H. W. WARNECKE.

OBSERVATION DEVICE.

APPLICATION FILED JAN. 10, 1919.

1,302,254.

Patented Apr. 29, 1919.

2 SHEETS—SHEET 1.

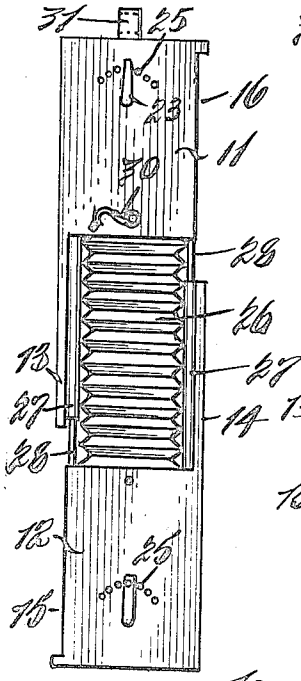


Fig. 2.

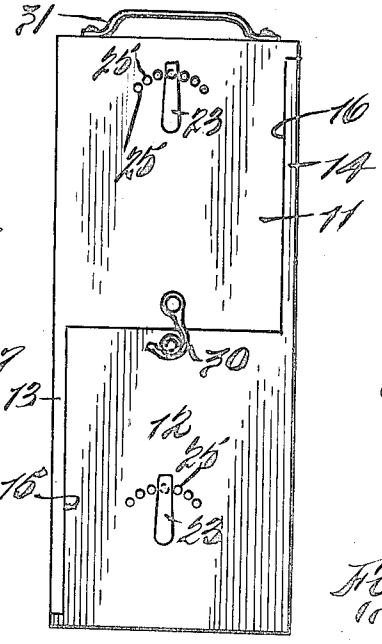


Fig. 1.

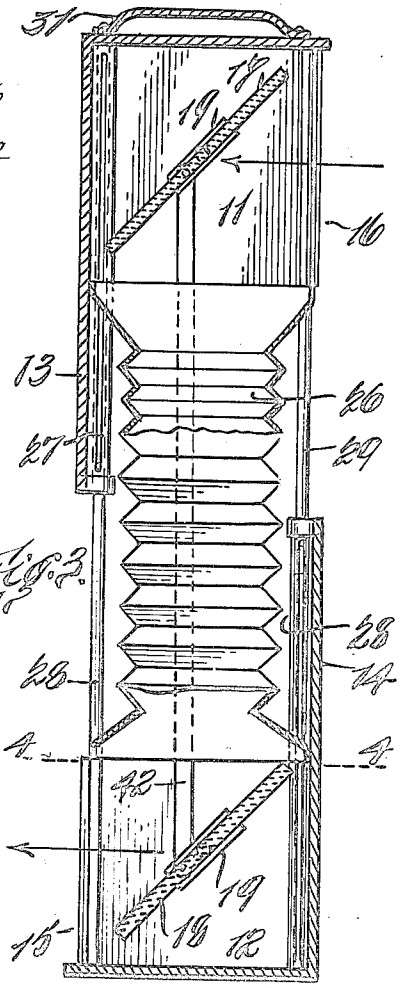


Fig. 3.

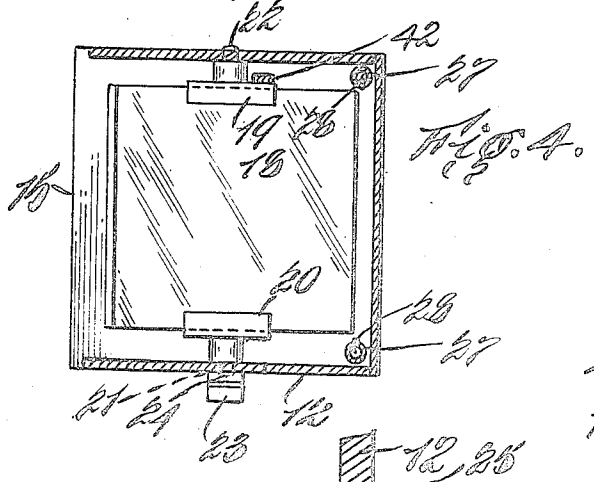


Fig. 4.

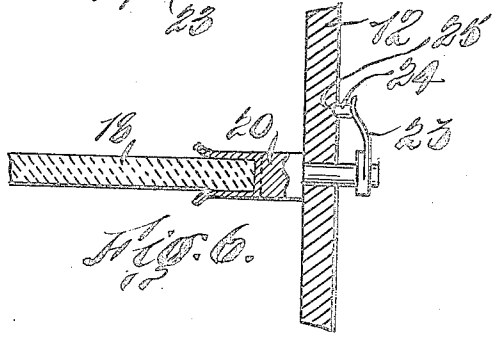


Fig. 6.

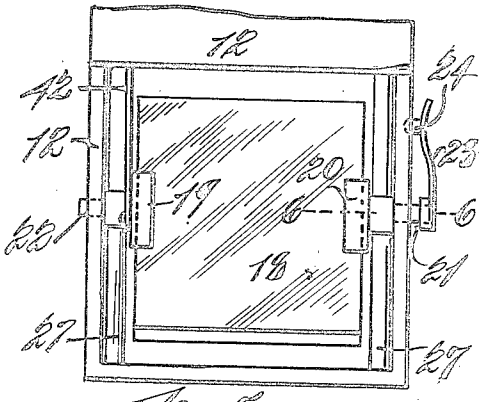


Fig. 5.

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2 SHEETS—SHEET 2.

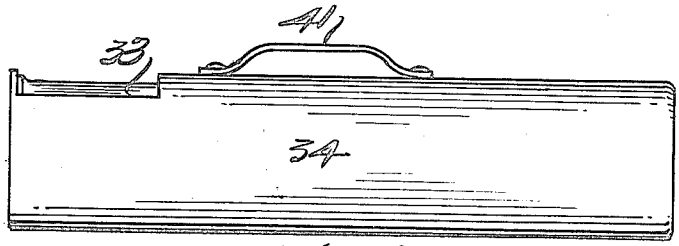


Fig. 7.

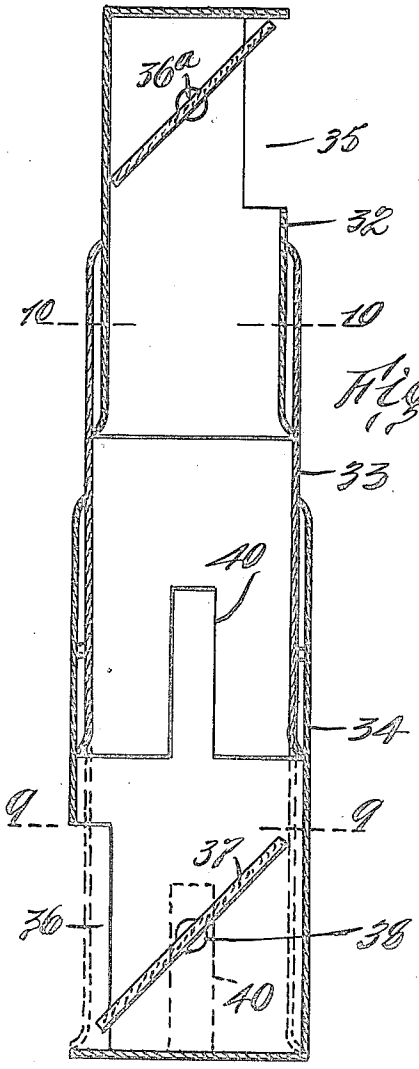


Fig. 8.

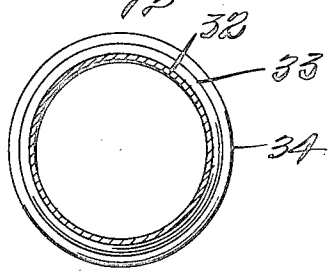


Fig. 10.

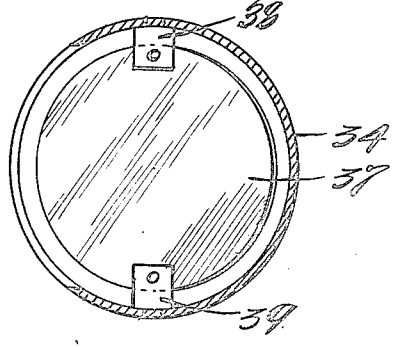


Fig. 9.

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UNITED STATES PATENT OFFICE.

HARRY W. WARNECKE, OF NEW YORK, N. Y.

OBSERVATION DEVICE.

1,302,254. Specification of Letters Patent. Patented Apr. 29, 1919.

Application filed January 10, 1919. Serial No. 270,465.

To all whom it may concern:

Be it known that I, HARRY W. WARNECKE, a citizen of the United States of America, residing at New York city, Bronx county, State of New York, have invented certain new and useful Improvements in Observation Devices, of which the following is a full, clear, and exact description.

This invention relates to improvements in observation devices, the chief object being to provide a collapsible periscope arranged for use in crowded places or in any place where the vision is obstructed, but more strictly speaking where obstructions or people are located between an observer and the object or objects to be observed. By means of my improvement a person will be enabled to watch a parade (for instance) over the heads of those standing between the observer and the parade.

I will now describe my invention in detail and finally claim the novel features thereof, reference being had to the accompanying drawings, forming part hereof, wherein:—

Figure 1 is a side view of my improved device collapsed;

Fig. 2 is a similar view of the device extended for use;

Fig. 3 is an enlarged vertical sectional view of the device extended;

Fig. 4 is an enlarged sectional plan view, the section being taken on a line 4—4 in Fig. 3;

Fig. 5 is an enlarged end view of the lower end of the device, looking from the left in Fig. 3;

Fig. 6 is an enlarged fragmentary sectional view, the section being taken on a line 6—6 in Fig. 5;

Fig. 7 is a side elevation of a modified form of my invention collapsed;

Fig. 8 is an enlarged longitudinal sectional view thereof extended; and

Figs. 9 and 10 are sectional plan views, the sections being taken on lines 9—9 and 10—10 in Fig. 8.

The form of my invention illustrated in Figs. 1 to 6 inclusive, consists of casing-members 11 and 12 in the form of boxes having aprons or extensions 13 and 14, respectively, arranged to overlie the open ends 15 and 16 of the casing members 11 and 12 when same are collapsed as indicated in Fig. 1. In the upper portion of the casing-member 11, I pivotally or movably mount an angularly positioned mirror 17, and in the lower portion of the casing-member 12, I pivotally or movably mount a similar angularly positioned mirror 18 with the reflecting surfaces presented toward each other. To mount the mirrors I provide frames 19 and 20 (Figs. 4, 5 and 6) carrying trunnions 21 and 22, respectively, the trunnions 21 being extended through the adjacent wall of their casing members and provided with a yieldable resilient handle 23 carrying a projection 24 to engage openings or recesses 25 in the adjacent wall of their respective casing-members (see Figs, 1 and 2). It will be understood that both mirrors may be similarly mounted. To exclude light, excepting through the open portions 15 and 16 of the casing members, I provide a foldable tubular duct or light excluder 26 which extends from the lower to the upper mirror. The casing members are slidably or collapsibly connected by means of telescoping supports consisting of tubular members 27 and rods 28 slidably engaging same. While I have herein illustrated supports consisting of a combination of two telescoping members, a tube and a rod, it should be understood that I may employ supports consisting of more than two telescoping members, whereby a greater extensibility can be obtained. In such case a suitable foldable duct will be provided. The casing members may be locked in closed or collapsed condition by a suitable latch 30 and may also be provided with a handle 31. When folded the structure will have the appearance of a camera.

By means of the movable or pivoted mirrors, I am able to alter the field of vision materially. As the mirrors are mounted for pivotal movement or adjustment in a horizontal plane, I am enabled to alter the field of vision up or down with respect to the position of the periscope when in use. When in use the instrument will be held in a vertical position, the upper mirror receiving the view and reflecting it downwardly to the lower mirror. By shifting the mirrors by means of the handles 23, the field of vision can be altered. By means of the recesses 25 the mirrors can be adjusted to and held in any angular position, as the projections 24 on the handle will engage the recesses 25. The frames 19 and 20 are virtually clamps that engage and hold the mirrors, said mir-

rors being slipped into said frames or clamps. In order that the two mirrors can be operated simultaneously, and a corresponding angular position maintained, I prefer to connect same by a link 42 pivoted, at the ends thereof, to the frames 20.

Figs. 7 to 10, inclusive, illustrate my improved device in the form of telescoping or collapsing tubular or cylindrical members 32, 33 and 34, the members 32 and 34 being open at 35 and 36. The upper end of member 32 carries a mirror 36ª angularly disposed relative to the axis of the device, and the member 34 carries a similar angularly disposed mirror 37, said mirrors being located opposite their respective openings 35 and 36. As can be seen in Figs. 8 and 9, the lower mirror 37 is spaced from the wall of its casing member 34 and is supported by hangers 38 and 39 which may or may not be pivot members. In order to collapse the structure, casing member 33 is slotted at 40 so that said member can be moved to the bottom of member 34, as indicated by dotted lines in Fig. 8. As can be seen, the members 32, 33 and 34 are flanged at the ends to prevent the separation of said members when extended to their full extent. This form of device may be provided with a handle 41. When collapsed, this form of my device will have the appearance of a casing for rolled music or a botanist's tube.

Having described my invention, what I claim is:—

1. An observation device consisting of a casing, frames pivotally mounted at each end of the casing, a mirror carried by each frame, a yieldable resilient handle also associated with each frame, and a projection carried by each handle, said casing being provided with recesses adjacent each of said handles to be engaged by the projection on said handles.

2. In an observation device, a plurality of extensibly connected box-members, said box-members being open at opposite sides thereof, an apron carried by each box to overlie the open side of its coöperating box when said device is collapsed, mirrors carried by each box, having their reflecting surfaces presented toward each other, tubular telescoping supports connecting said boxes, and a collapsible light excluding duct connecting said boxes.

Signed at New York city, N. Y., this 8th day of January 1919.

HARRY W. WARNECKE.

Witnesses:

HENRY D. PAUL, Jr.,

ADOLPH TROELLER.