

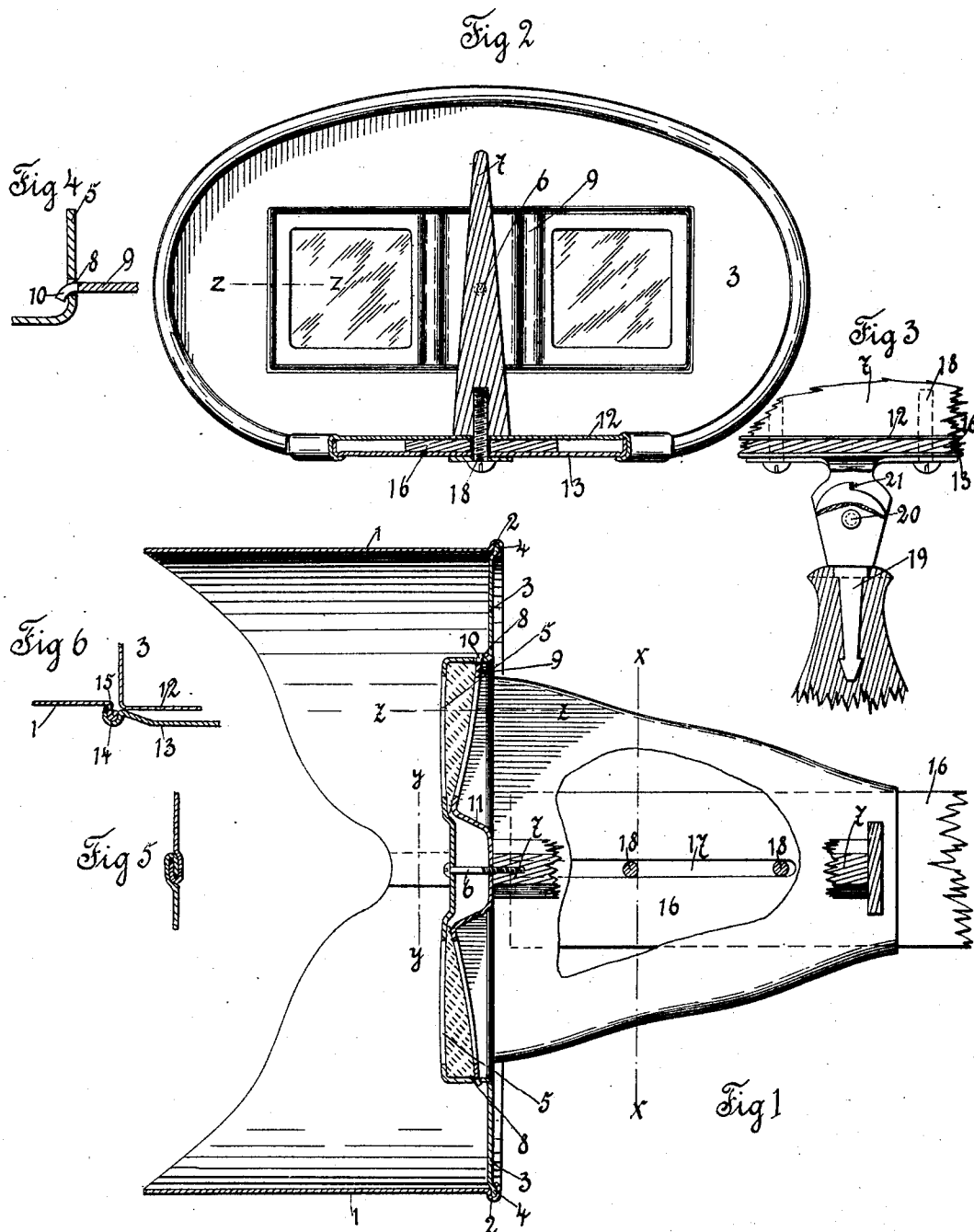
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C. L. PAPPENHAGEN.
STEREOSCOPE.

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NO MODEL.



WITNESSES:
Carl A. Knoll
Anne Wissemann

INVENTOR
Charles E. Pappenhagen
BY
Becker & Spaulding
ATTORNEYS

UNITED STATES PATENT OFFICE.

CHARLES L. PAPPENHAGEN, OF MEADVILLE, PENNSYLVANIA, ASSIGNOR
TO B. L. SINGLEY, OF MEADVILLE, PENNSYLVANIA.

STEREOSCOPE.

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To all whom it may concern:

Be it known that I, CHARLES L. PAPPENHAGEN, a citizen of the United States of America, and a resident of Meadville, county of Crawford, State of Pennsylvania, have invented certain new and useful Improvements in Stereoscopes, of which the following is a specification.

My invention relates generally to stereoscopes and more specifically to certain improvements in a number of the parts, which will appear as the specification proceeds.

Stereoscopes as constructed in the present art are as a rule composed of a hood adapted to conform to the contour of the face to exclude rays of light to form a dark chamber, a lens-frame, shaft-plates attached to the hood and lens-frame, a shaft fixed between the shaft-plates, a picture-carrier movable on said shaft for focusing, and a septum secured to the lens-frame between the lenses. A handle is also provided, which is usually fastened by screws running through the shaft-plates and into the septum.

The object of my invention is to provide improvements in these members, particularly in the shaft, the handle, the means for holding the lenses in position, the lens-frame, the method of joining the latter to the hood, and the method of joining the lower shaft-plate to the hood.

Other features will appear as the specification proceeds.

The accompanying drawings disclose the various novel features in a preferred form, although changes may of course be made within the scope of the claims.

Stereoscopes are at present constructed for the most part of aluminium, and while I prefer this in my construction I do not desire to be understood as limiting myself to this material, as, of course, any suitable material can be substituted.

In the accompanying drawings similar numerals of reference indicate corresponding parts in the several views.

Figure 1 is a partial plan view of a stereoscope, the shaft being broken off and the septum and lower shaft-plate broken away to in-

dicate the manner of engagement of the shaft and the shaft-plates. This figure also shows a cross-section of the lens-holder and hood. Fig. 2 is a view in elevation of the lens-frame, the shaft, shaft-plates, and septum being in section on the line *xx* of Fig. 1. Fig. 3 is a detail view of the handle. Fig. 4 is a detail view showing the manner of engagement of the lens-holder with the recess-wall of the lens-frame, taken on *zz*, Fig. 2. Fig. 5 is a detail view showing the method of joining the edges of the hood, taken on *yy*, Fig. 1. Fig. 6 is a detail view showing the arrangement of the lens-holder, shaft-plates, and hood and the method of joining the lower shaft-plate with the hood.

The hood is constructed in one piece in a conventional form, with its rear edge adapted to conform to the contour of the face, thereby excluding light and forming a dark chamber. It is joined at its forward edge to the lens-frame in such a manner as to form a rounded bead at the juncture of the hood and lens-frame, thereby relieving the usual flat appearance of the stereoscope. In practice the rearward edge is turned over on itself in the customary manner and covered with plush or other soft material of an attractive appearance, so that its contact with the face is rendered agreeable. The hood is united to the lens-frame and shaft-holder without screws or rivets and in a manner adapted to promote a beautiful appearance of the stereoscope taken as a whole. This is accomplished by uniting the edges in a lock-joint, which will be described hereinafter.

Referring now more in detail to the several parts in Fig. 1, 1 indicates the hood, shaped at its rear edge as described and having its forward edge grooved and flanged at 2.

3 is a lens-frame having its edge bent slightly outward at 4 to engage with the flanged groove of the hood. In this lens-frame is formed a rearwardly-projecting recess or pocket 5, having the central portion indented forwardly to allow for the screw 6, which binds the frame of the septum 7. This recessed portion of the lens-frame has lens-apertures and is provided in its walls at suitable points with open-

ings 8. Into this recessed portion of the lens-frame the lenses are positioned. Fitting snugly over them to keep them from lateral or forward displacement is the spring-plate 9, having a portion 10 on its edges adapted to engage with the before-mentioned openings in the walls of the pocket and having its centers apertured, so as to form a frame for the lenses. This spring-plate is constructed to conform to the angle of the lenses and has a central portion 11 indented outwardly sufficiently to bring it in snug contact with the rear face of the septum. It will thus be seen that the indented portion of the spring-plate, which forms, so to speak, a bridge, is adapted to spring into the recess of the lens-frame and to fit over the lenses. When the septum is fastened in the usual manner and the spring-plate is secured in position, the lenses are then held rigidly in place. This lens-frame 3 is bent forwardly and at right angles at its base to form the upper shaft-plate 12, which is joined at its marginal edges with the lower shaft-plate 13, so as to form a socket. The lower plate is bent upwardly near its junction with the hood and is then bent in a U shape 14, adapted to engage with a corresponding bent-back flanged portion 15 of the hood. The shaft 16 is fitted into the socket formed by the shaft-plates and is provided with a slot 17 in the portion inclosed by the said plates, thereby allowing the shaft to pass the screws 18, which pass through the shaft-plates and socket and unite the handle and septum. It will thus be seen that the shaft can be withdrawn without removing the screws. The shaft also serves to preserve the plates in their properly-distended form. The handle is connected to the lower shaft-plate by means of the member 19, forming a portion, spear-shaped, extending downwardly and embedded in the handle and pivoted at 20. The upper portion is cut away, so as to form a projection to engage with the lug 21, projecting from the upper left-hand quarter-segment and which forms a stop against this cut-away portion, thereby preventing the continued rotation about the pivot 20 and preventing the stereoscope from rotating beyond the horizontal. This member 19 is attached to the shaft by means of two vertical hanger plates or ears which are extended in the form of a shoe on the lower shaft-plate and is secured thereto by the screws 18. Two plates or ears are preferred, although only one need be used.

The ends of the hood may be united in any suitable manner, preferably as shown in Fig. 5 of the drawings, where the contiguous ends are formed into a lock joint or seam at the point where they meet, each edge being flanged in a hook form in the opposite direction to the other and adapted to interlock with the flange of the opposite end.

Having thus described my invention, what I claim is—

1. In a stereoscope, the combination of a hood, a lens-frame joined to said hood at the upper and side portions of its surrounding edge, a lower shaft-plate joined to the hood by a transverse seam at the lower portion of its surrounding edge, an extension on the lens-frame forming an upper shaft-plate joined to the lower shaft-plate by means of a lock-seam so as to form a socket for the shaft and a septum attached to the shaft and to the lens-frame.

2. In a stereoscope, the combination of a hood, a lens-frame joined to said hood at the upper and side portions of its surrounding edge, a lower shaft-plate joined to the hood by a transverse seam at the lower portion of its surrounding edge, and an extension on the lens-frame forming an upper shaft-plate joined to the lower shaft-plate by means of a lock-seam so as to form a socket for the shaft.

3. In a stereoscope, a lens-frame having a single pocket adapted to receive the lenses, and a member adapted to be secured in the said pocket to hold the lenses in position.

4. In a stereoscope, a lens-frame having a recessed portion extending rearwardly adapted to receive the lenses, and a spring-plate adapted to be secured in said recessed portion to hold the lenses in position.

5. In a stereoscope, the combination of a hood, composed of a single piece of metal and adapted to interlock at its forward edge with the periphery of the lens-frame, a shaft adapted to removably engage with a shaft-socket formed by two plates joined at their margins by an interlocking seam, one of said plates being joined to the hood by a U-shaped hook adapted to receive a bent-back flanged portion of the hood, the other plate being integral with the lens-frame and at right angles to it, the said lens-frame having a single pocket adapted to receive the lenses and a spring-plate adapted to be removably secured in said pocket and adapted to conform to the angles of the lenses and to hold them securely in position.

6. In a stereoscope, a lens-frame having a single pocket adapted to receive the lenses and extending rearwardly, said pocket having in its walls a plurality of openings, a spring-plate conforming to the angles of the lenses adapted to spring into the said pocket and to hold the lenses in position and having extending spurs adapted to engage in the openings in the wall of the pocket to secure the said plate.

7. In a stereoscope, a lens-frame having a single pocket extending rearwardly adapted to receive the lenses, a spring-plate conforming to the angles of the lenses adapted to spring into the said pocket and to hold the lenses in position, and lugs in the walls of said pocket adapted to secure the spring-plate.

8. In a stereoscope, a lens-frame having a single pocket extending rearwardly adapted to receive the lenses, a spring-plate conform-

ing to the angles of the lenses adapted to spring into the said pocket and to hold the lenses in position and a plurality of lugs integral with the walls of the pocket and adapted to secure the spring-plate in position.

9. In a stereoscope, a lens-frame having a recessed portion extending rearwardly adapted to receive the lenses, a spring-plate conforming to the angles of the lenses having a forwardly-extending bridge in its central portion and adapted to engage in said recess and to hold the lenses in position.

10. In a stereoscope, a lens-frame having a recessed portion extending rearwardly adapted to receive the lenses, a spring-plate conforming to the angles of the lenses and having a forwardly-extending bridge in its central portion, said spring-plate being adapted to engage in said recess and to hold the lenses against displacement and means adapted to secure the spring-plate in position.

11. In a stereoscope, a lens-frame having a single pocket adapted to receive the lenses and extending rearwardly, a spring-plate conforming to the angles of the lenses and having a forwardly-extending bridge in its center portion, said spring-plate being adapted to spring into the said pocket and to hold the lenses in position.

12. In a stereoscope, the combination of a hood, composed of a single piece of metal and adapted to interlock at its forward edge with the periphery of the lens-frame, two shaft-plates forming a socket joined at their margins by an interlocking seam, one of said plates being joined to the hood by a U-shaped hook adapted to receive a bent-back flanged portion of the hood, the other plate being integral with the lens-frame, and at right angles to it, the said lens-frame being adapted to receive the lenses, and a spring-plate adapted to hold said lenses in position.

13. In a stereoscope, the combination of a hood, composed of a single piece of metal and adapted to interlock at its forward edge with the periphery of the lens-frame, two shaft-plates forming a socket joined at their margins by an interlocking seam, one of said plates being joined to the hood by a U-shaped hook adapted to receive a bent-back flanged portion of the hood, the other plate being integral with the lens-frame and at right angles to it, the said lens-frame having a single pocket adapted to receive the lenses, and a spring-plate adapted to be removably secured in said pocket and adapted to conform to the angles of the lenses, and to hold them securely in position.

14. A stereoscope, comprising in part: a shaft, a lens-frame having a horizontal integral portion extending at right angles, and a shaft-plate secured to the hood, said integral portion and the shaft-plate being adapted to form a socket for the shaft.

15. In a stereoscope, the combination of a hood, a lens-frame joined to the said hood at

the upper and side portions of its surrounding edge, a lower shaft-plate joined to the hood by a transverse seam at the lower portion of its surrounding edge, an extension on the lens-frame forming an upper shaft-plate joined to the lower shaft-plate by means of a lock-seam so as to form a socket for the shaft, and a septum attached to the shaft and to the lens-frame.

16. In a stereoscope, a lens-frame having a rearwardly-extending recess adapted to receive the lenses and a spring-plate adapted to hold said lenses firmly in position, said spring-plate having projecting spurs adapted to engage with openings in the side of the recessed portion of the lens-frame to secure the spring-plate in position.

17. In a stereoscope, a lens-frame having a rearwardly-extending recess adapted to receive the lenses, a spring-plate having a forwardly-extending bridge in its center portion and adapted to hold said lenses firmly in position, said spring-plate having projecting spurs adapted to engage with the openings in the side of the recessed portion of the lens-frame to secure the spring-plate.

18. In a stereoscope, a socket, a shaft, a slotted portion of said shaft adapted to extend into the said socket, binding-screws for securing the shaft in the socket and which when loosened will allow the shaft to be withdrawn from the socket.

19. In a stereoscope, the combination of a hood, a lens-frame, a shaft adapted to engage in a socket formed by two plates, one of which is secured to the hood and the other of which is integral with the lens-frame.

20. In a stereoscope, the combination of a hood, a lens-frame, a shaft having a portion thereof slotted and adapted to engage in a socket formed by two plates, one of which is secured to the hood and the other of which is integral with the lens-frame.

21. In a stereoscope, the combination of a septum, two plates adapted to form a socket, means adapted to bind the said septum to the plate, and a shaft adapted to engage in the socket formed by the two plates, said shaft having a slot in the portion contained in the socket adapted to allow it to freely pass the said binding means.

22. In a stereoscope, a lens-frame having an integral portion projecting at right angles to form a plate, a second plate rigidly connected with this projecting portion of the lens-frame, the two forming a socket, a shaft adapted to engage in said socket, and a hood rigidly connected with said plate and lens-frame.

23. A stereoscope comprising in part, a shaft and a lens-frame having a horizontal integral portion extending at right angles and adapted to embrace said shaft.

24. In a stereoscope, a shaft, a socket adapted to receive said shaft, a hood, a lower plate rigidly attached to said hood, a lens-frame having a horizontal integral portion extend-

ing at right angles to form an upper plate, said plates forming a socket and being joined at their marginal edges by interlocking flanges.

25. In a stereoscope, a socket formed by an upper plate integral with the lens-frame and a lower plate rigidly attached to the hood, said plates being fastened at their marginal edges by interlocking flanges and a shaft having a portion within said socket slotted to permit of its free removal.

26. A stereoscope comprising in part a shaft,

adapted to engage in a socket formed by two plates connected at their marginal edges and having a portion contained in said socket slotted.

Signed at New York city this 9th day of November, 1903.

CHARLES L. PAPPENHAGEN.

Witnesses:

WAYNE M. MUSGRAVE,
RAYMOND C. SPAULDING.