

(No Model.)

2 Sheets—Sheet 1.

W. I. OHMER.
BOOK CASE SHELF.

No. 506,829.

Patented Oct. 17, 1893.

Fig 1.

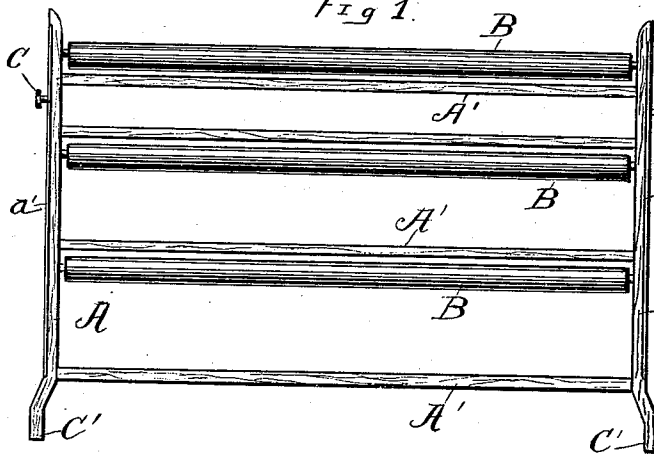


Fig 2.

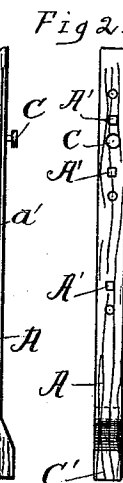


Fig 3.

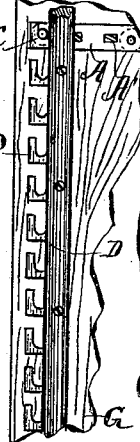


Fig 4.



Fig 5.

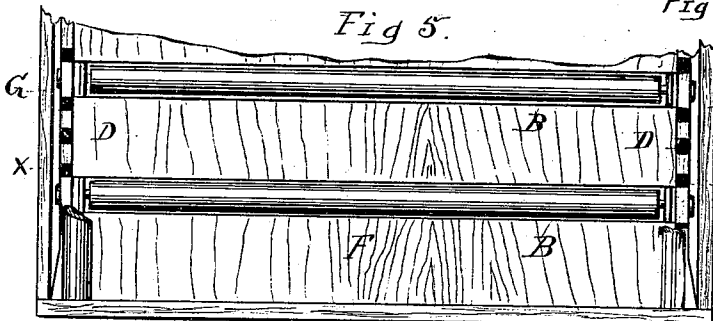


Fig 6.

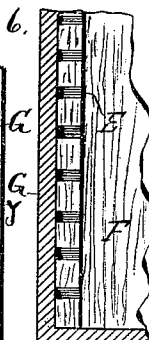


Fig 7.

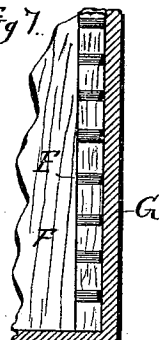


Fig 8.

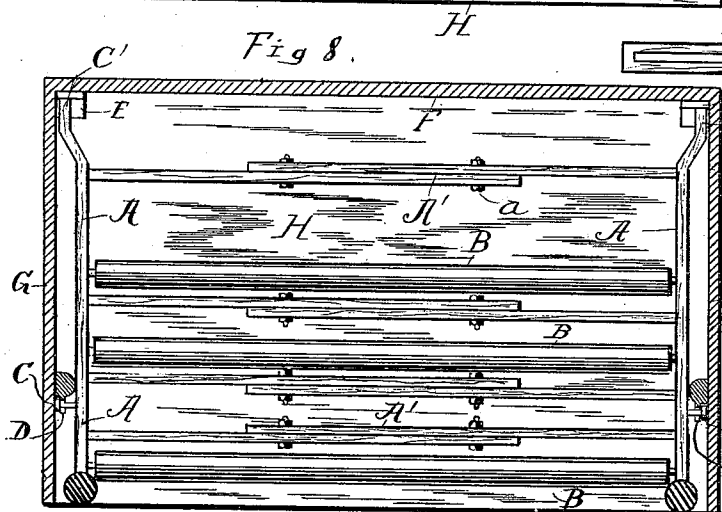


Fig 9.

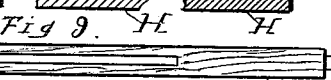


Fig 10.



Fig 11.

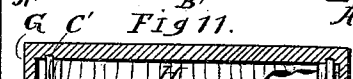
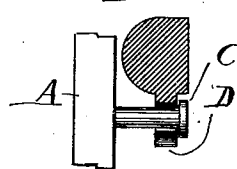


Fig 12.



Fig 13.



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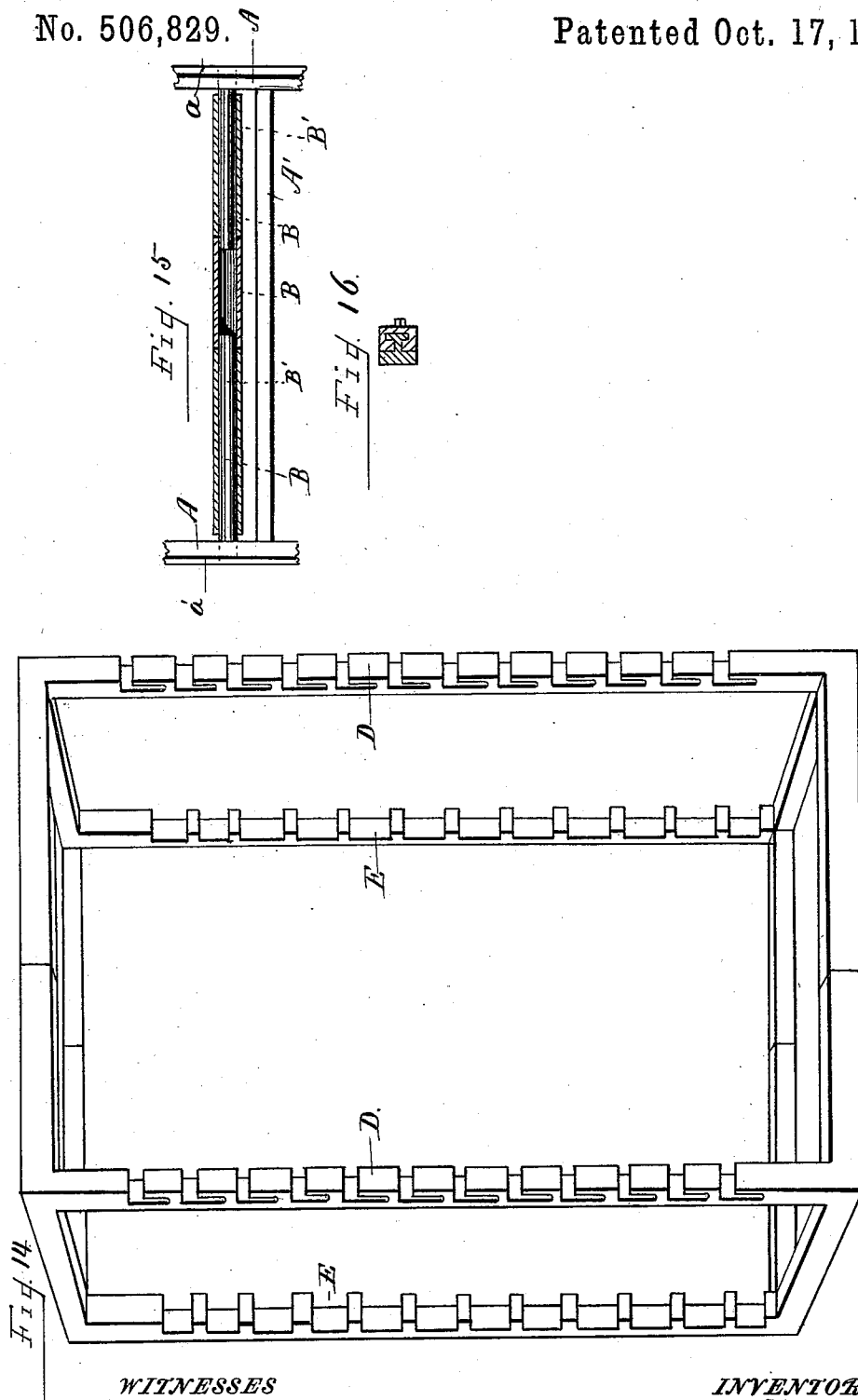
(No Model.)

2 Sheets—Sheet 2.

W. I. OHMER.
BOOK CASE SHELF.

No. 506,829.

Patented Oct. 17, 1893.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILFRED I. OHMER, OF DAYTON, OHIO, ASSIGNOR TO THE M. OHMER'S
SON'S COMPANY, OF SAME PLACE.

BOOKCASE-SHELF.

SPECIFICATION forming part of Letters Patent No. 506,829, dated October 17, 1893.

Application filed June 23, 1892. Serial No. 437,729. (No model.)

To all whom it may concern:

Be it known that I, WILFRED I. OHMER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Bookcase-Shelves, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in book cases of the class having roller shelves, to afford an easy handling of heavy volumes, such as are used in court houses, recorders' offices, &c.

The object of my invention is to furnish a book case with roller shelves, that may be easily removed to a higher or lower position, and the space between the adjacent shelves, decreased or increased, as the case may be, and all the available space utilized, without necessitating the removal of bolts, screws, or in the least, interfering with any of the permanently attached parts of the case; and further, to provide means for protecting the books from injury in being moved from and placed on the shelves.

In the construction of the casing, metal has been considered preferable, but a substantial quality of wood may also be employed successfully.

Referring to the drawings: Figure 1. is a plan view of one of my improved roller shelves removed from the case; Fig. 2. an end view of one of the shelves; Fig. 3. an elevation of a part of one side of the case, showing a series of hooks to support the front of the shelves; Fig. 4. an elevation of a part of one of the sides, showing notches to support the rear of the shelves; Fig. 5. a front elevation of the case with the upper part broken away and showing two roller shelves in position, also the outer ends of the frame and two circular upright posts, broken away. Figs. 6 and 7 are sectional views of the lower rear portion of the case. Parts of the back of the case are broken away in each of these figures. Fig. 8. is a transverse section of the case on the line $x-y$ of Fig. 5, showing a plan view of a shelf constructed with means for adjusting the same to accommodate its width

to cases of different sizes. The case shown in this view is provided with circular posts extending vertically the entire height thereof, and are situated in the front of the hook bars. These posts afford additional means for protecting the ends of the backs from injury. Fig. 9. is a detached view of one of the frame pieces, when the shelf is constructed for adjustment with a view to changing its dimensions as to width. The slot therein is adapted to receive the bolts by means of which the parts are rigidly secured. Fig. 10. is a detached sectional view, reduced, showing a modification in the construction of the shelf by providing the side pieces A, with upwardly extending pieces a' that maintain a book when placed on the shelf, in position. The modification in this instance, also extends to the rollers which are divided as set forth and tubular. The rod B' affords a support for these rollers. Fig. 11. is a reduced sectional plan view of a part of a shelf and the case; the case herein shown, is another modification. The notches that support the rear end of the shelf, in this instance, are formed directly in the case, and are a substitute for the means shown in Fig. 4. Fig. 12 is a sectional view of a great part of one of the frames and a part of the side of the case, in which a pin C'' as a support for the front of the shelf, is substituted for the hooks D. In this modification, cross-pieces A of wood, are placed between the frame pieces A. Fig. 13. is a transverse section on an enlarged scale of the bar with hooks as shown in Fig. 3. The rounded part of this bar affords a protection to the back and corners of the book when the same is being removed from the shelf and placed thereon. Fig. 14. is a perspective view of a skeleton frame that may be substituted for other cases herein shown, being adapted to support the adjustable shelf shown in Fig. 8. Fig. 15. is a view of a portion of a shelf, still another modification of form, in which the rollers are tubular and are supported by rods shorter than the width of the shelf frame. Fig. 16. is a transverse section of one of the skeleton frames, showing means of adjustment. This consists in constructing the transverse bars

of the frame in two pieces, dovetailed together longitudinally, and adapted to slide one over the other, and a set screw is shown.

A, indicates the end piece of the roller shelf, and A' the frame pieces connecting the two end pieces to each other and secured in any suitable way. The end pieces are perforated to receive the journals of a series of rollers, B, of which any desired number may be employed. If the rollers are tubular, they may be supported on rods B' as shown in Fig. 10.

C, are pins rigidly attached to the end pieces A, at the front end, and are adapted to engage with hooks D, in a vertical rod on either side of the casing. These hooks on the vertical rod afford one of the series of supports for the roller shelves; as shown in Fig. 12, a modified means of supporting the front portion of the shelf is provided by having the pins project from the side of the casing G to engage with notches in the under sides of the end pieces A. The end pieces A, terminate at their rear extremities, in points C', which are adapted to enter notches E, in a vertical bar in the rear portion of the case. Or should it be desirable to construct a case in accordance with the modification shown in Fig. 11, the bar with notches E may be dispensed with and the notches provided directly in the casing F, and further, in case the skeleton frame shown in Fig. 14, is adapted in connection with my shelf, the hooks D and notches E, would be dispensed with, and their equivalents found in the skeleton frame itself as shown. The skeleton frame may be provided with means for adjustment in either direction, whereby it becomes adapted to fit cases of various dimensions. The form of bar shown in the transverse section, Fig. 16, may be employed in this connection, for the standards and bars comprising the skeleton frame, and the section may be taken at any point between the two ends of the bar. The head of the set screw is shown in Fig. 16.

I have shown in the drawings, various modified forms that might be adopted and still the principle embodying my invention be fully demonstrated therein, which is to provide a roller shelf for book cases of the class described, that may be adjusted to a higher or lower position, freely without having to resort to the necessity of unloosening bolts, screws, &c., or using levers, cams or any similar means for effecting the removal of the shelf from one position to another.

The series of hooks D, and notches E, attached to their respective bars, may be secured to the side G, of the case, in any suitable manner.

In Fig. 9, I have shown a modified form of the transverse pieces to which the end pieces A A may be secured, and by means of which, said end pieces may be adjusted to suit cases of various widths.

As a means of preventing the injury to

books in their removal, the bar having the hooks D, is provided with a rounded inner surface affording a sliding surface should a corner of a back come in contact therewith.

Having fully described my invention, what I desire to secure by Letters Patent is—

1. The combination with a book case, of a shelf consisting of a series of rollers having their bearings in end pieces attached to each other by transverse slotted bars, said slots adapted to receive a bolt by means of which the end pieces may be secured nearer or farther apart, said end pieces provided with laterally projecting pins; vertical bars in the front part of the case with hooks adapted to receive said pins, vertical bars in the rear part of said case provided with notches adapted to receive the rear terminals of the end pieces, whereby the shelf may be sustained in a position whence it may be quickly raised or lowered.

2. In a roller book case, the combination with vertical bars in the front portion thereof, provided with outwardly projecting hooks, corresponding in number to the notches on the rear bar; said outer bar having its inner surface rounded; of a frame consisting of end pieces rigidly attached to each other by transverse rods, and a series of rollers journaled in said end pieces, the rearward ends of said end pieces terminating in points adapted to enter the notches in the rear vertical bar; laterally projecting pins on the outer ends of said end pieces adapted to fit in the hooks on the vertical bar in the front of the case, as herein described.

3. In combination with a filing or book case, having hooks and notches attached to the front and rear parts thereof; of a frame consisting of two end pieces A A having pins C and points C' and provided with parts a' extending upwardly, said pieces A A, attached to each other by rods B' upon which are mounted tubular rollers B, substantially as herein described.

4. The combination with a roller book case, of a shelf frame consisting of two end pieces, the forward ends of which are provided each with a pin, adapted to be inserted in a pocket or recess in the front of the case, the rearward ends of said end pieces adapted to fit in a series of notches in the rear of said case, said end pieces having horizontal metal rods with tubular rollers mounted thereon, rigidly attached thereto, and slotted cross bars connecting said end pieces with bolts provided therefor, by means of which said end pieces may be adjusted horizontally to accommodate rods and rollers of different lengths, substantially, as herein described.

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

WILFRED I. OHMER.

Witnesses:

BARRY S. MURPHY,
HENRY NEUSTADT.