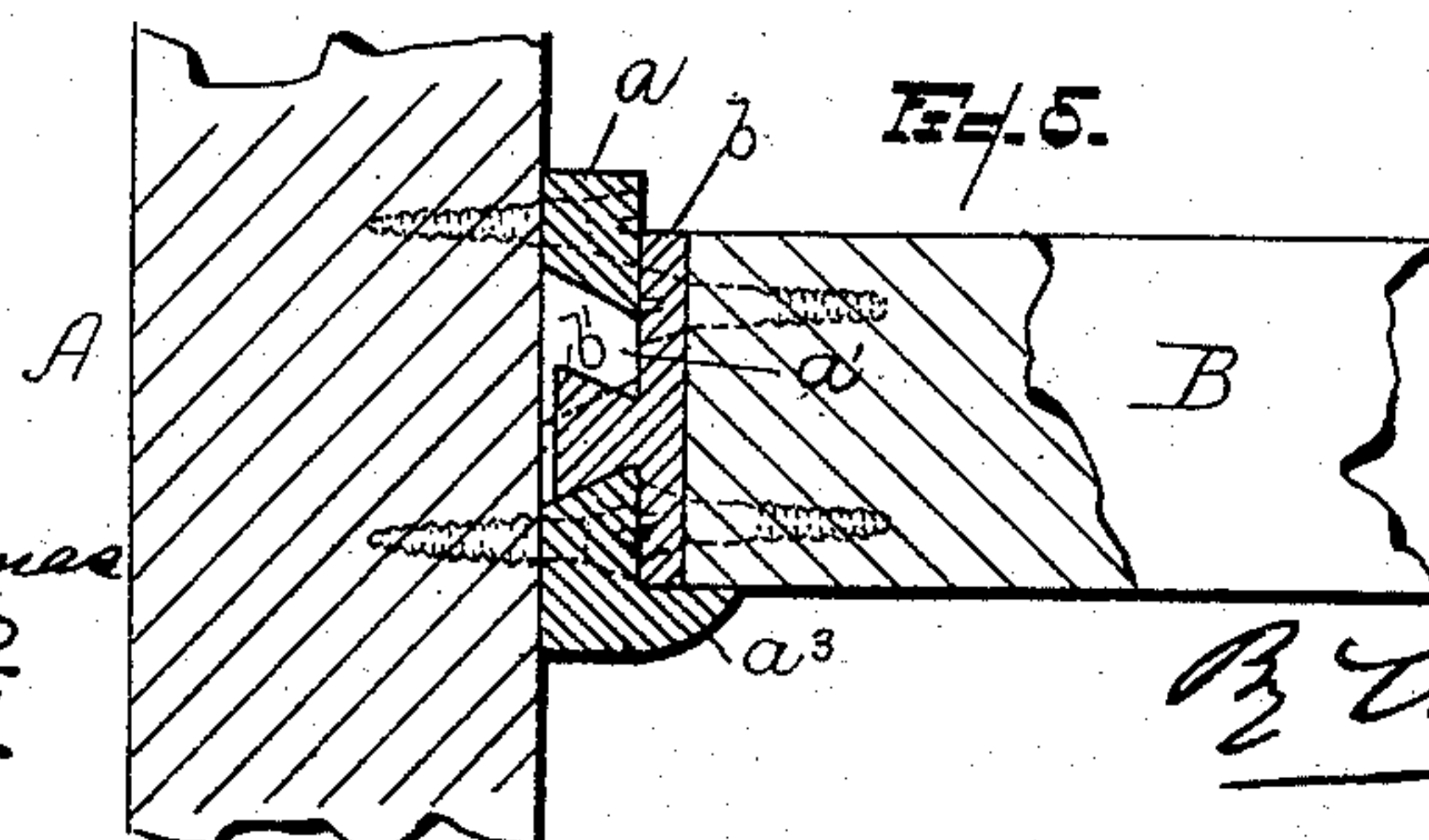
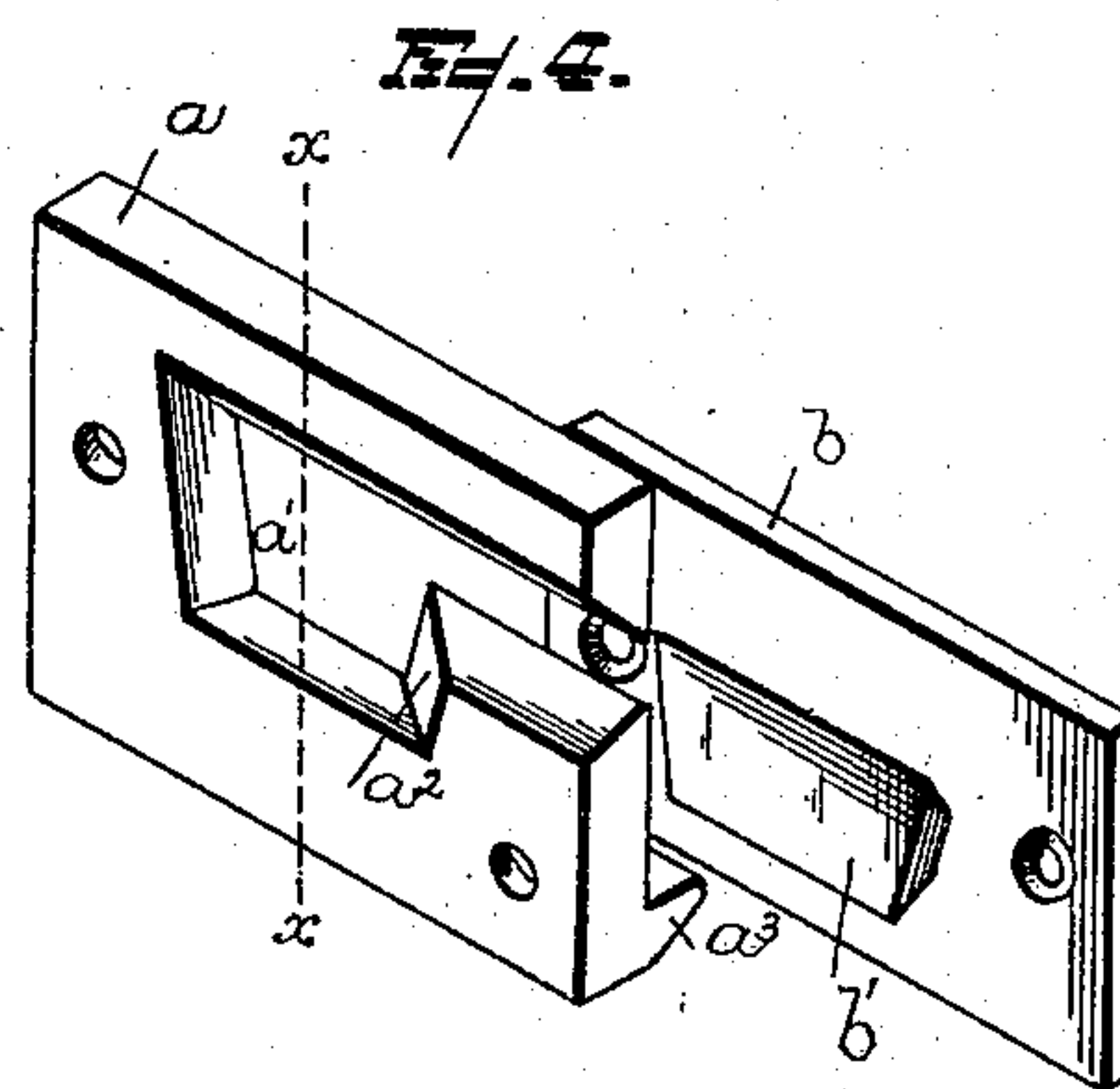
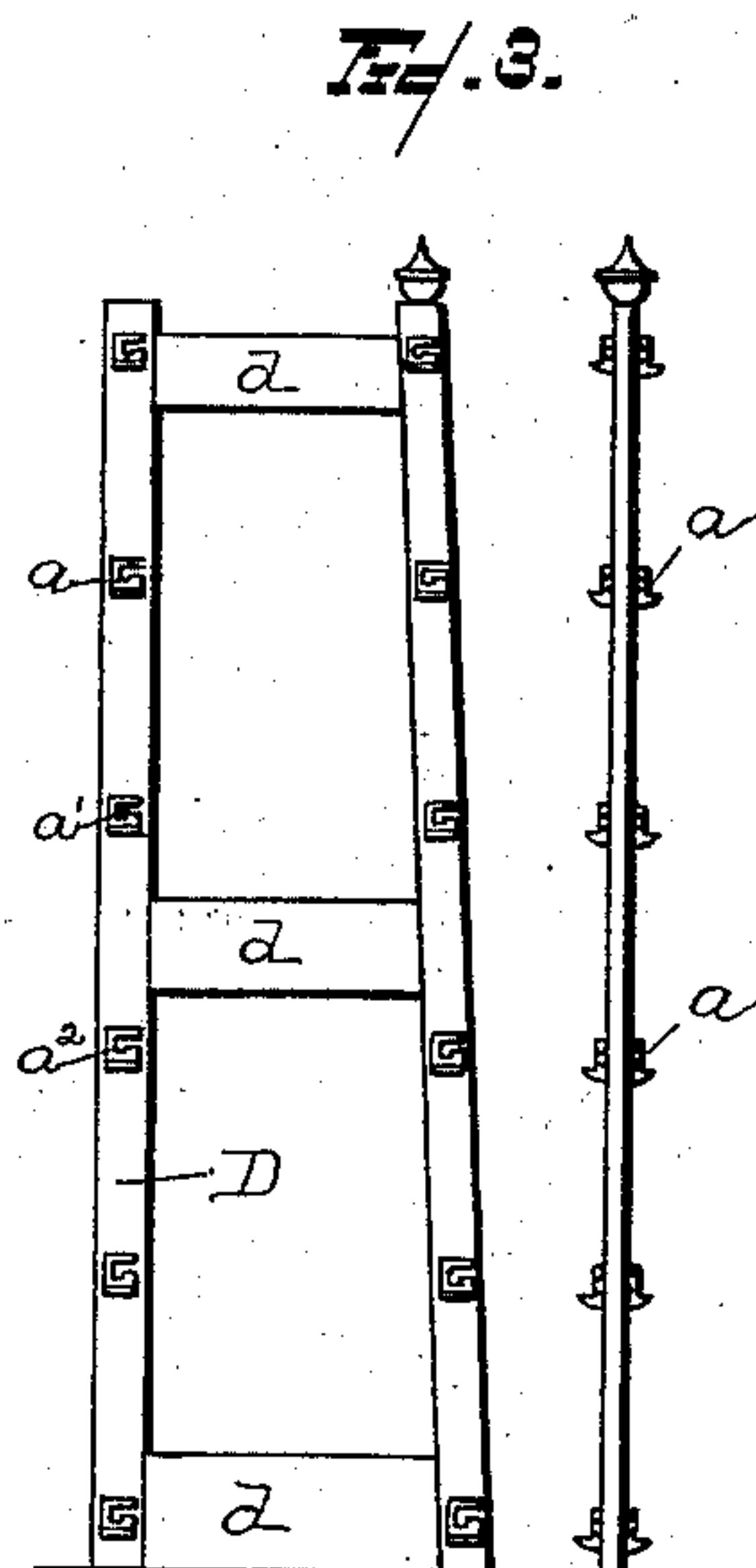
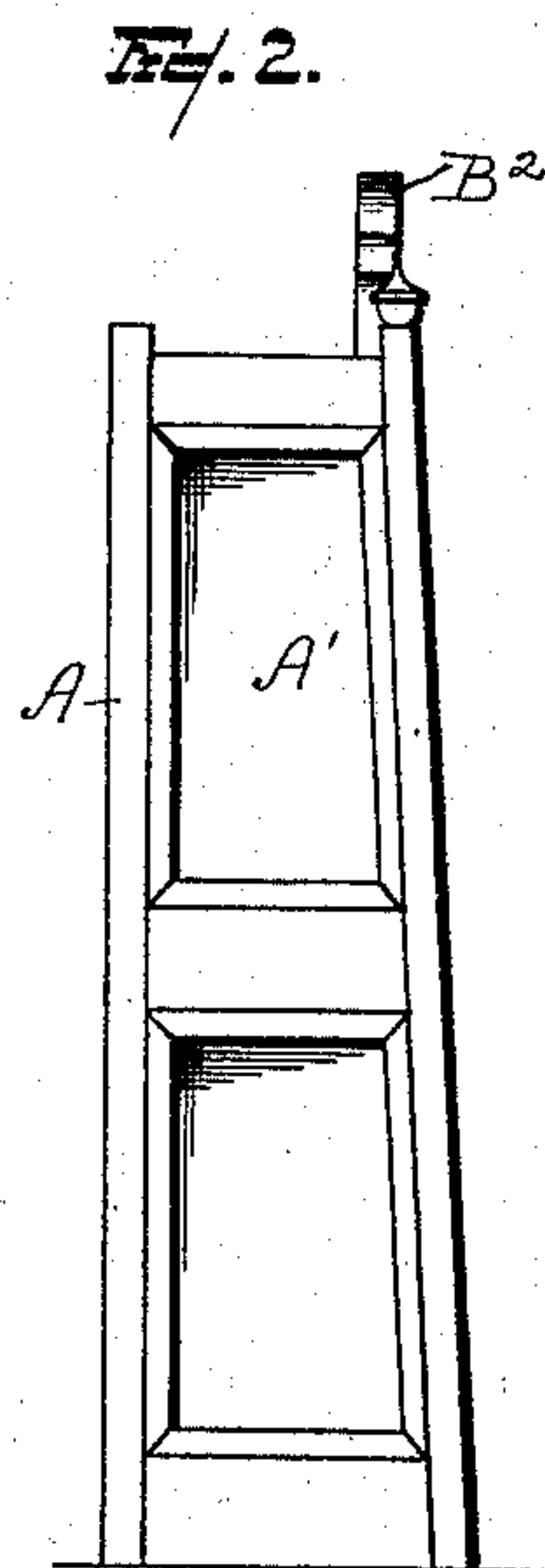
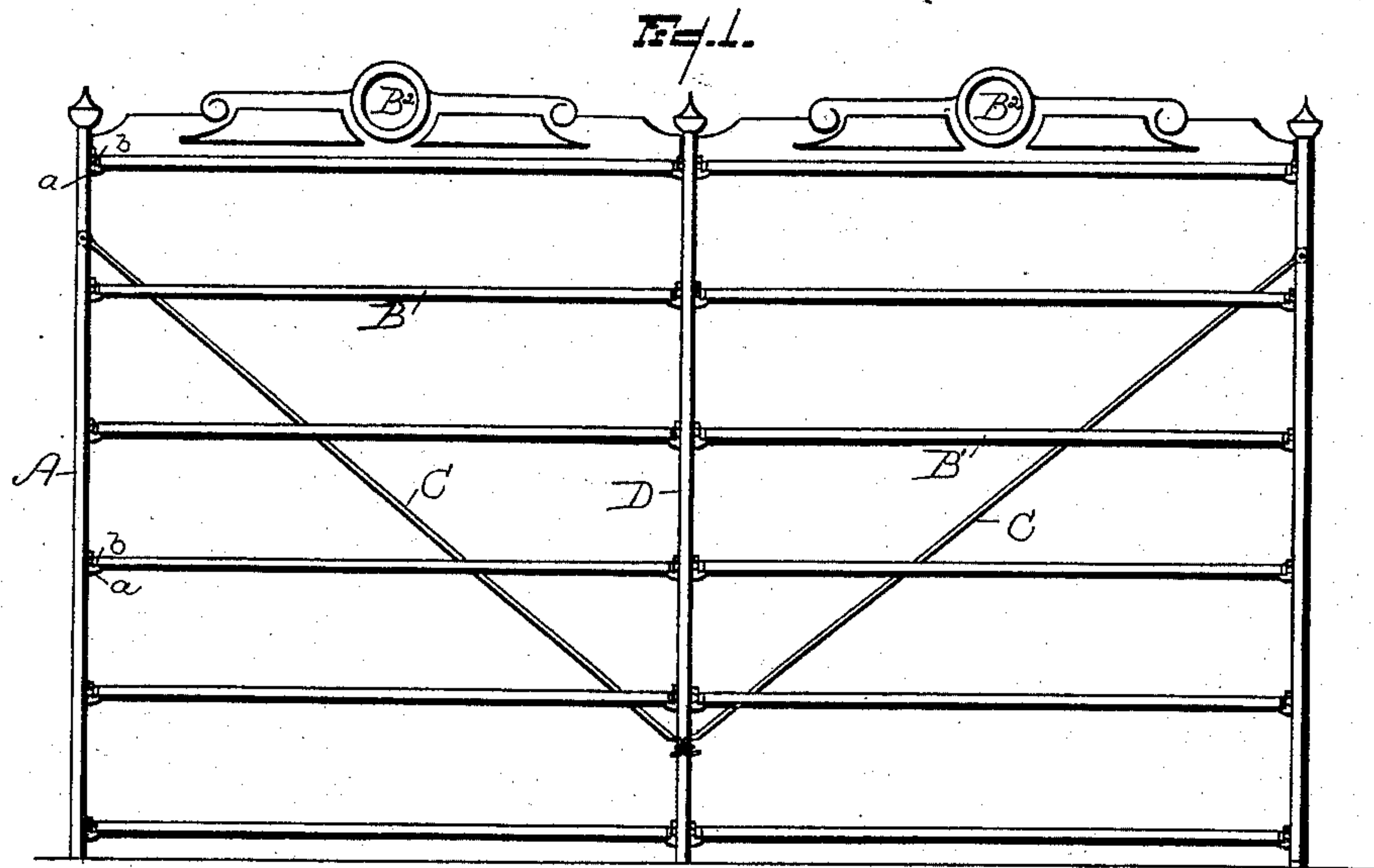


(No Model.)

E. YAGER.
BOOK CASE.

No. 406,496.

Patented July 9, 1889.



WITNESSES

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UNITED STATES PATENT OFFICE.

EUGENE YAGER, OF ANN ARBOR, MICHIGAN.

BOOK-CASE.

SPECIFICATION forming part of Letters Patent No. 406,496, dated July 9, 1889.

Application filed August 27, 1888. Serial No. 283,882. (No model.)

To all whom it may concern:

Be it known that I, EUGENE YAGER, a citizen of the United States, residing at Ann Arbor, county of Washtenaw, State of Michigan, have invented a certain new and useful Improvement in Book-Cases; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

In the drawings, Figure 1 is a view in elevation of a book-case embodying my invention. Fig. 2 is an end elevation of the same. Fig. 3 represents separate side and edge views of a partition. Fig. 4 is a separate detail view illustrating the shelf-irons. Fig. 5 is an enlarged sectional view showing the same as they would appear in use.

It is the purpose of my invention to produce an extension portable book-case, one which may be easily lengthened out or shortened to accommodate any given space, and which may be readily taken to pieces when it is desired to move or transport the same. To this end I provide end uprights suitably paneled or otherwise finished, and upon these uprights are provided shelf-irons to match and firmly engage corresponding shelf-irons upon the shelving-boards, and in connection therewith are employed hinged diagonal braces at the rear of the book-case. This construction admits of lengthening or shortening the book-case by simply using longer or shorter shelf-boards.

The invention contemplates also the employment of one or more intermediate partitions. These partitions are similar to the end boards, although they need neither be paneled nor, in fact, filled in between the front and rear. These partitions, being provided with shelf-irons upon both sides, are designed for introduction in the place of one of the end uprights whenever it is desired to lengthen out the case, and then new shelves are placed between the partitions and the end upright that has been moved outward.

In carrying out my invention, A represents one of the end uprights. It may be finished

in any suitable manner—as, for instance, panels A'.

B represents the shelving-boards.

a b represent the shelf-irons that are attached, respectively, to the uprights A and the shelving-boards B. The shelf-iron b has a dovetailed tenon b', adapted to engage a corresponding dovetail slot a' in the shelf-iron a, and when it has been inserted to its full depth the dovetail tenon may be dropped down into the dovetailed cavity a². This locks the shelf against any tendency to slide in or out, while the weight of the shelf and its load prevents any tendency of the shelf to rise out of place. The dovetailed construction serves to prevent the upright from springing away from the end of the shelf and binds the shelving firmly to the uprights. The shelf-iron a has also at its base the projecting ledge or flange a³, which serves to sustain directly the shelving and its load. These shelf-irons may be of sufficient dimensions vertically to serve effectually as a brace, and so prevent any tendency of the book-case to weave from side to side or to get out of its true vertical position. In addition to this, I locate back of the book-case diagonal brace-rods C, extending from the top of one upright to the base of the other. These rods are hinged at one end and hooked at the other.

D is a partition. It is made in any convenient form, although I prefer to shape it substantially the same as the end uprights A. So, also, it may be simply a plain board extending from front to rear, or it may, as shown in Fig. 3, be constructed in the form of an open frame, with cross-braces d. Of course this book-case may consist of simply the end uprights A' and a set of intermediate shelving-boards B, and this book-case would be entirely portable and might be shortened by cutting off its shelving-boards. When, however, it is desired to increase the length or extend the book-case, it may be accomplished within narrow limits by putting in longer shelving-boards; but if there is to be any considerable extension of the case an intermediate partition D is employed. This has the shelving-irons upon both sides, and it

takes the place of one of the end uprights A'. Then, by introducing new shelving-boards B', the book-case is lengthened out to any desired extent. It is also apparent that there
 5 may be one or more of these partitions D, dependent on the length of the book-case, and when thus lengthened out there may, if desired, be employed one or more diagonal braces C.

10 A book-case thus constructed can at any time in a very few minutes be taken apart and packed for shipment or for moving in its knockdown condition, and is thus convenient for all the usual purposes for which cases
 15 of this character are employed. So, also, it can be just as quickly assembled in place and shortened or lengthened to conform to any given space in its new locality.

The invention is equally applicable for
 20 store-shelving or for any kind of shelving as it is for book-cases, and I would have it understood that my invention contemplates its use for any such purpose. So, again, the shelf-irons *a b* are not limited in their em-
 25 ployment to a portable book-case or portable case of this character, for they are clearly applicable wherever removable or adjustable shelving is employed—as, for instance, in or-
 30 dinary book-cases, store-shelving, and the like.

The top of the case may be of any desired finish. It may be simply one of the shelves B B'. It may be specially finished as shown at B²; but in either case it would be provided with similar shelving-irons *a b*. So, also, there
 35 may be the usual ornamental front board or back board at the top of the case, fastened to the top board B² in the usual manner by dowel-pins projecting down into dowel-holes in the top board. If it is designed to use the
 40 top board, this ornamental upright board may be placed at the back of the case, and if not designed to use the top it may be brought forward to the front of the case.

What I claim is—

45 A portable or knockdown book-shelf consisting of the end uprights A, having irons *a*, provided with dovetailed recesses *a'*, and horizontal dovetailed slots *a*² leading thereto, in combination with shelves B, having the
 50 dovetailed tenon-irons *b'*, said shelves being adapted to rest upon the ledges or flanges *a*³, on the irons *a*, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

EUGENE YAGER.

Witnesses:

M. B. O'DOHERTY,
 SAMUEL E. THOMAS.