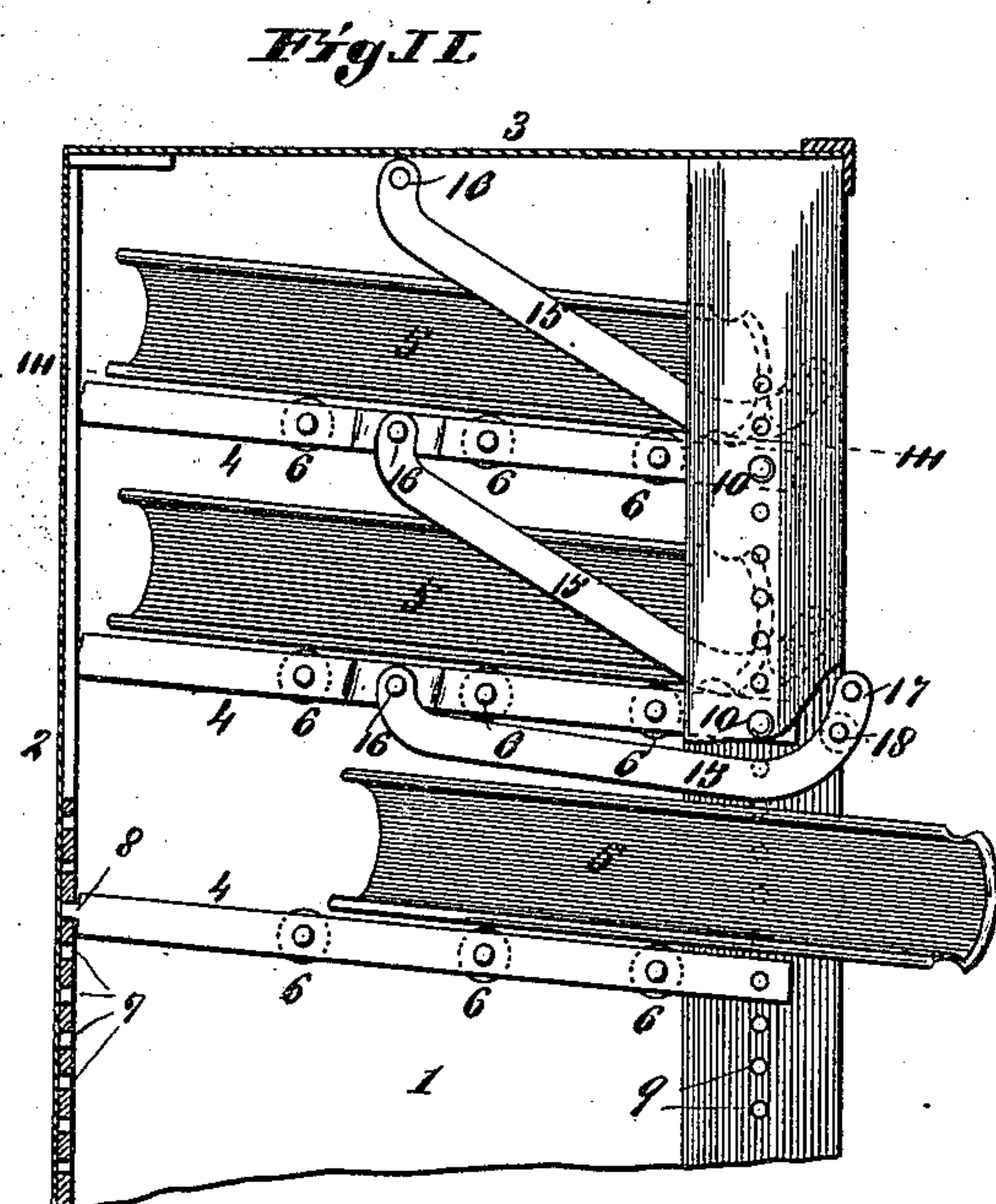
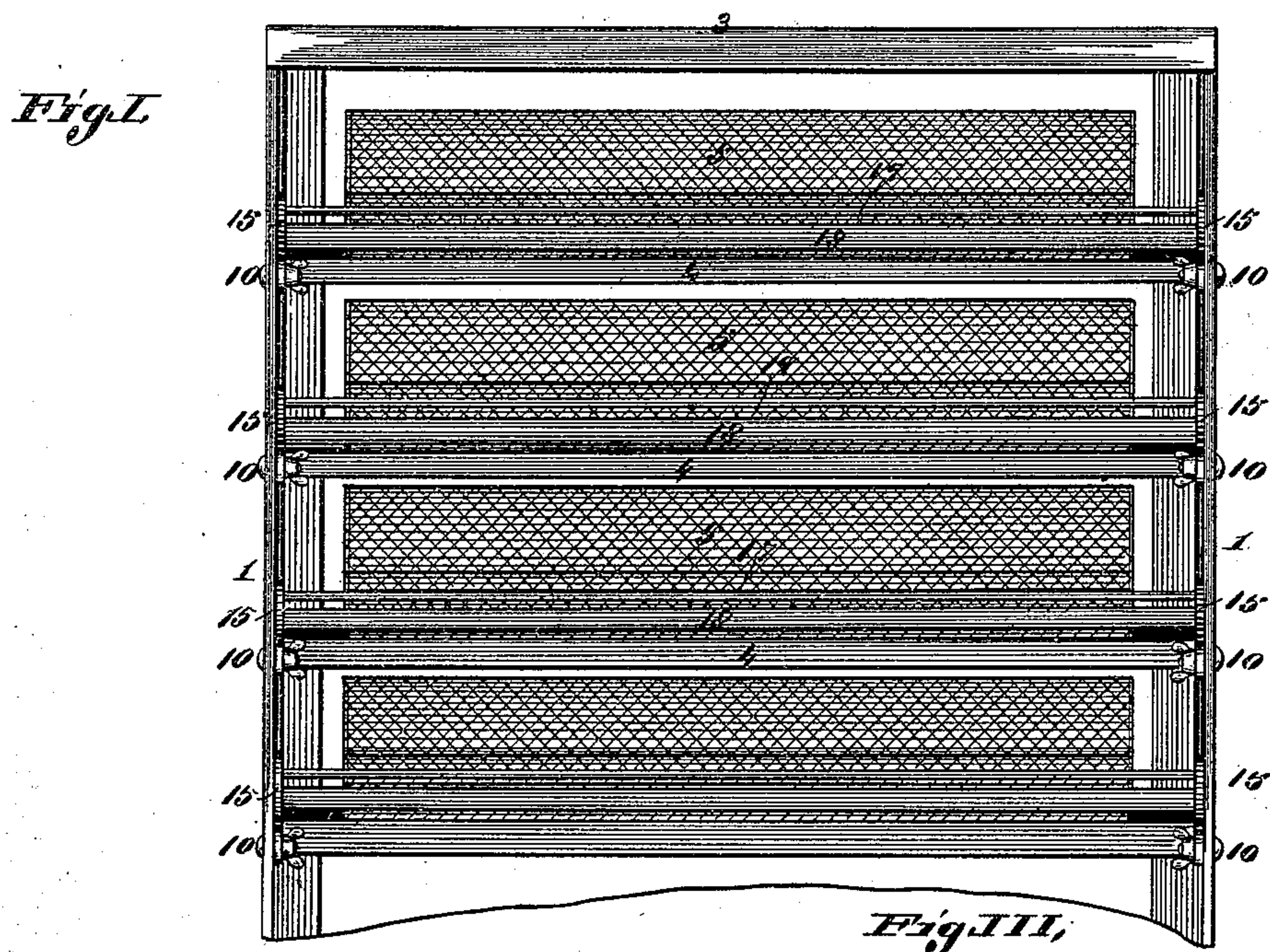


(No Model.)

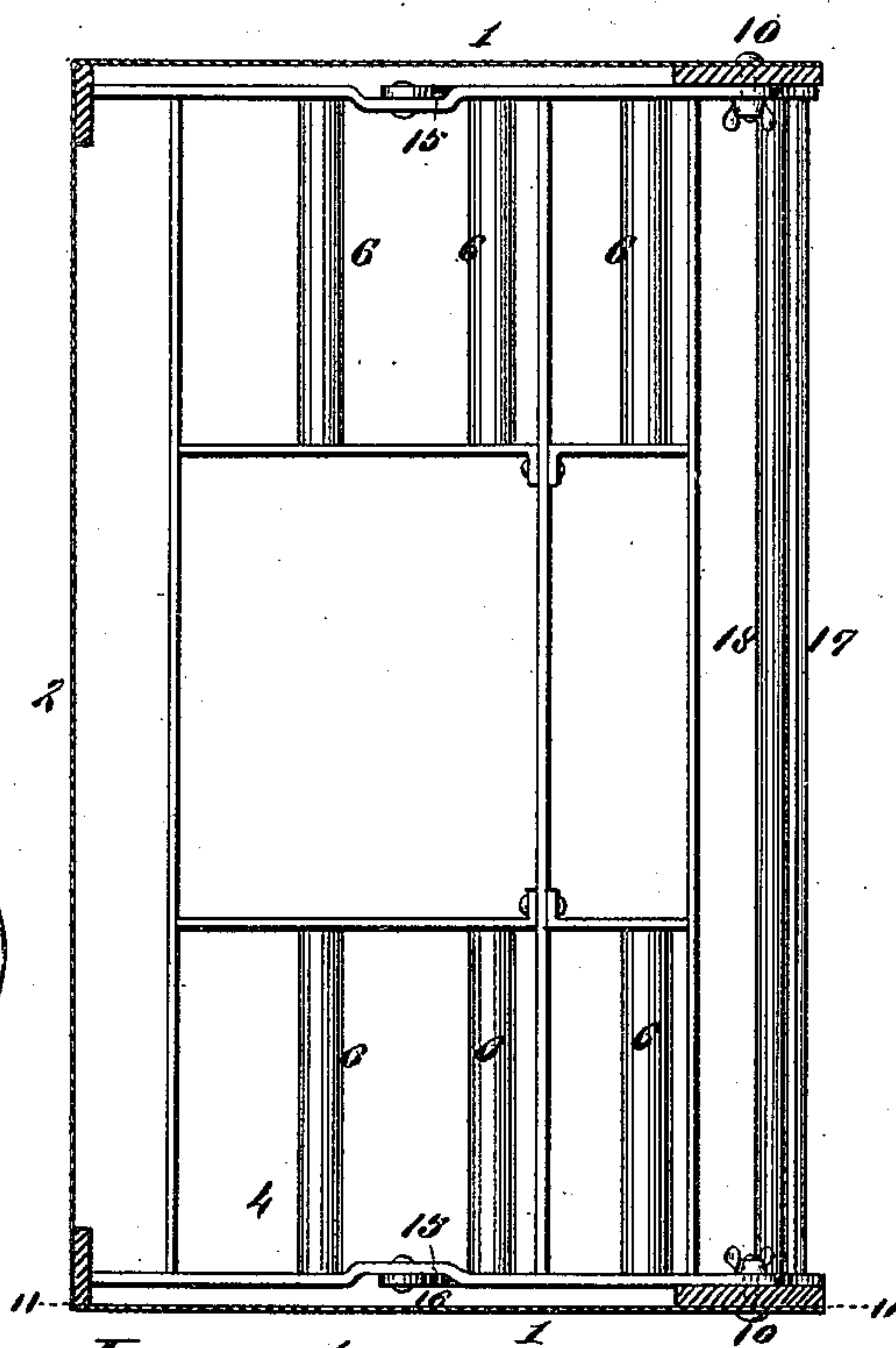
E. H. BABBITT & E. T. HARVEY.
ROLLER SHELF BOOK CASE.

No. 447,238.

Patented Feb. 24, 1891.



Attest;
E. Arthur.
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UNITED STATES PATENT OFFICE.

EDMOND H. BABBITT, OF ST. LOUIS, MISSOURI, AND EARL T. HARVEY, OF CHICAGO, ILLINOIS.

ROLLER-SHELF BOOK-CASE.

SPECIFICATION forming part of Letters Patent No. 447,238, dated February 24, 1891.

Application filed June 28, 1890. Serial No. 357,096. (No model.)

To all whom it may concern:

Be it known that we, EDMOND H. BABBITT, of the city of St. Louis, in the State of Missouri, and EARL T. HARVEY, of the city of Chicago, county of Cook, and State of Illinois, have invented a certain new and useful Improvement in Roller-Shelf Book-Cases, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Our invention relates to certain improvements in roller-shelf book-cases, the object being to provide a means by which heavy books of different sizes may be easily and readily inserted and removed from the case and by which the books will be held in place on the shelves; and our invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a detail front elevation of our improved case. Fig. II is a detail vertical section taken on line II II, Fig. III; and Fig. III is a horizontal section taken on line III III, Fig. II.

Referring to the drawings, 1 represents the sides or ends of the case, 2 the back, and 3 the top.

4 represents the shelves for receiving and supporting the books 5 and which are provided with rollers 6, as usual. Heretofore it has been customary to arrange the shelves horizontally; but we have discovered that if they are arranged on an inclination, or arranged to incline downwardly from their inner ends, as shown in Fig. II, the books, especially heavy books, can be much more easily applied and removed from the case. We have therefore shown and will describe the shelves as inclined or sloping downwardly from their inner ends toward their outer ends. In some cases it may be desirable to give the shelves more or less inclination, or it may be desired to enlarge or decrease the space between the shelves, and to accomplish this we make the shelves adjustable by means of a series 7 of perforations at each inner corner of the case, in which fit the reduced ends 8 of the shelves, and by providing a series 9 of perforations at each front corner of the case, through which bolts 10 are passed, which also

pass through the outer ends of the shelves. It will thus be seen that by removing the bolts 10 and drawing the shelves slightly in an outwardly direction their inner ends may be made to engage in holes of different elevations, and their outer ends may be likewise adjusted by passing the bolts 10 through the desired hole of the series 9. By this means the spaces between the shelves may be regulated or the inclination of the shelves may be changed.

As the shelves are inclined, it is generally desirable to have some kind of a stop to prevent the books from moving by gravity off of the shelves, and our preferred form of stop consists of arms 15, arranged in pairs, one of each pair being pivoted at 16 to the end of a shelf and the other of this pair being pivoted to the other end of the shelf. The outer ends of the arms may be connected and held the proper distance apart by means of rods 17, and journaled in the outer end of each pair is a roller 18. When a book is being inserted, the arms are raised, as shown in the lower part of Fig. II, and as soon as the book is inserted or placed on the shelf the arms drop, as shown in the upper part of Fig. II, the rollers 18 bearing against the back of the books and holding the books on the shelf. When a book is to be removed, the arms, carrying their roller, of course are moved up into a substantially horizontal position, as shown in the lower part of Fig. II, when the book will move freely in a downwardly direction off the shelf, and by curving the outer ends of the arms in an upwardly direction the arms will gradually fall as the books leave the shelf, the curve of the arms riding on the inner edge of the book, thus preventing a sudden fall of the arms the entire distance which they move, and this upward curving of the arms also facilitates the insertion of the books, as the inner edge of the book can be simply placed against the curved outer ends of the arms, and then being forced upwardly and inwardly the arms will automatically rise, their outer curves riding on the inner edges of the books, thus preventing the necessity of raising the arms or stops by hand before inserting the books. Another advantage of having the outer ends of the arms curved up-

wardly is to bring the roller 18 up above and out of the way of the book when placing in or removing from the shelf without occupying any unnecessary space between the shelves.

A book-case thus made is cheap and durable, and heavy books can be applied and removed from the shelves with the greatest of ease.

10 We claim as our invention—

1. In a roller-shelf book-case, the combination of inclined shelves and hinged stops for holding the books on said shelves, substantially as and for the purpose set forth.

15 2. In a roller-shelf book-case, the combination of inclined shelves and stops for holding the books on said shelves, said stops being composed of rollers, and hinged or pivoted

arms in which said rollers are journaled, substantially as and for the purpose set forth. 20

3. In a roller-shelf book-case, the combination of the inclined shelves and stops for holding the books on said shelves, said stops being composed of pivoted arms having curved outer ends, and rollers journaled in the outer 25 ends of the arms, substantially as set forth.

EDMOND H. BABBITT.

EARL T. HARVEY.

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Witnesses to signature of Earl T. Harvey:

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