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A. CROSSMAN & A. V. MARTIN.

SUPPORTING DEVICE FOR CLOTHES HORSES, &c.

APPLICATION FILED NOV. 9, 1903.

NO MODEL.

Fig. 1.

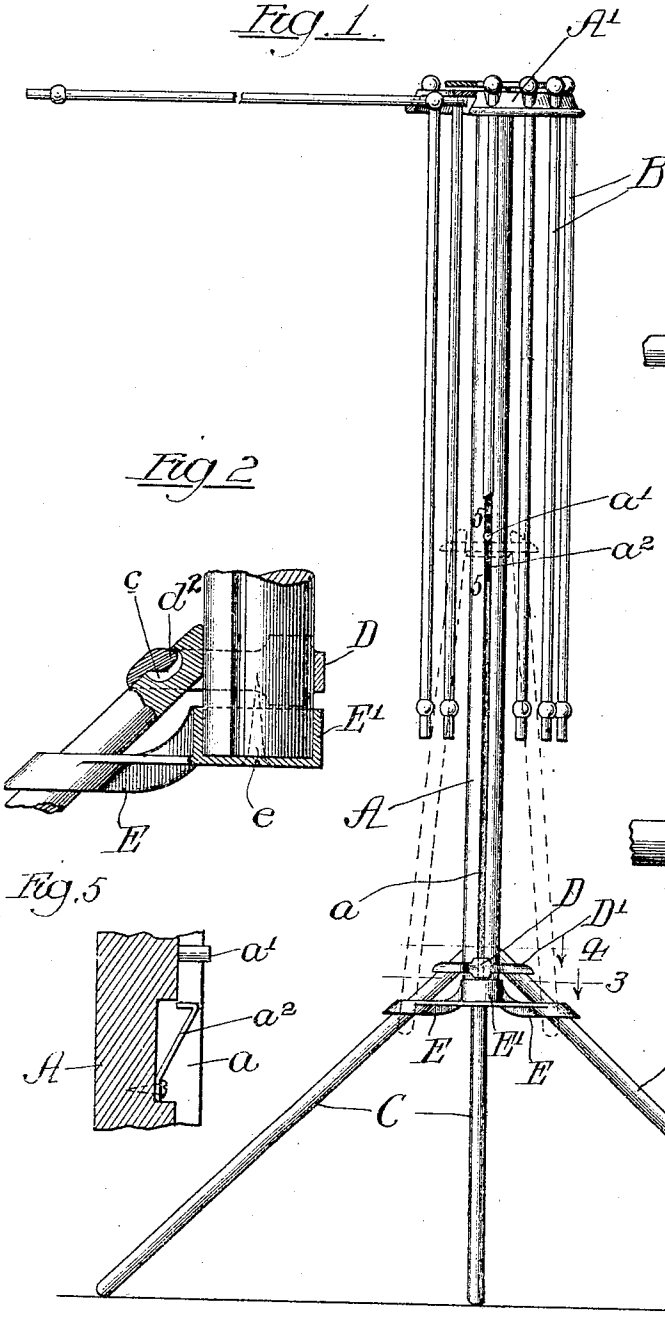


Fig. 3

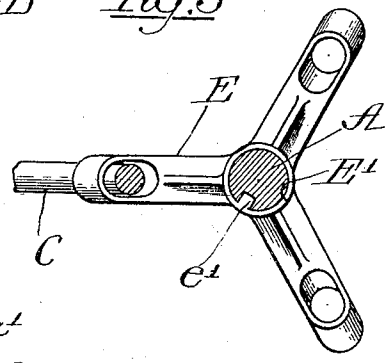


Fig. 2

Fig. 4

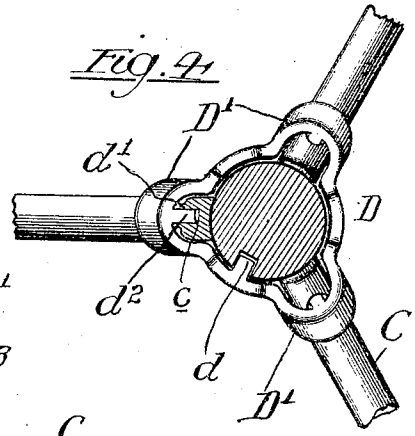


Fig. 5

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UNITED STATES PATENT OFFICE.

ABNER CROSSMAN AND ANSON VERE MARTIN, OF CHICAGO, ILLINOIS.

SUPPORTING DEVICE FOR CLOTHES-HORSES, &c.

SPECIFICATION forming part of Letters Patent No. 773,787, dated November 1, 1904.

Application filed November 9, 1903. Serial No. 180,379. (No model.)

To all whom it may concern:

Be it known that we, ABNER CROSSMAN and ANSON VERE MARTIN, citizens of the United States, and residents of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Supporting Devices for Clothes-Horses, &c.; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to a novel support for a clothes-horse, table, and the like, and refers more specifically to the novel construction of such support, whereby the supporting-legs forming part thereof may be folded or closed in compact form when not in use upon or against the standard of the clothes-horse, table, or the part to which they are attached.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

Our invention is herein shown as applied to a clothes-horse of that class embracing a rotative head supported on a vertical standard and provided with a plurality of hanging arms which are supported in suitable openings in the head and which when not in use hang vertically around the standard and are adapted to be drawn upwardly through said openings to assume horizontal radial positions.

As shown in the drawings, Figure 1 is a side elevation with parts broken away of a clothes-horse provided with a support or base made in accordance with our invention. Fig. 2 is an enlarged fragmentary view showing the manner of connecting the legs with the standard. Fig. 3 is a horizontal section taken on line 3 3 of Fig. 1 with parts omitted. Fig. 4 is an enlarged section taken on line 4 4 of Fig. 1 with parts shown in section. Fig. 5 is a detail section taken on line 5 5 of Fig. 1.

As shown in said drawings, A designates the vertical post or standard of the clothes-horse, A′ a rotative head thereon, and B B a plurality of hanging bars or arms which hang downwardly through openings at the margin of said head when not in use, around the standard A, and are adapted to be pulled upwardly and radially from said head to assume horizontal positions, as shown at the right hand of Fig. 1. The manner of constructing the head and attaching the arms thereto and the head to the standard constitutes no part of the present invention and need not be further described. It will be furthermore observed that the standard A may constitute the standard of a table or other article.

C C designate a plurality of supporting-legs which are loosely connected at their upper ends with the standard and diverge downwardly and outwardly when open to support the article of which the standard A constitutes a part and are adapted to be closed or folded upon the standard, as indicated in dotted lines in Fig. 1, when the article is not in use. As herein shown, three legs are employed and constitute a tripod-support; but more than three legs may be used when preferred or required.

Referring now to the devices for loosely connecting the legs with the standard and the construction whereby said legs are held rigidly in their open position and whereby they are permitted to close or fold upon the standard, said parts are made as follows:

D designates a ring or sleeve, preferably made of cast metal, which surrounds the lower end of the standard A and is adapted to slide vertically thereon. Said ring is held non-rotative on the standard, and a convenient way to accomplish this is to provide the ring with a radial lug *d*, Fig. 4, to engage a longitudinal groove *a* of the standard A. The ring is provided with a number of radial arms D′ equal to the number of legs C, (three being shown in the present instance,) which are apertured or made of looped form to provide vertical openings *d*′, adapted to receive the upper ends of said legs C. Said arms are provided at the outer sides of said openings *d* with radially inwardly extending lugs *d*², which are adapted when the legs are seated in said openings to engage outwardly-opening notches *c* in the outer side faces at the upper end of said legs C, as more clearly shown in Figs. 2 and 4. The construction described constitutes a loose

or hinged connection between the legs and ring D, and said parts are so fitted as to permit the legs to assume their inclined or open positions or to be folded against the standard when closed in positions generally parallel with the standard.

The legs are held rigidly in their open position by means of guide-arms E E, located below the ring D and provided with openings through which the legs extend. Said arms are attached to or formed integral with a socket-piece D′, which fits upon the lower end of the standard A. Said socket-piece and arms are herein shown as made of a single casting, but may be otherwise made. The socket-piece is attached to the standard by means of a screw *e*, (shown in dotted lines in Fig. 2,) which extends upwardly therethrough and into the lower end of the standard, and the socket-piece is held non-rotative on the standard by means of a radial lug *e′* thereon, which engages the groove *a* of the standard. The openings in the said guide-arms E are outwardly and downwardly inclined, as shown in Figs. 2 and 3, and the legs C fit somewhat loosely in said openings to permit the necessary movement of the legs with respect to said guide-arms when the legs are being opened and closed.

The ring D, to which the legs are loosely connected at their upper ends, rests against the socket-piece when the legs are open, as more clearly shown in Figs. 1 and 2, said socket-piece constituting a stop which arrests the downward movement of said ring D. By reason of the fact that said ring D and the socket-piece are held non-rotative on the standard and the further fact that the legs are engaged by said guide-arms E below said ring the legs are held firmly in their open positions and prevented from twisting and racking with respect to the standard, so as to constitute a substantial support for the article of which the standard performs a part. Furthermore, by reason of the inclination of the legs to the standard the ring D is prevented from sliding upwardly on the standard when weight is brought thereon in a manner to collapse or close the support.

When the legs of the support are to be closed or folded, the ring D is slid upwardly on the standard A, thereby drawing the legs through the guide-arms until they reach the positions shown in dotted lines in Fig. 1. A stop is provided which arrests the upward movement of the ring D before the lower ends of the legs are drawn out of the openings in the guide-arms. A convenient form of stop is the pin or nail *a′*, (shown in Figs. 1 and 5,) which is inserted into an opening in the bottom of the groove *a* and against which the upper margin of the ring D strikes. It will be observed that the longitudinal external groove of the standard extends throughout its length, and this is done for the reason that the groove may be formed in a cylindric bar of sufficient length from which to form a number of standards or posts, said bar being thereafter cut into the lengths desired. This not only facilitates the manufacture of the standards, but cheapens their cost. If the stop is to be located in the groove therefor, it is necessary that it be a part, such as the pin *a′*, which is inserted into said groove, and this is a convenient and preferred location of the stop, inasmuch as it avoids having a part for this purpose which projects from the standard. In order to hold the parts in their closed position, a spring-latch a^2, Fig. 5, may be provided, which is seated in a notch in the bottom of the groove *a*, said latch having the general form of an umbrella-latch. The ring may, however, fit sufficiently close upon the standard to prevent the legs sliding down by their own weight from their closed position, in which event latch a^2 or its equivalent device may be omitted.

In assembling the parts the legs are first inserted with their upper ends into the openings of the arms D′ of the sleeve D, with the lugs d^2 of said arms engaging the notches *c* of the legs. Thereafter while the legs hang vertically from the ring D the ring is slipped upon the lower end of the standard A and moved to the position shown by dotted lines in Fig. 1. The socketed base-piece and guide-arms are then fitted in place, the apertured arms E thereof being slipped over the lower ends of the legs.

While the constructions of the several parts shown are preferred constructions, it is to be observed that changes in the structural details may be made without departing from the spirit of the invention, and we do not wish to be limited to the specific details excepting as hereinafter made the subject of specific claims.

The provision of the ring D, having the integral radially-extending lugs d^2 in the openings of the arms thereof, is of considerable practical advantage, for the reason that it avoids the necessity for providing and mounting in said ring pivot-pins or like devices by which the legs may be loosely connected with the ring. This construction not only shortens the time necessary to assemble the device as compared with the construction last mentioned, but also greatly lessens the cost of its production and, furthermore, avoids the liability of the parts becoming loosened or detached by reason of improper or careless use thereof. It will be noted that with the construction described of the ring D, to which the legs are loosely connected, and the guides E such parts are assembled and fastened in place with the use of but a single screw, said screw being employed to fasten the guides in place, as shown in Fig. 2.

We claim as our invention—

1. The combination with a vertical standard, of a support therefor, comprising a ring which surrounds and has sliding engagement with the standard, legs loosely connected at their upper ends to said ring, guide-arms affixed to the standard below said ring and having openings through which said legs slide, said standard being provided with an external, longitudinal groove and said ring having a lug which engages said groove, and a stop located in said groove against which the lug strikes to limit the upward movement of said ring.

2. The combination with a vertical standard, of a support therefor comprising a ring which surrounds and has sliding, non-rotative engagement with the standard, and provided with vertical openings, integral lugs projecting into said openings, legs fitted at their upper ends in said openings, and provided in their outer faces with notches adapted to receive said lugs, and guides for said legs affixed to the standard below said ring.

3. The combination with a vertical standard, of a support therefor comprising a ring surrounding and having sliding, non-rotative engagement with the standard, and provided with openings and with integral lugs extending radially into said openings from the outer sides thereof, legs provided at the outer faces of their upper ends with notches and which are inserted at their upper ends in said openings with said lugs fitted into the notches therein, said legs bearing at their upper ends, when in their open positions, against said standard, and guides for said legs below said ring.

4. The combination with a vertical standard, of a support therefor comprising a ring which surrounds and has sliding engagement with the standard, said standard being provided with an exterior longitudinal groove, and the ring with an interior radial lug adapted to engage and slide in said groove, said ring being provided with a plurality of radial arms having vertical openings and the arms being provided at their outer ends with integral lugs which extend radially into said openings, legs fitting at their upper ends in said openings of the arms and provided in their outer faces with notches within which said lugs fit, said legs being adapted to engage, when in their open positions, the standard above said lugs and a guide attached to the standard below said ring and provided with a plurality of openings through which said legs slide.

5. In a support for the purpose set forth, the combination with the standard A, of the ring D slidable thereon, and having the arms D′ provided therein with the openings d' and the lugs d^2 and the legs C provided with the sockets c engaged by said lugs d^2.

6. The combination with a vertical standard provided with an exterior, longitudinal groove extending from end to end thereof, of a ring which has sliding engagement with the standard, and is provided with an internal, radial lug adapted to engage and slide in said groove, legs loosely connected at their upper ends with said ring, and a guide affixed to the standard below said ring and provided with openings through which said legs slide.

In testimony that we claim the foregoing as our invention we affix our signatures, in presence of two witnesses, this 23d day of October, A. D. 1903.

ABNER CROSSMAN.
ANSON VERE MARTIN.

Witnesses:
WILLIAM L. HALL,
GEORGE R. WILKINS.