C. A. KESSLER.

FOLDING SHELF.

APPLICATION FILED DEC. 11, 1913.

1,106,569.

Patented Aug. 11, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

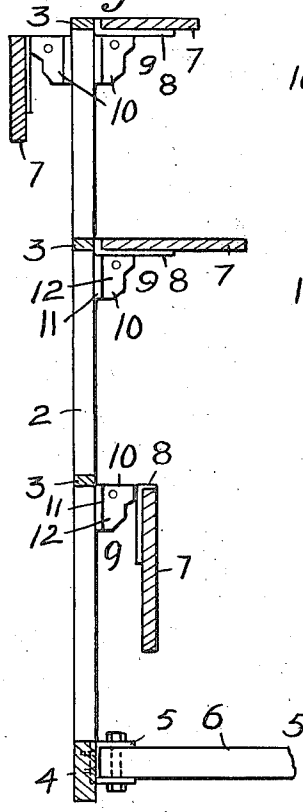


Fig. 2.

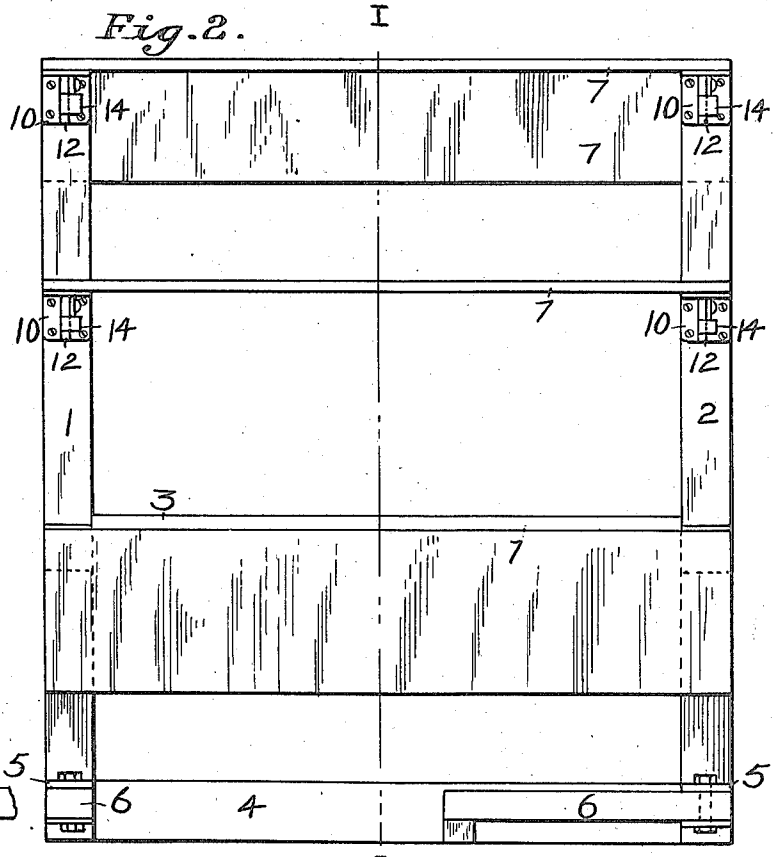


Fig. 3.

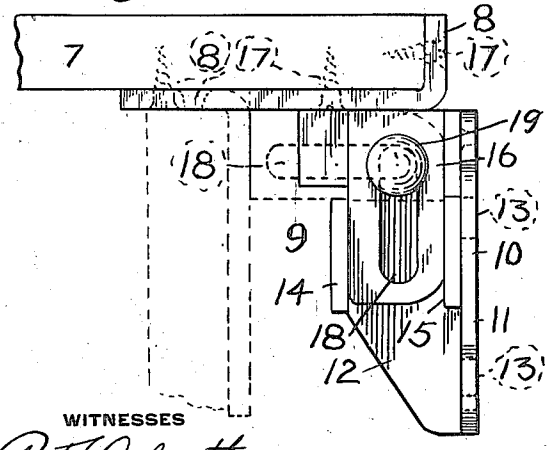
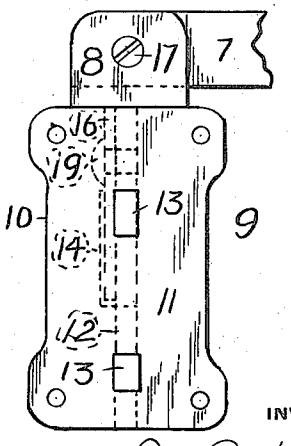


Fig. 4.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 5.

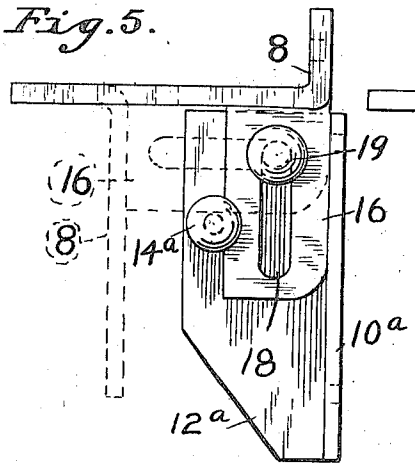


Fig. 6.

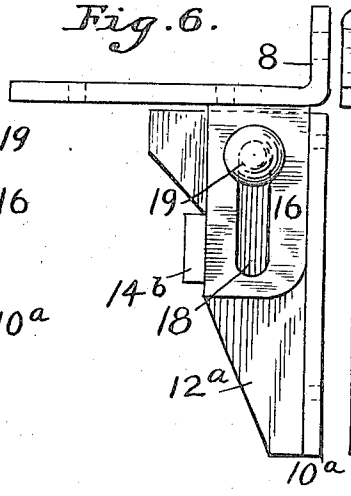
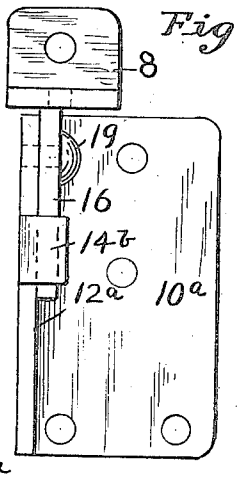


Fig. 7.



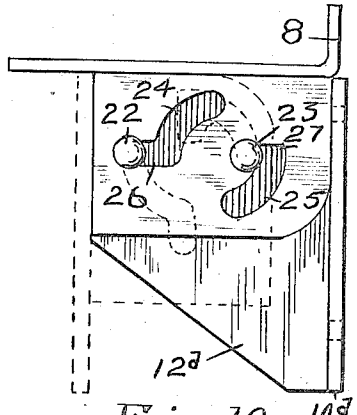


Fig. 10.

Fig. 8

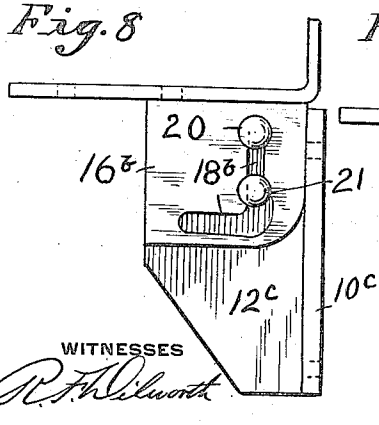
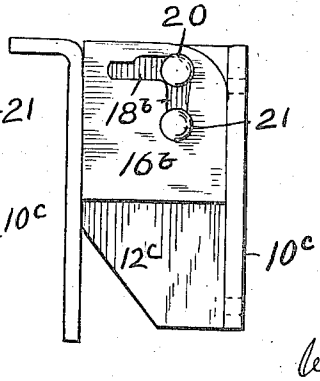


Fig. 9.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES A. KESSLER, OF PITTSBURGH, PENNSYLVANIA.

FOLDING SHELF.

1,106,569. Specification of Letters Patent. Patented Aug. 11, 1914.

Application filed December 11, 1913. Serial No. 805,908.

To all whom it may concern:

Be it known that I, CHARLES A. KESSLER, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented new and useful Improvements in Folding Shelves, of which the following is a specification.

My invention relates to folding shelves, designed especially for display stands for fruit or other objects.

The object of my invention is to provide display stands or analogous structures with folding or collapsible shelves.

A further object is to provide for such stands or structures suitable folding supports.

A still further object is to provide improved hinges for such shelves or other folding objects.

Referring to the accompanying drawings, Figure 1 is a vertical cross-section of a folding stand embodying my invention; Fig. 2, a front view thereof; Fig. 3, an enlarged side view of one of the hinges shown on Figs. 1 and 2; Fig. 4, an elevation of Fig. 3 looking toward the left; Fig. 5, a side view of a second form of hinge; Fig. 6, a side view of a third form of hinge; Fig. 7, a front view of Fig. 6; Fig. 8, a side view of a fourth form of hinge, showing the parts in one position; Fig. 9, a view of the hinge shown in Fig. 8 with the parts in a different position; and Fig. 10, a side view of a fifth form of hinge.

On Figs. 1 and 2, I show a vertical rectangular frame having the vertical end members 1 and 2, connected together by the horizontal members 3 and 4. To the front faces of the members 1 and 2 and near the lower ends thereof, I secure the U-shaped brackets 5, between the free ends of which I pivot the horizontal supports or braces 6, so that the latter can be swung out at right angles to the frame with their outer ends on the floor, ground, or other surface on which the frame stands. The braces 6 may be swung so as to lie parallel with the member 4 when the frame is not in use. I provide the frame with a number of shelves 7, having their ends secured to the movable members 8 of the hinges 9. The fixed members 10 of the hinges are secured to the frame members 1 and 2. Each member 10 comprises the base 11 which is directly secured to the frame members by screws, and the web or flange 12 arranged at right angles to the base 11 and secured thereto by heading down the lugs 13 projecting from the flange through holes in the base. The forward edge of the flange 12 is bent laterally at a right angle to the flange so as to form the front guide or lug 14. The rear edge of the flange 12 next to the base 10 is also bent opposite the lug 14 so as to form a rear guide or lug 15. The lugs 14 and 15 lie on the same side of the web or flange 12. The hinge or member 8 comprises an angle piece of iron or steel having the vertical member 16 secured to the bottom thereof. The shelf 7 is secured to the angle piece by the screws 17. The member 16 is a flat piece of iron or steel arranged parallel and in contact with the flange or web 12 and having the vertical slot 18 for the headed pin 19 which is secured in the web 12, the head of the pin lying over the outer face of the member 16. The lower end of the member 16 lies between the lugs 14 and 15, which guide the same and hold the shelf steady, the lug 15 preventing the member 16 from any tendency to pry the web 12 away from the base 10. By raising the member 8 and thereby causing the member 16 to travel up on the pin 19 until the lower end of the slot engages the said pin, the member 8 may be swung downwardly on the pin 19 as a center, the forward edge of the member finally resting on the top of the lug 14 (dotted lines, Fig. 3), which preferably has its upper end below the pin 19 by a distance equal to the distance between the slot 18 and the front edge of the member 16.

On Fig. 5, I show the base 10^a and the flange 12^a in one piece. I omit the lug 15 and have the member 16 engage the base directly. In the place of the lug 14, I provide the headed pin 14^a secured in the flange 12^a and having its head overlapping the member 16. The operation will be readily understood as it is the same as in Fig. 3. The member 8 is shown folded in dotted lines.

On Figs. 6 and 7, the parts are the same as on Fig. 5 except that the headed pin has been replaced by the lug 14^b, which is practically the same as the lug 14 in Fig. 3.

On Figs. 8 and 9, the base 10^c and flange or web 12^c are substantially as in Fig. 3, but the lug 14 and the pin 19 are replaced by the two pins 20 and 21 arranged one vertically over the other and secured in the

flange 12^c. The member 16^b has the slot 18^b somewhat L-shaped, the slot being enlarged at the angle so that the member 16^b can be swung and slid around on both the pins 20 and 21 from a vertical to a horizontal position, or in the opposite direction.

On Fig. 10, the base 10^d supports the flange or web 12^d which has the two pins 22 and 23 in the slots 24 and 25 in the member 16^c. The slots 24 and 25 are drawn from radii having their center between the said pins so that the slot 24 occupies substantially the upper left quadrant and the slot 25 substantially the lower right quadrant of a circle drawn from the said center. The lower end of the slot 24 and the upper end of the slot 25 have the horizontal extensions 26 and 27, respectively, both extending forwardly or away from the base 10^d. Normally the pins 22 and 23 rest in the extensions 26 and 27. By pulling the member 8 forwardly or to the left, the arc-shaped slots 24 and 25 are brought into registry with the pins 22 and 23, whereupon the member 8 may be rotated to the dotted position.

I claim—

In a folding stand, a frame, a shelf therefor, and a hinge connecting the frame and the shelf, one member of the hinge being secured to the frame and comprising a base, a vertical flange thereon extending at a right angle to the base and provided with two projections at right angles thereto, the second member of the hinge comprising a horizontal portion secured to the shelf and a vertical portion secured to the horizontal portion and provided with at least one slot to receive one of the projections, the other projection coöperating to support the second hinge member when the shelf is folded.

Signed at Pittsburgh, Pa., this 5″ day of December, A. D. 1913.

CHARLES A. KESSLER.

Witnesses:
ALICE E. DUFF,
ELVA STANIEK.