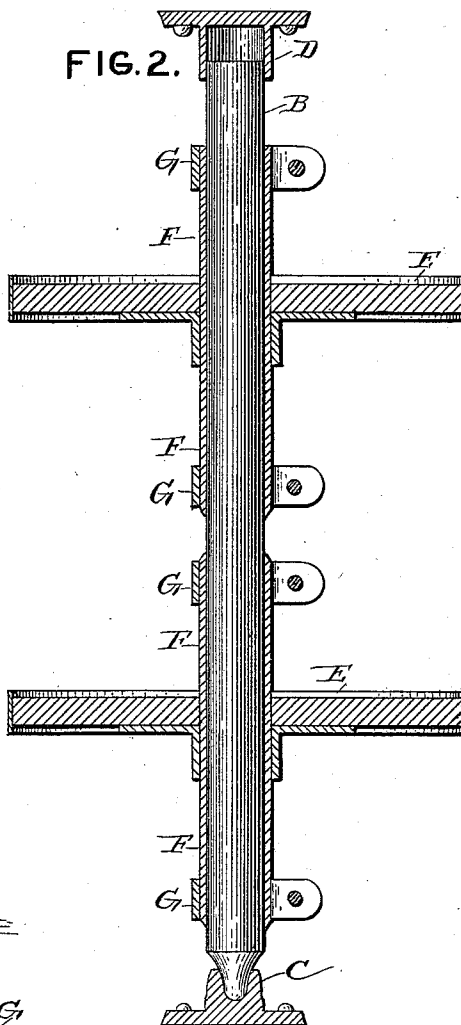
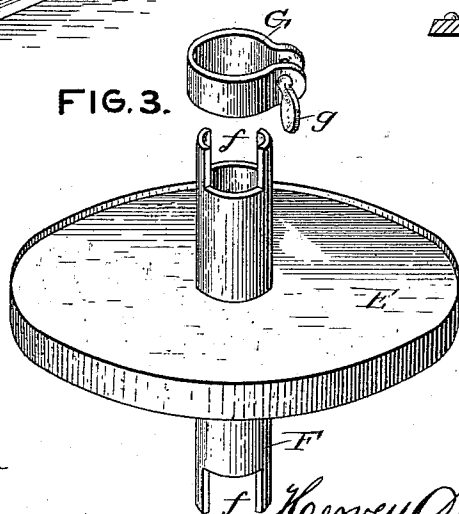


FIG. 3.



ATTEST.

J. Henry Kaiser
Victor J. Evans

INVENTOR.

H. D. Thatcher

UNITED STATES PATENT OFFICE.

HERVEY DEXTER THATCHER, OF POTSDAM, NEW YORK.

ADJUSTABLE SHELF-FASTENER.

SPECIFICATION forming part of Letters Patent No. 379,252, dated March 13, 1888.

Application filed December 24, 1887. Serial No. 258,875. (No model.)

To all whom it may concern:

Be it known that I, HERVEY DEXTER THATCHER, a citizen of the United States, residing at Potsdam, in the county of St. Lawrence and State of New York, have invented certain new and useful Improvements in Adjustable Shelf-Fasteners; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make use the same.

My invention has relation to revolving shelves which are at the same time adjustable upon the supporting-standard to which they are attached. Heretofore it has been customary to tap a set-screw through the annular hub carrying the shelf and to bind the same in place upon its supporting shaft or standard by engaging the end of the screw with the surface of the shaft or standard. This is objectionable in that the point of the set-screw soon destroys the finish of the surface of the shelf-standard, abrading, marring, and defacing the same until it is unornate and unserviceable. Moreover, by this old means of securing shelves to the standard the adjustment is often inconvenient, and from the inaccessibility of the screws difficult to secure.

To this end my improvement consists in a spindle or shaft, either tubular or solid, resting upon its pointed or rounded lower end in a step or socket upon the base of the case or frame and carried at its upper extremity in a socket which projects from the under face of the top of the case or frame, the said spindle being, for convenience of ready removal, of less length than the distance between the top and base of the case, but sufficiently long to be securely held in place by the elongated upper bearing or tubular socket, in which for removal or replacement the upper extremity of the spindle has full longitudinal play to permit the lower extremity to be stepped out of or into its bearing. Upon the spindle thus seated within its bearings in the case are firmly secured a series of shelves made easily and quickly adjustable by means of spring-metal clamping-bands, which inclose the split-ended sleeves or tubular supports upon which the shelves themselves are firmly secured. These clamping-bands are brought together and

closed down upon the tubular sleeves by means of thumb-screws.

My improvement is fully illustrated in the accompanying drawings, forming a part of this specification, and to which reference is to be had, like letters of reference designating similar parts in the several views, of which—

Figure 1 is a perspective view of a case such as is used to display druggists' goods and other similar wares. Fig. 2 is a detail showing certain parts thereof in central vertical section, and Fig. 3 is a detail perspective view of a shelf and its fastener.

A represents the case.

B is the spindle or shaft, stepped into its bottom bearing, C, upon the base of the case.

D is the elongated downwardly-projecting upper bearing, in which the top of the spindle telescopes when the same is sufficiently raised to lift it from its bottom step, but which upper bearing is sufficiently long to retain the spindle in place when at rest in its bottom step.

E represents any one of the series of revolvable shelves, of which I have shown two. Each shelf E is firmly secured to a short hollow tubular sleeve, F, which sleeve is slightly larger in diameter than the diameter of the spindle, and projects preferably above and below the two surfaces of the shelf. The extremities of each sleeve are provided with a split or cut-away portion, *f*, Fig. 3. This split or cut-away portion is engaged by a clamping-band, G, of spring metal, open at one point of its periphery and provided with a thumb-screw, *g*, passing through screw-holes in the outwardly-turned ends of the said spring-metal clamping-band. The sleeve F is of spring metal, as is also the clamping-band, each having normal tendency to remain expanded.

The operation of my device is exceedingly simple and quickly effected. The spindle being either in or out of place, as hereinbefore described, a shelf upon the same is quickly raised or lowered, fastened or unfastened, by simply turning the thumb-screw, thus tightening or loosening the clamping-band, as the case may be. The engagement of the shelf with the spindle is thus exact and unaccompanied with any marring or defacement of the spindle whatever. Its polished surface is not

even grazed, the pressure brought to bear upon its entire body is so uniform and evenly distributed. Moreover, by means of the elongated bearing given to each shelf by the tubular sleeve rigidly fitted thereto and the uniform compression brought to bear upon the extremities thereof, much more exact horizontality is secured for the shelves upon their spindle without impairing in any degree their adjustability.

A single clamping-band would secure the shelf; but I preferably employ two at each extremity of the split-ended spring-metal sleeve.

Various modifications of my improvement are within the scope of my invention, and I wish, therefore, it to be distinctly understood that any changes which do not differ in substance fall within its scope and are not herein relinquished.

Having now fully and precisely described my invention and its mode of operation, what I desire to secure by Letters Patent of the United States is—

1. A case or frame provided with an upper

and a lower tubular bearing, in combination with a spindle seated therein and provided with adjustable shelves, said spindle being adapted for instant removal, as set forth.

2. The combination, in a frame having an upper and lower tubular bearing, of a spindle, a shelf adjustable thereon, the said shelf being provided with a rigidly-attached split-ended sleeve, with means for compressing the sleeve uniformly upon the spindle, as set forth.

3. The combination of the revoluble shaft, suitable bearings therefor, the shelf-bearing spring-metal sleeve split at the end, with the screw-controlled clamping-band encircling the same, whereby the positive engagement of the sleeve with the spindle is secured by uniform pressure upon its entire surface, while admitting of ready adjustment upon the shaft without marring its surface, as set forth.

HERVEY DEXTER THATCHER.

Witnesses:

HARVEY PATTEN BARNHART,
WALTER ROSWELL PERRIN.