

No. 644,247.

Patented Feb. 27, 1900.

R. L. HENLEY.
DISPLAY STAND.

(Application filed Oct. 2, 1899.)

(No Model.)

3 Sheets—Sheet 1.

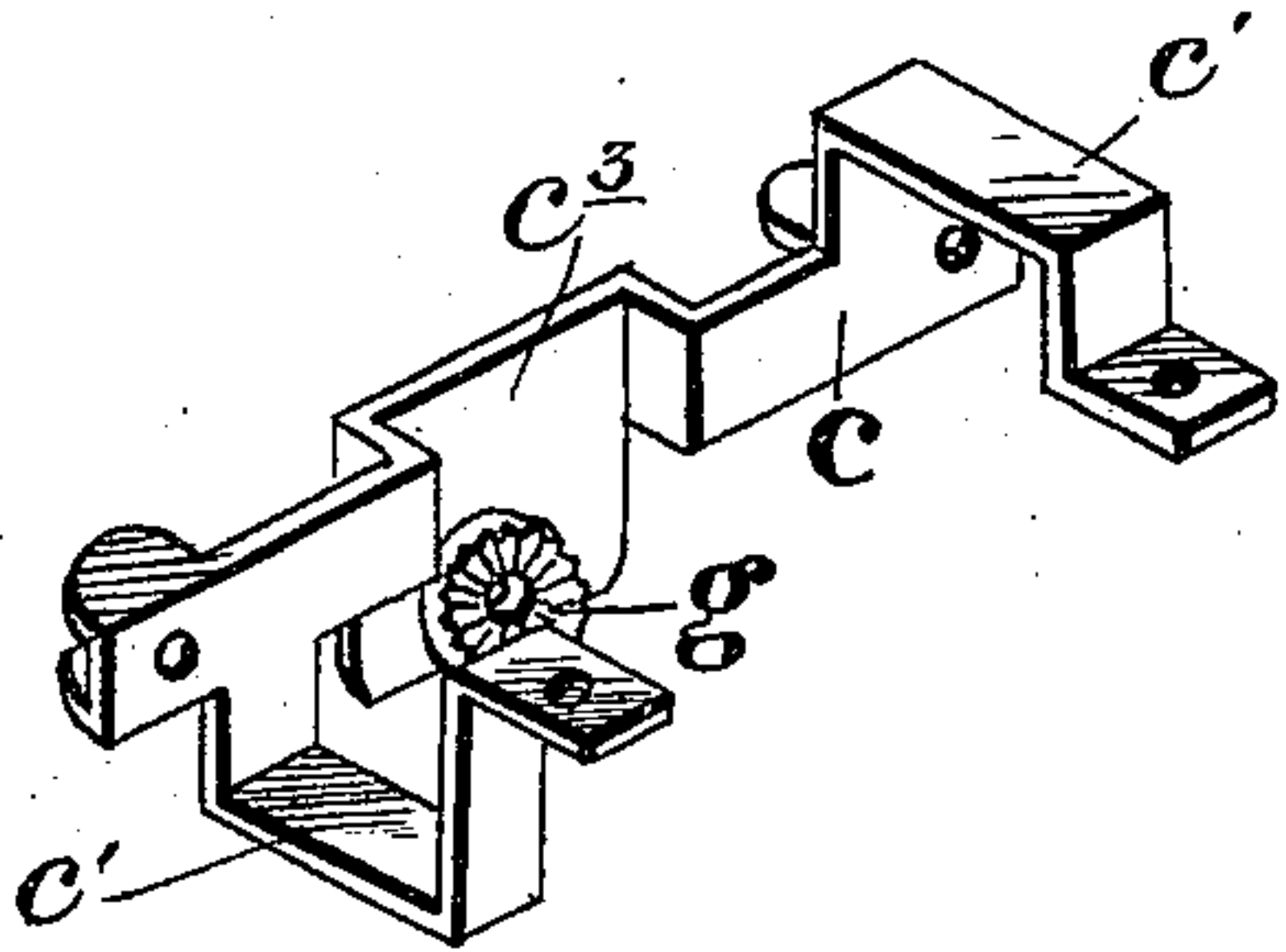


Fig. 4.

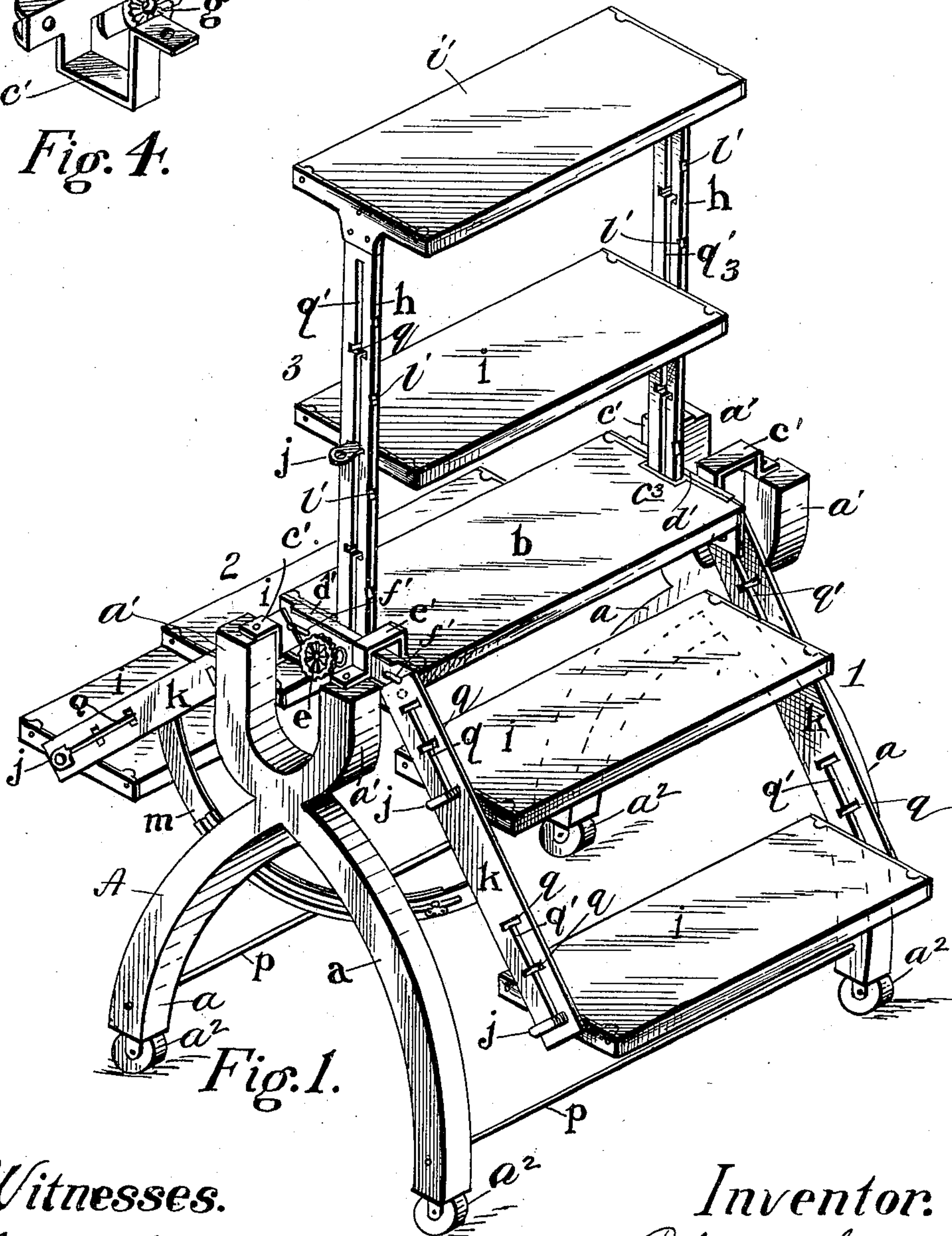


Fig. 1.

Witnesses.

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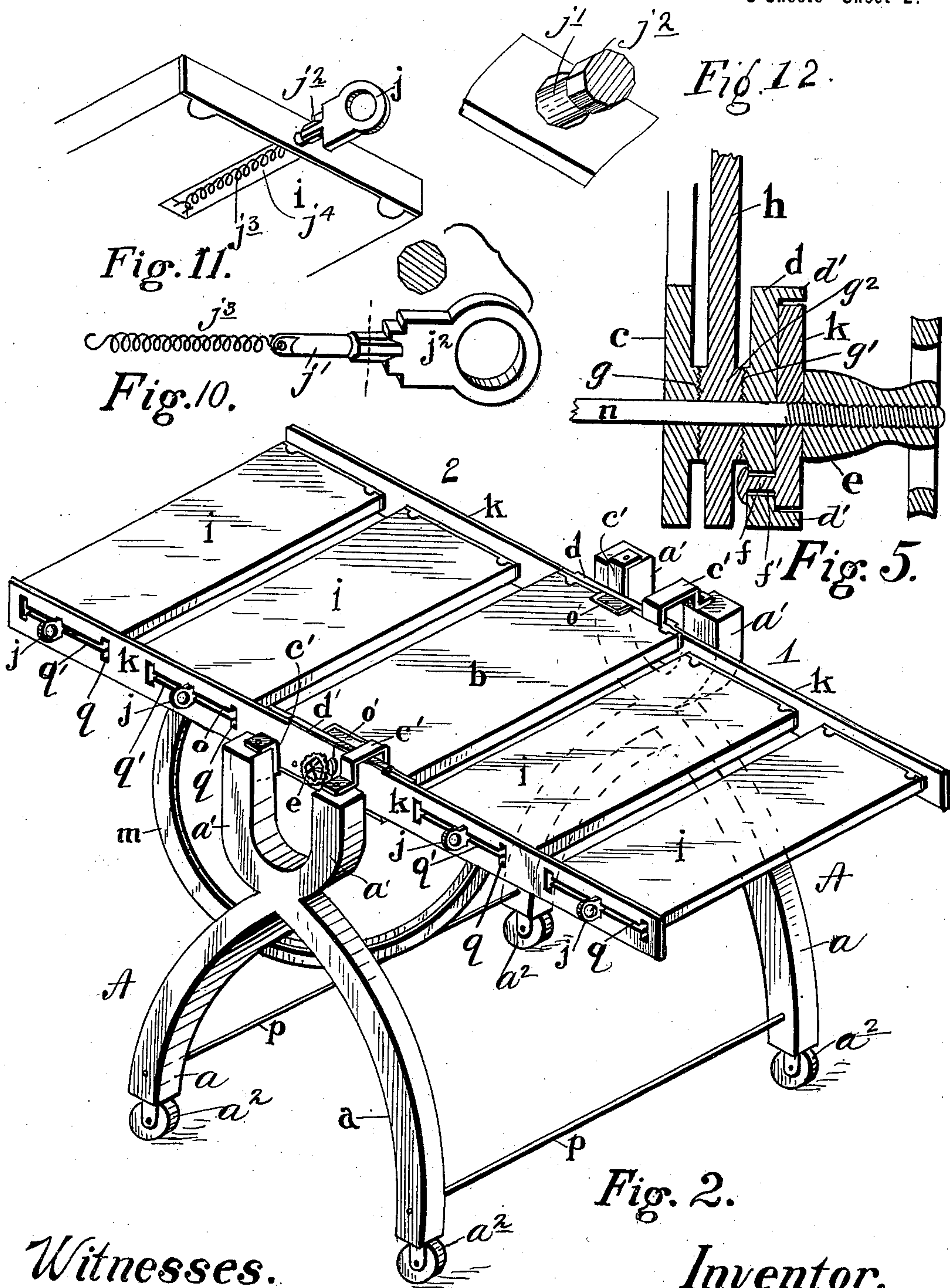
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3 Sheets—Sheet 2.



Witnesses.
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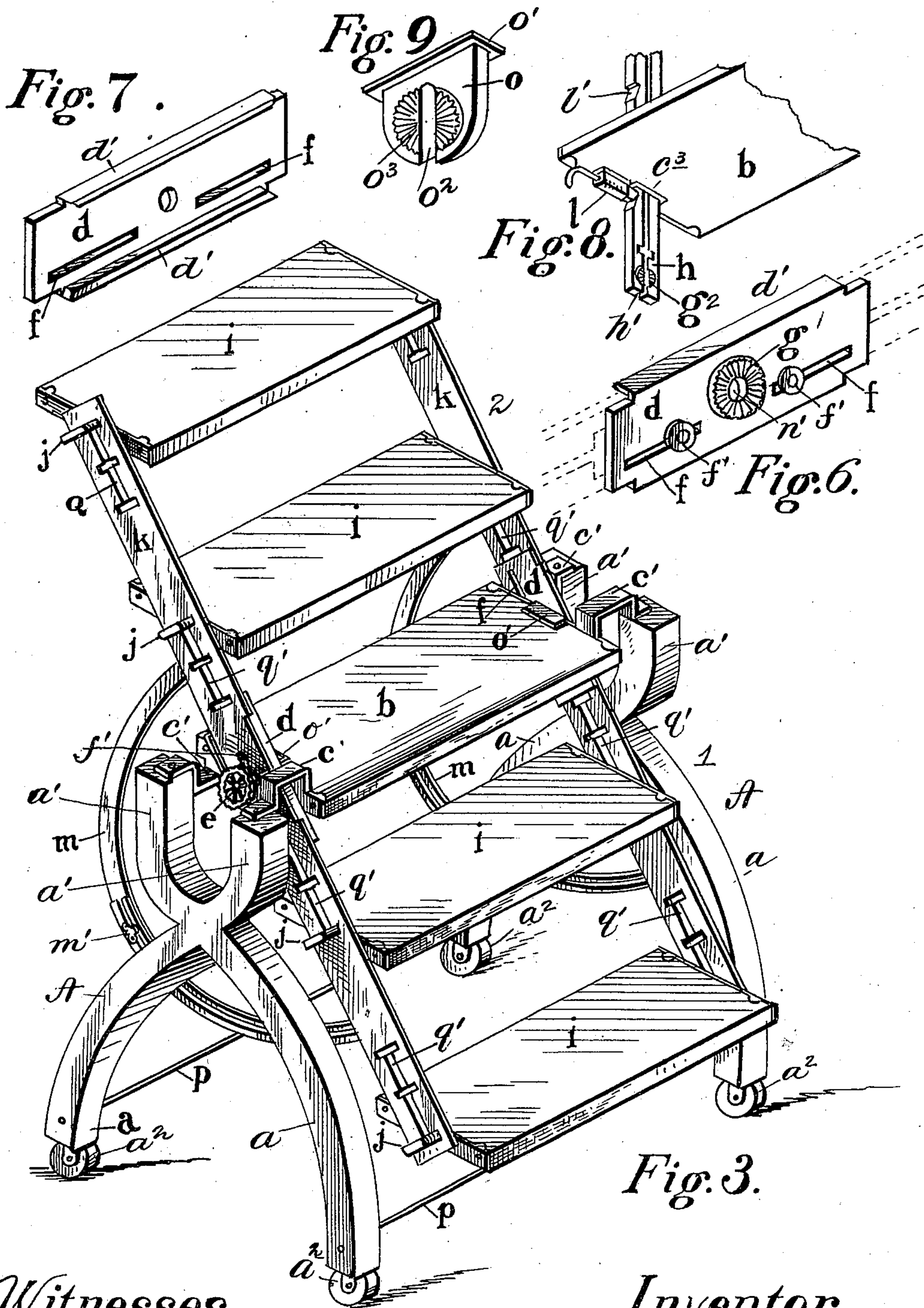
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3 Sheets—Sheet 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

ROBERT L. HENLEY, OF LOUISVILLE, KENTUCKY, ASSIGNOR OF ONE-HALF
TO JAMES H. BUTTON, OF SAME PLACE.

DISPLAY-STAND.

SPECIFICATION forming part of Letters Patent No. 644,247, dated February 27, 1900.

Application filed October 2, 1899. Serial No. 732,269. (No model.)

To all whom it may concern:

Be it known that I, ROBERT L. HENLEY, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Display-Stands; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention has most particular reference to that class of display-stands designed for the use of grocers and embodying shelves upon which may be displayed in an attractive manner samples of the various kinds of goods—canned, bottled, &c.—kept by the user, although it is obvious that its usefulness is not restricted to grocers.

The invention consists in certain peculiarities in the construction of parts and in certain combinations and arrangements of elements, substantially as hereinafter described, and particularly pointed out in the subjoined claims.

The objects of the invention are to provide a display-stand which, considered in its entirety, has the following novel and advantageous characteristics—namely, first, the parts are so mounted as to provide for various adjustments which enable the user radically to change the form of the stand, thus affording opportunities for novel and attractive displays not presented when the stand or its parts are of fixed construction; secondly, the stand is built up of independently-adjustable and separable parts, whereby changes may be made therein to accord with different conditions of place or space where the display is to be made and to suit various different kinds and sizes of goods to be displayed; thirdly, its construction is such as that there are no rods or obstructions of any kind whatsoever in the way of the goods displayed; fourthly, it may be shipped or stored in “knockdown” condition and in most compact form; fifthly, the putting of the stand together for use, the tak-

ing of it apart for storage or transportation, and the adjustments of its parts may be readily accomplished and require no special mechanical skill, and, finally, it is durable, and in comparison with its several capabilities or characteristics above named is of simple and inexpensive construction. These several objects are accomplished by the construction illustrated in the accompanying drawings, which show the preferred embodiment of my invention and in which similar reference characters designate the same parts in the several views.

In said drawings, Figures 1, 2, and 3 are perspective views of a display-stand constructed in accordance with the invention, showing radically-different forms thereof which the parts may be adjusted to produce. Fig. 4 is a detail perspective view of a device which connects the stationary shelf *b* of the stand with the main supports. Fig. 5 is a detail sectional view intended particularly to show the clamping means of the device. Fig. 6 is a detail perspective view of a plate which constitutes one of the members of the clamping means and also serves to connect adjacent ends of two of the display-sections together. Fig. 7 is a perspective view of said plate, showing the side thereof opposite that seen in Fig. 6. Fig. 8 is a detail view of one end of the stationary shelf *b* and a portion of the upright display-section, showing a lock for securing the latter in vertically-adjusted position. Fig. 9 is a detail perspective view of a clamp member which is employed in certain adjustments of the stand and which dispense with the upright display-section. Fig. 10 is a perspective and a sectional view of a bolt upon which one end of a shelf is pivoted, and Figs. 11 and 12 are detail views showing the bolt applied to a shelf.

The main supports of the stand preferably consist of two similar parts *A*, each formed to provide two legs *a a*, converging to each other from their lower ends and surmounted by upwardly-extending diverging arms *a' a'*. The two supports *A* are preferably connected at the base by brace-rods *p p* and mounted on reversible rollers *a*².

The displaying portions proper of the stand

are provided by a plurality (preferably three) of display-sections 1, 2, and 3, mounted to be relatively adjustable, and preferably a stationary shelf *b*, supported in the space which constitutes the junction of the display-sections. Each display-section embodies two side arms *k* or *h*, connected by a plurality of shelves *i*. The arms *k* of sections 1 and 2 are pivotally supported at their upper ends, whereby they may be adjusted to various inclinations or positions with respect to each other and to shelf *b*. The section 3 is mounted to be vertically adjustable, and when it is used its shelves will be above the fixed shelf *b*. The sections are also mounted so as to be independently removable from the stand, whereby when desired less than the entire number of sections may be employed and all may be removed for convenience in storage or transportation. The several shelves *i* are independently pivoted to their respective supporting-arms *k* or *h*, whereby they may be adjusted to various angles with respect to said supporting-arms. By this means the shelves may always be horizontal, regardless of the angle of inclination or position of the supporting-arms, or they may be adjusted to incline from a horizontal without necessitating adjustment of their supporting-arms when it is desired that they assume such position. The shelves are, furthermore, mounted to be adjustable independently to and from each other between their supporting-arms and to be separately removed therefrom when desired.

It will be seen that the construction thus generally described provides a display-stand having capabilities of adjustment which adapt it to display an infinite variety of kinds and sizes of goods and to be changed radically in shape and size to suit the kind of display to be presented or the scheme of display to be carried out and also to present a display which does not depend for its different appearance from that which preceded it upon differences in the goods displayed. It thus affords the greatest opportunities for most radical changes in the characters of the displays and allows the goods to be shown in most attractive manners. In addition to these very important advantages possessed by the invention the changes permissible in the size and shape of the stand enable it to be used in various places the conditions of which demand different styles or sizes, respectively. Furthermore, the separability of the parts enables the stands to be shipped or stored in most compact form, and the construction of the stand is such that when the parts are assembled for use no means are or need be employed which obstruct the view of the display.

The various preferred means devised and employed by me for securing the several parts adjustably and removably in position will now be described.

The stationary shelf *b* is supported in position between the two main supports *A* and with its ends free from contact with the latter by two devices *c*, which are formed or provided with arms *c'*, which span the spaces between the ends of said shelf and supports and are secured to the tops of the latter. Said arms *c'* project from opposite ends of each device *c* and they are bent into U shape or other suitable form, so as to support the shelf in proper position without interfering with adjustability of display-sections 1 and 2 around the same. For the same reason the arms of each device are bent reversely, as shown, one extending upward from one end of its device and the other extending downward from the other end of the same. The portion *c* of each device which connects said arms together is suitably secured to the edge of the shelf *b* and preferably has a set-off portion *c³*, which receives and guides a side arm *h* of the display-section 3, and is formed, as shown at *g*, to constitute locking or clamping members. Two plates *d d'*, which are located in the spaces between the edges of the shelf *b* and the arms *a'* of the main supports *A*, connect the arms *k* of section 1 with the corresponding arms *k* of section 2 and have elongated openings *f* near both ends of each, which receive pivot-pins *f'*, projecting from the ends of said arms, thus permitting pivotal adjustment of said sections and also bodily adjustment of either toward and from the other. Each connecting-plate *d* is mounted to be turned pivotally relatively to shelf *b* and the parts fixedly connected with the latter, and each has flanges *d'*, which engage the edges of the arms *k k* during certain adjustments of the sections 1 and 2 and stiffen the connection of one section with the other at such time. These flanges extend throughout a portion only of the lengths of their respective plates, so as to not interfere with the pivotal adjustments of the sections 1 and 2 when the latter have been adjusted so that their pivot-pins will be in the outer ends of slots *f*. Each of said plates is also formed with a central opening *n'* and with a clamp member *g'*, surrounding said opening. The arms *h* of the display-section 3 extend through the set-off portions *c³* of the devices *c*, and their lower ends are formed with open-ended slots *h'* to permit the section 3 to be applied and removed without removing other parts of the stand which are used therewith, and said lower ends are each formed at both sides with clamp members *g²*, corresponding with the members *g* and *g'*, which they respectively engage. The several clamp members *g*, *g'*, and *g²* are formed similarly to the faces of friction-clutches, which construction is preferred, because it is simple in construction and provides for a maximum number of adjustments of the plates *d d'*. To hold the clamp members in interlocking engagement with each other and permit them readily to

be released, I prefer to employ a locking rod or bolt n , which extends from one side of the stand to the other through the openings formed in the clamp members g , g' , and g^2 and is provided at its ends with adjustable nuts or heads e , as indicated.

Secured to the under side of the fixed shelf b are dogs l , (preferably spring-pressed,) which engage depressions or teeth l' in the edges of the arms h and operate to hold the section 3 in place. Preferably each arm has a series of said depressions or teeth which permit it to be held in vertically-adjustable positions.

The outer portions of arms k k of the sections 1 and 2 are connected by a pair of curved braces m , each formed of two parts, having a slidable or telescopic engagement with each other and provided with a clamp-screw m' or other suitable means for holding them in adjusted position.

The construction thus far described provides, as will be seen, for the adjustment of the several display-sections 1, 2, and 3 to various relative angles or positions and for the removal of section 3 without interfering with sections 1 and 2. In Fig. 9 is shown a device o , which is interchangeable with section 3 and is used (when the latter is not employed) to render the clamping means complete. Said device o consists of a plate having flanges o' at its top, by which it is supported in the set-off portions c^3 of the devices c , and formed with openings o^2 , through which the locking-bolt n extends, and with clamp members o^3 at both sides to engage clamp members g and g' .

It will be observed that when the parts are in the position shown in Fig. 1 the clamp will operate to lock the lower ends of the arms of section 3 rigidly between devices c and plates d and will also lock said plates d against a tendency to accidental movement, which might not be completely overcome by the braces m . It will also be observed that when the three sections 1, 2, and 3 are used and sections 1 and 2 are adjusted to horizontal position the confronting ends of the arms of said sections 1 and 2 will occupy positions in which they (approximately or really) touch each other and that when they are in said position the heads e of the locking-bolts n will span the space between or junction of said confronting ends and engage the latter and lock them tightly against the surfaces of said plates d , whereby in such event the clamp will not only lock section 3 and plates d in place, but will further assist the braces m in holding sections 1 and 2 rigidly in said horizontal position. Similarly if the section 3 is not being used for the time being and sections 1 and 2 are adjusted to relative positions, such as shown in Figs. 2 and 3, the clamp will serve both to lock the plates d and the arms of the sections rigidly in adjusted positions. Finally it will be seen that the clamping means is so located as to be common to the arms of the several sections.

To permit independent adjustment of the several shelves i to various angles or positions with relation to the arms, each of said shelves is pivotally connected with the arms of its section and has clamping devices for holding it in adjusted position. The pivoting and clamping means employed by me consist of bolts j , having reduced rounded portions j' and angular ends j^2 . The angular parts of these bolts extend through angular openings q in the side arms h or k and correspondingly-formed openings in the ends of the shelves, and their inner ends are attached to springs j^3 , located in sockets j^4 , provided in the ends of the shelves i therefor. By pulling the bolts outward so as to free the angular portions thereof from the correspondingly-shaped openings in the ends of the shelves and side arms h or k the shelves may be adjusted pivotally to the desired position, and when said position is secured the bolts are released and they are caused to return to their normal position by the actions of their springs, thus locking the shelves in adjusted position. To the end that the shelves may also be adjusted farther from or nearer to each other, so as to change the distance between shelves without removing any from the stand, there is a plurality of openings q for each shelf normally used, and said openings q are connected in series by slots q' ; but removal of the shelves from the sections for storage purposes or independently of each other to change the number thereof in the respective sections may also be provided for and is accomplished in this construction simply by connecting the bolts with the springs in such manner as that they may readily be detached from each other, as shown in Fig. 10. The angular portion of each bolt is preferably ten-sided, thus providing for holding the shelves in a great number of different positions of pivotal adjustment.

From the above the various advantages of my invention will readily be seen, and it will also be understood that while the detail embodiment thereof is quite advantageous, yet the invention is not in all respects limited thereto and that the details of construction may be changed without departing from the spirit of the invention or going outside the bounds of its scope.

Having thus described the invention, what I believe to be new, and desire to secure by Letters Patent, is—

1. A display-stand, comprising a main support, three display-sections having side arms projecting in different directions, plates connecting contiguous ends of the arms of two sections, and clamping devices for locking said plates and the arms of the third section together, substantially as described.

2. A display-stand, comprising main supports, a shelf fixed in position between said supports and with spaces between its ends and said supports, a plurality of display-sections having side arms projecting into said spaces, plates connecting together contiguous ends of

the arms of two of said sections, and clamping devices for locking said plates to contiguous arms of a third section and for locking the latter arms between said plates and the ends of the fixed shelf.

3. A display-stand, comprising a main support, a plurality of display-sections having side arms, pivoted plates connecting adjacent ends of said side arms with each other, and means for locking said pivoted plates in adjusted position.

4. A display-stand, comprising a main support, and a plurality of display-sections supported thereby, each of said display-sections embodying supporting-arms and shelves connecting said arms together and being mounted to have pivotal and bodily adjustments, substantially as described.

5. A display-stand, comprising a main support, and a plurality of display-sections supported thereby, two of said display-sections being adjustable pivotally at opposite sides of the base of a third section, and each of said display-sections embodying supporting-arms and shelves connecting said arms together, substantially as described.

6. A display-stand, comprising a main support, and a plurality of display-sections supported thereby, two of said display-sections being adjustable pivotally at opposite sides of the base of a third section and said third section being removable, and each of said display-sections embodying supporting-arms and shelves connecting said arms together, substantially as described.

7. A display-stand comprising a main support, and a plurality of display-sections supported thereby, one of said display-sections being removable and the other sections having pivotal and bodily adjustments, as described, said other sections being provided with pivoted shelves, all for the purposes specified.

8. A display-stand, comprising a main support, a plurality of display-sections having side arms, plates to which contiguous ends of said arms are secured, clamp members carried by said plates, double-face clamp members, one face of each of which engages the clamp member on the adjacent plate, clamp members to engage the other faces of the double-faced members, and means for locking said clamp members together.

9. A display-stand, comprising a main support, a plurality of pivotally and bodily adjustable display-sections, pivoted plates connecting one display-section with another, and means for locking said plates in adjusted position.

10. A display-stand, comprising a main support, a fixed shelf, and pivotally-mounted display-sections having means for holding them in any one of several positions, each display-section having side arms and pivoted shelves having means for securing them in any one of several positions of pivotal adjustment.

11. A display-stand, comprising a main support, a fixed shelf, pivoted display-sections at opposite sides of said fixed shelf, and a removable display-section above said shelf, each display-section comprising side arms and shelves, and the shelves of the pivoted sections being pivotally adjustable.

12. A display-stand, comprising a main support, a fixed shelf, pivotally and bodily adjustable sections at opposite sides of said fixed shelf, and a removable display-section projecting above said shelf.

13. A display-stand, comprising a main support, a fixed shelf, pivotally and bodily adjustable display-sections at opposite sides of said fixed shelf, each of said sections having adjustable shelves, and a removable display-section projecting above said fixed shelf.

14. A display-stand, comprising a main support, pivoted plates, means for clamping said plates in adjusted position, and a plurality of display-sections carried by said plates, said sections having side arms, pivoted to opposite ends of said plates and adjustable to and from each other bodily thereon.

15. A display-stand, comprising a main support, pivoted plates, a plurality of display-sections, having side arms pivoted to opposite ends of said plates and adjustable to and from each other bodily thereon, means for clamping said arms in pivotally-adjusted position, and means for clamping the plates in adjusted position and for clamping contiguous ends of the side arms to said plates in certain adjustments of the arms, substantially as described.

16. A display-stand, having supporting-legs, a fixed shelf in the space between the upper ends of said legs, bent arms securing said shelf to the legs, and adjustable display-sections having side arms in the spaces spanned by said bent arms.

17. A display-stand, having display-sections constructed with side arms, and plates connecting the arms of one section with the companion arms of the other section, said arms having pivot-pins and said plates having elongated openings for said pivot-pins, substantially as described.

18. A display-stand, comprising main supports, a plurality of display-sections having side arms, and pivotally-mounted plates connecting the arms of one section with the companion arms of the other section, said arms having pivot-pins and said plates having elongated openings for said pivot-pins, substantially as described and for the purposes set forth.

19. A display-stand, comprising main supports, a plurality of pivotally and bodily adjustable display-sections, adjustable plates connecting one display-section with the other, said plates having flanges to engage edges of the sections, and means for clamping the sections in adjusted position.

20. A display-stand, comprising main supports, a plurality of pivotally and bodily adjustable display-sections, adjustable plates

connecting one display-section with the other, means for clamping said sections in adjusted positions, said sections having pivotally-adjustable shelves and clamping means therefor, substantially as described and for the purposes set forth.

21. A display-stand, comprising main supports, a fixed shelf, mounted between the upper ends of said supports, a plurality of display-sections, projecting in different directions from said fixed shelf and having side arms extending toward each other and into spaces between the ends of the fixed shelf and the main supports, and clamping means for locking the contiguous ends of said arms together, in said spaces.

22. A display-stand, comprising main supports, a fixed shelf, mounted between the upper ends of said supports, a plurality of display-sections projecting in different directions and having side arms extending toward each other and into spaces between the ends of the fixed shelf and the main supports, plates connecting together contiguous ends of the arms of two sections, means for pivoting said arms upon said plates and for permitting the arms to be adjusted toward and from each other bodily on said plates, and clamping means for said arms.

23. A display-stand, comprising a main support, a display-section having side arms projecting above said support and provided with shelves connecting its arms together, pivoted plates engaging the lower ends of said arms, side arms pivoted to opposite ends of said plates and adjustable to and from each other bodily thereon, pivoted shelves connecting the latter arms together in pairs, and clamping means for locking the plates adjustably to the lower ends of the first-mentioned arms and for locking the other arms to the plates in certain positions of bodily adjustment of said arms, substantially as described.

24. A display-stand, comprising main supports, a display-section having arms at its sides, each arm provided with clamp members at both sides, plates having clamp members engaging those on the outersides of said arms, clamp members engaging those on the inner sides of said arms, means for locking the clamp members together, and display-sections having arms pivoted to said plates.

25. A display-stand, comprising main supports, a display-section having arms at its sides, each arm provided with clamp members at both sides, plates having clamp members engaging those on the outersides of said arms, clamp members engaging those on the inner sides of said arms, means for locking the clamp members together, and display-sections having arms pivoted to said plates and pivoted shelves connecting their arms together.

26. A display-stand, comprising main supports, a fixed shelf, means supporting said fixed shelf between said supports, each of said means having arms projecting from the shelf to the adjacent support and a clamp member

between said arms, plates having clamp members, display-sections having side arms pivotally connected with said plates, a display-section having side arms each formed at its lower end with a clamp member at each side, and means for forcing the clamp members into interlocking engagement with each other.

27. A display-stand, comprising a main support, a plurality of display-sections supported thereby, one of said display-sections being removable, and the other sections having pivotal and bodily adjustments and provided with pivotally-mounted shelves, said sections having arms approaching each other, clamping means for locking said arms together.

28. A display-stand, comprising main supports, a fixed shelf, means supporting said fixed shelf between said main supports, each of said means having arms projecting from the shelf to the adjacent support and a clamp member between said arms, pivotally-mounted plates each having a clamp member, pivotally and bodily adjustable display-sections having side arms connected by said plates, and provided with pivotally-mounted shelves, a removable display-section having side arms formed at the lower ends with open-ended slots and clamp members at both sides of each arm, and a rod extending through the clamp members and provided with means for forcing the clamp members into interlocking engagement.

29. A display-stand, comprising a main support and a plurality of relatively-adjustable display-sections, each of said sections having a series of pivoted shelves, means for permitting the shelves to be adjusted bodily toward and from each other, and means for securing the shelves in adjusted position.

30. A display-stand, provided with side arms and shelves connecting said arms together, said arms and shelves having angular openings and bolts having angular sections removably engaged with the angular openings in the shelves and arms, and serving to lock said shelves adjustably to the arms, substantially as described.

31. A display-stand, provided with side arms and shelves connecting said arms together, said arms and shelves having angular openings, bolts having angular sections removably engaged with the angular openings in the shelves and arms, said bolts having reduced inner ends, and springs for attaching said bolts to the shelves so as to permit disengagement of the angular sections thereof from said openings.

32. A display-stand, provided with side arms, having angular openings connected together in series, shelves connecting said arms and having angular openings, and bolts having angular sections removably engaged with said openings in the arms and shelves, said bolts also having reduced inner ends located in the openings in the shelves and serving as pivots for the shelves when the angular sections of the bolts are disengaged from said

openings, substantially as described, whereby the shelves are adjustable pivotally and bodily, as specified.

33. A display-stand, having a main support, and a pivoted display-section, comprising side arms having angular openings connected together in series by slots, shelves connecting said arms together and having angular openings, bolts having angular sections removably engaged with said angular openings, and also having reduced inner ends located in the openings in the shelves and serving as pivots when the angular sections of the bolts are disengaged from said openings, and springs connecting said inner ends of the bolts with the shelves.

34. A display-stand, comprising main supports, a fixed shelf between the upper ends of said main supports, a plurality of display-sections mounted to be adjustable pivotally and bodily as described; each of said sections comprising slotted side arms, shelves between said arms having angular openings, and bolts connecting the shelves with the arms, said bolts being longitudinally movable and having round and angular sections, as specified.

35. A display-stand, comprising main supports, pivotally-adjustable plates, and display-sections, having side arms with confronting ends secured to said plates, and shelves pivoted between said arms.

36. A display-stand, comprising main supports, pivotally-adjustable plates, display-sections having side arms with their confronting ends connected by said plates, each of said sections also having shelves pivoted between its arms and means for fixing the shelves in adjusted positions, and clamps, securing said plates in adjusted positions and also fixing the confronting ends of the side arms to said plates.

37. A display-stand, comprising main supports, pivotally-adjustable plates having clamp members, display-sections having side arms with their confronting ends connected by said plates and shelves pivoted between the arms of each section, means for pivoting said arms to opposite ends of the plates and for permitting the arms to be adjusted bodily toward and from the centers of the plates,

clamp members to engage those on the plates, and a locking-bolt extending through said plates and clamp members and having heads to engage the confronting ends of said arms in certain adjustments of the sections.

38. A display-section, comprising main supports, plates adjacent to the upper ends thereof, having clamp members, clamp members adjacent thereto, a display-section, means for causing said members to clamp the lower ends of said section between them, and display-sections having side arms attached to said plates and connected thereby.

39. A display-stand, comprising main supports, plates adjacent to the upper ends thereof, having clamp members, clamp members adjacent thereto, a display-section having arms projecting between said clamp members and formed to interlock therewith, locking-bolts to secure said clamp members and arms together, and display-sections having side arms attached to said plates and connected thereby.

40. A display-stand, comprising main supports, pivotally-mounted plates adjacent thereto, having clamp members, clamp members adjacent thereto, a display-section, having arms projecting between said clamp members and formed to interlock therewith, display-sections projecting from opposite ends of said plates, means for pivoting the latter sections to the plates and for permitting them to be adjusted toward and from the centers thereof, and a locking-bolt extending through the clamp members and having heads at its outer ends, substantially as described and for the purpose set forth.

41. A display-stand, comprising main supports, a fixed shelf, display-sections having arms projecting in different directions from opposite ends of said shelf, means for securing the arms of the several sections together, and dogs secured to said shelf for engaging the arms of one section.

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

ROBERT L. HENLEY.

Witnesses:

JOSEPH SHORT,
W. S. HOGUE.