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2,326,718

STEREOSCOPE

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Application January 7, 1941, Serial No. 373,420

11 Claims. (Cl. 88—29)

My invention has reference to a stereoscope, and is of that type which is used with a strip of picture film bearing pairs of stereoscopic pictures for simultaneous viewing through the optical channels of the instrument. Machines of this type have been quite generally distributed commercially under the name of "Tru-Vue." They are designed with a mechanism for advancing the strip of picture film in a "step-by-step" movement through the machine.

One of the chief purposes of the present invention is to simplify the device in such a manner as to reduce manufacturing costs. This is accomplished not only by reducing the number of parts one third below the number previously employed, but by simplifying the assembly of the parts so that no screws, rivets, or welding operations need be made use of as in previous forms of the device. This is done by a snapping and friction locking in the assemblage of the parts, which will be herein more fully set forth. The snapping together of the parts is made possible by the use of commercial plastic in the construction of the casing, which is a "streamlined" effect, and molded into the desired form, with a main body portion and closure part therefor.

Another feature of the invention is a unitary sliding member, carrying the devices for engaging with a strip of film used in combination with the stereoscopic viewer. As an improvement over previous devices, this sliding member does not enter or cross the optical channels of the instrument.

Another feature of the invention is a specially designed seat in the casing for the holding of translucent diffusing windows which are used. These seats, which provide results which are usually accomplished either by an "undercut" in the molding, or a separate part, is usually molded in a single part by standard methods. It allows the translucent windows, which may be made of some such material as celluloid, to be sprung into position from the outside of the casing, but prevents their removal from the outside in any normal use.

The strip of film made use of in combination with this viewer is of special design, being provided along one edge with perforations which allow its exposure and processing with the aid of standard 35 mm. motion picture equipment, while being provided at the other edge with engaging means at regular intervals, corresponding to the length of movement of the film at each advance thereof when used in the viewer. This accomplishes two purposes—it eliminates the noisy operation associated with some such devices in use at present, wherein the engaging means drags over a series of standard 35 mm. perforations, instead of gliding along the surface of the film; second, it results in a pair of corresponding pictures being brought into line before the translucent viewing windows each time that the mechanism is advanced to its stop, and regardless of the previous position of the film in the viewer. Thus it results in what may be termed "automatic framing."

The above named, and other features and advantages of the invention will more fully appear from the following specification, reference being had to the accompanying drawings, in which:

Fig. 1 is a perspective view of an instrument embodying the invention, with a roll of picture film in position for use.

Fig. 2 is an end view thereof in the position in which it is generally held when in use.

Fig. 3 shows the closure section of the casing removed from the body portion.

Fig. 4 shows the body portion of the casing, separated from the closure part, and with a portion broken away.

Fig. 5 is a cross-section on the broken line 5—5 of Fig. 3.

Fig. 6 is a cross-section on the line 6—6 of Fig. 4.

Fig. 7 is an enlarged view of the slide unit, in perspective, with one corner broken away.

Fig. 8 shows the pawl member, detached, in perspective.

Fig. 9 is a detail of the pawl retaining spring.

Fig. 10 is a detail of the slide knob, broken apart.

Fig. 11 is a side view of the slide unit, partly broken away, with the pawl mechanism disclosed.

Fig. 12 is illustrative of a strip of picture film, partly rolled.

Fig. 13 is a fragmentary enlargement of Fig. 5, showing the special retaining seat for one of the translucent windows.

Fig. 14 is a cross-section on the line 14—14 of Fig. 13.

Fig. 15 is a plan view of a blank from which the slide member is produced.

In all of the structural figures except Figs. 1 and 2 the parts are shown in the positions in which they are assembled.

The casing of the viewer instrument consists of two molded parts, a body portion (designated generally by the reference letter A) and a lid or closure portion (indicated generally by the letter B), which portions are shown united in Figs. 1 and 2. In Figs. 3 and 4, and 5 and 6 said parts are shown separated but in the same orientation as when united. The body portion consists of a pair of eye-tubes 10, with the interocular spacing customary for binocular instruments, united by a bridge 15. The casing is of hollow formation, molded of commercial plastic or other suitable material. It bifurcates into two relatively thin-walled spaces, comprising the eye-tubes referred to. In the small end of each of said eye-tubes is a plate 11, provided with an oval opening 12, and on the inner side of each of the plates 11 over the opening 12 is a lens 1, held in place by guides 13 and 14 in the eye-tubes, and further secured from release by clips 5, provided with openings in line with the openings 12. The clips 5 are of spring material, and are held in place by points 6 which engage the guides 14 yieldably.

Projected beyond the sides of the eye-tubes are flanges 20 and 21, with upwardly curved ends as shown at 22 in Fig. 4. The lower sides of said flanges are ribbed as an ornamental treatment, which serves to disguise the line 18 along which the lid and body portion of the casing join.

The large end of the body portion A is open, and is closed for use by the lid B, consisting of a base-plate 30 and side plates 31. The sides 31 closely engage the flanges 30, and are provided on their inner surfaces with small grooves 32 for engagement with ridges 25 in the faces of said flanges. The plates 31 possess sufficient resiliency to permit of their being snapped in place over the ridges 25, holding the parts A and B together and secure from accidental release.

Projected upward from the flange 21 is a plate 23, accommodated by an opening 32 in the side plate 31 of the lid which is adjacent thereto. The opening remaining between the top of said plate 23 and the bottom of the opening 32 allows the handle 48 of the slide mechanism to project through the casing, and the ends of the opening 32 act as stops to limit its motion in each direction.

The base-plate is provided with a pair of spaced openings 33, in register with the openings 12 of the eye-tubes, and outlined at their side edges by strips 33a. These strips, which are integral with the base-plate, form film guides in connection with ledges 35 spaced therefrom and parallel therewith. These film guides support and conduct the film 3 in its passage through the viewer, between the lid and body portions B and A, the film being held in slidable relation with said guides by the edges of the side plates of the body at 26, (Fig. 6), which are spaced a little ways from the guides 34 when the body and lid parts are united. Slight bumps in the guides and in the side plates 26 offer suitable resistance to the passage of the film to prevent accidental slipping thereof.

The strips 33 and ledges 36 (Figs. 13 and 14) cooperate to form a seat into which the translucent diffusing window 38 may be sprung. As may be seen from the drawings, the window 38 may be readily inserted through the opening 33 by springing the same flexibly into an arch shape. Once in position in the seat it rests against the strips 34 and ledges 36 so that it is well supported from pressure from the outside of the casing (uppermost in the figures). This seat for the window may be readily molded because the opening 33 is formed by a "peg" in the cavity of the mold while the groove on the outside of the strip 34 is formed by a raised rib on the punch of the mold. A very thin film of the plastic material is left between them, and this may be readily broken out when the molding process is completed, leaving the opening through which the ends of the window are to be inserted (Fig. 13). As before stated the body portion A and lid portion B are each molded in a single piece.

The mechanism for engaging a strip of film and advancing it a predetermined distance consists of a sliding mechanism 40 (Fig. 4) bearing a knob 70 by which it is manually controlled from the outside of the casing. It is returned to the original position upon being released by a coiled spring 4, connected at one end to a lug 27 in the casing, and at the other end to a post 48 at the end of the slide member (Fig. 11).

In Figs. 7, 8, 9, and 10 the parts of the slider mechanism are shown in exploded positions, with an assembly thereof disclosed by the broken out section in Fig. 11. The case of the slider is formed from a single blank of metal as shown in Fig. 15, after a cutting and punching operation. The handle 48 projects through the casing and carries a knob 70, which is held on the handle by a "friction lock," and by engagement with recesses 49 in the handle. Grooves 71 in the knob engage these catches, and while the knob can be readily slipped into position, its accidental release is prevented.

The movable film engaging tooth 51 projects through the opening 43 in the slider case, and is part of a pawl unit, shown in Fig. 8. The pawl is held from lateral movement by the side walls of the case, and is held in yieldable contact with the base 42 by means of a thin plate spring 60, the ends of which are held from longitudinal escape by tangs 44 struck inwardly from the slider base 42 (Fig. 11). An arm 54 projected from one side of the pawl outfit engages with a notch 61 in the spring 60, and holds the pawl from movement longitudinally. The arm 54 is projected at an angle into a cam rider or follower 53, which engages the arcuate edge of a cam 37 on the inner face of the lid part B of the casing. In the extreme returned position of the slider 40 the cam 37 acts to withdraw the tooth 51 into the case of the slider, with a resultant disengagement of the tooth with the picture film, permitting such film to be freely withdrawn from the viewer in the reverse direction from that in which it is normally advanced through the instrument. As the slider is again moved in a feed direction the cam and rider 53 disengage and the tooth 51 is again forced into engaging position by the spring 60.

The tooth 51 engages with perforations 81 of specially designed picture film shown in Fig. 12. The pictures indicated at 82 are so spaced on the strip of film that a pair of stereoscopic views will be at such distance apart as to come into register with the eye openings 12 of the viewer. This requires a non-standard frame separation on film of the type used for 35 mm. motion picture work. Such picture film may, however, be processed on commercial 35 mm. motion picture equipment if it is provided with the standard 35 mm. perforations along one edge, as shown at 80. Previous devices of this type have used this same perforation along the edge or edges engaged by a toothed feeding mechanism. On account of resulting faults and drawbacks in the use of said standard perforations it was sought to improve thereon by the use of a special type

of perforation, such as shown at 81, which perforations always bear the same positional relation to a correlated pair of pictures on the film. Following the previous usage the pictures of a stereographic pair are separated by two other pictures, the left one of which is the right eye picture of the pair following normally in sequence with said first-named pair. For each change of pictures the film is advanced two-thirds of the inter-ocular distance, and by spacing the perforations 81 to correspond therewith, and placing them in suitable relation to the pictures, as determined by certain dimensions of the viewer, definitely causes a stereoscopic pair of pictures to be brought into register with the eye-holes of the viewer each time that the slider is advanced until the handle 48 comes in contact with the leading edge of the recesses 32 in the lid of the viewer. Should a stereoscopic pair be gotten out of alignment with the eye-tubes by an incomplete operation of the slider, or from other cause, upon the next operation of the slider the tooth 51 will glide along the surface of the film until it reaches the perforation with which it previously engaged, and will re-engage therewith, advancing the picture film until the stereoscopic pair is brought into proper position for viewing.

While the picture film has been shown herein in the form of a simple strip, capable of being rolled at the ends, it can also be in the form of a loop for continuous operation. This would be of advantage in the operation of a display stereoscope, on a desk or counter, to prevent the strip of film from being removed from the machine, surreptitiously or otherwise.

What I claim, and desire to secure, is:

1. A stereoscope, adapted for use with a strip of picture film, comprising a casing formed of a body portion, including eye-tubes open at one of their ends, lenses in the other ends thereof, a lid removably engageable with the open end of the casing, to form a closure therefor, with a passage between the body portion and lid for the movement of a strip of film, translucent windows in said lid in register with the eye-tubes, means for guiding a strip of film through said passage, operable from without the casing, and means in said lid for holding said last-named means normally out of engaging position.

2. A stereoscope adapted for use with a strip of picture film, formed of moldable plastic material, and embracing a hollow body portion with sight channels and open at one of its ends, lenses in the other ends of said sight channels, a lid for the open end provided with parts adapted for a frictional engagement with the body portion, and capable of being snapped into position thereon, with clearance between said body portion and lid for the passage of a strip of film, a slide unit near said clearance passage provided with means for engagement with a strip of film near its edge, to give a feed movement thereto, and means in said lid for holding said last-named means out of engaging position.

3. A film viewing instrument adapted for use with a strip of picture film, comprising a hollow body portion embracing a pair of tapered eye-tubes, open at its larger end, a lid engageable with the body portion, lenses in the smaller ends of the eye-tubes, diffusion windows in said lid in registry with the lenses, said body portion and lid being spaced to permit the passage of a strip of picture film, a slide unit movable adjacent to said space, a film engaging member carried by said slide unit, including a pawl and tooth thereon, a cam within said lid engageable with said pawl to release the tooth at the end of a feed movement thereof, means for the movement of the slide unit from without the casing, and spring means for returning said slide unit to its normal position, following a feed movement thereof.

4. A stereoscope, adapted for use with a strip or loop of picture film, comprising a plastic body portion, molded in a single piece, including a pair of tapered eye-tubes open at their larger ends, a lid for the open end formed of plastic material, molded in a single piece, having resilient parts capable of a snap connection with the body portion, with a space between said parts for the passage of a strip or loop of film, lenses in the small ends of the eye-tubes, translucent diffusing windows in said lid, in register with said eye-tubes, pairs of tracks on the inner face of said lid, at the sides of said windows, with seats at the sides of the windows to receive the ends thereof, capable of being sprung into place from without the lid, and non-removable when the lid is attached, a slide unit in said lid carrying means for engagement with a strip of film at its edge, to give a feed movement thereto, and means for returning said slide unit to its initial position, with said last-named means out of engagement.

5. In a picture film viewing machine, a slide unit formed from a flat thin piece of metal, bendable into U-form in cross-section, provided in one of its sides with an opening for a tooth actuating part, and an opening in its bottom for free movement of a tooth, also having bendable portions at its ends, one of which forms a post for attachment of a spring, and an arm bent laterally to form an actuating piece for the slide unit.

6. A picture film viewing apparatus, comprising a hollow body portion, provided with a pair of eye-tubes, and a lens in one of the ends of each thereof, a closure for the other ends, spaced from the body portion to permit the passage of a strip of film, diffusion windows in said closure, in line with the lenses, a slide unit in said apparatus, provided with a pawl mechanism engageable with perforations in the edge of a strip of film, to give feed movement thereto, for spacings of predetermined length, and a strip of film for use therein, provided in one of its edges with perforations at regular intervals, corresponding with the length of such spacings.

7. In a device of the class described, a two-piece casing comprising a body portion formed with binocular eye-pieces and central sight passage therefor, open at one end, and a lid forming a closure for said end, and continuing the sight passage, a film shifting slide unit movable in a space at one side of the body portion, non-interfering with the sight channel, and provided with a film feeding ratchet mechanism, means in said lid for holding said ratchet mechanism out of operation at the end of a feed movement, and complementary means in said body and lid at the sides of said sight passage, for supporting and guiding a strip of picture film through said device, to be viewed therein.

8. In combination, a device for viewing a series of stereoscopic pictures on a perforated tape, the device having a casing forming binocular eye tubes, and a tape suitably perforated for use with said device, the device having means for receiving and guiding the tape over registering

windows, means operable manually from outside said casing for advancing said tape, by engaging said tape with a slidably mounted claw, perforations in the tape spaced at intervals two-thirds the separation of the registering windows, means for limiting the forward motion of the claw at such a point that a complementary picture pair registers with the registering windows, means for limiting the backward motion of the claw so that it will not be as much as four-thirds the separation of the registering windows, and means for preventing the claw from carrying the film with it during its backward motion.

9. In combination, a device for aligning a series of complementary picture pairs on a perforated tape over a pair of registering windows, and a tape with picture pairs suitably disposed thereon and with perforations suitably disposed thereon with relation to said pictures, means reciprocably operable between definite limiting positions less than four-thirds the separation of the registering windows, to engage said perforations with a claw and advance them in the line of said registering windows, means enabling said claw to release said perforations during its return movement, a tape with pictures disposed on it at intervals one-third the separation of the registering windows, and with perforations for engagement with the aforesaid claw also disposed on it at intervals of two-thirds the separation of the registering windows, and in such relation to said pictures that upon the claw being advanced to its limiting position a complementary pair of pictures registers with said registering windows.

10. A film viewing device for viewing in the still state a series of pictures or images on a perforated film tape, the device having a casing forming binocular eye tubes, and extending forward and having teeth over which are sprung, by means of indentations therein a front plate of such shape that a channel can be used both for guiding the film past registering windows and for guiding a mechanism operable from outside said channel for advancing said tape by engaging in the perforations of said tape a claw flexibly mounted in said mechanism, means whereby the motion within the channel of said mechanism is limited so the tape will be carried to a suitable position for registry with said windows, said windows containing a flexible translucent material sprung into place from the front and extending laterally beyond the margins of the opening through which it is sprung, means for locating it laterally, a ledge supporting it from the rear at the top and bottom and two rails supporting it at the sides, said rails being so positioned that their outside faces fall slightly within the vertical margin of the said opening.

11. A film viewing device for viewing in the still state a series of pictures or images on a perforated film tape, the device having a casing forming binocular eye tubes, and a channel of such shape and size that it can be used both for guiding the film past registering windows and for guiding a mechanism operable from outside said channel for advancing said tape by engaging in the perforations of said tape a claw flexibly mounted in said mechanism, said claw having an integrally formed extension arm which by engagement with a camming surface in the front plate of the film guiding channel is forced out of engagement with said tape at one of the limiting positions of said film advancing mechanism, and means whereby the motion within the channel of said mechanism is limited so that the tape will be carried to a suitable position for registry with the windows.

GIFFORD M. MAST.

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STEREOSCOPE

Filed Jan. 7, 1941 2 Sheets-Sheet 1

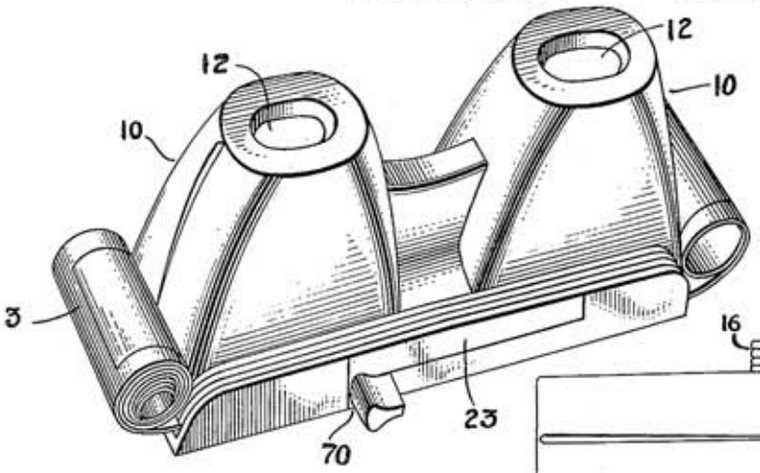


FIG. 1.

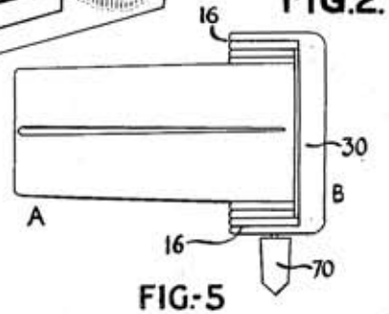


FIG. 2.

FIG.-3

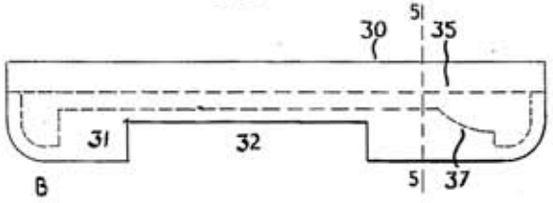


FIG.-5

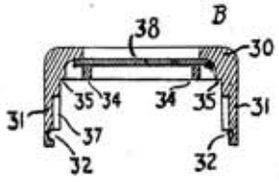


FIG.-4

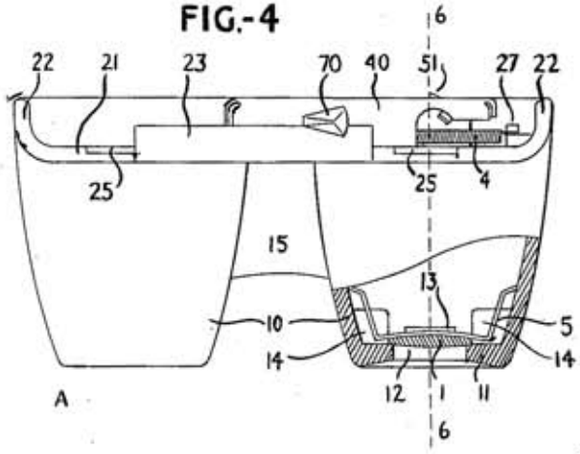
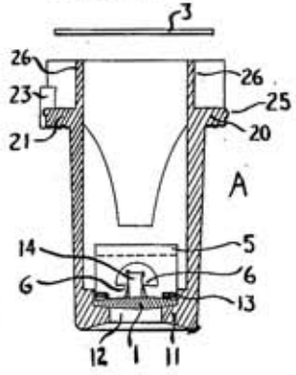


FIG.-6



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STEREOSCOPE

Filed Jan. 7, 1941 2 Sheets-Sheet 2

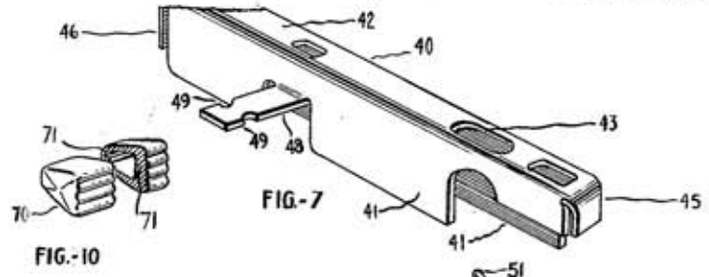

FIG.-7

FIG.-10

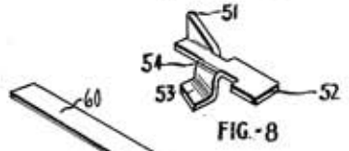

FIG.-8

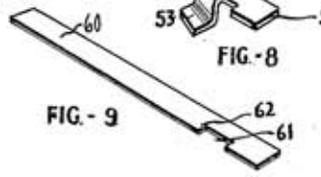

FIG.-9

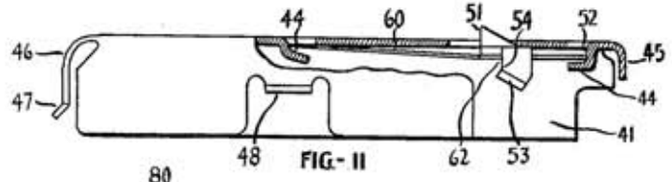

FIG.-11

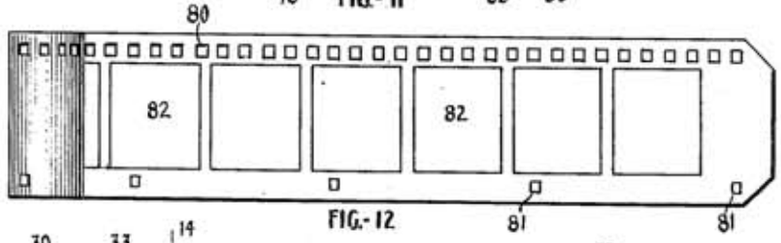

FIG.-12

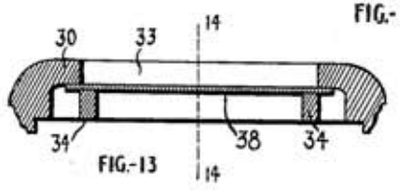

FIG.-13

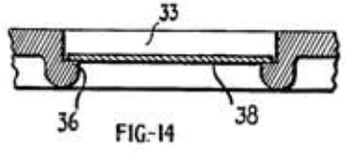

FIG.-14

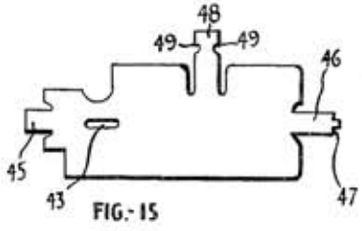

FIG.-15

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UNITED STATES PATENT OFFICE

2,590,260

STEREOSCOPIC FILM VIEWER

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Application August 24, 1948, Serial No. 46,832

3 Claims. (Cl. 88—31)

The present invention relates to improvements in the structure disclosed in Patent No. 2,326,718 and among the objects of this invention are the provision of an improved form of film actuator which can be assembled outside of the body of the viewer and then installed therein as a unit, whereby to simplify the construction and reduce the cost of production of the viewer; the provision of a modified form of film which will obviate what has heretofore at times happened, namely, the film has been fed entirely through the machine without the operator being aware of having reached the end of the film; the provision of improved means for insuring that the film will be held substantially flat when passing through the viewer; and such further objects, advantages, and capabilities as will hereafter appear and as are inherent in the construction disclosed herein. Our invention further resides in the combination, construction, and arrangement of parts illustrated in the accompanying drawings and, while we have shown therein what is now regarded as the preferred embodiment of this invention, we desire the same to be understood as illustrative only and not to be interpreted in a limiting sense.

In the drawings annexed hereto and forming a part hereof,

Fig. 1 represents an expanded perspective view of a structure embodying our present invention;

Fig. 2 represents a vertical transverse section substantially along the plane indicated by the line 2—2, Fig. 1;

Fig. 3 represents a fragmentary longitudinal section of a structure embodying our present invention, taken substantially along the plane indicated by the line 3—3, Fig. 2;

Fig. 4 represents a side elevation of the film-actuator mechanism, with the film shown in section;

Fig. 5 is a view similar to Fig. 4 but with the film-actuating device moved to the opposite end and substantially at the end of its film-actuating movement;

Fig. 6 represents an exploded view of the film-actuating device, in perspective; and

Fig. 7 is a plan view of an end portion of a film showing the arrangement of the actuating perforations.

This construction comprises a pair of picture-viewing tubes 1 connected by a bracing member 2 and to a body 3. To this is connected a cover member 4 which snaps in place and presses on the outer face of the film 5 to hold the same substantially flat in the area carrying the pictures to be viewed. The edges 6 and 7 of the top and bottom walls of the viewer are straight and parallel and furnish a support for the film 5 as it passes through the viewer.

A rib 8 on the inside of the cover 4 has a straight edge which is spaced slightly from the edge 7 and provides enough room for the film 5 to slide freely between the two. The edge 6 of the opposite wall of the body 3 is straight and therefore tends to hold the film straight when the edge 9 of the cover 4 is pressed against it. The edge 9 on the inside of the cover 4 is straight and spaced slightly from the edge 6 to provide a space in which the edge of the film 5 may slide. A rib 10 is formed on the inner face of the cover 4 and, in its central part, this rib extends backwardly a few thousandths of an inch to be sure to take out the natural buckle in the film and make it substantially flat in the areas to be viewed.

In order to feed the film 5 through the viewer, use is made of the film-actuator mechanism shown in Figs. 4, 5, and 6 which comprises a channel member 11, a slide 12, and an actuating spring 13. Both members 11 and 12 are of channel form and the slide 12 has at one end a hook or post 14 to which the eye 15 of spring 13 is connected. The channel member 11 is provided at one end with a hook 16 to which the eye 17 of spring 13 is connected, the second end of channel member 11 being provided with an abutment 18 which serves as a limiting stop for movement of the slide 12. The hook or post 14, abutting against the stop 18, limits the motion of the slide 12 in one direction while the engagement of the end 12a of the slide 12 limits the motion of this slide in the opposite direction.

An arm 19 extends laterally from the slide 12 and out through a slot 20 in the closed side of the channel member 11. On this arm 19 is mounted a finger piece 21 which is used in actuating the slide 12, of which the hook 22 forms a part. This hook is carried by a spring arm 23 which normally slides in a recess 24 formed at one edge of the channel member 11. However, the hook 22, as the slide approaches one end of its travel under the influence of the spring 13, rides under the wall 25 of the channel member and is released from its engagement with the edge of film 5. This releases the film 5 and insures proper positioning of the film so that the perforation 27 therein will be in position to be engaged by the hook 22 when actuated. When the handle 21 is moved in the opposite direction, the hook 22 comes out from under the wall 25 and engages in the first available notch or perforation 27 in the edge of the film. Attention is directed to the ease with which the actuator-mechanism, shown in Figs. 4, 5, and 6, can be assembled, since it is assembled as a unit independently of the body of the viewer and installed as a unit in the cavity 26 in the side wall of the housing 3. In order to prevent actuation of the film beyond the final viewing position, we omit the final perforation 27 at one end portion of the film, as indicated in Fig. 7. There is, therefore, no opening at this point to be engaged by the hook 22 and, therefore, no reason for the film to be actuated farther.

It has been found that, when roll film is unrolled, there is a tendency for it to curl transversely, with the concave side inwardly. In order to overcome this tendency, we have placed the ribs 8 and 10 on the cover 4, and the rib 10, with its supporting wall 3, tends to keep the film flat. Also, as seen in Fig. 3, there is a slight hump on the central portion of the rib 10 which tends to furnish a braking effect on the film and to keep it from sliding in a reverse direction, with the feeding hook 22, when this is returned by the spring 13. To a certain extent, there is also a braking effect produced by the pressure of the walls 3, 8, and 10, even without the hump on the rib 10.

It will of course be understood that the specific description of structure set forth above may be departed from without departing from the spirit of this invention as disclosed in this specification and as defined in the appended claims.

Having now described our invention, we claim:

1. A stereoscopic film-viewer, comprising a pair of parallel, spaced-apart viewing tubes, an elongated body and cover for supporting and guiding film to be viewed, said tubes being secured to said body at adjacent ends of said tubes and adjacent to the ends of said body, said cover extending over said body on the side thereof away from said tubes whereby to form a film passage between said cover and body perpendicular to the plane of the axes of the tubes, said body having an elongated recess parallel to said passage and opening toward an edge of a film in said passage, a film-advancing assembly freely received and positioned in said recess, said assembly comprising a channel of a size to fit said recess, a slide positioned within said channel slidable longitudinally thereof, a spring attached to said slide and channel for biasing said slide toward one end of said channel and for allowing manual movement of said slide in the opposite direction, a film-advancing lug carried by said slide, and a spring actuated normally to bias said lug toward a film in said passage for engagement in openings along an edge of said film, said slide having an arm movable therewith extending outwardly from said recess for manual actuation of said slide.

2. A film-viewer in accordance with claim 1 in which said channel includes a shoulder for engagement with said lug in the position of said slide to which it is spring-biased, said lug having an inclined surface for engagement with said shoulder, whereby, upon termination of movement of said slide under spring-actuation thereof, said lug is withdrawn from film-engaging position.

3. A stereoscopic film-viewer, comprising a pair of parallel, spaced-apart viewing tubes, an elongated body and cover for supporting and guiding film to be viewed, said tubes being secured to said body at adjacent ends of said tubes and adjacent to the ends of said body, said cover extending over said body on the side thereof away from said tubes whereby to form a film passage between said cover and body perpendicular to the plane of the axes of the tubes, said body having an elongated recess parallel to said passage and opening toward an edge of a film in said passage, a film-advancing assembly freely received and positioned in said recess, said assembly comprising a channel of a size to fit said recess, a slide positioned within said channel slidable longitudinally thereof, a spring attached to said slide and channel for biasing said slide toward one end of said channel and for allowing manual movement of said slide in the opposite direction, a film-advancing lug carried by said slide, said lug being adapted to engage slots in said film and said slots to advance said film in said film passage, and a spring actuated normally to bias said lug toward a film in said passage for engagement in openings along an edge of said film, said slide having an arm movable therewith outwardly from said recess for manual actuation of said slide.

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STEREOSCOPIC FILM VIEWER

Filed Aug. 24, 1948 2 SHEETS—SHEET 1

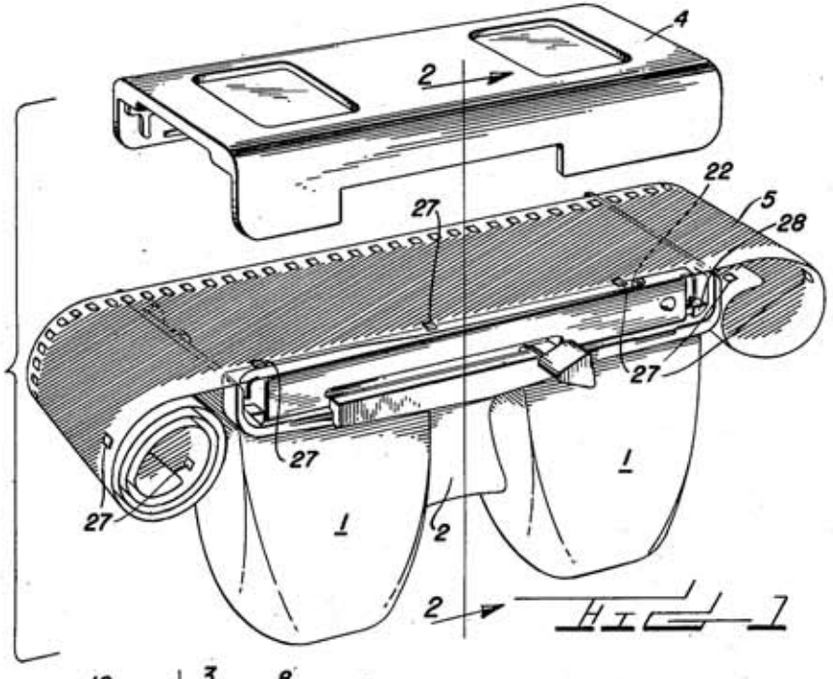


FIG. 1

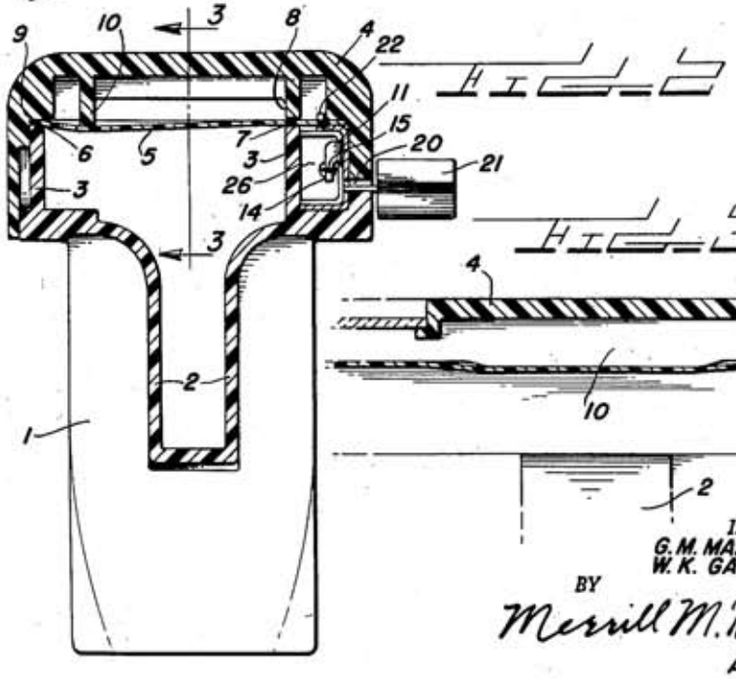
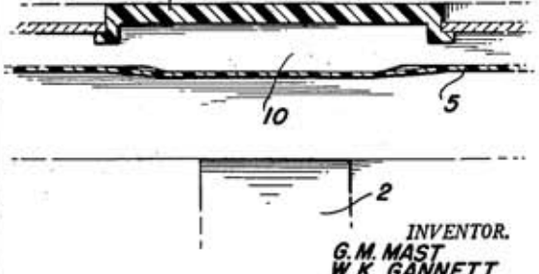


FIG. 2

FIG. 3



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STEREOSCOPIC FILM VIEWER

Filed Aug. 24, 1948 2 SHEETS—SHEET 2

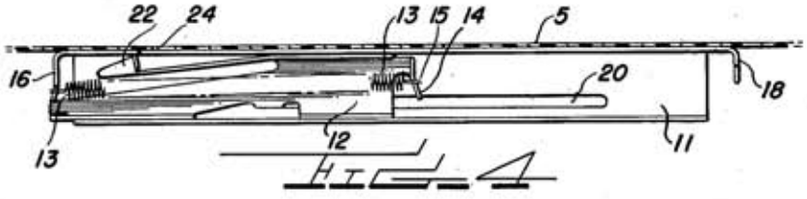

FIG. 4

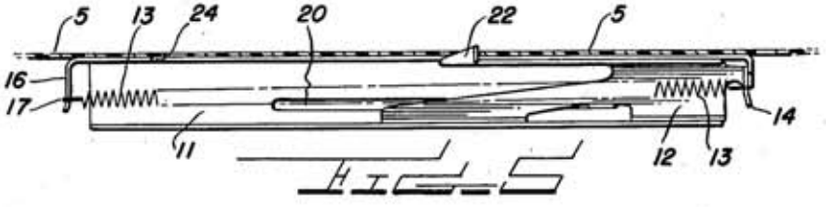

FIG. 5

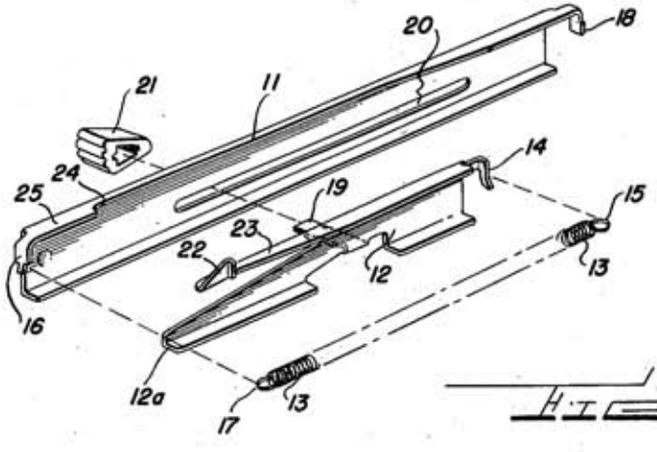

FIG. 6

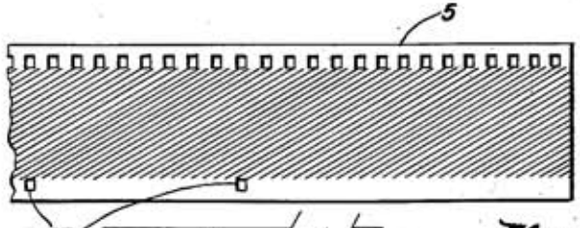

FIG. 7

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