G. T. FIELDING.

OBSERVATION APPARATUS.

APPLICATION FILED MAR. 27, 1915.

1,166,343.

Patented Dec. 28, 1915.

2 SHEETS—SHEET 1.

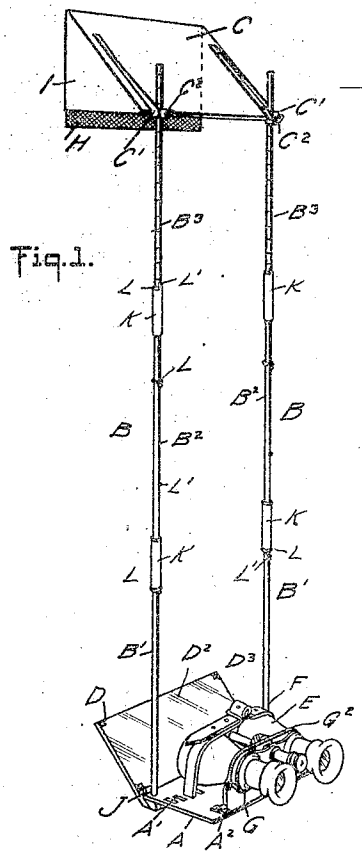

Fig. 1.

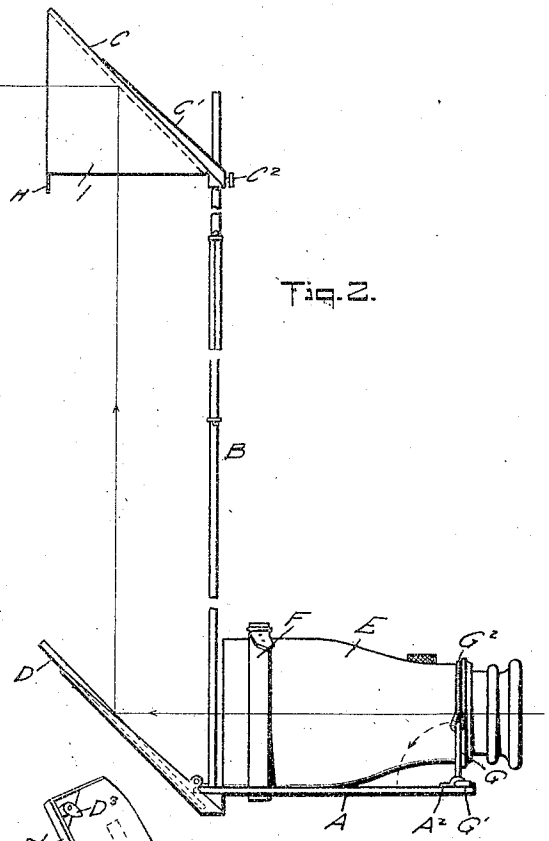

Fig. 2.

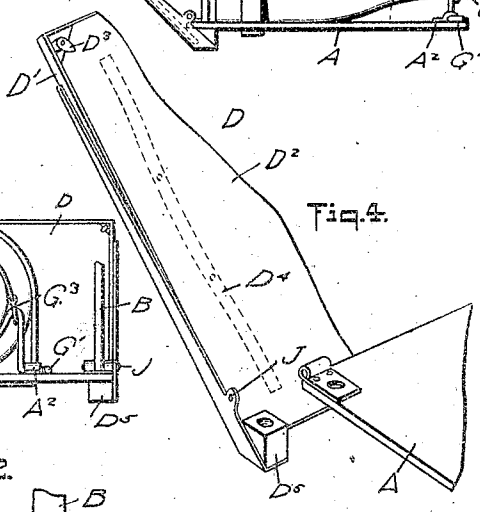

Fig. 4.

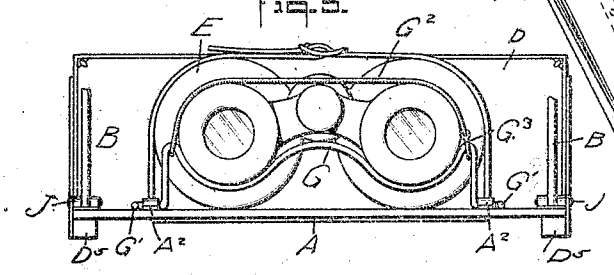

Fig. 5.

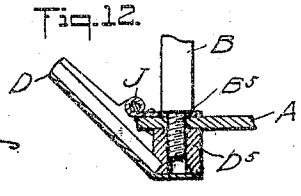

Fig. 12.

WITNESSES

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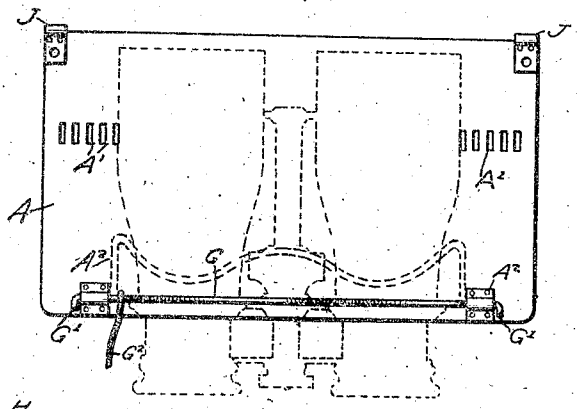
2 SHEETS—SHEET 2.

Fig. 5.



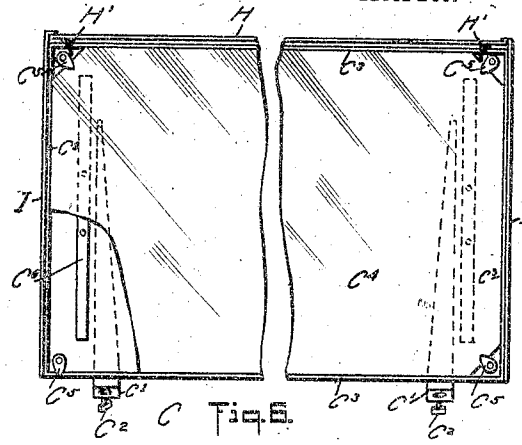


Fig. 6.

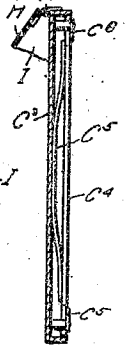


Fig. 7.

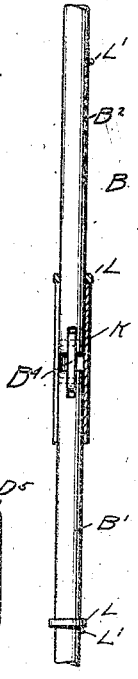
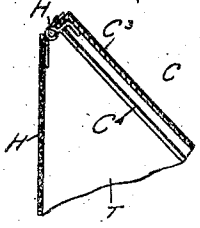


Fig. 9.

Fig. 8.



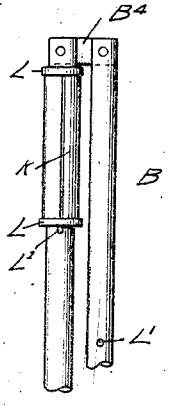


Fig. 10.

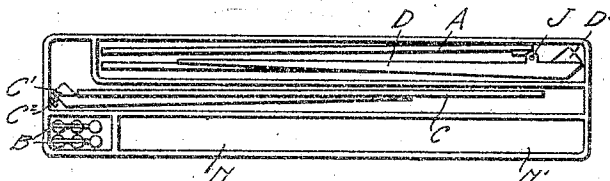


Fig. 11.

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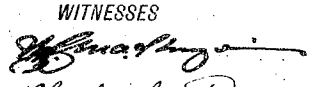

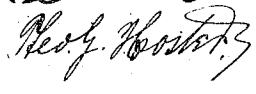

INVENTOR

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UNITED STATES PATENT OFFICE.

GEORGE T. FIELDING, OF NEW YORK, N. Y.

OBSERVATION APPARATUS.

1,166,343. Specification of Letters Patent. Patented Dec. 28, 1915.

Application filed March 27, 1915. Serial No. 17,425.

To all whom it may concern:

Be it known that I, GEORGE T. FIELDING, a citizen of the United States, and a resident of the city of New York, borough of the Bronx, in the county of Bronx and State of New York, have invented a new and Improved Observation Apparatus, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved observation apparatus more especially designed for use by military persons and arranged to enable a person to safely observe distant bodies of men or other objects without danger of exposure.

In order to accomplish the desired result, use is made of a support or a platform for a binocular or other telescope, posts rising from the said support, a top reflector mounted on the upper ends of the said posts and standing at an angle thereto, and a bottom reflector attached to the front of the said support at an angle thereto and in reflecting alinement with the said top reflector, the said bottom reflector being in the field of the said telescope.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the observation apparatus with the parts extended ready for use; Fig. 2 is an enlarged side elevation of the same; Fig. 3 is a front elevation of the same; Fig. 4 is a perspective view of a portion of the support and the lower reflector in disassembled positions; Fig. 5 is a plan view of the support; Fig. 6 is a face view of the upper reflector with a part broken out; Fig. 7 is a cross section of the same; Fig. 8 is an enlarged cross section of a portion of the same, and showing more particularly the hinged screen depending from the front of the reflector; Fig. 9 is an enlarged sectional side elevation of the locking sleeve in extended position on the sectional posts used for supporting the upper reflector from the support; Fig. 10 is a side elevation of the same with the parts in a folded position; Fig. 11 is a plan view of the observation apparatus folded and housed in the casing; and Fig. 12 is an enlarged sectional side elevation of the bottom reflector, one of the posts and a portion of the platform.

The observation apparatus in its general construction consists of a support A, posts B rising therefrom and supporting at their upper ends a forwardly and upwardly inclined top reflector C in reflecting alinement with a bottom reflector D extending upwardly and forwardly from the forward end of the support A. The reflectors C and D are arranged parallel one to the other and at an angle of about 45° to the posts B and the support A respectively. On the support A is removably held a binocular or other telescope E having the plane of its axis in alinement with the middle of the reflector D so that the image of a distant object reflected by the reflector C onto the reflector D can be readily viewed by an observer looking through the telescope E.

The support A is preferably in the form of a platform or shelf provided near the forward end with sets of apertures A′ for the passage of a leather strap F adapted to pass over the body of the telescope E near the body thereof, the strap also passing through two of the apertures A′ and along the underside of the support to permit of securely strapping the telescope in position on the support A. By the use of sets of apertures A′ telescopes of different width can be readily connected as the strap F is passed through corresponding apertures. The eye-piece end of the body of the telescope E rests on a saddle G pivoted at its ends in bearings A^2 arranged on the top of the support A to permit of folding the saddle G flat onto the support when the device is not in use and is folded up. A strap or cord G^2 is attached to one end of the saddle G and is provided at its other end with a hook G^3 adapted to hook onto the other end of the saddle G after the cord or strap G^2 is passed over the eye-piece of the body of the telescope E to aid in securely holding the telescope E in position and with the plane of its axis intersecting the reflector D at or near the middle thereof. The eye-pieces of the telescope E project beyond the rear edge of the support A so that the observer having hold of the platform A can conveniently make the desired observations and can also

adjust the eye-pieces to the proper focus in the usual manner by turning the focusing device of the telescope in the usual way. It will also be noticed that the support A may be firmly set on the ground or projecting ledge for supporting the apparatus while making the desired observation.

The top reflector C is provided on its back with brackets C′ slidably engaging the upper ends of the posts B to permit of moving the top reflector C a desired distance up or down on the posts B, and when the desired position is reached the top reflector is fastened in place by set screws 62 screwing in the brackets C′ against the posts B. From the upper forward end of the reflector C depends a screen H, preferably in the form of a perforate sheet metal plate, connected by a spring hinge H′ to the upper part of the frame C^3 of the reflector C. The spring hinge H′ is arranged normally to hold the screen H at an angle to the face of the top reflector C but the outward swinging movement of the screen H is limited by blinders I of leather, canvas or other fabric material attached to the sides of the frame C^3. By the arrangement described sunlight or other reflection from the reflector C is prevented from reaching a distant person and consequently the observer is free from observation by another person in front or to the side of the apparatus. The screen H however, allows the image of the distant object to be viewed by the observer at the telescope E. The reflecting surface C^4 of the top reflector C is preferably in the form of a mirror removably held in the frame of the reflector frame C^3 by the use of suitably pivoted buttons C^5 so that in case the reflecting surface C^4 is broken it can be readily replaced by a new one. Springs C^6 are attached to the reflector casing C^3 and bear against the back of the surface C^4 to hold the reflecting surface in proper position between the reflector frame C^3 and bear against the back of the surface C^4 to hold the reflecting surface in proper position in the reflector frame C^3 and against rattling.

The bottom reflector D is provided with a casing D′ in which is removably held a mirror D^2 by the use of buttons D^3 and springs D^4, the same as above described in reference to the top reflector C. The sides of the frame D′ of the bottom reflector D are connected by hinges J with the support A to permit of folding the bottom reflector D onto the top surface of the support A, as hereinafter more fully described and shown in Fig. 11. The lower ends of the sides of the frame D′ are provided with stop lugs D^5 adapted to abut against the under side of the support A to hold the bottom reflector D in the angular position previously mentioned when the apparatus is in use.

The posts B are alike in construction and each is made of a number of sections, preferably a bottom section B′, a middle section B^2 and a top section B^3 connected with each other by links B^4, as plainly indicated in Figs. 9 and 10. A split sleeve K is adapted to be moved over the joint at the time the corresponding sections B′, B^2 or B^2 B^3 are in extended position to hold the sections locked in such position. The sleeves K are split and snugly embrace the post sections so as to stay in whatever position they are moved into by the user of the apparatus. Rings L encircle the adjacent post sections B′, B^2 and B^2, B^3 and are adapted to engage the top and bottom ends of the sleeves K so as to permit the operator to conveniently push the sleeves into locking or unlocking position. The movement of the rings L on the sections is limited by stop lugs L′ fixed on the sections B′, B^2 and B^3. The upper post sections B^3 are preferably provided with a graduation of linear measurement to permit of correctly adjusting the top reflector C up or down on the posts. In order to removably fasten the posts B in position on the support A the lower ends of the bottom sections B′ of the posts are provided with reduced threaded studs B^5 extending through the support A and screwing into the corresponding stop lugs D^5, as plainly indicated in Fig. 12. By the arrangement described the posts B are fastened to the support A and at the same time the bottom reflector D is fastened in working position to the support A.

When it is desired to fold the apparatus, the operator looses the set screw C^2 and disconnects the top reflector C from the posts B, after which the latter are screwed out of engagement with the lugs D^5 and are folded by sliding the locking sleeves K into open position, as indicated in Fig. 10, to permit of doubling up the post sections, as indicated in Figs. 10 and 11. The operator next unhooks the hook G^3 from the saddle G and disengages the strap F from the telescope E to allow of removing the latter from the support A, after which the bottom reflector D is folded on top of the support A while the telescope E is placed in its usual casing. The screen H can be readily pressed by the operator against the mirror C^4 and then placed into a casing N (see Fig. 11) having several compartments for receiving and storing the folded parts of the apparatus. The casing may also have a separate compartment N′ for a camera or other paraphernalia.

When the parts of the observation apparatus are assembled and the telescope is fastened in place on the support A then the user can readily carry the apparatus about by taking hold of the sides of the support A and while the eyes of the user are at the eye-

pieces of the telescope E. Thus the observer can carry and manipulate the apparatus while being safely stationed behind an embankment and with the upper reflector only above the embankment to enable the observer to view the entire landscape in front of the embankment. When used in open country the user can lie down flat on the ground and make the desired observation with comparative safety.

When not in use, the parts of the apparatus can be quickly disassembled and stored in a comparatively small casing.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. An observation apparatus, comprising a platform provided with fastening means for fastening a binocular or other telescope to the platform, foldable posts rising from the said platform, a top reflector adjustably and detachably secured to the upper ends of the said posts and extending upwardly and forwardly therefrom, a bottom reflector hinged on the forward end of the said platform and adapted to extend upwardly and forwardly from the front of the platform when the apparatus is in use and adapted to fold upon the said platform when the apparatus is not in use, the said bottom reflector when in position of use being in the field of the telescope.

2. An observation apparatus, comprising a support for a binocular or other telescope, posts rising from the said support, a top reflector mounted on the upper ends of the said posts and standing at an angle thereto, a bottom reflector attached to the front of the said support at an angle thereto and in reflecting alinement with the said top reflector, the said bottom reflector being in the field of the said telescope, and a perforate screen in front of the said top reflector.

3. An observation apparatus, comprising a support for a binocular or other telescope, posts rising from the said support, a top reflector mounted on the upper ends of the said posts and standing at an angle thereto, a bottom reflector attached to the front of the said support at an angle thereto and in reflecting alinement with the said top reflector, the said bottom reflector being in the field of the said telescope, and blinders on the sides of the said top reflector.

4. An observation apparatus, comprising a support for a binocular or other telescope, posts rising from the said support, a top reflector mounted on the upper ends of the said posts and standing at an angle thereto, a bottom reflector attached to the front of the said support at an angle thereto and in reflecting alinement with the said top reflector, the said bottom reflector being in the field of the said telescope, a perforate screen hinged to the upper edge of the said top reflector to depend therefrom, and blinders attached to the sides of the top reflector and connected with the sides of the said screen.

5. An observation apparatus, comprising a support for a binocular or other telescope, posts rising from the said support, a top reflector mounted on the upper ends of the said posts and standing at an angle thereto, a bottom reflector attached to the front of the said support at an angle thereto and in reflecting alinement with the said top reflector, the said bottom reflector being in the field of the said telescope, a perforate screen hinged to the upper edge of the said top reflector to depend therefrom, blinders attached to the sides of the top reflector and connected with the sides of the said screen, and a spring pressing the said screen to hold the same in depending angular position relative to the top reflector, the said blinders limiting the opening movement of the said screen.

6. In an observation apparatus of the type described, a base adapted to support a reflecting system and carrying a binocular or other telescope, the said base board being provided with means for holding the telescope in position and for supporting it with its axis approximately parallel to the said base board.

7. In an observation apparatus of the type described, a base board adapted to support a reflecting system and provided with a strap adapted to pass over the outer end of the body of a binocular or other telescope resting on the said base board, and a saddle on the said base board for the inner end of the said body to rest on to support the telescope on the base board with its axis approximately parallel to said base board.

8. In an observation apparatus, of the type described, a platform adapted to carry a reflecting system and provided with a strap adapted to pass over the outer end of the body of a binocular or other telescope resting on the said platform, a saddle mounted to swing on the said platform and adapted to support the inner end of the said body, and a strap attached at one end to one side of the said saddle and adapted to pass over the said body, the other end of the strap having means for detachably connecting this end of the strap with the saddle.

9. In an observation apparatus of the type described a base board adapted to carry a reflecting system and provided with spaced apertures, a strap adapted to be passed through a pair of the said apertures and over the forward end of the body of a binocular or other telescope held on the said base board to fasten the telescope in place thereon.

10. In an observation apparatus of the type described, a platform adapted to carry a reflecting system and provided with

spaced apertures, and a strap adapted to be passed through a pair of the said apertures and over the forward end of the body of a binocular or other telescope held on the said platform to fasten the latter in place on the platform, a rest mounted to swing on the said platform and provided with concave seats for the inner ends of the telescope to rest on, and a strap connected with the rest and extending over the inner end of the said telescope.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE T. FIELDING.

Witnesses:

THEO. G. HOSTER,

PHILIP D. ROLLHAUS.