March 18, 1930. A. C. HAYDEN 1,750,803

STAND

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Fig. 1

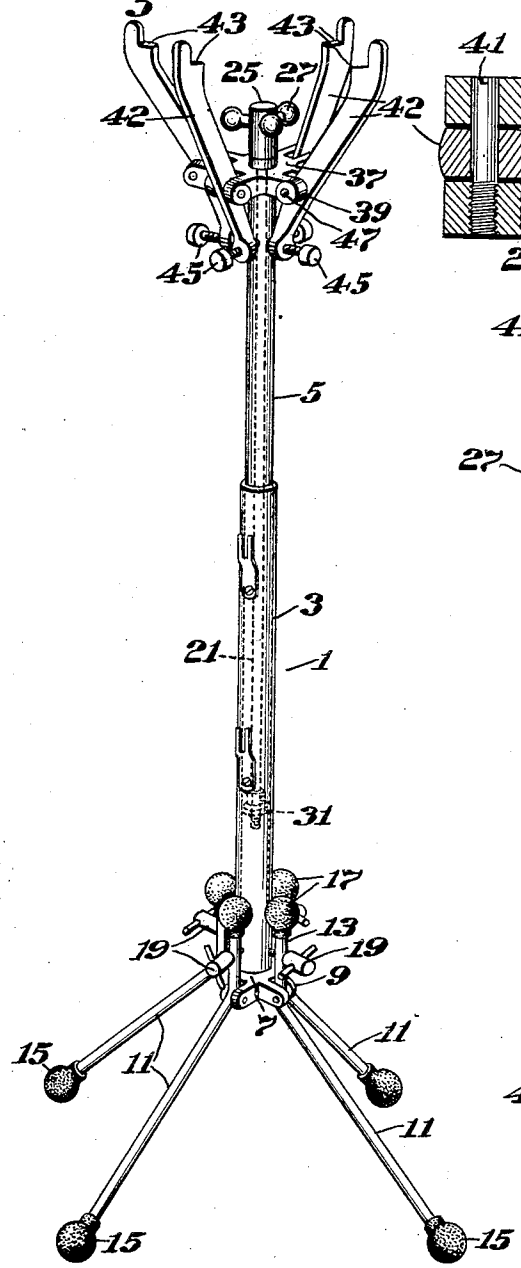


Fig. 2.

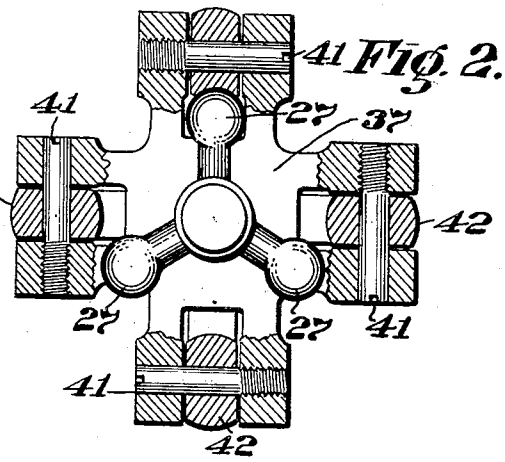


Fig. 3

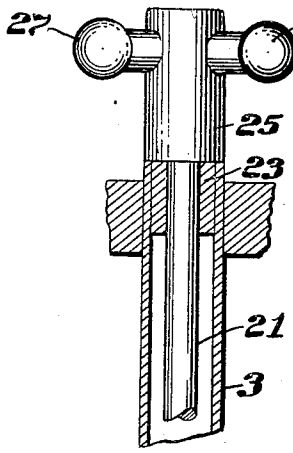
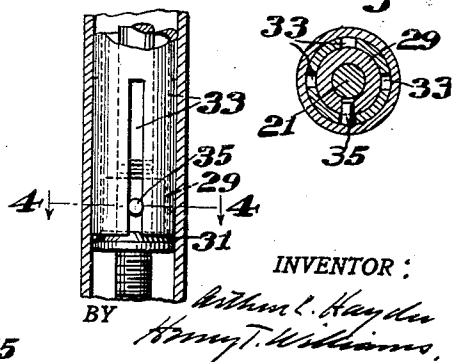


Fig. 4



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STAND

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Fig. 5

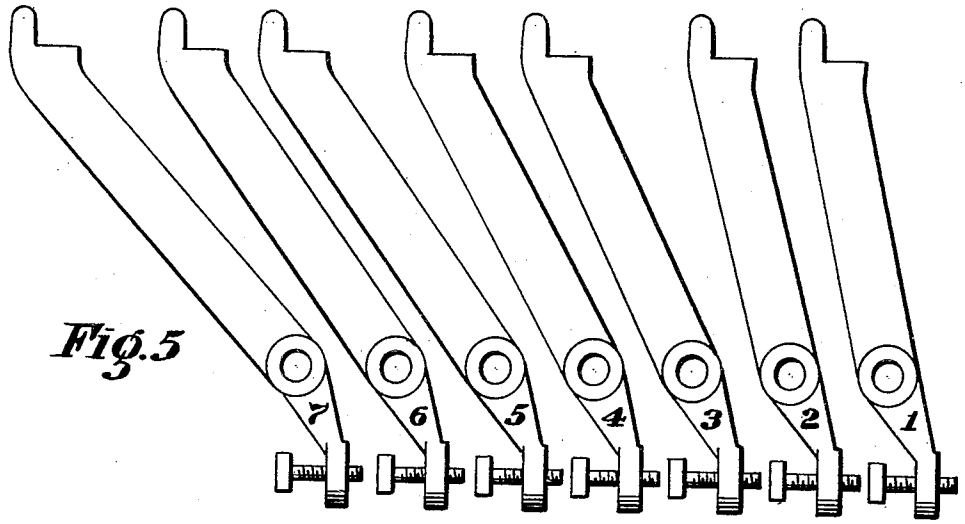


Fig. 6

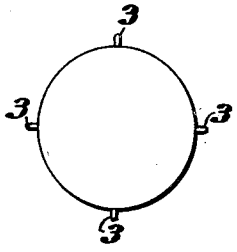


Fig. 7

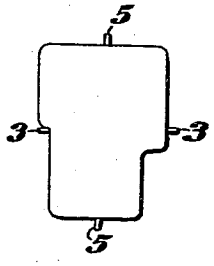


Fig. 8

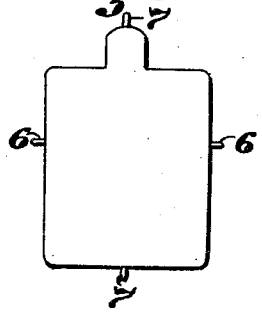


Fig. 9

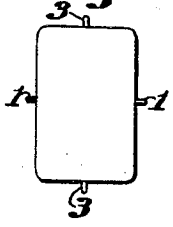
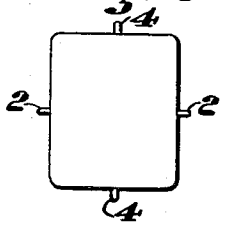


Fig. 10



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Patented Mar. 18, 1930 1,750,803

UNITED STATES PATENT OFFICE

ARTHUR C. HAYDEN, OF BROCKTON, MASSACHUSETTS

STAND

Application filed April 6, 1928. Serial No. 268,030.

The invention to be hereinafter described relates to stands for motion picture projectors and the like, and is of the type disclosed in my copending application Serial No. 137,858, filed September 27, 1926.

The stand of said application comprises a post having upper and lower members in telescopic relation, the upper member being adapted to be held in several positions of vertical adjustment by a pin entered through the lower member and selected holes in the upper member. One of the purposes of the present invention is to provide improved means for holding the upper member in different positions of adjustment with respect to the lower member, the construction being such that the upper member may be adjusted to any position desired and be securely held in such position.

Motion picture projectors of different makes or models have differently shaped bases. Another purpose of the invention, therefore, is to provide means whereby the stand may properly support projectors having differently shaped bases, the construction being such that the stand has a desirable range of application to suit the requirements of these different projectors.

The character of the invention may be best understood by reference to the following description of an embodiment thereof taken in connection with the accompanying drawings, wherein:

Fig. 1 is a perspective view of a stand embodying the invention;

Fig. 2 on an enlarged scale is a horizontal section through the projector supporter arms and taken above the head to which they are pivotally connected;

Fig. 3 on an enlarged scale is a vertical section showing portions of the upper and lower telescoping members and the means for securing the upper member in different positions of longitudinal adjustment with respect to the lower member;

Fig. 4 is a horizontal section taken on line 4—4 of Fig. 3;

Fig. 5 is a side elevation of the assembly or equipment of arms for selected application to the stand; and

Figs. 6 to 10 are views showing the shapes of bases of projectors of different makes or models.

Referring to the drawings, the stand shown therein as one good form of the invention comprises a post 1 (Fig. 1) having a tubular lower member 3 and a tubular upper member 5 in telescoping relation. The post is provided with a base comprising a ring 7 threaded to the lower end of the post and having forks 9 receiving legs 11 pivotally mounted on pins on the forks. The legs have arms 13 projecting up along the lower end portion of the post and at obtuse angles with respect to the portions of the legs beneath their pivotal points. Rubber balls or tips 15 are on the lower ends of the legs, and rubber balls or tips 17 are on the upper ends of the arms 13. Hand screws 19 are entered through holes in the arms and are adapted to be threaded to the post.

The construction is such that the screws may be set up to compress the rubber balls 17 against the post, thereby firmly to support the post on the floor. The base formed as shown and described herein is the subject of my aforesaid application, to which reference may be had for further detailed explanation of the construction and operation thereof.

The means for securing the upper tubular member in different positions of longitudinal adjustment with respect to the lower tubular member, comprises a rod 21 (Fig. 3) extending down into the upper and lower tubular members. The upper end of this rod projects through a sleeve 23 fast in the upper member 5, and secured to the upper end of the rod is a head 25 engaging the top of the upper member and having arms or handles 27 projecting radially from the head.

A nut 29 is threaded onto the rod, and is provided with a tapered portion 31 at the lower end of the upper tubular member. The lower end portion of the upper member is split and has slots 33. To prevent rotation of the nut in the upper member, it has a pin 35 entered into one of the slots.

The construction is such that on rotation of the handles 27 and the rod 21 in the proper

direction, the nut will be drawn upward somewhat, thereby causing its tapered portion 31 to expand the split lower end portion of the upper member into secure frictional engagement with the inner wall of the lower tubular member. When it is desired to adjust the upper member relatively to the lower member, it is merely necessary to rotate the handles and the rod in the opposite direction, thereby releasing the frictional hold of the split portion of the upper member on the lower member. Then the upper member may be adjusted to the elevation desired, and may be secured as described.

As stated, one of the purposes of the invention is to adapt this stand for supporting projectors of different makes or models. It is designed more particularly for supporting projectors having differently shaped bases. The forms of these bases are shown in Figs. 8, 7, 10, 6 and 9 in the order named.

Fig. 5 shows an assembly of arms for selected application to the post of the stand, said arms being numbered 1 to 7. For the base shown in Fig. 8, a pair of arms #6 and a pair of arms #7 are used. For the base shown in Fig. 7, a pair of arms #3 and a pair of arms #5 are used. For the base shown in Fig. 10, a pair of arms #4 and a pair of arms #2 are used. For the base shown in Fig. 6 four arms #3 are used. For the base shown in Fig. 9, a pair of arms #3 and a pair of arms #1 are used.

In order that the post may receive these arms, it is provided at the upper end thereof with a head 37 having forks 39 projecting therefrom receiving screws 41.

Each arm 42 has an angular seat 43 at the upper end thereof and a screw 45 threaded in the lower end thereof. Intermediate the ends of the arm is a boss containing a hole 47.

The construction is such that the proper complement of selected arms may be mounted on the head 39 by entering screws 41 into the forks and through the holes in the arms. Each screw passes through a smooth hole in one side of the fork and has an end threaded in the other side of the fork. The screws 45 will abut against the post, and they may be adjusted so that the bottoms of the seats 43 will be in the same plane, and the upstanding walls of the seats will press against the periphery of the projector base and securely hold it onto said seats.

If a projector of different model or make is to be supported, the screws 41 are removed, and the appropriate arms are applied to the head 37.

In properly supporting the projector, it is important that its base shall rest fully upon the bottoms of the seats of the four arms, and to accomplish this for the differently shaped bases, the arms therefor have different angles with respect to a line common to and registering with the bottoms of the seats, and their lengths from the centers of their holes are varied, as will be noted in Fig. 5.

It will be understood that the invention is not limited to the specific embodiment shown, and that various deviations may be made therefrom without departing from the spirit and scope of the appended claims.

What is claimed is:—

1. A stand comprising a base, a post rising therefrom, a head on the post having forks, each having axially alined smooth and threaded holes therein, removable screws in the fork holes, arms pivotally mounted on the screws and having seats adapted to receive the base of a motion picture projector or the like, and screws threaded into the arms for abutting engagement with the post to cause the seats to press against the projector base and to relatively adjust the arms in levelling the base.

2. A stand comprising a post having upper and lower tubular members in telescopic relation, said upper member having slots in the lower end portion thereof, a rod extending down into said members, a nut threaded on the rod having a tapered portion, and a pin on the nut entered into one of said slots to prevent rotation of the nut on the rod, and a handle at the upper end of the rod for rotatively adjusting the same, thereby to cause the tapered portion of the nut to expand the slotted end portion of the upper member into secure frictional engagement with the lower member.

ARTHUR C. HAYDEN.