No. 720,900. PATENTED FEB. 17, 1903.

G. H. DORR.

FOCUSING HOOD

APPLICATION FILED NOV. 25, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

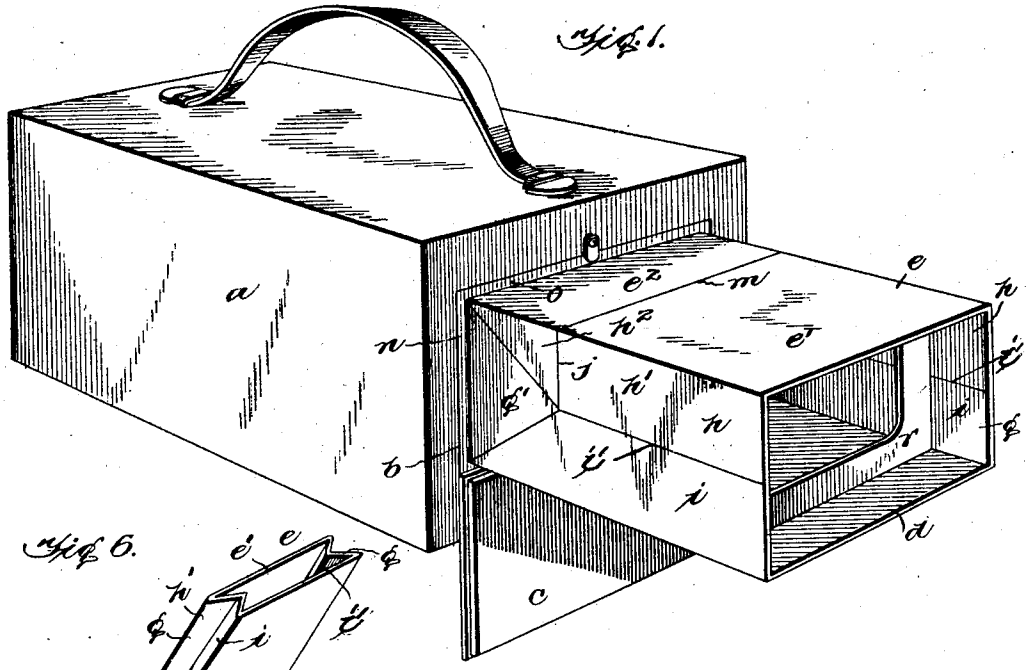


Fig. 6.

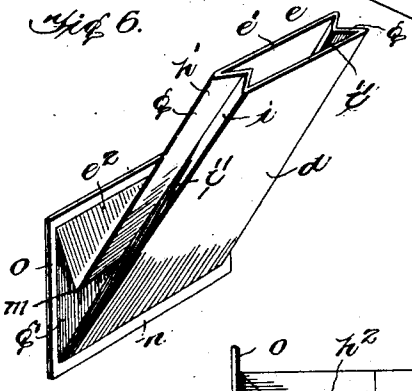
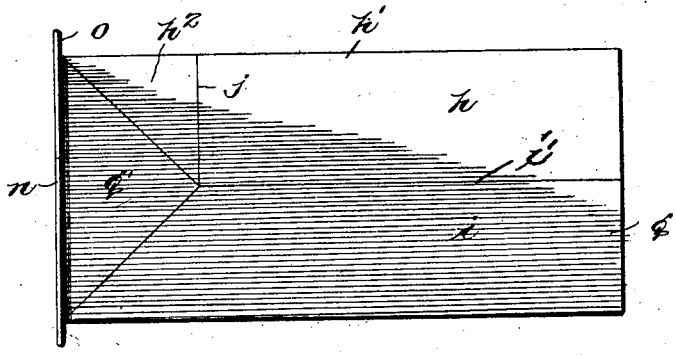


Fig. 2.



Witnesses

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

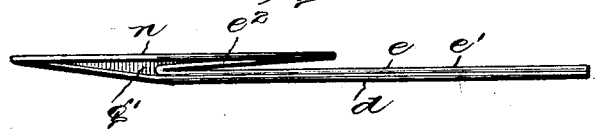


Fig. 4.

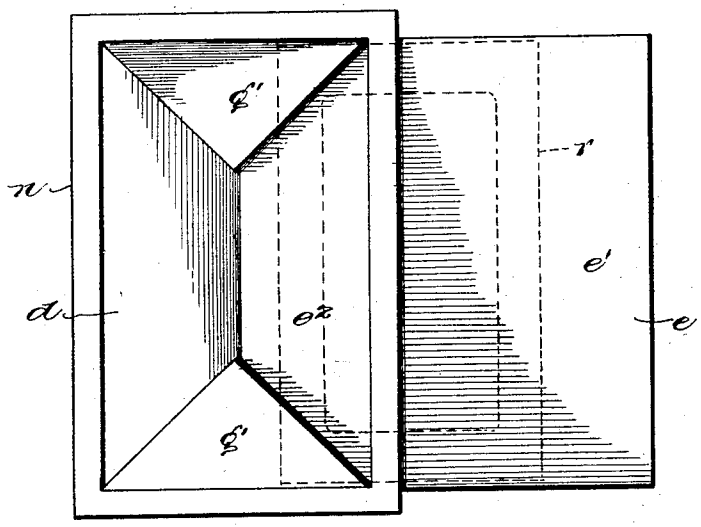
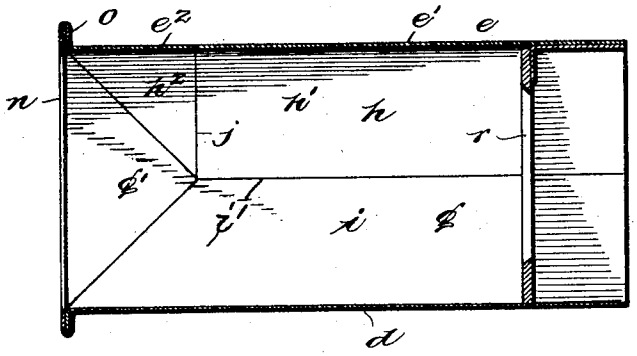


Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE H. DORR, OF NEW ROCHELLE, NEW YORK.

FOCUSING-HOOD.

SPECIFICATION forming part of Letters Patent No. 720,900, dated February 17, 1903.

Application filed November 25, 1902. Serial No. 132,816. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. DORR, of New Rochelle, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Focusing-Hoods, of which the following is a specification.

My invention relates to focusing-hoods for cameras; and the object thereof is to provide an exceptionally simple and inexpensive article of this character which may be folded into a very compact form when not in use to occupy but a small compass.

A further object of the invention is to provide a focusing-hood which may be readily attached to and detached from a camera-box, so that the same may be carried when out of use in the operator's pocket.

Other objects of the invention will appear and the many advantages presented by the same be appreciated when the construction of the hood is understood.

The invention comprises the construction of hood and combination of parts forming the same, to be hereinafter described, and particularly pointed out in the claims.

While the invention is susceptible of many modifications, the accompanying drawings illustrate, and I shall describe herein, what is now conceived to be the preferred embodiment of the same.

In the drawings, Figure 1 shows the invention in perspective view attached to a camera, only a fragment of which is illustrated. Fig. 2 is a side view of the article in open position. Fig. 3 is a similar view showing the hood in closed position. Fig. 4 is a plan view of the device in closed position. Fig. 5 is a longitudinal sectional view. Fig. 6 shows the hood in perspective when partly collapsed.

A camera of ordinary construction is indicated by the letter a, in the rear wall of which an opening b is provided, between which and the lens an ordinary focusing ground glass is located. The opening b is normally closed by a door c, which fits into the same so that its rear face or side is flush with the rear of the camera-box.

The hood forming the subject of my invention is preferably when open of tubular form, being preferably of rectangular shape in cross-section, and the same includes a major side d, flat throughout, a second major side e, comprised of two sections e' e^2, having hinged movement relative to each other, said sections both being also flat throughout, and two minor sides g, connecting the major sides d e. Each minor side comprises a triangular section g', the base of which forms a portion of one end or edge of the hood, and it further includes parallel sections h i, joined to each other to form a bellows or to permit the latter sections to fold one upon the other. Each parallel section h is further comprised of two subsidiary sections h' h^2, having movement relative to each other, said subsidiary sections being joined together upon a line j, which extends from the apex of the angular section g' to intersect with the line m, formed by a crease, upon which the sections e e^2 fold upon each other. In practice the major side d is made of a single flat piece of comparatively stiff material, stiff paper answering the purpose in a very satisfactory manner. The two sections of the side e are made integral with each other of a similar material, and the line of demarcation between the said sections is formed by the crease m, which facilitates the parts folding one upon the other, as will be hereinafter described. The four sections of each minor side are also formed integral of a material similar to that employed in the construction of the major sides, and the lines defining said sections are formed by creases upon which the sections fold when the hood is collapsed.

To the end of the hood formed in part by the bases of the triangular sections g' a stiff open rectangular frame n is secured in any desirable manner, this frame having a flange o projecting beyond the plane or faces of the sides of the hood, this frame serving to permanently hold one end of the hood open or distended.

Arranged within the hood, adjacent to the opposite end of the same, is a second distending-frame r, which is secured at one of its edges, which abuts against the face of one of the major sides d e in a manner which will permit the same to swing from a position parallel with said side into a position at right angles thereto.

When not in use for the purpose of focusing, the hood is collapsed, in which position all of the sections of both the major and minor sides, as well as the two distending-frames, lie in substantially parallel relation to one another. The article is then perfectly flat, as indicated in Fig. 3, and may be readily slipped into the pocket of the operator.

In collapsing the hood the distending-frame r is first swung around to lie parallel to the side to which the same is permanently attached. The ends of the sides d e opposite to the frame n are then pressed together, the minor sides folding inwardly upon the lines i', so that the sections h i overlie each other. The ends of said major sides are then moved in relation to the frame n to bring the same in parallelism therewith. In this movement the sections g' g' fold inwardly, the sections h^2 fold toward the frame n to overlie said sections g' g', and the sections e' e^2 fold against each other. It will be noted that the connection of the bases of the section g', the section e^2, and the side d with the frame n permits said parts to have relative movement, so that they may fold up upon said frame, as shown in Fig. 3.

To open the hood, so that the same may be used for focusing, the end of the same opposite the frame n is swung into a position at right angles to the latter and the sides d e distended, which forces the sections h i outwardly to the maximum extent. The movable frame r, which when the hood is collapsed lies against the major side, to which it is attached at one edge, is then drawn around at right angles to the same and acts as a brace to maintain the hood in distended position.

The hood may be made of varying sizes, it being intended that the frame n shall fit snugly in the wall of the door-opening b of the camera with which the hood is associated. To attach the same to a camera for focusing, after the door c is opened the frame n is placed within the opening b, the edge of said frame, as premised, closely fitting the wall of the latter and the face of the same preferably finding a bearing against a flange formed by the rabbeted door-opening. The ordinary catches b', which are employed for retaining the door c in closed position, are then turned to overlie the flange o of the frame and lock the same in place. If desired, the frame may be permanently held in the door-opening b and the major side d of the hood secured to the inner face of the door c, so that when the latter is drawn down the hood will be automatically opened and automatically collapsed when the door is closed.

The construction and operation of my invention will be readily understood upon reference to the foregoing description and accompanying drawings, and it will be appreciated that the parts and combinations recited may be varied within a wide range without departing from the spirit of the same.

Having thus described my invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. A collapsible focusing-hood including major sides formed of stiff material, one of said sides being comprised of two sections, said sections being defined by a crease upon which the parts fold, and minor sides connecting the major sides, substantially as described.

2. A collapsible focusing-hood constructed of stiff material including major sides, one of said sides being comprised of two sections, and sectional minor sides connecting said major sides, substantially as described.

3. A collapsible focusing-hood including major sides, one of which is comprised of two sections foldable upon each other, and minor sides foldable in parallelism with the major sides, said sides and sections being defined by creases upon which the parts fold, substantially as described.

4. A collapsible focusing-hood including major sides, one of which is comprised of two sections foldable upon each other, and sectional minor sides foldable in parallelism with the major sides, said sides and sections thereof being maintained rigid or stiff in all the positions assumed thereby.

5. The combination with a permanent distending-frame, of a collapsible tubular hood secured thereto at one end, said hood being formed of stiff major folding sides and stiff minor folding sides, substantially as described.

6. The combination with a permanent distending-frame, of a collapsible tubular hood including major sides formed of stiff material designed to be folded into parallelism with the frame, and minor sides constructed of stiff material connecting the major sides, substantially as described.

7. The combination with a permanent distending-frame, of a collapsible tubular hood including major sides formed of stiff material designed to be folded into parallelism with the frame, and minor sides connecting the major sides also constructed to be folded into parallelism with the frame, substantially as described.

8. The combination with a permanent distending-frame, of a collapsible tubular hood secured thereto at one end, said hood including two major sides formed of stiff material, one of which comprises two sections, and minor sides connecting the major sides and secured to said distending-frame, substantially as described.

9. The combination with a permanent distending-frame, of a collapsible tubular hood secured thereto at one end, said hood including two major sides formed of stiff material, one of which comprises two sections, and

minor sides including foldable sections connecting the major sides and secured to said distending-frame, substantially as described.

10. The combination with a permanent distending-frame, of a collapsible tubular hood secured thereto at one end, said hood including two major sides formed of stiff material, one of which comprises two sections, and minor sides including sections foldable between the major sides, and other sections foldable at right angles to the line of fold of the first-mentioned sections of said minor sides, substantially as described.

11. The combination with a rigid distending-frame, of a collapsible hood secured thereto at one end, and a second distending-frame coacting with the opposite end of the hood, said frame being arranged to be shifted to permit the latter end of the hood to be collapsed, substantially as described.

12. The combination with a rigid distending-frame, of a collapsible hood secured thereto at one end, and a second distending-frame having a movable engagement with the hood in proximity to the other end of the same, to permit said end to be collapsed, substantially as described.

13. The combination with a rigid distending-frame, of a collapsible hood secured thereto at one end, and a second distending-frame having a hinged connection to the hood coacting with the same in proximity to the other end of the same, substantially as described.

14. The combination with a rigid distending-frame, of a collapsible hood secured thereto at one end, and a second distending-frame located within the hood and connecting to the same to move in relation thereto, substantially as described.

15. The combination with a rigid distending-frame, of a collapsible hood secured thereto at one end, and a second distending-frame located within the hood connected to the same to occupy a position at right angles to one side of the same and a position parallel to said side, substantially as described.

16. The combination with a rigid distending-frame, of a collapsible hood secured thereto at one end, and a second distending-frame having a hinged connection to one side thereof, substantially as described.

17. The combination with a distending-frame, of a rectangular tubular hood secured thereto at one end, including two major sides, one of said sides being creased intermediate of its ends to provide two sections foldable upon each other, and minor sides connecting the major sides, each minor side including a triangular section, and two parallel longitudinally-extending sections, one of the latter sections including two subsidiary sections, all of said sections being defined by creases upon which the parts fold when the hood is collapsed.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at New Rochelle, in the county of Westchester and State of New York, this 24th day of November, 1902.

GEORGE H. DORR.

Witnesses:
A. LARUS,
W. J. COMERFORD.