Nov. 12, 1929. W. HENK 1,735,276

PROJECTOR TABLE

Filed Nov. 14, 1927

Fig. 1.

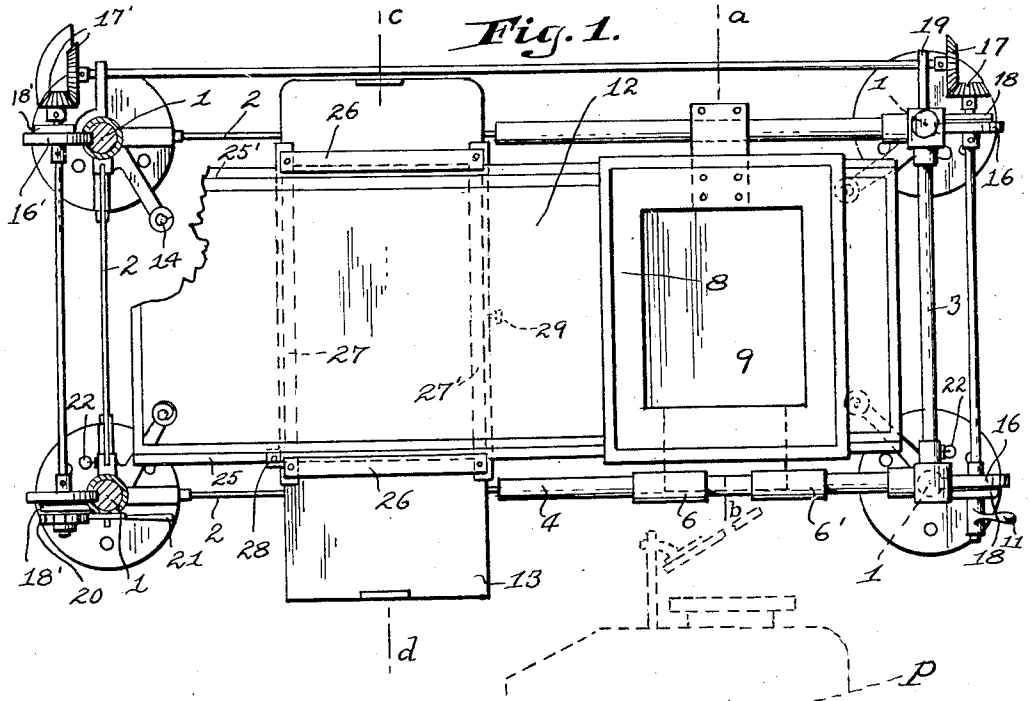


Fig. 2.

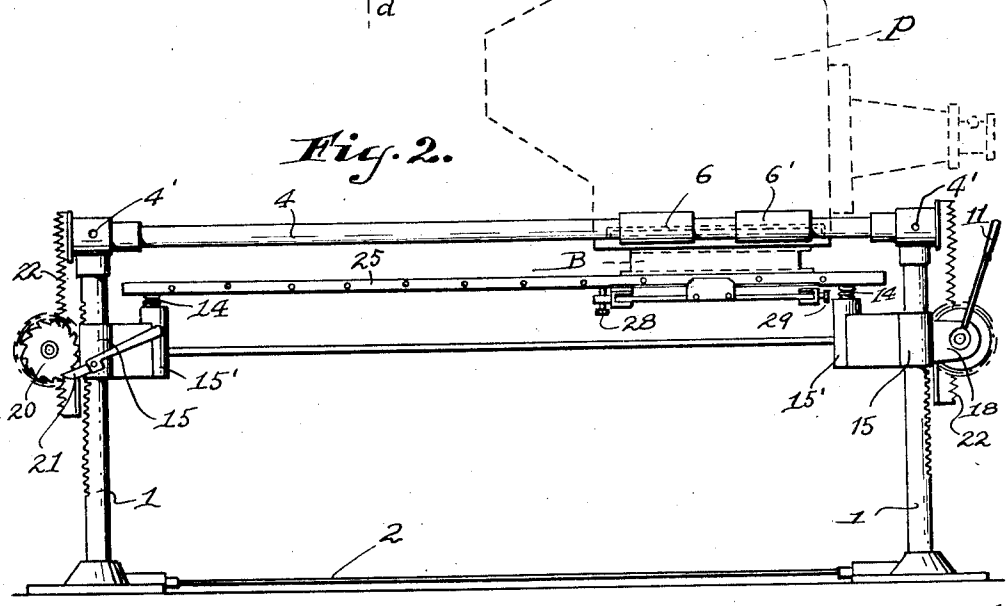


Fig. 3.

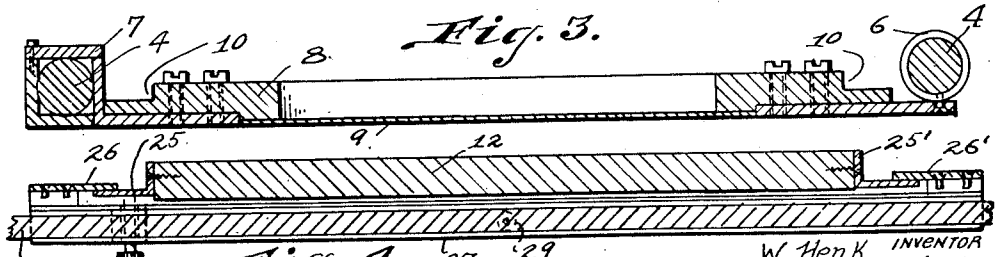


Fig. 4.

W. Henk INVENTOR

By Marks & Clerk Attys

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UNITED STATES PATENT OFFICE

WILHELM HENK, OF VIENNA, AUSTRIA

PROJECTOR TABLE

Application filed November 14, 1927, Serial No. 233,247, and in Austria November 17, 1926.

This invention relates to an improved projector-table, which is particularly suited for the projection of the text and drawings or pictures contained in books, and further for the projection of maps with the aid of an episcope.

One mode of carrying out the persent invention is illustrated by way of example on the accompanying sheet of drawings in which—

Figs. 1 and 2 show the projector-table in plan view and side view respectively.

Figs. 3 and 4 are detail views in section, the sections being taken on line *a*—*b* and *c*—*d* respectively of Fig. 1.

The projector-table according to the present invention comprises a stand provided with a plate for the reception of the apparatus and with a member movable in a vertical direction by means of toothed wheels. The stand comprises four cylindrical legs 1, which are provided with racks extending over a part of the said legs. The exact distance between the legs can be adjusted by four rods 2, which are screw-threaded and screwed into a suitably shaped base of the legs.

A frame, consisting of cylindrical transverse rods 3 and of two longitudinal rods 4, 4 is firmly secured to the upper ends of the supporting legs 1. A plate 5, carrying the projector P, is slidably mounted on the longitudinal bars 4. The plate 5 is carried and guided by sleeves 6, 6′ and by a square frame, which consists of two angle irons 7, 7′ (Fig. 3). The frame is attached by sliding the sleeves 6, 6′ onto the bars 4, after the same have been pulled out of their bearings by removing the screws 4′. Now the angle-iron 7 is placed onto the bar 4 and screwed to the angle-iron 7′ of the guide-frame shown in Fig. 3. The members 6, 6′ and 7 are fixed to the plate 5. The latter consists of a wooden frame 8 provided with a glass plate 9 and the outer edges of the frame 8 are stepped as shown at 10 for the reception of the projector P.

The vertically movable part comprises a table 12, a wooden plate 13 and toothed wheels. The wooden plate 13 is slidable in the longitudinal direction of the plate 12 and can be pulled out or pushed in in the transverse direction of the latter.

Two angle-irons 25 and 25′ are screwed to the longitudinal sides of the plate 12 and act as guides for the movement of the plate 13 in the longitudinal direction of the plate 12. Guide-plates 26, 26′ are slidable on the angle-irons 25, 25′ and are screwed to two U-shaped iron 27, 27′ in which rests the plate 13. The latter is slidable in the transverse direction and preferably serves for supporting depending parts for instance book-covers.

The plate 12 rests on springs 14, which are mounted on supports 15′, connected with the main-bearings 15 of toothed wheels. The four toothed wheels 16 and 16′ mesh with the racks of the legs 1 and during the rotation of a handle *h*, which is keyed to the shaft of the toothed wheels 16, operate on the racks. By means of bevel wheels 17, 17′ the rotation is transmitted to the toothed wheels 16′.

The toothed wheels 16 and 16′ are mounted at 18 and 18′ respectively, while the bevel wheels 17 and 17′ are supported at 19 and 19′ respectively. These bearings are in the shape of simple arms, which embrace the wheel-shafts (Fig. 2) and are rigidly connected with the main-bearings 15, slidable along the legs 1. Thus the toothed wheels, the table 12 and the plate 13 form a unit, which is slidable along the legs 1. The pictures to be projected and placed on the plate 12 can be pressed against the plate 5 and thus against the projector by operating the handle *h*.

In order to prevent the plate 12 from moving downward or the toothed wheel from rotating backward in case the plate 12 is heavily loaded for instance by a heavy book B, a ratchet wheel 20 is keyed to one of the shafts of the toothed wheels and engaged by a pawl 21, which is secured to the main-bearing. Springs 22, attached on the one hand to an immovable part and on the other hand to a movable part of the episcope (at 15), serve for facilitating the adjustment of the toothed wheels and thus of the plate 12. A screw 28 locks the plate 13 against longitudinal ad-

justment and a screw 29 arrests the same against transverse movement.

In place of the racks and toothed wheels, pulling members such as steel bands, (wire ropes, chains or the like) may be employed for moving the table in a vertical direction, the said members being fixed to the table or to its supporting rails and pass over the rolls of a winch.

I claim—

1. A projector-table for episcopic projection, comprising in combination a longitudinally movable frame for the reception of a projector, a table for carrying the object to be projected and extending over the entire length of movement of the frame and disposed underneath the frame, and means for adjusting the said table in a vertical direction.

2. A projector-table for episcopic projection, comprising in combination a longitudinally movable frame for the reception of a projector, a table for carrying the object to be projected and extending over the entire length of movement of the frame and disposed underneath the frame, means for adjusting the said table in a vertical direction, and a plate mounted longitudinally and transversely movable on the said table, for the purpose specified.

3. A projector-table for episcopic projection, comprising in combination a longitudinally movable frame for the reception of a projector, a table for carrying the object to be projected and extending over the entire length of movement of the frame and disposed underneath the frame, racks provided on the legs of the projector-table, and toothed wheels meshing with the said racks for adjusting in a vertical direction the table carrying the object to be projected.

4. Projector-table as claimed in claim 2, in which the vertically movable table rests on springs, for the purpose specified.

5. Projector-table as claimed in claim 3, in which the vertically movable table rests on springs, for the purposes specified.

In testimony whereof I affix my signature.

WILHELM HENK.