

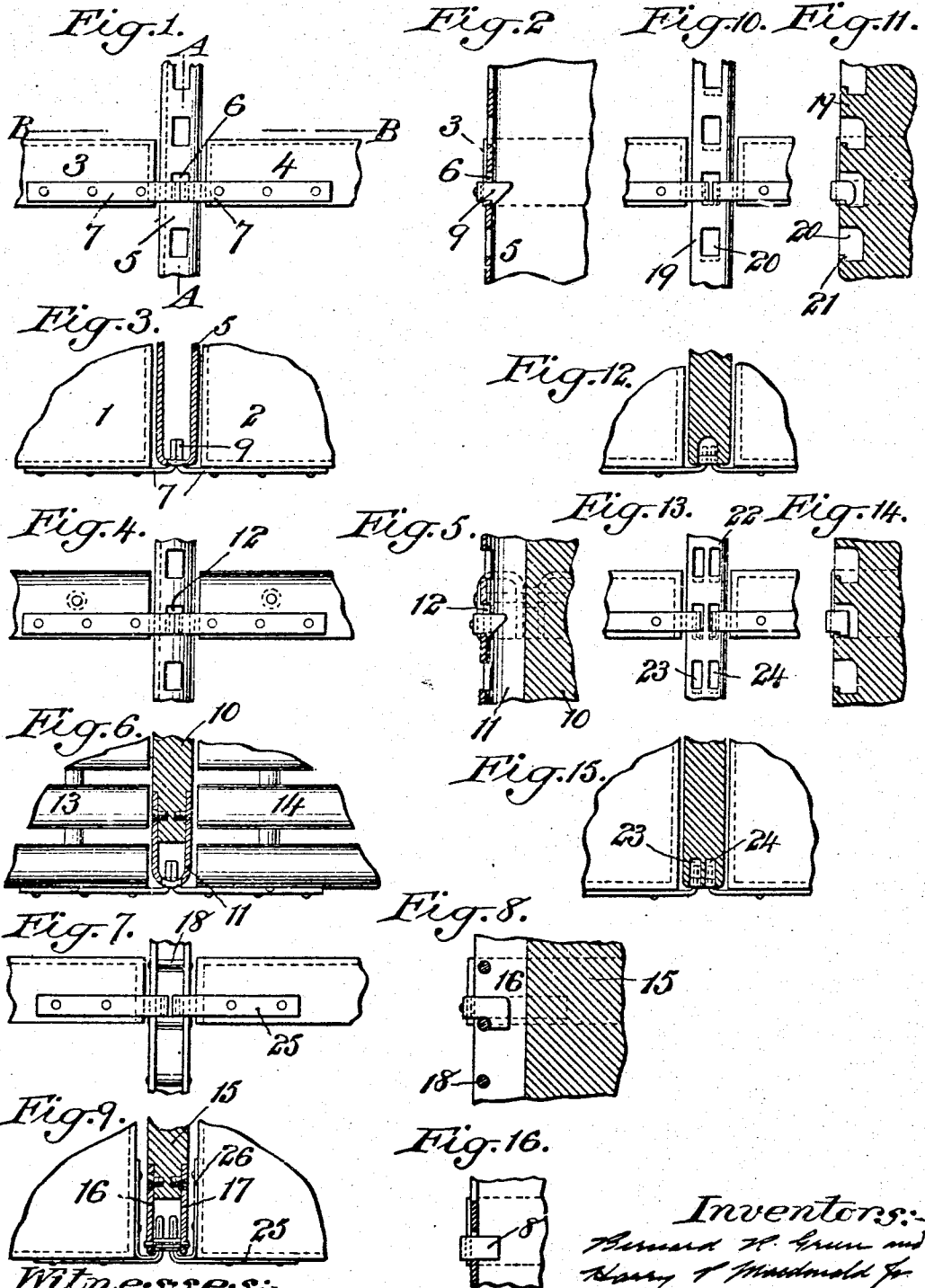
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B. R. GREEN & H. P. MACDONALD, JR.
BOOK STACK.

APPLICATION FILED JAN. 9, 1904.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

BERNARD R. GREEN, OF WASHINGTON, DISTRICT OF COLUMBIA, AND
HARRY P. MACDONALD, JR., OF JERSEY CITY, NEW JERSEY: SAID
MACDONALD, JR., ASSIGNOR TO SAID GREEN.

BOOK-STACK.

SPECIFICATION forming part of Letters Patent No. 776,233, dated November 29, 1904.

Application filed January 9, 1904. Serial No. 188,343. (No model.)

To all whom it may concern:

Be it known that we, BERNARD R. GREEN, a resident of Washington, in the District of Columbia, and HARRY P. MACDONALD, JR., a resident of Jersey City, in the county of Hudson and State of New Jersey, citizens of the United States, have invented a new and useful Book-Stack, of which the following is a specification.

10 This invention relates to book-stacks, and more particularly to means for supporting the fronts of the shelves, with the object in view of guarding against the lateral displacement of the bearings carried by the shelves
15 whether the partitions be thick or thin and at the same time when so desired providing against the forward displacement of the shelves without the necessity of hooking or otherwise securing them at or near the rear edge, as has
20 hitherto been common.

Our invention further contemplates the employment of partitions formed wholly or partly of thin sheet metal in such form as to coact with the bearings carried by the shelves.

25 In the accompanying drawings, Figure 1 is a partial front view of a partition and two adjacent shelves of a book-stack embodying our invention. Fig. 2 is a vertical section in the plane of the line A A of Fig. 1. Fig. 3 is
30 a horizontal section in the plane of the line B B of Fig. 1. Figs. 4, 5, and 6 represent similar views, including a modified form of partitions and shelves. Figs. 7, 8, and 9 are similar views, including a third form of partition.
35 Figs. 10, 11, and 12 are similar views, including a fourth form of partition. Figs. 13, 14, and 15 are similar views, including a fifth form of partition; and Fig. 16 represents a modified form of bearing carried by the shelf.

40 In the several groups of figures representing the various forms of partitions, with the exception of the group numbered 4, 5, and 6, the shelves are indicated as formed of sheet metal with a depending flange and are denoted
45 by 1 and 2 and their flanges by 3 and 4, respectively.

The vertical partition between two shelves or tiers of shelves (for it is to be understood

that the shelves 1 and 2 are each a single member of a vertical tier or bank of shelves of 50 the same size and construction) is denoted in Figs. 1, 2, and 3 by 5 and consists of a sheet or plate of metal bent into a flat U shape in horizontal section with the bight of the U disposed toward the front and provided with a 55 series of perforations 6, preferably rectangular in shape and adapted to receive the bearings carried by the shelves.

The bearings carried by the shelves consist of L-shaped pieces of metal 7, disposed edge- 60 wise up and down and having one leg secured to the front of the shelf and the other extended rearwardly to enter an opening 6 in the front of the partition. The leg which enters 65 the opening in the partition may be either plain, as shown at 8, Fig. 16, or hooked, as shown at 9, Fig. 2. If hooked, as at 9, the bearing will prevent the shelf from both longitudinal and forward displacement whether the shelf be hooked or fastened at its rear or 70 not, and when plain, as at 8, it will prevent the shelf from longitudinal displacement only and other means—such, for example, as the means shown and described in Reissue Patent No. 11,401, dated January 30, 1894, to Bernard R. Green—may be employed to prevent 75 forward displacement.

It is intended that the adjacent ends of shelves shall each be provided with an L-shaped bearing, such as hereinabove described, 80 and their rearwardly-extended legs may enter the same opening 6 in the partition, and the partition need be only thick enough to admit the two rear legs of the bearings, as the walls of the partition will prevent the said legs from 85 displacement in the longitudinal direction of the shelf.

In Figs. 4, 5, and 6 the partition is represented as made up of a solid part 10 and a 90 U-shaped part 11 at the front, having its sides let into the opposite sides of the solid part and secured thereto. The U-shaped front is provided with openings 12, similar to the openings 6, hereinabove described, and the shelves, here shown as of the grid form and denoted 95 by 13 and 14 are provided with bearing-

hooks similar in all respects to those shown in Figs. 1 to 3.

In the form shown in Figs. 7, 8, and 9 the partition is composed of a solid part 15 and a skeleton front part, consisting of two strips of thin metal 16 and 17, let into the opposite sides of the part 15 and projecting forward from its front edge. The strips 16 and 17 are connected at frequent intervals by pins 18, which serve to support the hooks attached to the shelves, as described above.

In the form shown in Figs. 10, 11, and 12 the partition (denoted by 19) is solid and is provided with sockets 20 in its front edge, the sockets being provided with a ledge 21 to coact with the bearing-hook.

In the form shown in Figs. 13, 14, and 15 the partition (denoted by 22) is solid and is provided with two vertical series of sockets 23 24, the former to receive the bearing-hook of one shelf and the latter to receive the bearing-hook of a horizontally-adjacent shelf.

The bearing-hooks instead of consisting of a simple L-shaped piece of metal may be formed of a folded piece, as shown in Fig. 9, one of the parts being made fast at the front of the shelf, as at 25, and the other at the end of the shelf, as at 26.

The particular structure of the body of the shelf is not material to the present invention.

What we claim is—

1. In a book-stack, the combination with a partition having openings in its front, of shelves provided with rearwardly-projecting bearings adapted to enter the said openings to support the fronts of the shelves.

2. In a book-stack, the combination with a partition provided with openings in its front,

of shelves provided with rearwardly-extended hooked bearings adapted to enter the said openings to hold the fronts of the shelves in position.

3. In a book-stack, the combination with a partition terminating at its front in thin metal walls spaced apart and provided with a vertical series of openings at the front, of shelves provided with rearwardly-extending bearings adapted to enter the said openings and rest on the bottoms thereof.

4. In a book-stack, the combination with a partition terminating at the front in thin metal walls U-shaped in horizontal section and provided with a series of openings in the bight of the said U-shaped part, of shelves provided with bearings adapted to enter said openings to support the shelves.

5. In a book-stack, the combination with a partition formed of thin metal flat U-shaped in horizontal section and provided with a vertical series of openings at its front, of shelves provided with bearings adapted to enter the said openings to support the shelf.

In testimony that we claim the foregoing as our joint invention we have signed our names in presence of two witnesses.

BERNARD R. GREEN.

HARRY P. MACDONALD, Jr.

Witnesses to signature of Bernard R. Green, January 6, 1904:

GEO. N. FRENCH,

R. B. SEWARD.

Witnesses to signature of Harry P. Macdonald, Jr., January 7, 1904:

FREDK. HAYNES,

C. S. SUNDGREN.