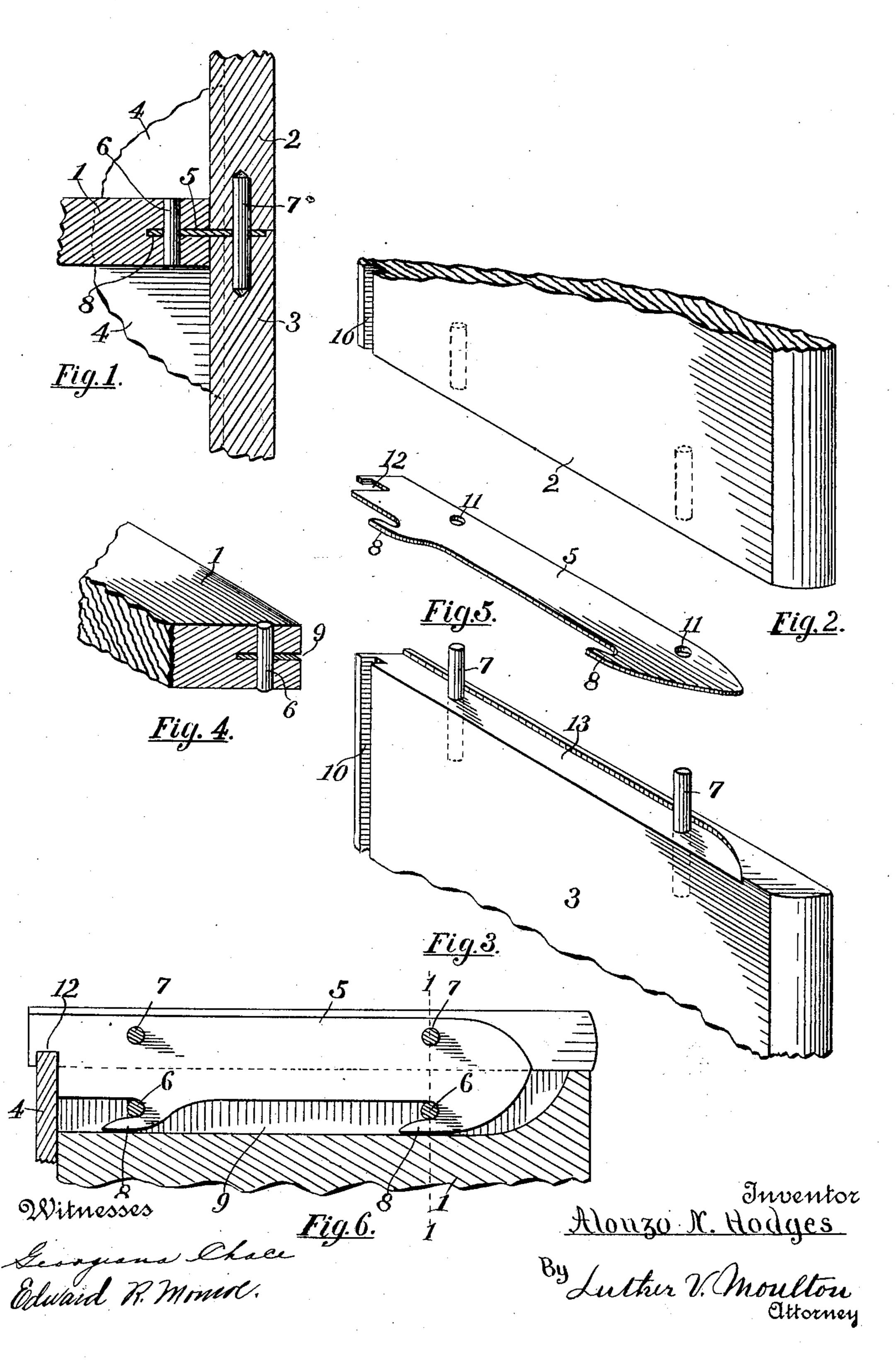
## A. N. HODGES. KNOCKDOWN SECTIONAL BOOKCASE. APPLICATION FILED APR. 9, 1904.

NO MODEL



## United States Patent Office.

ALONZO N. HODGES, OF GRAND RAPIDS, MICHIGAN.

## KNOCKDOWN SECTIONAL BOOKCASE.

SPECIFICATION forming part of Letters Patent No. 762,529, dated June 14, 1904. Application filed April 9, 1904. Serial No. 202,438. (No model.)

To all whom it may concern:

Be it known that I, Alonzo N. Hodges, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of 5 Michigan, have invented certain new and useful Improvements in Knockdown Sectional Bookcases; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled 10 in the art to which it appertains to make and use the same.

My invention relates to improvements in knockdown sectional bookcases, and more particularly to such bookcases in which each sec-15 tion is separable into its component parts; and its object is to provide a simple, cheap, effective, and reliable means for connecting the various parts and maintaining the same in position for use and to provide the device 20 with various new and useful features, hereinafter more fully described, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical sectional detail taken 25 on the line 11 of Fig. 6; Fig. 2, a perspective detail of a portion of the lower end of an end section; Fig. 3, the same of an upper end of an end section; Fig. 4, a perspective detail of a portion of one end of a shelf; Fig. 5, a per-3° spective detail of the fastening-plate; Fig. 6, a plan view of a fastening-plate and the parts adjacent thereto in assembled position with a portion of the shelf in horizontal section in the plane of the plate.

Like numerals refer to like parts in all of

the figures.

1 represents a portion of a shelf in each end of which is a horizontal groove 9, adapted to receive the fastening-plate, and inserted trans-4° versely of each groove are suitable pins 6, located to properly engage the hooks on the said plate.

2 and 3 represent portions of the superposed end sections of the case, which sections 45 are arranged in series one above the other, one section to each compartment, between the respective shelves. Near the rear of the end sections are vertical grooves 10 therein to receive the back 4 and support the same in place. 5° These end sections are connected and held in

proper relation one above the other by means of dowel-pins 7, detachably inserted in suitable alined openings in the adjacent ends of the superposed end sections.

13 represents a recess in one of the end sec- 55 tions of sufficient depth and form to receive a coupling-plate 5. The depth of the recesses 13, the width of the grooves 9, and the thickness of the plate 5 are all substantially the same, whereby the material of the shelves and 60 ends fit closely against the opposite sides of the said plate. This coupling-plate is also provided-with suitable holes 11, through which the pins 7 extend to secure the plate within the recess 13. The plate 5 projects inward to prop- 65 erly engage the groove 9 and support the shelf in place. The edge of this plate within the groove 9 is also provided with hooks 8, adapted to engage the pins 6 and firmly force the end of the shelf against the end sections and 70 secure the same in place. Near the rear end of the plate 5 is a recess 12, which is in alinement with the grooves 10 in the end section, whereby when the back 4 is inserted in place it will engage said recess and the back of the 75 shelf 1, and thus hold the pins in close relation. to the hooks 8 and prevent the shelf from moving backward or splitting off of the portion of the end sections back of the groove. It will be noted that this means of securing the parts 80 while being strong and reliable is at the same time easily constructed, consisting of the plate 5, which is easily made of sheet metal, having plane upper and under surfaces and made very rapidly by means of dies, and that the remain- 85 der of the work consists merely in cutting the recesses 13 and the groove 9 with a suitable saw or rotary cutter and inserting the pins 6 and 7 in suitable holes or openings. It is also obvious that various modifications may be 90 adopted without departing from my invention. For instance, the coupling-plate may extend wholly through between the end sections instead of being recessed into the same.

Having thus fully described my invention, 95 what I claim, and desire to secure by Letters Patent, is—

1. The combination of a shelf having a groove in its end, a flat plate inserted in the groove and projecting therefrom and also hav- 100

ing openings in the projecting part, means for securing the plate in the groove, superposed end sections above and below the plate, and dowel-pins connecting said end sections 3 and extending through the openings in the plate.

2. The combination of a shelf having a groove in its end, a flat plate inserted in the groove and projecting therefrom, and having 10 openings in the projecting part, means for detachably securing the plate in the groove, end sections above and below the plate and having a recess to receive the projecting part of the plate, and dowel-pins connecting the 15 end sections and extending through the openings in the plate.

3. The combination of a shelf having a groove in its end, superposed end sections having a recess of the same thickness as the 20 groove, dowel-pins connecting the end sections, a flat plate inserted in the groove and recess, means for detachably securing the plate in the groove, and means for detachably

securing the plate in the recess.

4. The combination of superposed end sections, a flat plate between the end sections and projecting therefrom, dowel-pins connecting the end sections and extending through the plate, hooks on the projecting edge of the 30 plate, a shelf having a groove to receive the projecting portion of the plate, and pins in the shelf to engage the hooks.

5. The combination of end sections superposed and having recesses to receive flat 35 plates, dowel-pins connecting the end sections, flat plates in the recesses and projecting therefrom and also having openings for the dowelpins, hooks on the projecting edges of the plates, a shelf having grooves in its ends to 40 receive the projecting parts of the plates, and pins arranged transversely of the grooves to engage the hooks.

6. The combination of superposed end sections having vertical grooves near the rear, a 45 flat plate between said sections and projecting

therefrom, hooks on the projecting edge of the plate, means for detachably securing the end sections and plate together, a shelf having a groove to receive the plate, pins in the shelf to engage the hooks, and a back inserted in 5° the vertical grooves and engaging the rear of the shelf.

· 7. The combination of superposed end sections having a horizontal recess to receive a plate, dowel-pins connecting said sections and 55 extending through the plate, a flat plate in the recess and projecting therefrom and also having a recess to receive the back, hooks on the projecting edge of the plate, a shelf having a groove to receive the projecting portion 60 of the plate, pins in the shelf to engage the hooks, and a back inserted in the recess of the plate and engaging the rear of the shelf.

8. The combination of end sections superposed and having vertical grooves near their 65 rear, and a horizontal recess at their adjacent ends, a flat plate in the recess and projecting therefrom, and also having a recess opposite the vertical grooves, dowel-pins connecting the end sections and extending through the 7° plate, a shelf having a groove to receive the projecting part of the plate, pins in the shelf to engage the hooks, and a back inserted in the vertical grooves and the recess of the plate, and also engaging the rear of the shelf. 75

9. The combination of superposed end sections, a flat plate between said sections and projecting horizontally inward therefrom, dowel-pins connecting the end sections and extending through the plate, a shelf supported 80 by the inwardly-projecting portion of the plate, and means for attaching the shelf and plate to each other.

In testimony whereof I affix my signature in presence of two witnesses.

ALONZO N. HODGES.

Witnesses:

LUTHER V. MOULTON, GEORGIANA CHACE.