

Dec. 17, 1940.

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2,225,012

PORTABLE DEVICE ADAPTED FOR DAYLIGHT PROJECTION

Filed Dec. 15, 1937

Fig. 1

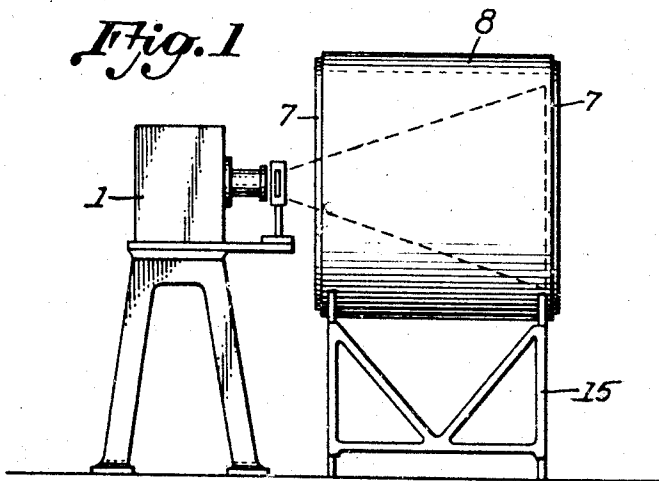


Fig. 2

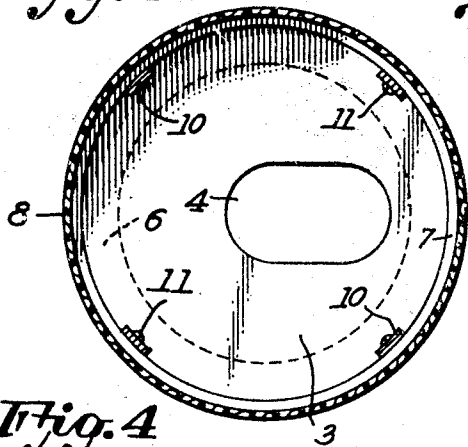


Fig. 3

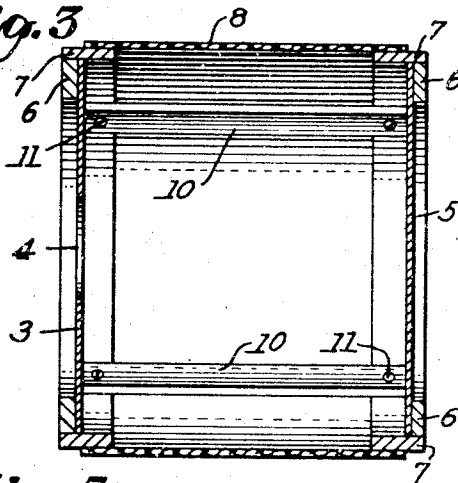


Fig. 4

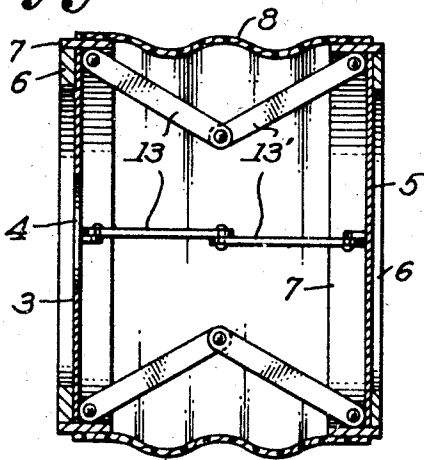
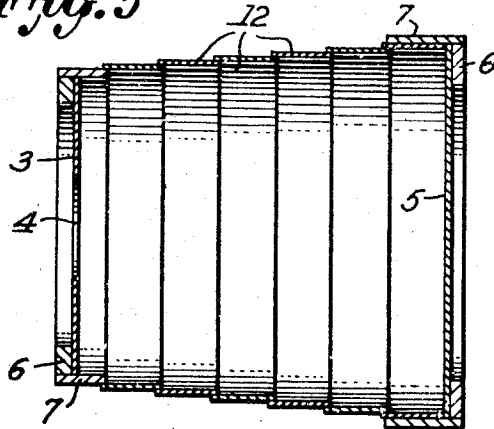


Fig. 5



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UNITED STATES PATENT OFFICE

2,225,012

PORTABLE DEVICE ADAPTED FOR DAY-
LIGHT PROJECTION

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Application December 15, 1937, Serial No. 180,038
In Czechoslovakia December 23, 1936

4 Claims. (Cl. 88—24)

The present invention relates to a portable device adapted for daylight projection, the said device being particularly suitable for veterinary purposes, as, for example, in connection with trichinoscopes.

A portable device of the above-mentioned character requires to be capable of being erected and dismantled both readily and expeditiously. Furthermore, it is required that the weight of the device shall be a minimum, whilst capable of being folded up compactly so as to occupy relatively small space during transport.

With these objects in view, the device according to the present invention comprises a hollow body having two bases, one of which is provided with a projection screen and the other with an opening for the passage of light rays, or for the observation of a projected picture or the like, the cover of the body being rigidly fixed to the bases and so arranged that it is capable of being folded up by laying the bases on top of one another.

In order that the said invention may be clearly understood and readily carried into effect, the same will now be described more fully, by way of example, with reference to the accompanying drawing, in which:

Figure 1 is an elevation showing diagrammatically a device embodying the invention arranged relatively to projecting apparatus,

Figure 2 is a cross section of the device detached, looking toward the front wall thereof,

Figure 3 is a longitudinal section of the device taken at right angles to Figure 2,

Figure 4 is a longitudinal section showing a modified constructional form of device, and

Figure 5 is a view similar to Figure 4 but showing a further modified constructional form of device.

Referring first more particularly to Figures 1, 2 and 3 of the drawing, 1 denotes the projecting apparatus, e. g. a trichinoscope, which is arranged on a suitable lower frame, as shown in Figure 1. The portable device according to the invention, which is provided with a projection screen, comprises two bases 3 and 5, which are made of a light material, e. g. from sheet plywood, in order to facilitate transport. In the examples illustrated, the bases 3 and 5 form two circular plates, of which the plate 3 is provided with a suitable opening 4 for the passage of the projected light rays. The opening 4 is large enough to permit the observation of a picture, image or the like projected on to the oppositely

disposed plate 5, which may be conveniently adapted to constitute a projection screen.

The plates 3 and 5 are stiffened exteriorly thereof by means of flat end rings 6 having circumferential rings 7 connected thereto. On the rings 7, a black waxed linen screen 8, for example, is fixed, whereby a casing is formed which may serve as a dark room suitable for projection even in daylight.

The plates 3 and 5 are connected by rigid stiffening elements which, in conjunction with the bases, form the frame-work of the projection chamber. The said elements may consist of struts 10 which, in the example shown, are connected to the rings 7 by means of screws 11. Instead of screws, spring catches or other suitable connecting means may be employed.

The length of the struts 10 is less than the diameter of the circular plates 3 and 5, so that it is possible to lay these between the rings 7 when the chamber is folded up after loosening the screw or other connections. On account of the waxed linen screen 8 being foldable, the length of the folded chamber is equal to or approximately equal to that of the interconnected rings 7 during transport.

The struts 10 may be replaced by links 13, 13', as shown in Figure 4, or by toggle-like supporting rods as used in photographic apparatus, thus permitting the folding up of the chamber to be effected expeditiously.

In the embodiment shown in Figure 5, the casing of the chamber, in which the projection screen is arranged, consists of light metal rings 12 which can engage with one another in a telescopic manner. Each ring is provided with known means for securing the rings in the extended position.

The body thus formed is arranged on a suitable under frame 15, which is also collapsible to permit of ready transport.

It will be understood that the devices above described and illustrated are given only by way of examples of embodiments of the invention, and that the individual details, particularly for retaining and securing the stiffening elements, can be varied in many ways without departing from the essence of the invention.

What I claim is:

1. Portable apparatus for daylight projection particularly for medical and veterinary purposes comprising two similarly shaped end plates, an opaque screen supported by one of said plates on which the image is projected the other plate having an observation opening therein, a light

excluding and shading hood connecting said plates, said opening being arranged in close proximity of a light aperture for the passage of the projection rays, said hood being foldable and means connecting said plates for extending
5 said hood.

2. A portable apparatus as set forth in claim 1 in which the end plates form circular discs which are connected by foldable members, said
10 members being disposed at the periphery of the discs and forming the reinforcement of the housing as well as the support therefor.

3. Portable apparatus according to claim 1, in which members connect the end plates and said members have the form of bars which are attached rigidly but easily detachable to the periphery of the end plates.
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4. Portable apparatus according to claim 1, in which the housing comprises light metal, telescoped rings, and the outermost rings are rigidly connected with the end plates.
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