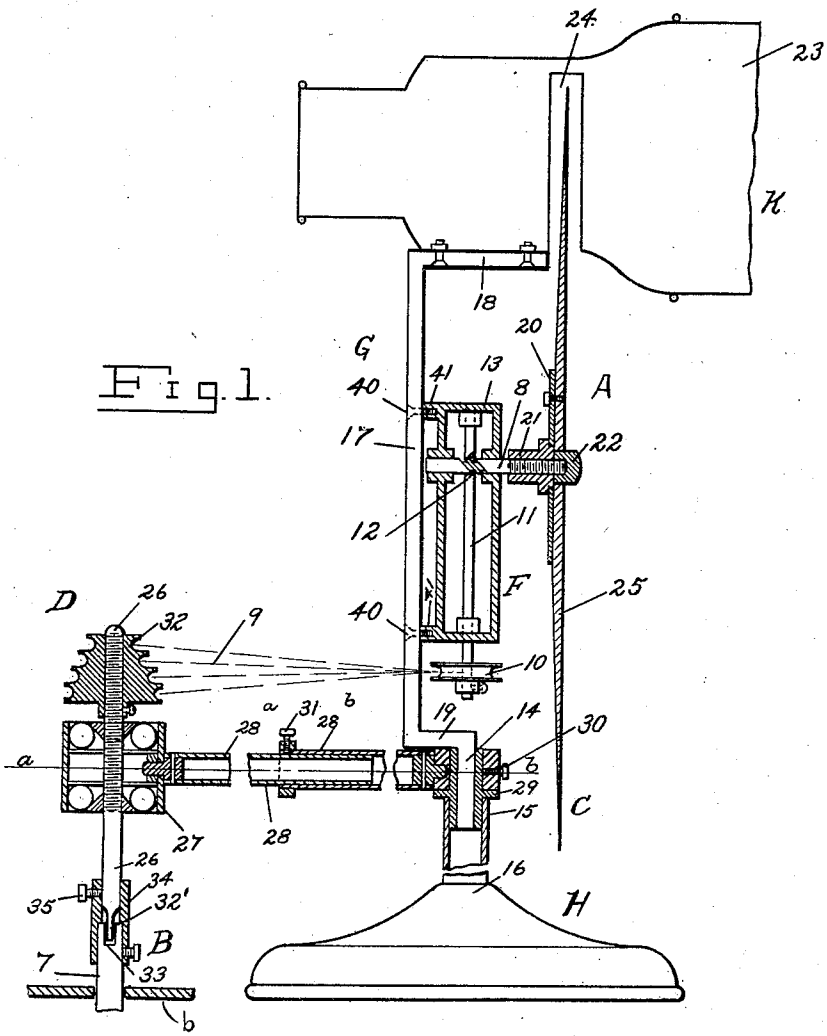
R. A. WHITEHEAD.

STEREOPTICON.

APPLICATION FILED AUG. 17, 1911.

1,110,247. Patented Sept. 8, 1914.

Fig. 1.



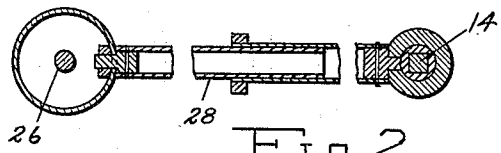


Fig. 2.

WITNESSES:

H. Gearing.

E. C. Mockee

INVENTOR,

Richard A. Whitehead.

BY.

Raymond Van Blarcom,

his ATTORNEY.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

RICHARD A. WHITEHEAD, OF LOS ANGELES, CALIFORNIA.

STEREOPTICON.

1,110,247. Specification of Letters Patent. Patented Sept. 8, 1914.

Application filed August 17, 1911. Serial No. 644,684.

To all whom it may concern:

Be it known that I, RICHARD A. WHITEHEAD, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Stereopticons, of which the following is a specification.

This invention relates to stereopticons or apparatus or devices for displaying pictures or images upon a screen by the projection of light through a picture record or succession of records; and the invention has for its object to provide improvements in stereopticons or similar apparatus or devices of the character stated, which will be superior in point of relative simplicity and inexpensiveness of construction and organization, facility of control and adjustment, and of adaptability to varying conditions of use and operation, and which will be generally superior in efficiency and serviceability.

Although the invention contemplates a construction, provision and operation of parts, members and features which may be utilized in general stereopticon construction capable of actuation, as to its moving parts, in any suitable or preferred manner; the construction and organization of the same is particularly adapted to operation by and in connection with phonographic or other sound producing apparatus. The apparatus or device may therefore conveniently and effectively be utilized for the displaying of images simultaneously with the rendition of a musical or other sound composition or production, the operation of the stereopticon features being caused in the operation of the phonograph or similar apparatus. Likewise, the apparatus may be independently actuated, all as will hereinafter appear.

The invention consists in the novel, useful and peculiar provision, construction and organization of parts, members and features, all as hereinafter described, shown in the drawings, and finally pointed out in claims.

In the drawings:—Figure 1 is a side elevation, partly in section, of stereopticon apparatus constructed and organized in accordance with the invention and operatively associated with sound producing apparatus such as a phonograph; and Fig. 2 is a horizontal section of the same, taken upon the line *a*—*b*, Fig. 1, and looking downwardly.

Corresponding parts in all the figures are denoted by the same reference characters.

Referring with particularity to the drawings, A designates stereopticon apparatus, and B, in Fig. 1, designates sound producing apparatus operatively associated therewith.

C designates a picture record.

b in Fig. 1 designates the sound record of the sound producing apparatus B, and 7 designates the sound-record shaft of the sound producing apparatus which is included within the drive means D shown.

F designates operative connections between the shaft 8 of the picture record C, or picture record shaft, and the drive means D. These drive means are illustrated as including a cord or belt 9 leading to a pulley 10 included within the operative connections F, which latter are illustrated as comprising a transmission shaft 11, geared in connection with the picture record shaft 8, as at 12, both of said shafts 8 and 11 being suitably journaled in a casing 13. The specific organization of the operative connections F is not material to the issues of the present invention, which latter contemplates the employment of such operative connections as are best adapted to cause the actuation of the picture record in a suitable manner for the proper display of the images thereon. The operative connections F, are illustrated as mounted upon a standard G mounted upon a base H, the standard having a vertical foot 14 fitting in a sleeve or socket 15 received in a tubular stem 16 projecting upwardly from the central portion of the base H; together with a main central vertical portion 17 having a rectangularly directed top portion or head 18 and a rectangularly directed bottom portion or foot 19 connected with the vertical foot 14. The shaft 11 of the transmission means F lies in a vertical plane and the axis of said shaft constitutes an extension of axis of the vertical foot 14. The shaft 8 ranges at right angles from the shaft 11, and the picture record C is fitted to the outer end thereof and pinned to a disk 20 fitted to the shaft 8 by a hub 21, there being a cap nut 22 applied to the end of the shaft 8. Upon the head 18 of the standard G is mounted suitable projecting means K, of any preferred organization, and including a casing 23 within which is installed a suitable source of light, or lamp, not shown, forward of such lamp there being provided a display chamber 24, or vertical slot in the

casing 23, within which the picture record C projects; said picture record consisting preferably of a circular disk 25 carrying the pictures or picture-portions which are successively presented within the display chamber 24 upon rotation of the shaft 8. The picture record C is not shown in detail, as its organization is not in any sense material to the issues of the present invention.

The drive means D comprise a vertical shaft 26 journaled in a suitable box or bearing 27 carried at the outer end of a telescopic arm 28 the inner end of which encircles the socket 15 and is rotatable thereon resting upon a flange 29 upon the socket, and provided with a thumb-screw 30 whereby the arm 28 may be fixed in position of adjustment upon said socket, about which it may revolve on an axis corresponding to the axis of the foot 14 of the standard G, and of the vertical shaft 11 of the operative connections F. The telescopic arm 28 comprises two members, 28^a and 28^b, which may be locked in relatively adjusted positions by a thumb-screw 31. The drive means D further include a change-speed pulley 32 mounted upon the upper end of the shaft 26 and connected by the belt 9 with the pulley 10 upon the shaft 11. The lower end of the shaft 26, beneath the box 27, is reduced in diameter, or flattened, as at 32′, to enter a notch 33 produced in the upper end of the sound record shaft 7. The shafts 26 and 7 may be kept in alinement by a bushing or jacket 34 fitting over both shaft-ends and provided with a thumb-screw 35 holding the same adjustably in position.

The casing 13 is detachably and adjustably mounted upon the vertical portion 17 of the standard G, as at 40, by screws or the like entering lugs 41 in one side wall of the casing.

The operation, method of use and advantages of the improvements in stereopticons constituting the invention will be readily understood from the foregoing description, taken in connection with the accompanying drawings and the following statement.

The operative connections F serve to properly rotate the picture record disk 25 so as to successively present the picture portions or pictures included within or mounted upon the same, within the display chamber 24, whereby the projecting means K suitably project the images upon a screen or the like.

In the drawing is shown such relative arrangement and operative association of the parts and features of the stereopticon apparatus A, with sound producing apparatus B, as permits of the actuation of the operative connections F simultaneously with the phonographic or sound producing apparatus B. To that end, the shaft 11 of the operative connections F is vertically disposed, parallel with the vertically disposed shaft 26 of the drive means D, which latter shaft co-engages with the vertically disposed sound record shaft 7. The box 27 of the shaft 26 being adjustably carried upon the stem 16 of the base H, by the telescopic arm 28, said box and the shaft 26 may be swung into position so that the shafts 7 and 26 may co-engage, with the standard G suitably positioned so that the images projected from the projecting means K may be thrown in the desired direction. Thus, the stereopticon apparatus may be shifted as desired, around the axis of the shaft 7 of the phonographic apparatus B. The socket 15 may, if desired, be turned in the stem 16, so as to turn the standard G and cause the projecting means K to face in the desired direction, and, the axis of the shaft 11 being an extension of the axis of the vertical foot 14 of the standard G, such turning of the standard upon a vertical axis will not disarrange the belt connection between the pulley 32 and the pulley 10. When the phonographic apparatus B and the stereopticon apparatus A are jointly operated, as by the shaft 7 of the sound record *b*, of the images projected by the stereopticon apparatus, from the picture record C, may be related, synchronously, to the sounds or subject matter of the sounds issuing from the phonographic apparatus. The operative connections F may, however, be driven in any desired manner.

The socket 15 may be either rotatable in the stem 16, or fixed therein, in accordance with the desire to either adjustably or fixedly mount the standard G upon the base H.

I do not desire to be understood as limiting myself to the particular provision, construction, formation, relative arrangement and combination of parts, members and features shown and described; but reserve the right to vary the same, in adapting the improvements to varying conditions of use, without departing from the spirit of invention and terms of the following claims:—

Having thus described my invention I claim and desire to secure by Letters Patent—

1. Apparatus of the character described, comprising a base, a standard rising from the base and comprising an upright foot, a further upright portion connected with the foot, and top and bottom portions extending angularly with relation to the upright foot and the further upright portion, said bottom portion constituting the means of connection between the foot and the further upright portion; picture projecting means mounted upon said top portion, drive means, a picture record shaft, and operative connections between the drive

means and picture record shaft; said operative connections being mounted upon the further upright portion of the standard, and including a transmission shaft operatively connected with the picture record shaft and extending at an angle thereto and having its axis in coincidence with the axis of said upright foot of said standard.

2. Apparatus of the character described, comprising a base, a standard rising from the base and comprising a vertical foot and top and bottom horizontal portions and an intermediate vertical portion connected with the foot, picture projecting means mounted upon the top horizontal portion of the standard, drive means, a picture record, and operative connections between the drive means and the picture record; said operative connections being mounted upon the vertical portion of the standard and including a shaft upon which the picture record is mounted and a transmission shaft operatively connected therewith and extending at an angle thereto and having its axis in extension of the axis of said vertical foot of said standard.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

RICHARD A. WHITEHEAD.

Witnesses:
C. P. WARDEN,
RAYMOND J. BLAKESLEE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."