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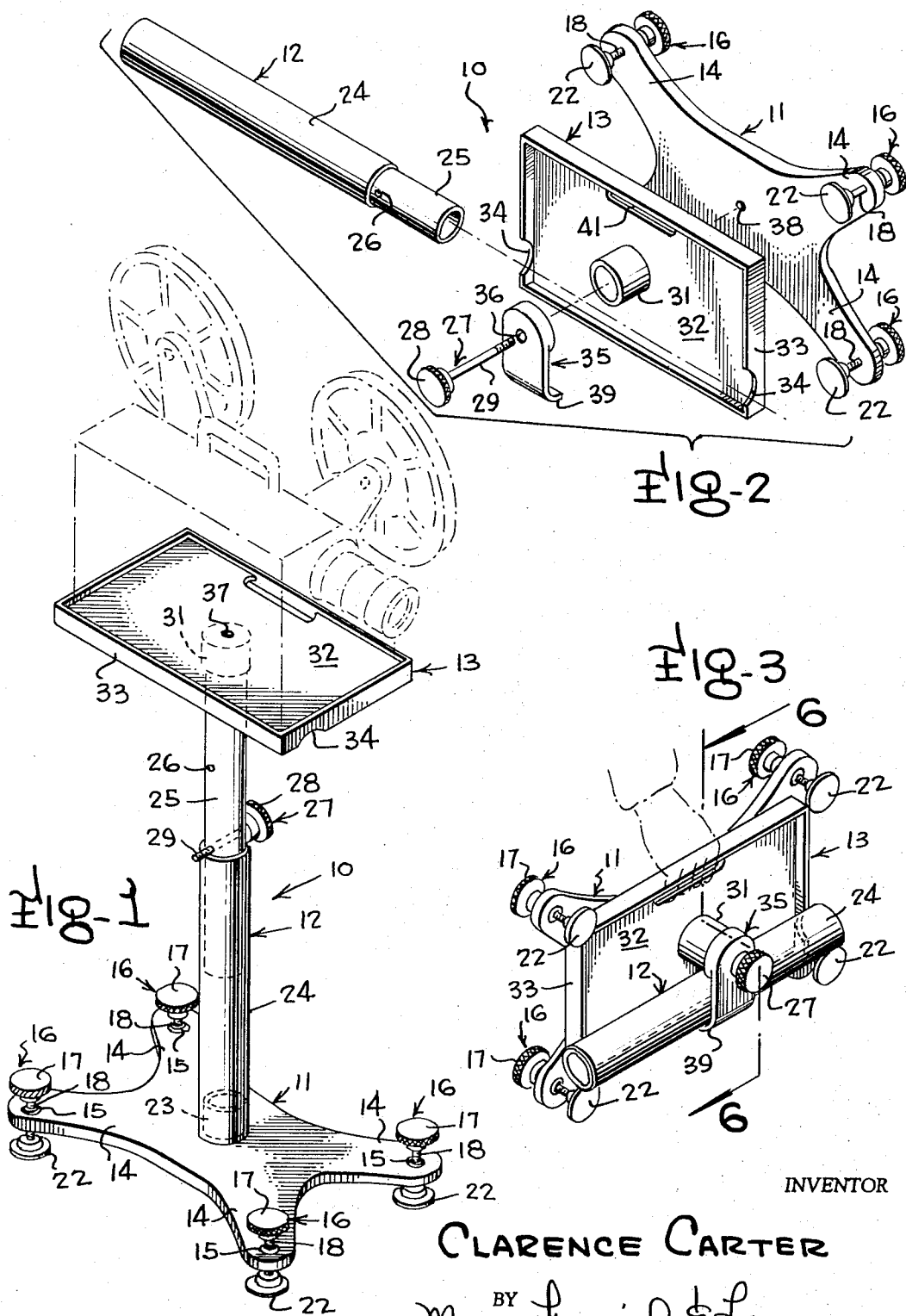
C. CARTER

3,358,951

PORTABLE PROJECTOR STAND

Filed Nov. 17, 1965

2 Sheets-Sheet 1



INVENTOR

CLARENCE CARTER

BY *Mason, Fenwick & Lawrence*
ATTORNEYS

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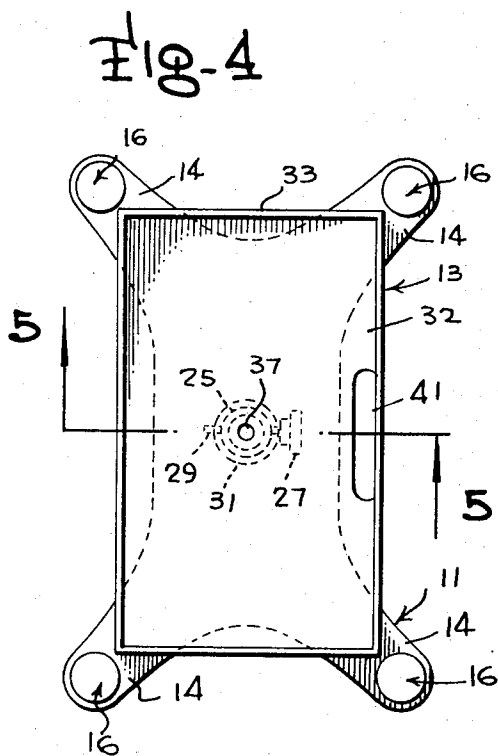
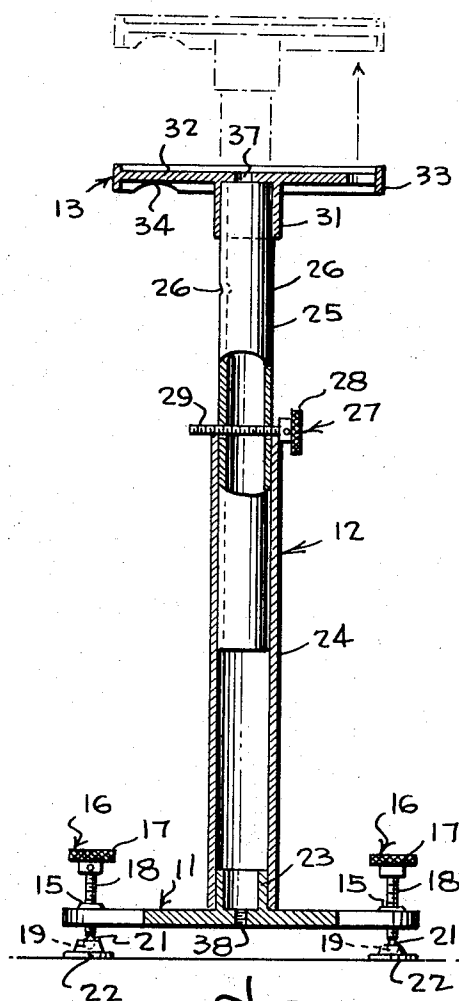
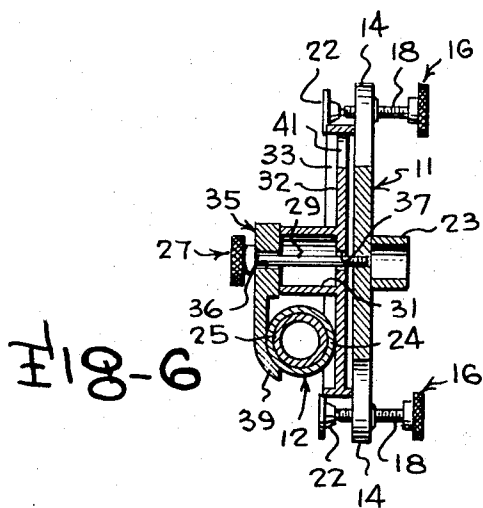
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BY
Mason, Fenwick & Lawrence
ATTORNEYS

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Clarence Carter, 1613 Lando Lane, Orlando, Fla. 32811

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ABSTRACT OF THE DISCLOSURE

A collapsible projector stand having a planar base with individually adjustable support legs each having a foot extremity portion and a projector tray supported by a removable telescoping tubular standard wherein the tray is receivable in a flat nested relationship between the support legs and with the standard resulting in a compact structure for storage or transportation.

Heretofore, the setting up of the projector apparatus, and especially that pertaining to motion pictures, has been difficult and extremely inconvenient and it has been difficult to obtain desirable and proper support for the projector. This has been particularly true where the apparatus is set up for temporary use either in the home or other places where the pictures might be shown.

In summation, the present invention comprises an easily assembled and disassembled projector stand having a base member supported on vertically adjustable legs and connected by a removable extensible support standard to support a projector tray. The base member standard and tray are dimensioned to be clamped together in a flat compact array for storage with the tray being receivable within the peripheral confines of the adjustable legs.

Therefore, one of the objects of the present invention is the provision of a compact portable projector stand which may be easily and quickly set up to support the projector, yet maintaining the desired stability.

Another object of the present invention is the provision of a projector stand which may be adjusted so as to have a secure and stable relationship with the supporting floor.

Still another object of the present invention is to provide a compact portable projector stand having parts which may be adjusted into a compact collapsed relation and occupy a small amount of space so that the collapsed stand may be conveniently carried from place to place.

Another object of the present invention is the provision of a portable projector stand which may be easily manufactured at low cost, is simple and convenient in use and is able to withstand a great deal of abuse.

Other objects, advantages and capabilities of the invention will become apparent from the following description taken in conjunction with the accompanying drawings showing only a preferred embodiment of the invention.

In the drawings:

FIGURE 1 is a perspective view showing the portable projector stand in assembled relation;

FIGURE 2 is an exploded perspective view of the portable projector stand in disassembled relation preparatory to being secured in the travelling position;

FIGURE 3 is a perspective view showing the portable projector stand disassembled and secured in the travelling position;

FIGURE 4 is a top plan view of the invention in its assembled configuration;

FIGURE 5 is a vertical section view taken along lines 5—5 of FIGURE 4; and

FIGURE 6 is a vertical section view taken along lines 6—6 of FIGURE 3.

Referring to the drawings wherein like reference characters designate corresponding parts throughout the several figures, the portable projector stand of the present

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invention is designated by the numeral 10. Comprising the stand 10 is a flat, planar base member 11, an extensible telescoping support standard 12, and a support platform 13. Base member 11 is flat and planar in configuration so that the entire device may be easily collapsed and then carried about with the minimum of space being utilized. Outwardly extending from the base member are a plurality of coplanar legs 14 each of which have, near their terminal portions, a threaded aperture 15 which is designed to receive therein a level screw 16. Each levelling screw 16 comprises an enlarged knurled handle 17 and a threaded shank portion 18 which is threadingly engaged with the aperture 15 and which terminates at the remote end in a ball and socket joint 19. The ball and socket joint 19 is partially composed of a ball 21 at the terminal end of each shank 18 and a socket within each of the pivotal levelling feet 22.

At the center portion of the base member 11 is an upstanding tubular base support hub 23. The extensible standard 12 is adapted to fit about the hub 23 in a frictional fit which is tight enough to maintain good stability between the base member 11 and the standard 12 yet loose enough so that the standard may be easily removed from the base member. Generally the extensible support standard 12 comprises a lower tubular standard 24, and an upper tubular support standard 25 which is adapted to telescope within the lower standard 24. The upper tubular standard 25 has through its side walls a plurality of height adjustment holes 26 through which a suitable lock pin 27 is designed to fit to maintain the upper tubular support standard 25 in a desired relative location with respect to the lower tubular standard 24. The lock pin 27 merely comprises an enlarged knurled handle 28 and a threaded shank 29 extended therefrom. Lock pin 27 may be inserted through a set of holes 26 to effect height adjustment of the projector stand 10. It is anticipated that the holes 26 need not be threaded since the weight of the upper portion of the projector stand will maintain a sufficient binding pressure between the tubular standards 24, 25 and the lock pin 27 to maintain the lock pin in position.

The uppermost portion of the tubular standard 25 is designed to support the platform 13 by engaging in a frictional fit with the platform hub 31 which is an integral member of the platform 13. Generally, the tubular standard 25 fits within the hub 31 in a manner similar to that described with respect to hub 23 and standard 24 except that in the present embodiment it is desired that the tubular standard 25 make an internal fit with respect to hub 31.

The support platform 13 comprises a planar projector tray 32 of generally rectangular shape and having a peripheral rim therearound. The rim 33 is designed to extend both above and below the planar surface of the projector tray so that on the upper side of the projector tray the rim will maintain the projector within the confines of the support platform without any possibility that the vibration might cause the projector to slip off the edge of the platform. The purpose of the rim extending below the projector tray 32 is so that at opposing ends of the support platform 13 the peripheral rim may have a rounded notch 34 cut therein which acts as a disassembled carrying recess for the support standard 12 when the entire projector stand 10 is in a disassembled condition.

An especially important feature of this invention is the provision of a portable projector stand which may be easily disassembled and the parts thereof secured in a compact unit that allows easy carrying from one place to another. FIGURE 2 discloses the table in a knocked-down condition preparatory to assembling the various parts in the compact manner. As is evident from FIGURES 2, 3, and 6, the base member 11 receives the support platform 13 upon its flat planar surface between the four levelling screws 16. The support platform is so

placed that the hub 31 faces away from the base member so as to position the disassembled carrying recesses 34 in a manner that allows the extensible support standard 12 to rest across the support platform within the notches 34. To secure the disassembled parts together there is provided a clamp 35 for retaining the tubular support standard in the notches 34 and to provide a bearing surface for the lock pin 27 which is designed to fit through the aperture 36 of the clamp 35. The lock pin 27, in the disassembled position, projects through an aperture 37 which is centrally located within the support platform 13 and then is threadingly engaged with the receiving aperture 38 until it forces the clamp downwardly against the platform hub 31 and the support standard 12. The support standard is maintained within the notches 34 by means of the curved tongue portion 39 of the clamp which has a radius similar to the outer curvature of the support standard. Once the projector stand is in its disassembled relation, as shown by FIGURE 3, it is then a simple matter to carry the stand about utilizing the carrying handle aperture 41 within the support platform 13.

The above invention has disclosed a compact portable projector stand which is easily assembled and disassembled, adjustable in height with the maximum of ease and one which may be carried about in an extremely compact package. In addition, the base member may be easily levelled by means of the four levelling screws and the support platform for the projector may be swivelled in any direction with the maximum of ease by merely swinging the platform in one horizontal direction or the other. As is readily evident, the projector stand of the present invention may be set up in extremely close quarters and takes the very minimum of floor space in which to be operated. The present invention contemplates that the stand may be made of any suitable material, but it has been found practical to make the base member and the support platform of cast aluminum, and the extensible telescoping support standard of a plastic material which will readily return to its original shape after being slightly deformed.

While I have shown and described one particular embodiment of the invention, it is distinctly understood that the invention is not limited thereto but that modifications may be made within the scope of the invention and such variations as are covered by the scope of the appended claims.

What is claimed is:

1. A compact collapsible easily assembled and disassembled portable table having construction permitting rapid transition between the assembled and collapsed disassembled states comprising a base member having a plurality of legs, an extensible support standard having a first end adapted to be removably attached to the base member, a support platform adapted to be removably attached to a second end of the extensible support standard, means for adjusting the length of the support standard, means positioned upon the base member legs for adjusting the level of the base member, the base member having a flat planar configuration, the plurality of legs extending outwardly from the base member in a coplanar relationship therewith, the first end and the second end of the extensible support standard comprising a lower tubular standard and an upper tubular standard respectively, the upper tubular standard being telescopically engaged within the lower tubular standard, the upper tubular standard having a plurality of apertures therethrough, a lock pin adapted to fit through the upper tubular standard apertures and to engage the lower tubular standard thereby maintaining the upper and lower standards in a desired telescoped relation, the support platform having a flat planar surface, a peripheral rim extending about the planar surface of the support platform and extending both above and below said surface, recess means in the portion of the peripheral

rim which extends below said surface, a compact self-contained carrying case adapted to be constructed when the table is in a collapsed disassembled state including the peripheral rim of the support platform above the planar surface disposed adjacent the base member, the extensible support standard disposed within the recess means in the lower portion of the peripheral rim, a clamping member having a curved portion and a flat portion, the curved portion adapted to mate with the tubular standard and engage a portion thereof, the flat portion of the clamping member having an aperture therethrough and adapted to be disposed adjacent the support platform, the support platform and the base member each having an aperture therethrough, the aperture of the base member being threaded, the apertures of the clamping member and the support platform and the base member all adapted to be disposed in registry, the lock pin being threaded and disposed through the registered apertures to threadingly engage the base member thereby maintaining the carrying case in constructed relation.

2. A compact collapsible easily assembled and disassembled portable table having construction permitting rapid transition between the assembled and collapsed disassembled states, said table comprising a base member having a plurality of legs, an extensible support standard having a first end adapted to be removably attached to the base member, a support platform adapted to be removably attached to a second end of the extensible support standard, means for adjusting the length of the support standard, means positioned upon the base member legs for adjusting the level of the base member, wherein when the table is in a collapsed disassembled state a compact carrying case is adapted to be constructed, the carrying case including the support platform, the platform having a first side disposed adjacent the base member, the extensible support standard disposed adjacent a second side of the support platform, and means maintaining the support standard adjacent the second side of the support platform, and the base member adjacent the first side of the support platform.

3. An easily assembled and disassembled projector stand comprising a base member having a plurality of spaced legs adjustably mounted for movement on said base member, a projector tray dimensioned to be received in flat abutting relation with said base within the area bounded by said legs when said stand is in its disassembled condition, an extensible telescoping support standard removably attachable to both said base member and said tray to extend in tray supporting relation therebetween and clamping means for clamping said base member, said tray and said standard in its disassembled condition.

4. The stand of claim 3 wherein said clamping means includes a lock pin having a threaded end portion which is threaded into a threaded lock pin receiving aperture in said base member when said stand is in its disassembled condition but which is extended through a desired one of a plurality of height adjustment holes in said extensible standard to provide a desired height of said stand when said stand is in its assembled condition.

5. The stand of claim 4 wherein said tray includes a peripheral rim having aligned rounded notches to receive said standard when the stand is in its disassembled condition.

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ROY D. FRAZIER, *Primary Examiner*.

FRANK DOMOTOR, *Assistant Examiner*.