No. 720,204. PATENTED FEB. 10, 1903.

R. R. WHITING.

VIEW OUTFIT.

APPLICATION FILED JUNE 12, 1902.

NO MODEL.

Fig. 1.

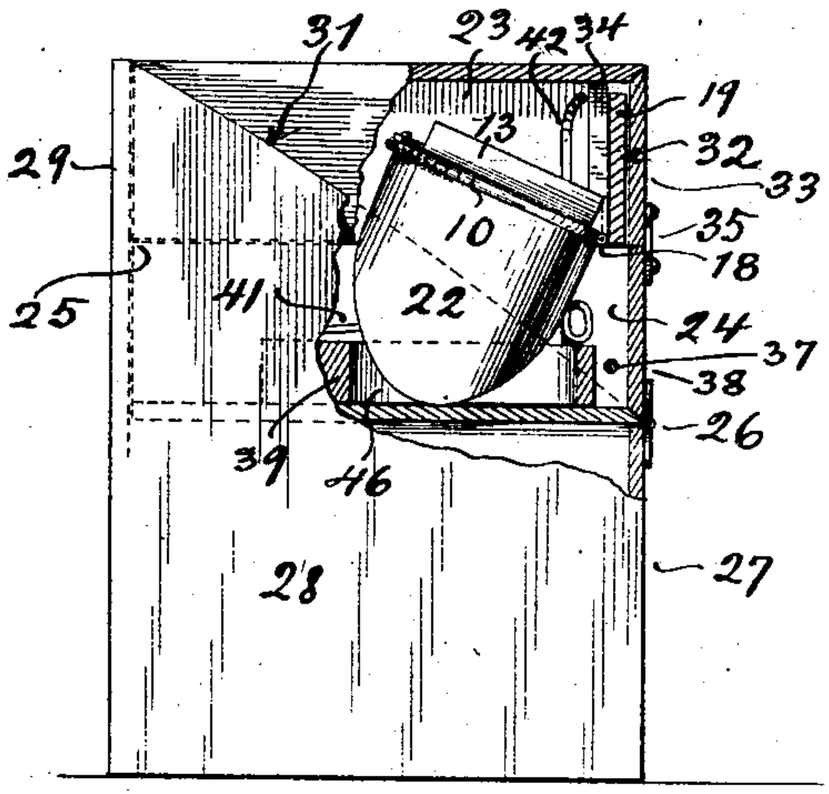


Fig. 2.

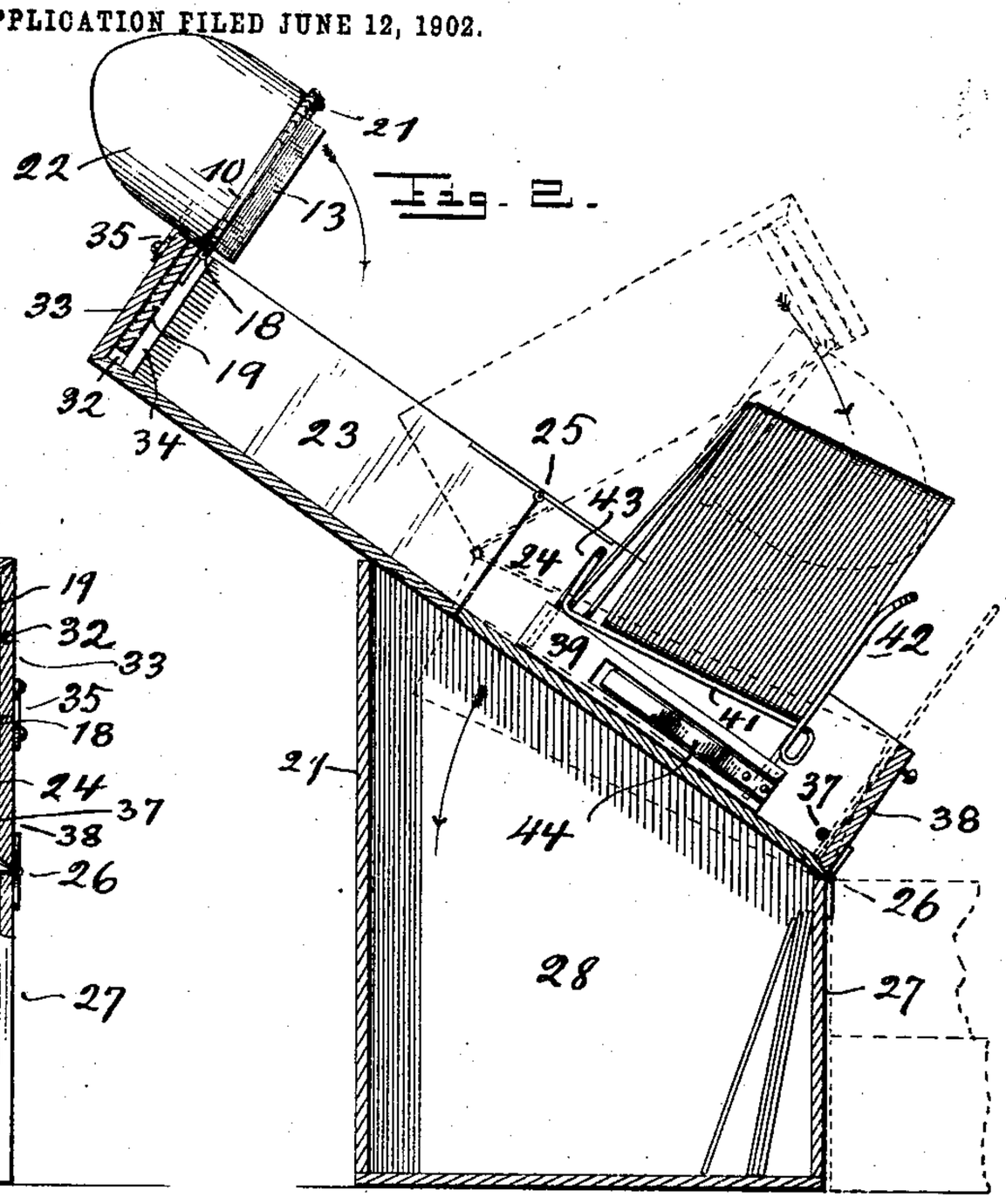


Fig. 3.

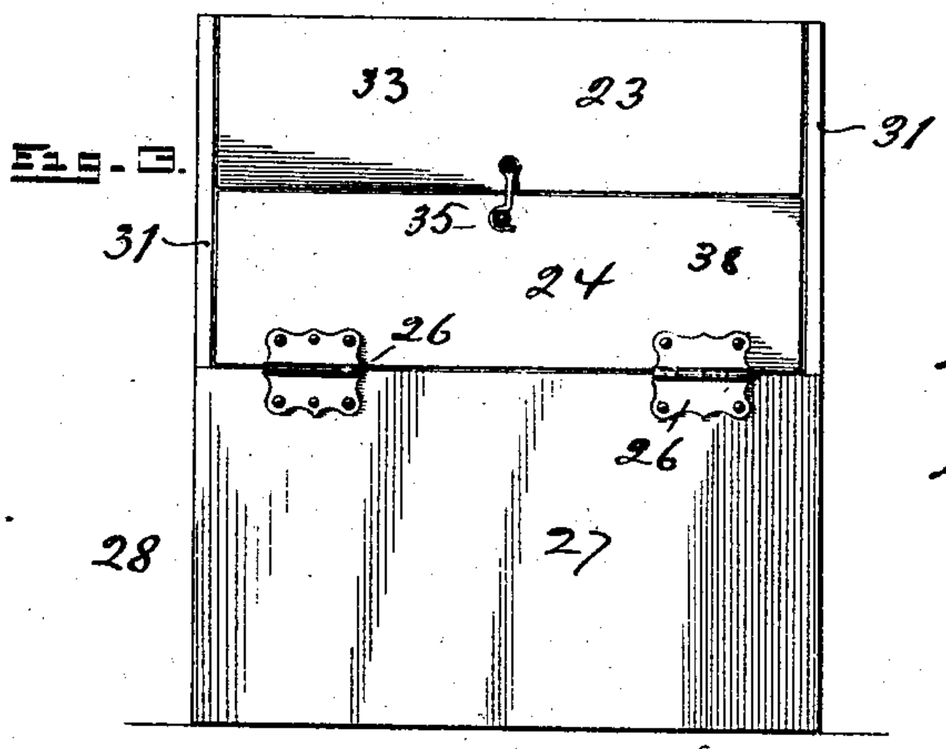


Fig. 4.

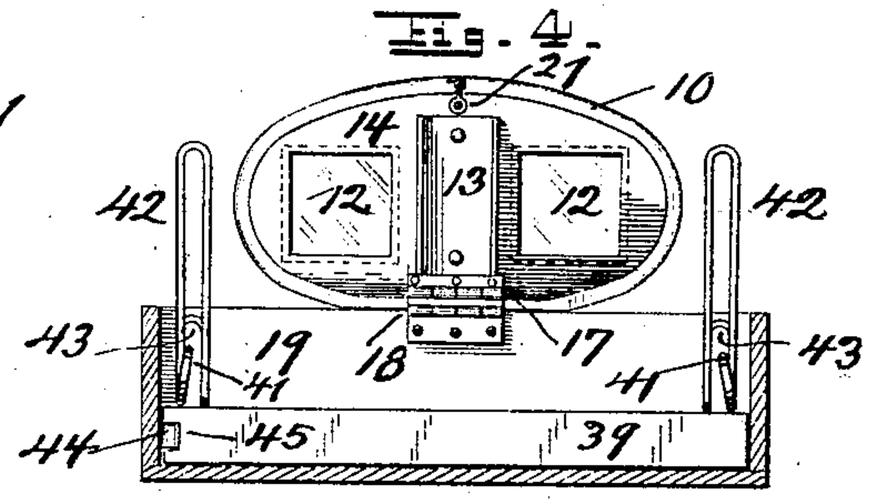


Fig. 5.

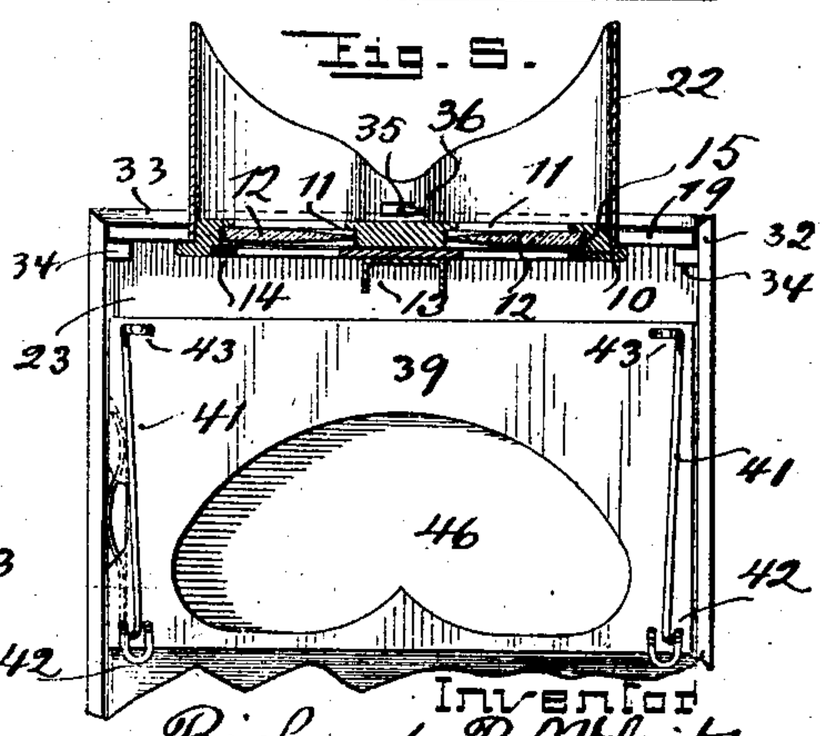


Fig. 7.

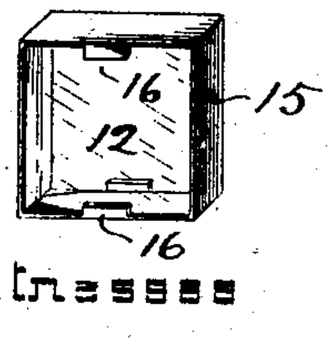
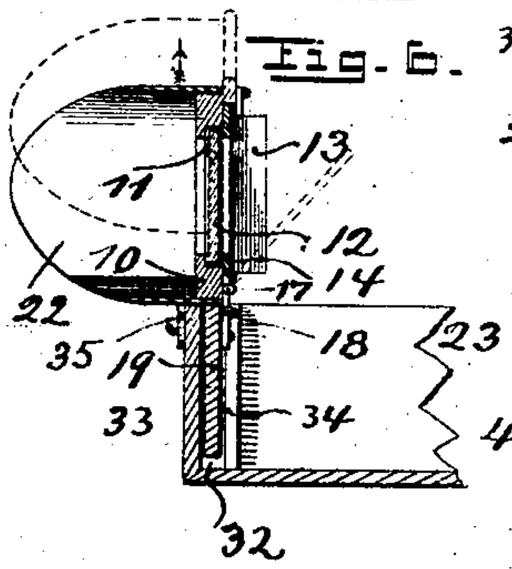


Fig. 6.



Witnesses

Orrin Cady

Arthur Kline

Inventor

Richard R. Whiting

by C. Spengel atty.

UNITED STATES PATENT OFFICE.

RICHARD R. WHITING, OF CINCINNATI, OHIO.

VIEW OUTFIT.

SPECIFICATION forming part of Letters Patent No. 720,204, dated February 10, 1903.

Application filed June 12, 1902. Serial No. 111,301. (No model.)

To all whom it may concern:

Be it known that I, RICHARD R. WHITING, a citizen of the United States, and a resident of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in View Outfits; and I do declare the following to be a clear, full, and exact description thereof, attention being called to the accompanying drawings, with the reference-numerals marked thereon, which form also a part of this specification.

This invention relates to improvements in view outfits of the kind where pictures, usually in form of photographs, may be viewed behind a set of view-glasses. Such outfits comprise, substantially, a set of view glasses or lenses, a holder for them, a carrier or slide for the pictures, and a general support for both—that is, for the lens-holder and the picture-carrier—the arrangement being such that one of these two may be adjusted with reference to the other on this general support for the purpose of obtaining the proper focus.

The invention comprises several features as to the construction and arrangement of the parts and whereby certain effects and results are obtained. As to the manner of attachment of the lens-holder to the general support, the construction of the engaging parts is such that one lens-holder may be readily taken out and exchanged for another one, the object of such exchange, for instance, being to change the view outfit from a graphoscope to a stereoscope, or vice versa, by using a lens-holder having graphoscopic lenses in place of one having stereoscopic lenses, so that in the first case graphoscopic—that is, plain or single—pictures or photos may be viewed, while in the other case stereoscopic or double views may be seen. As to the lens-holder, the construction of the same and arrangement of the lenses are such that the change from a graphoscope to a stereoscope, or vice versa, may be accomplished by a mere change in position of the lenses only within the lens-holder, which latter remains in place, so that in this case its connection to the general support need not necessarily be detachable. As to the picture-support, the construction is such that the same may be readily adjusted on the general support with reference to the lenses to obtain the proper focus and in which position it will then readily remain. The views may be readily and quickly manipulated thereon, so as to change successively one for another for inspection. The construction of this general support and of all the other parts with reference to it and to each other is such that all these parts necessary to a complete view outfit are combined in one device, which after use may be closed up in a convenient manner to form a compact box-shaped package, whereby all parts and the contents thereof are properly protected.

In the following specification, and particularly pointed out in the claims, is found a full description of the invention, together with its manner of use, parts, and construction, which latter is also illustrated in the accompanying drawings, in which—

Figure 1 shows, in a side elevation with parts broken away, the entire outfit closed up to form a box-shaped package and as it appears when not in use. Fig. 2, in a similar view with parts in section, shows the same opened out with all the different parts of the outfit in operative position for use. Fig. 3 is another side elevation of the device in its closed position, showing it as viewed from the right side as it appears in Fig. 1. Fig. 4 shows an inside view of the lens-holder when the same is in operative position as shown in Fig. 1, showing also parts of the general support in cross-section and the picture-carrier behind it. Fig. 5 is a horizontal section of the lens-holder as it appears in the preceding figure, showing also a top view of the picture-carrier. Fig. 6 is a vertical section of the lens-holder. Fig. 7 shows in perspective view, somewhat enlarged, one of the lenses detached.

The principal part of the lens-holder consists of the lens-frame 10, which may be of wood and is provided with square pockets 11 in one of its flat sides, which receive the lenses 12. These latter consist of rectangular pieces of glass of unequal thickness in a vertical plane—that is to say, their thickness decreases toward one of their upright edges. According to the position of these edges with reference to each other the device may be used as a graphoscope for viewing single pictures or as a stereoscope for viewing double or stereoscopic views. When the thinner edges of the lenses are opposite each other, as shown in Fig. 5, the device constitutes a stereoscope. When the lenses are turned so as to

bring these thinner edges to the outside and remote from each other, the device constitutes a graphoscope. When used as a steroscope, it is preferable to have on the inside of the lens-holder a partition or septum 13, as shown. The pockets are closed on the one side of the lens-frame by a plate 14, having openings which register with the openings in the pockets of the lens-frame, and which openings are closed by the lenses between these parts. These openings are slightly smaller than the lenses, so that the inclosing parts project somewhat over the margins or edges of the lenses, whereby they are held in their pockets against displacement in either direction. This plate 14 may rest flat against the side of lens-frame 10, or this latter may be recessed to receive it, so both are flush with each other.

The unequal thickness of the lenses requires means to hold them firmly within their pockets, for which purpose they are inclosed within a metallic frame 15 (see Fig. 7) of equal width all around and fitted so as to fill out the pockets 11 fully. Portions of this frame are bent down over the upper and lower edges of the lens, forming lugs 16, which hold the lens and frame to each other. It will now be understood that the lenses may be readily exchanged to change the view outfit from a graphoscope to a stereoscope, or vice versa, and rest firmly in their pockets in either position. To permit such change, access must be possible to pockets 11, for which purpose plate 14 is connected accordingly. This connection is by a hinge to the lens-frame, as shown at 17. This hinge is a double one—that is to say, it has three flaps and two pintles, as shown, and serves also to connect at 18 the lens-holder to a flap 19, whereby the former is attached and held in operative position for use. A suitable catch 21 holds plate 14 to the lens-frame 10 to hold it in proper position to close the pockets of the lenses and hold these latter in place.

22 is the customary hood or eye-shade, preferably of sheet metal and held in place by being secured all around to the edge of lens-frame 10. The lens-holder as a whole is supported in operative position for use at the front end and highest part of the general support, which is in shape of a shallow box and consists of two sections 23 and 24, hingedly attached to each other at 25, as may best be seen in Fig. 1. Of these two sections section 24 is also hinged at 26 to one of the sides 27 of another box-shaped part 28, which serves as a base for the entire outfit. These two hinged sections are of equal size, so that when opened out and in position, as shown in Fig. 1, their bottoms and sides form straight and continuous surfaces, upon and between which the pictures to be viewed may be supported and shifted until adjusted to proper focal position behind the view-glasses. If the outfit is used on a table, as is generally the case, it is desirable that the lens-holder is held elevated at proper height and angle to be convenient for the eyes and which is attained by a support 29, produced in the most practical manner by a suitable increase in height of that side of base 28 which is opposite side 27 thereof. The upper edges 31 of the intermediate sides are disposed so as to run at an angle from the highest to the lowest side. They also curve upwardly somewhat, the object being to cause them to project partly over the sides of sections 23 and 24 when they are opened out, so as to hold them firmly in place and prevent any lateral strain on their hinges. The lens-holder is held in position on this general support, as described, within a recess 32, which receives flap 19, and which recess is formed by the end 33 of box-section 23 and two cleats 34 inside, one on each side. The connection is detachable, so that, for instance, a lens-holder having permanently-attached stereoscopic lenses may be exchanged for one having similarly-attached graphoscopic lenses, all lens-holders intended to be used on this general support being of course supposed to have similar flaps 19. The change is made by simply lifting out the one lens-holder and sliding in the flap of the other one. The lens-holder is held rigid on its hinge by means of a suitable catch 35 entering a recess 36 in the hood. Views like graphoscopic pictures, for instance, not requiring an absolute close focal adjustment, may be held between a cross-bar 37 and the end 38 of section 24 of the general support, the length of this latter between the view-glasses and end 38 being such as to suit the average focal distance of the normal human eye, which is about from eleven to twelve inches.

Stereoscopic views requiring a close individual adjustment are carried on a view-holder consisting, substantially, of a base 39, capable of a sliding adjustment upon the bottom and between the sides of the general support, being the extended sections 23 and 24, and more particularly the latter. The pictures rest on two ways 41, formed of wire and disposed so as to extend across the base near each edge thereof. These wires are held in place by having their ends inserted into the base, being, however, before so inserted shaped and bent upwardly to form in the rear supports 42, against which the backs of the pictures lean, and in front stops 43 to prevent the pictures from sliding off. This entire picture-holder may be filled up with views between rests 42 and stops 43, the front one being always viewed and after inspected simply lifted out and inserted at the rear of the pile immediately in front of supports 42. The views move freely forwardly by reason of the limited contact of the wireways and the smoothness of the metallic contact. For focusing this view-holder is simply moved up and down on the general support, sliding on the bottom thereof and being guided between the sides of the same, between which it is fitted. It is held in the position to which it has

been adjusted by the contact and pressure of a friction-spring 44, secured in a recess 45 in one of the sides of base 39, and which spring bears outwardly against the inside of the adjacent side of the general support.

The various parts are held in position during use by their weight and by overhanging their supports, section 23 overhanging the upper edge of side 29 of base 28 and the lens-holder overhanging the upper edge of the front end 33 of section 23.

After use the outfit may be closed up to form a compact package, as shown in Figs. 1 and 3, for which purpose, as already explained, all parts are hingedly connected to each other. The closing up is done as indicated in dotted lines in Fig. 2. The view-holder is placed into base 28 or between sections 23 and 24, the lens-holder is turned into section 23, swinging on hinge 18, and the latter section, with the lens-holder, is doubled up on section 24, swinging at 25, and the two sections, with the lens-holder between them, are finally lowered into base 28, swinging on hinges 26. When the view-holder is also stored between these two sections 23 and 24, it becomes necessary to cut out the base of the view-holder, as shown at 46, to clear the hood of the lens-holder, which swings in between uprights 42. This provides additional storage-room for pictures on the other side of the view-holder and between sections 23 and 24. Any other unoccupied space in these latter, as well as in base 28, serves for storing of additional views. Catch 35 serves also to hold the two boxes together when the device is closed, as shown in Figs. 1 and 3.

Access to box 28 is readily had by swinging the two doubled-up sections 23 and 24 outwardly, as shown in dotted lines in Fig. 2. When so doubled up, they are of even height with box 28, so that at that time all parts of the outfit rest even and in line with each other. Again, when swinging inwardly, as shown in Figs. 1 and 3, their combined height is such as to equal the upwardly-extended side 29 of the box, so that no part of the closed-up package projects above the other one.

The removability of the lenses, whereby they may be bodily taken out from the lens-holder, facilitates their cleaning.

While I have described the picture-carrying support as adjustable in its position for focusing, it is evident, since such focusing consists merely of adjusting the distance between the former and the lenses, that such adjustment might be had by having either or both movable. Accordingly the picture-support might remain stationary and the lens-holder could be moved, for which purpose this latter would be adjustably supported on section 23 on the bottom and between the sides of which it would be moved.

Having described my invention, I claim as new—

1. A lens-holder consisting of the wooden lens-frame 10 provided with lens-pockets, lenses fitted into these pockets, the thickness of frame 10 being such as to provide sufficient depth for these pockets to receive the lenses flush with the frame, a plate 14 having openings corresponding with the lenses and their pockets, but slightly smaller than the lenses so that by projecting over their edges these lenses are held in place and means to hold plate 14 on frame 10 with the lenses between.

2. A lens-holder consisting of two parts hingedly secured to each other, so as to permit them to be swung apart and with pockets between them, two openings in each which register with those of the other part, independent frames fitting into these pockets and around the lenses which they engage to confine them in position within the pockets and a locking device to hold the parts in position on each other.

3. In a view outfit, the combination of a lens-holder, a picture-holder, a support for the lens-holder being in sections hingedly secured to each other, thereby permitting it to be opened out so as to serve as a support for the lens-holder and picture-holder, means whereby the lens-holder is detachably secured to one of the sections of its support, it being held by frictional contact merely so as to be removable, a combined storage-box and base to which this sectional lens-holder support is hinged and a support projecting upwardly therefrom upon which this sectional support is adapted to rest in an inclined position when opened out.

4. In a view outfit, the combination of a lens-holder consisting of two parts between which the lenses are confined, a support adapted to be adjusted to an inclined position, a double hinge having three flaps and two pintles whereby the two parts of the lens-holder are hinged to each other and the latter also as a whole to this support and a picture-holder resting upon this latter.

5. A view-glass consisting of two lenses substantially square and thinner on one edge than on the other, a holder for them consisting of two parts having pockets between them to admit these lenses, two openings in each of these parts, which in one register with those of the other, said openings conforming in outline to the lenses, but of dimensions somewhat smaller than these latter and an independent frame for each lens fitted around the edge thereof and having projections engaging the thicker parts of the lenses whereby they are held within their frame.

6. In a view outfit, the combination of a box 28 having one of its sides extending upwardly and another box divided horizontally in two equal-sized sections 23, 24, hingedly connected, said divided box hingedly connected to the side of box 28 opposite the highest side thereof and adapted when opened out to rest upon the upper edge of said extended side and a lens-holder held on section 23 by frictional contact merely so as to be removable.

7. In a view outfit, the combination of a lens-holder consisting of two separable parts between which the lenses are confined, a support for the lens-holder and a hinge having two hinge-pintles and whereby the two parts of the lens-holder are secured to each other and to the support thereof.

8. A lens for a view outfit, being of decreasing thickness toward one side, a frame fitted around the edges of the same and of even width, such width being not less than the lens at its thickest part and means to hold the frame in position on the lens, both being adapted to be received by the sockets of a lens-holder into which said frame is fitted.

9. In a view outfit, the combination of a lens-holder, a sectional support 23, 24 for it, a base 28 to which the sectional support is hingedly secured, the base being of a size capable to receive this latter when folded up and a support for the sectional support to hold the same in an inclined position when opened out, such support consisting of one of the sides of base 28, which for such purpose is extended upwardly, the height of this extended part of such side being equal to the height of this sectional support when folded up so as to be even with the outside thereof when closed up, so that no part of the outfit projects above the other.

10. In a view outfit, the combination of a lens-holder, a support for it, a flap on the former and a recess in the other to receive this flap which is fitted thereinto with a sliding fit and whereby the lens-holder is detachably held on its support.

11. In a view outfit, the combination of a lens-holder, a box-shaped support for it to one end of which it is attached and a bar 37 disposed across it near its other end, serving in conjunction with the adjacent end of the support as a means to support views which are held between them.

12. In a view outfit, the combination of a lens-holder, a box-shaped support for it to one end of which the former is attached and a view-carrier also resting on this support and having upright posts against which the views rest, said support being in two sections hingedly secured to each other so that they may be closed up with the lens-holder and view-carrier between them, the hood of the lens-holder being received between the posts of the view-carrier.

13. In a view outfit, the combination of a lens-holder, a box-shaped support for it to one end of which the former is attached, a view-carrier consisting of a base and uprights against which the views are adapted to lean, said general support being in two sections hingedly secured to each other, so that they may be folded up with the lens-holder and the view-carrier between them, the base of the view-carrier being cut out to receive the hood of the lens-holder.

14. In a view outfit, the combination of a lens-holder, a box-shaped support for it to one end of which it is attached and the body of which extends rearwardly from the lens-holder, a view-carrier consisting of a base fitted adjustably between the sides of the box-shaped support, upright members on this base against which the views are adapted to lean and a friction-spring between one of the sides of the base and the adjacent side of the box-shaped support holding the view-carrier in its adjusted position by frictional contact.

15. In a view outfit, the combination of a lens-holder, a box-shaped support for it to one end of which it is attached and the body of which extends rearwardly from the lens-holder, a view-carrier consisting of a base fitted adjustably between the sides of the box-shaped support and wires near each edge of this base, they being shaped to form ways upon which the pictures rest edgewise and turned up at each end to form in the rear end supports against which the pictures lean and stops at the front end to prevent them from sliding off.

16. In a view outfit, the combination of a box-shaped base 28, a lens-holder support consisting of two hingedly-connected sections 23 and 24 hingedly attached to the upper edge of one of the sides of base 28, the side opposite this side being higher, the excess being equal to the height of sections 23 and 24 when doubled up, the upper edge of the intermediate sides being disposed to pass from the upper edge of the higher side to the upper edge of the lower one, sections 23 and 24 being equal as to size, which size is such with reference to base 28 that when said sections are doubled up on each other, they may be swung between the three sides of base 28.

17. In a view outfit, the combination of a box-shaped base 28 of which one side is considerably higher than the others, a lens-holder support consisting of two hingedly-connected sections 23 and 24 hingedly attached to the upper edge of the side opposite to the higher side of the box, said two sections adapted to be opened out and swung over onto the highest side of the box whereby they are supported in an inclined position, the upper edges of the sides intermediate the high and low sides being disposed at an angle in an inclined direction to connect the upper edges of these sides and also curved upwardly between them, sections 23 and 24 being equal as to size which latter is such with reference to base 28 that when said sections are doubled up on each other they may be swung between the three sides of base 28, so as to be in line with the highest side, or when opened out they may swing in between the upper edges of the sides between the high and low sides of the base.

In testimony whereof I hereunto set my signature in the presence of two witnesses.

RICHARD R. WHITING.

Witnesses:
C. SPENGEL,
ARTHUR KLINE.