

No. 781,060.

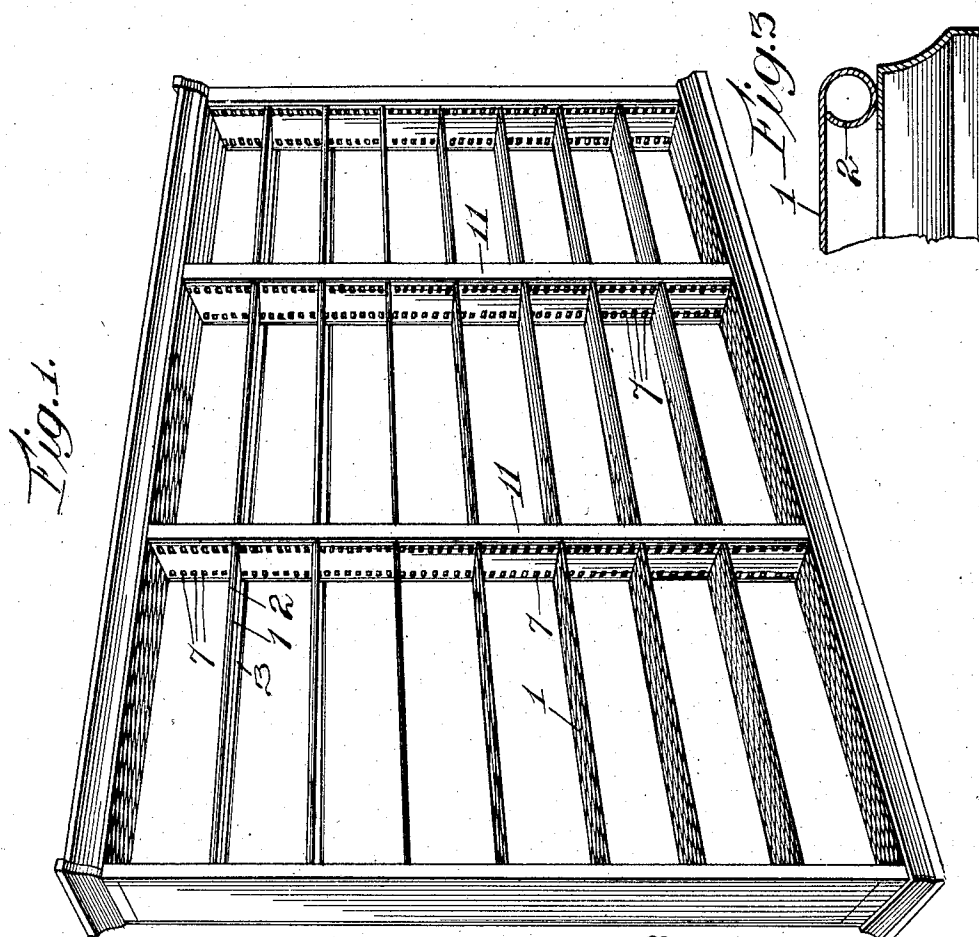
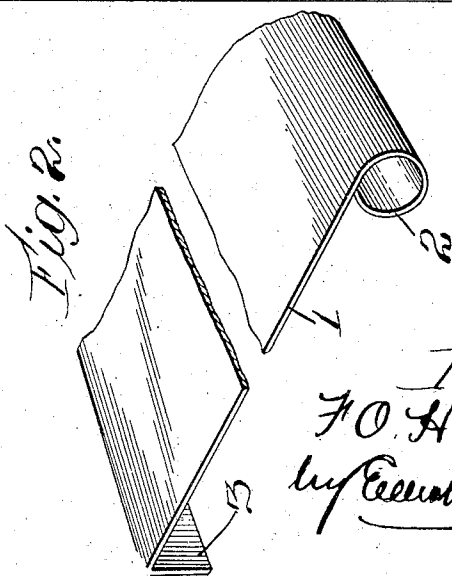
PATENTED JAN. 31, 1905.

F. O. HANSON.

BOOK STACK.

APPLICATION FILED AUG. 26, 1904.

2 SHEETS—SHEET 1.



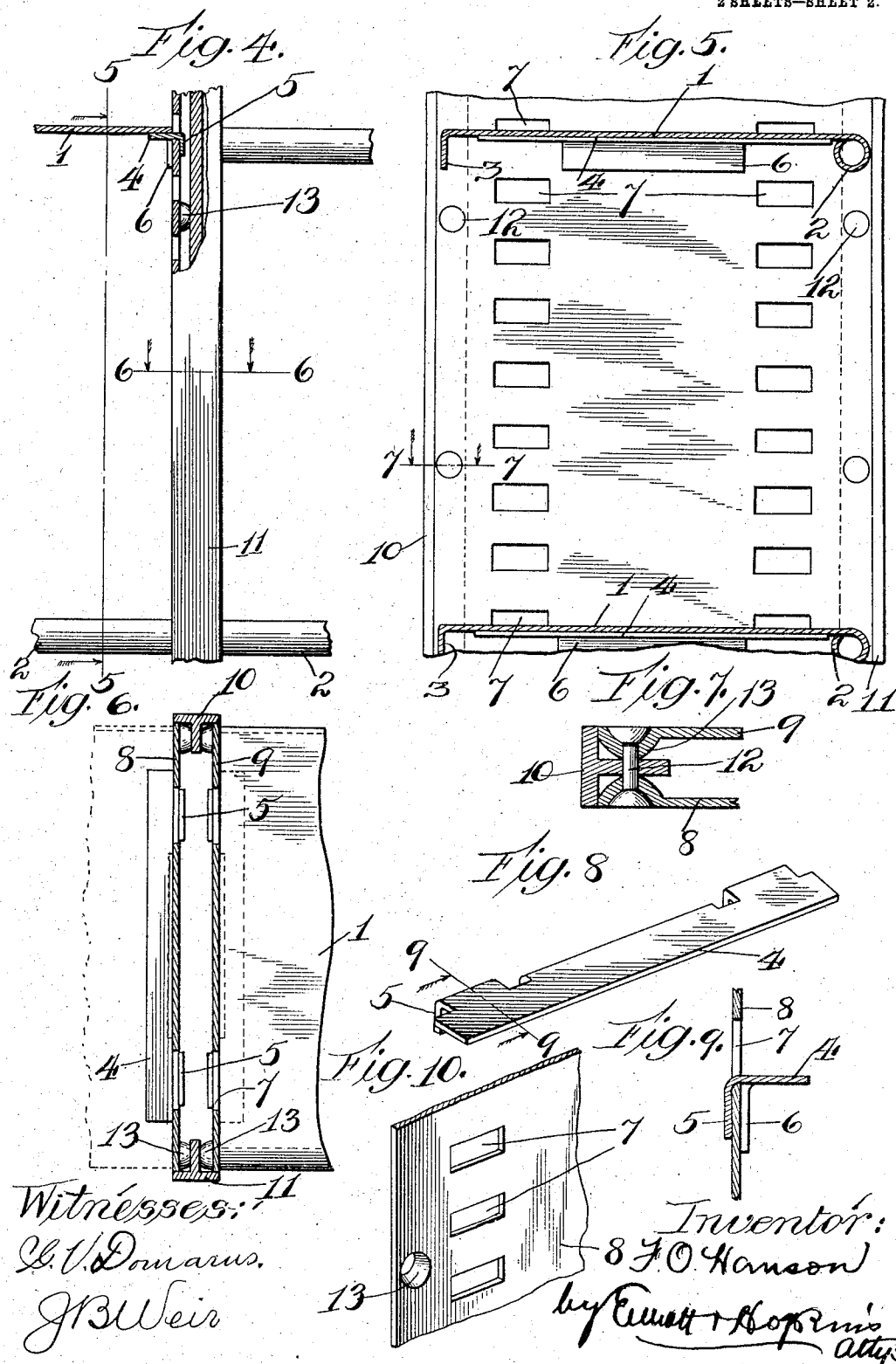
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C. O. Domarus.
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UNITED STATES PATENT OFFICE.

FRANCIS O. HANSON, OF CHICAGO, ILLINOIS.

BOOK-STACK.

SPECIFICATION forming part of Letters Patent No. 781,060, dated January 31, 1905.

Application filed August 26, 1904. Serial No. 222,203.

To all whom it may concern:

Be it known that I, FRANCIS O. HANSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Book-Stacks, of which the following is a full, clear, and exact specification.

My invention relates more particularly to metallic book stacks or cases; and it has for its object to provide a durable, simple, and inexpensive construction of book stack or case which shall possess a wide range of adjustment.

With the described ends in view the invention consists in certain features of novelty, which will be hereinafter described, with reference to the accompanying drawings, and more particularly pointed out in the claims.

In the said drawings, Figure 1 is a perspective view of my improved book stack or case.

Fig. 2 is an enlarged detail perspective view of one of the shelves broken away. Fig. 3 is

an enlarged detail vertical section of a part of the base and the lowermost shelf. Fig. 4 is

a detail front elevation, partly in vertical section, showing two shelves on each side of a

partition. Fig. 5 is a vertical transverse section thereof on the line 5 5, Fig. 4. Fig. 6 is

a plan section on the line 6 6, Fig. 4. Fig. 7 is a detail plan section on the line 7 7, Fig. 5.

Fig. 8 is a detail perspective view of one of the shelf lugs or supports. Fig. 9 is a cross-

section thereof on the line 9 9, Fig. 8, also showing the partition-wall; and Fig. 10 is a

detail perspective view of one of the partition walls or plates detached.

The shelves on which the books rest are preferably composed of a sheet or plate 1 of

thin metal, having their outer edges turned downwardly and curled, as shown at 2, to give

them finish and longitudinal rigidity, and their inner edges are also preferably stiffened by

means of depending flanges 3. These shelves are supported at each end by means of flanges

or ledges 4, one of which is shown in detail in

perspective in Fig. 8 and all of which are formed with lugs or hooks 5, one at each end,

projecting downwardly therefrom, and one or more depending lips 6, which are arranged

parallel with the hooks or lugs 5, but at a slight distance therefrom. The hooks or lugs

5 are adapted to be inserted in paired apertures 7, formed in vertical end walls or partition-plates 8 9 and engaging against the inner face thereof in the manner clearly shown in Figs. 4 and 9, while the lip 6 bears against the outer face of the end wall or partition-plate and holds the flange 4 from being depressed, while the lugs 5 prevent it from pulling out or moving laterally, the space between the lip 6 and the lugs 5 being substantially the same as the thickness of the partition-plate 8 or 9.

The paired apertures for the introduction of the lugs 5 may be as numerous as desirable and arranged in vertical columns as close together as consistent with strength, and hence it will be seen that the shelves 1 will have a wide range of adjustment and their positions may be readily altered by shifting the lugs 5 from one pair of holes to another. As shown in Fig. 5, the curl 2 engages over one end of the flange 4, while the depending flange 3 engages over the other end of the flange 4, and thus the shelf is held against being pulled out or pushed in should its weight and the weight of the books thereon not be sufficient to prevent such movement.

The partitions between the ends of the shelves are constituted by the aforesaid partition-plates 8 9 and T-bars 10 11, which are duplicates of one another and arranged with their stems turned inwardly between the plates 8 9 and their cross-bars arranged against the outer edges of said plates and constituting facings for the finishing-strips for the partitions, the cross-bars being preferably substantially the same in length as the distance between the outer faces of the partition-plates, and the partition-plates are secured to the stems of the T's by rivets 12 or other suitable means, but preferably by rivets, which are countersunk in the outer faces of plates 8 9, as better shown in Fig. 7, and the inner faces of the plates 8 9 are upset or distorted to form bosses 13 where these countersinks are located and which serve as spacers for making up the difference in width of the cross-bar of the T and the combined thickness of the partition-plates and stem of the T. It is of course evident that the partition-plates 8 9 might be

brought in direct contact with the stem of the T; but that would not leave room between the plates for the lugs 5.

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

1. In a book-stack the combination of the shelves, partitions therefor constituting end walls and each comprising two apertured
10 plates arranged face to face with a space between them, a T-bar having its stem arranged between said plates and its head or cross-bar arranged at the edges of said plates and means
15 passing through said plates and the stem of the T-bar for securing the plates and T-bar together, and shelf-supporting flanges having lugs engaging in said apertures.

2. In a book-stack the combination of the shelves, partitions therefor constituting end walls and each comprising two apertured
20 plates arranged face to face with a space between them and having bosses struck inwardly therefrom to constitute spacers therefor, a T-bar arranged at the edges of said plates and
25 having its stem located between said bosses, and means passing through said bosses and stem for securing the T-bar and plates together, and a shelf-supporting means engaging in said apertures.

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