(No Model.)

E. HALTEMAN.

CONVERTIBLE SHELF AND TABLE.

No. 580,643. Patented Apr. 13, 1897.

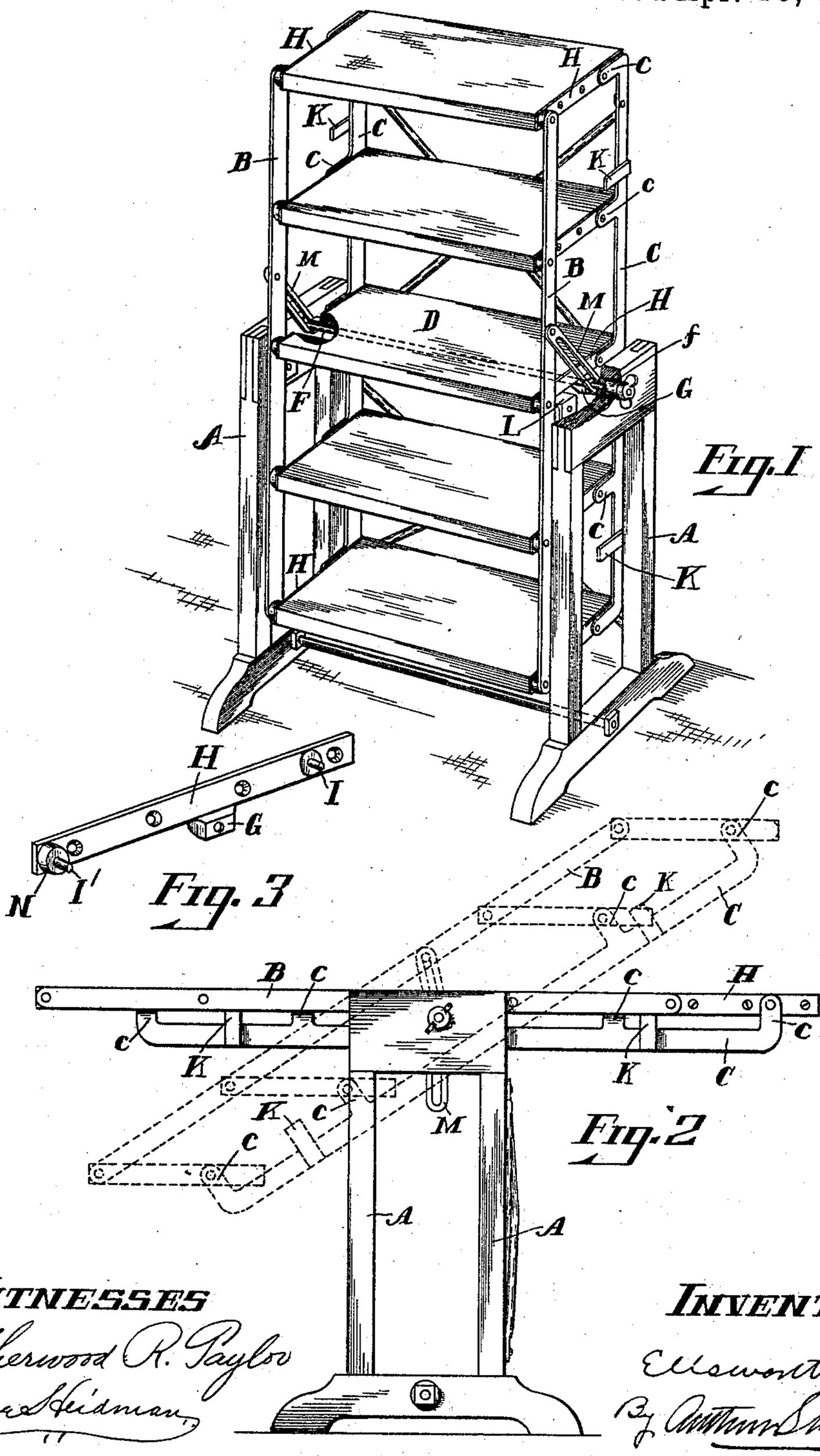

Fig. 1

Fig. 3

Fig. 2

WITNESSES

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CONVERTIBLE SHELF AND TABLE.

SPECIFICATION forming part of Letters Patent No. 580,643, dated April 13, 1897.

Application filed January 2, 1897. Serial No. 617,743. (No model.)

To all whom it may concern:

Be it known that I, ELLSWORTH HALTEMAN, 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 Convertible Shelves and Tables, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to improvements in that class of structures capable of being converted at will either into a set of vertically-arranged or stepped shelves or into a horizontal table.

The object of the invention is to provide a simple, strong, and efficient structure of neat and ornamental design; and the invention consists in certain novel details of construction and combinations and arrangements of the parts, as will be hereinafter pointed out in the specification and drawings.

In Figure 1 of the accompanying drawings is shown a perspective view of the structure arranged as a series of vertical shelves. Fig. 2 shows a side elevation of the structure arranged as a horizontal table and in the dotted lines arranged as stepped shelves. Fig. 3 is a perspective view of one of the end bars attached to the shelves.

A is a skeleton stand or framework supporting the series of hinged shelves, which are arranged to be converted either into a horizontal table or into a set of vertical or stepped shelves. This framework may be of any suitable material and convenient form.

B C represent parallel bars hinged to each of the shelves. The bar B, which I will call the "front" bar, is hinged to each shelf at the front corner, as shown in the drawings. The rear bar C is provided with a series of arms or lugs *c c*. The ends of these lugs *c c* are pivoted to the ends of the shelves at a point forward of the rear edge or corner. A corresponding pair of parallel bars B C are also arranged at the other end of the shelves. The central shelf D is the fixed or stationary shelf. These two pairs of parallel bars of course connect all the shelves together and all are free to swing except the central shelf D. Connected with the central shelf D and shown as passing beneath it is a rod F. This rod passes through the frame A at both ends and is used to lock the entire series of shelves in any position.

If it is desired to convert the series of vertical shelves, as shown in Fig. 1, to a horizontal table, the whole series must be swung so as to bring the shelves to the same horizontal plane, and the arms *c* on the rear parallel bar C would strike the front parallel bar B. To obviate this and for the more secure and firm connection between the parallel bars and the shelves, I use the end bar shown in Fig. 3, with the lug G only attached when it is used for the middle or fixed shelf D. This end bar H is screwed or firmly fastened to the end of the shelf. At the rear end it is provided with a pin I, which passes through a hole in the lug or arm *c*, and forms a pivot. At the forward end it is also provided with a pin I′, and also a washer or boss N. The pin I′ passes through holes in the front parallel bar B, but the boss N leaves a space between the end of the shelf and the parallel bar B, so that when these parallel bars and the shelves are swung down into a horizontal position the lug or arm *c* can pass between the end of the shelf and the front bar B, as shown in Fig. 2, and permit the various shelves, which are of course made of such a width that when they are swung back into a horizontal position their edges will pass part way and meet, thus forming a solid top.

In order to hold the framework and the shelves firmly and rigid when converted into a horizontal table, I provide on the rear parallel bars C stops K K. These stops K K strike against the rear edge of the front parallel bars B whenever these bars are brought into a horizontal position, and act as braces, preventing any further movement and holding the shelves firmly and rigidly in the shape of a horizontal table.

The center or middle shelf D is hinged to the parallel bars B C just as the other shelves are, but it is held stationary by clips or brackets L, one end of which is screwed to the bottom of the shelf D and the other to the support A, making this shelf stationary and permitting the others to swing, as it were, around it.

The end bars on the stationary shelf D are

provided with the lugs G, and the rod F is preferably provided with collars *f* at either end, where it passes through the supporting-frame A. Between the lug G and the collar *f* on the rod A is the slotted bar M. One end of this slotted bar M is pivoted to the front parallel bar B, so that the other end can swing freely. The rod F passes through the slot formed in the bar M. On the end of the rod F is a thumb-screw. By tightening this thumb-screw the collars *f* press the slotted bar M firmly against the lug G, thus holding the shelves in any position and locking them, as it were. By loosening the thumb-screw and releasing the slotted bar M the shelves can be swung into any position between the perpendicular and the horizontal, so as to form either a perpendicular series of shelves, (shown in Fig. 1,) the horizontal table, (shown in Fig. 2,) or the stepped shelves, (shown by the dotted lines in Fig. 2,) and by the thumb-screw set or locked into any of these positions desired.

Without the arms *c* or their equivalent on the rear parallel bar C it would be impossible to adjust the shelves in the same horizontal plane, because the two parallel bars B and C would come in conflict.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with a series of shelves, of parallel bars one of which is provided with arms pivotally attached to the shelves between the front and rear edges or corners and the other parallel bar pivoted to the front corners of the shelves with space for the passage of the arms on the first-mentioned parallel bar substantially as and for the purpose described.

2. The combination with a series of shelves of two pairs of parallel bars not in the same plane, the front parallel bars being pivoted to the front corners of the shelves with a space between, the rear parallel bars having angular arms pivoted to the ends of the shelves at a point between their front and rear corners and having stops rigidly attached to it so as to strike against the front parallel bar when the two are in a horizontal position, substantially as shown and described.

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Witnesses:
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