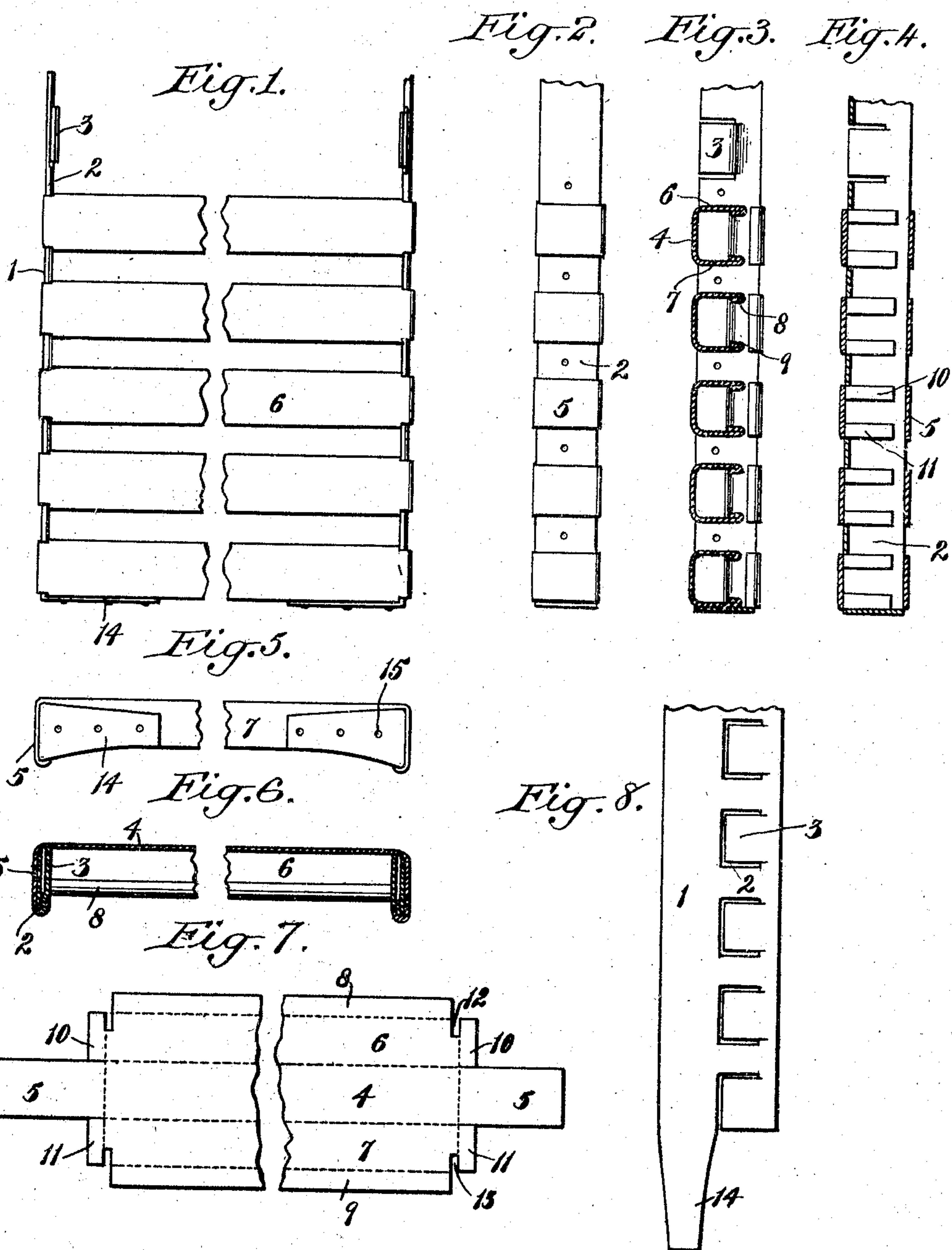


No. 791,154.

PATENTED MAY 30, 1905.

H. P. MACDONALD.
BOOK SHELF.

APPLICATION FILED OCT. 5, 1904.



Witnesses:
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UNITED STATES PATENT OFFICE.

HARRY P. MACDONALD, OF JERSEY CITY, NEW JERSEY.

BOOK-SHELF.

SPECIFICATION forming part of Letters Patent No. 791,154, dated May 30, 1905.

Original application filed April 29, 1904, Serial No. 205,446. Divided and this application filed October 5, 1904. Serial No. 227,184.

To all whom it may concern:

Be it known that I, HARRY P. MACDONALD, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Book-Shelves, of which the following is a specification.

The object of this present invention is to provide a book-shelf which will be extremely cheap to manufacture, in which the parts are easily assembled, and in which the arrangement of the several parts with respect to each other is such that a very strong and light shelf may be formed which will be capable of successfully withstanding the weight of the books placed thereon.

The present application is a division of an application filed by me on the 29th day of April, 1904, entitled "Improvement in book-shelves," its serial number being 205,446.

In the accompanying drawings, Figure 1 is a top plan view of a portion of the shelf. Fig. 2 is an end view. Fig. 3 is a transverse section taken at a distance from one of the transverse bars. Fig. 4 is a transverse section at one of the transverse bars. Fig. 5 is a side view. Fig. 6 is a longitudinal section. Fig. 7 is a partial top plan view of a blank from which the longitudinal bar is formed, and Fig. 8 is a partial top plan view of the blank from which the transverse bar is formed.

The blank from which the transverse bar is formed is so shaped that when the bar is completed it will have two vertical portions 1 and 2, connected along their upper edges, the vertical portion 2 having a plurality of upwardly-projected tongues 3 cut therein. The blank from which the longitudinal bar is formed is so shaped that when the bar is completed it will have a horizontal portion 4, flaps 5, projected therefrom, downwardly-extended sides 6 7, upwardly-folded lips 8 9, and locking-flaps 10 11, projected from the sides 6 and 7. These flaps are partially severed from the sides by slits 12 13.

When the shelf is set up, the end flaps 5 are folded downwardly over the outer face of the transverse bar and thence upwardly a short distance on its inner face. The side

flaps 10 11 are extended into the transverse bar upon opposite sides of the tongue 3 and are there folded toward each other between the vertical portions 1 and 2. The bases of the tongues 3 are interlocked with the ends of the longitudinal bars, as the notches 12 13 permit the longitudinal bars to be depressed until portions of the ends of their sides abut against the vertical portion 2 of the transverse bar.

The vertical portion 1 of the transverse bar may be provided with a tongue 14, fitted to be folded along the outer side of the outermost longitudinal bar and secured thereto by rivets 15 or other suitable fastening devices.

What I claim is—

1. A book-shelf comprising transverse bars and longitudinal bars, each transverse bar having inner and outer vertical portions connected along their upper edges, the inner vertical portion having a plurality of upwardly-projected tongues cut therein.

2. A book-shelf comprising transverse bars and longitudinal bars, the transverse bars having inner and outer vertical portions, the inner vertical portions having upwardly-projected tongues cut therein and tongues at the ends of the outer vertical portions folded along the outer sides of the outermost longitudinal bars and secured thereto.

3. A book-shelf comprising transverse bars and longitudinal bars, the transverse bars having inner and outer vertical portions and tongues cut in the inner vertical portions, the longitudinal bars having downwardly-extended sides provided with flaps at their ends folded between the tongues and the outer vertical portions of the said transverse bars.

4. A book-shelf comprising transverse bars and longitudinal bars, the transverse bars having inner and outer vertical portions and tongues cut in the inner vertical portions, the longitudinal bars having horizontal portions, downwardly-extended sides, side flaps folded between the tongues and the outer vertical portions of the transverse bars and flaps at the ends of the horizontal portions folded downwardly along the outer sides of the said transverse bars.

5. A book-shelf comprising transverse bars and longitudinal bars, the transverse bars having inner and outer vertical portions and tongues cut in the inner vertical portions, the longitudinal bars having horizontal portions, downwardly-extended sides, side flaps folded between the tongues and the outer vertical portions of the transverse bars and flaps at the ends of the horizontal portions
10 folded downwardly along the outer sides of

the said transverse bars and upwardly on the inner sides thereof.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 4th day of October, 1904.

HARRY P. MACDONALD.

Witnesses:

FREDK. HAYNES,
F. GEORGE BARRY.