Jan. 5, 1965 L. J. ARMSTRONG 3,164,349

STAND FOR PORTABLE MOVIE SCREEN

Filed Oct. 15, 1963 3 Sheets-Sheet 1

FIG. 1

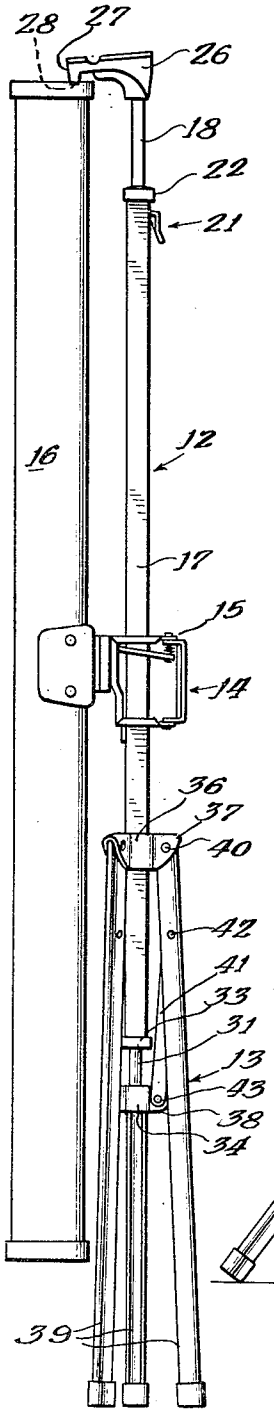


FIG. 2

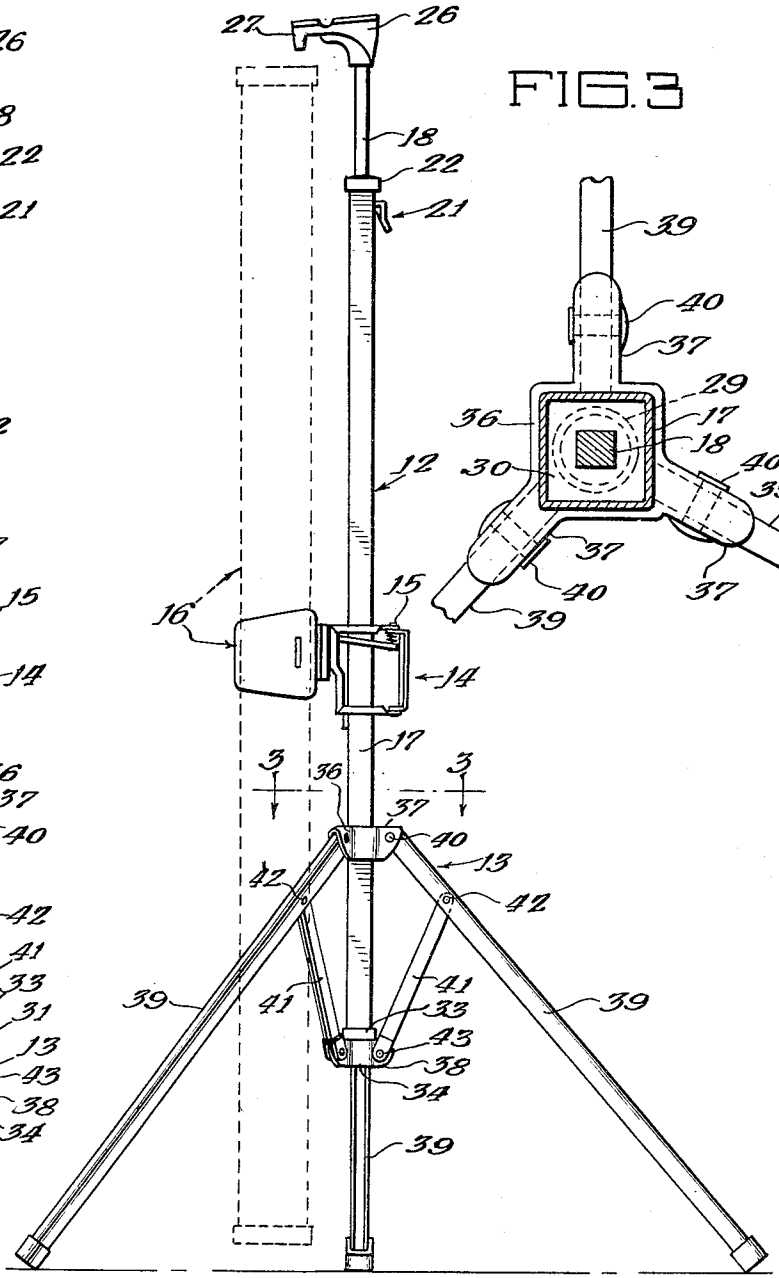


FIG. 3

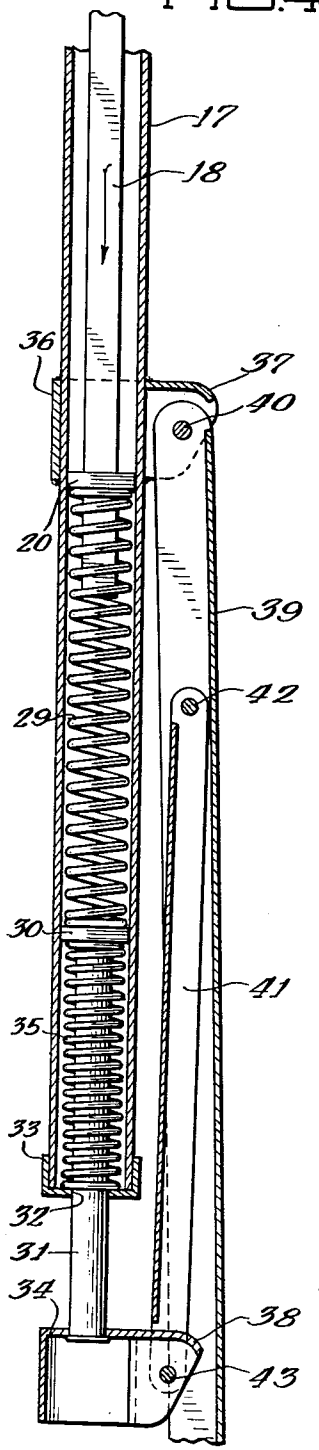
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Attorneys

Jan. 5, 1965 L. J. ARMSTRONG 3,164,349

STAND FOR PORTABLE MOVIE SCREEN

Filed Oct. 15, 1963 3 Sheets-Sheet 2

FIG. 4



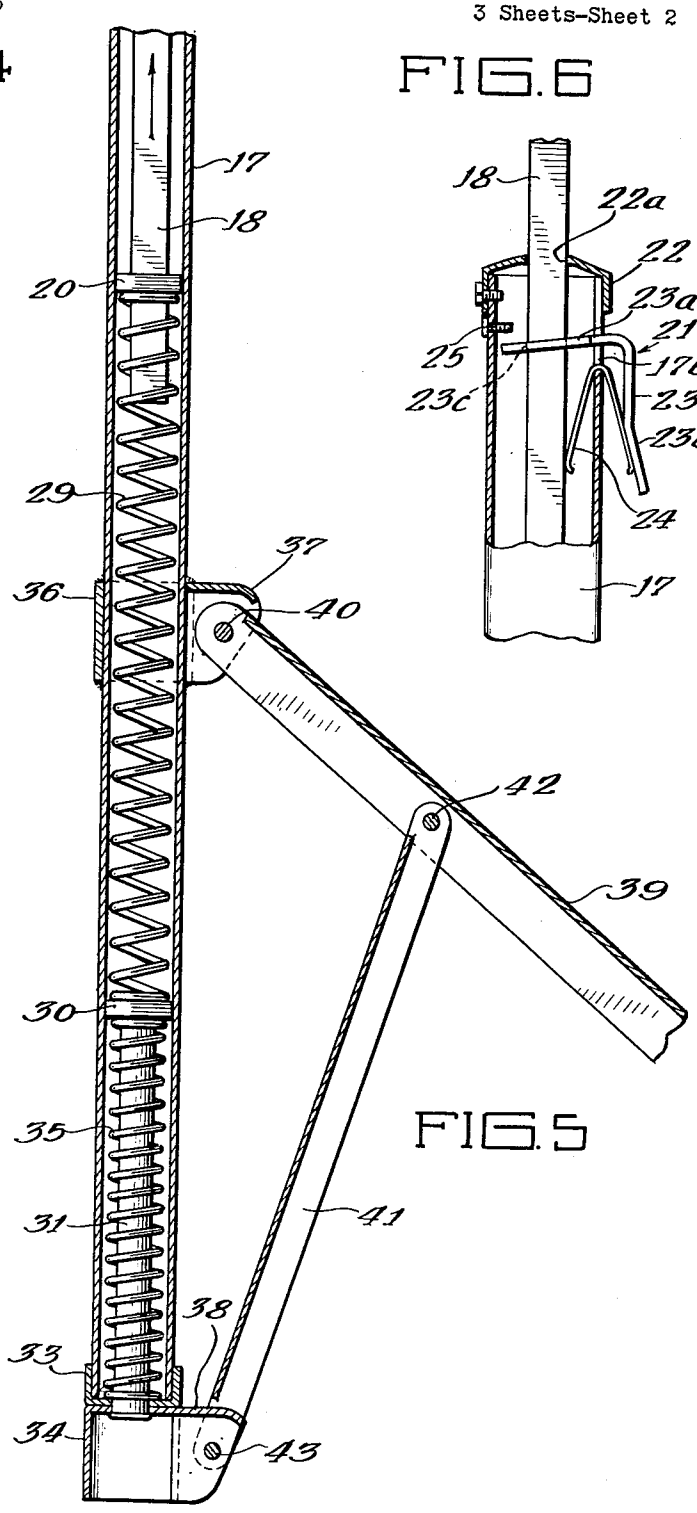


FIG. 5

FIG. 6

Jan. 5, 1965 L. J. ARMSTRONG 3,164,349

STAND FOR PORTABLE MOVIE SCREEN

Filed Oct. 15, 1963 3 Sheets-Sheet 3

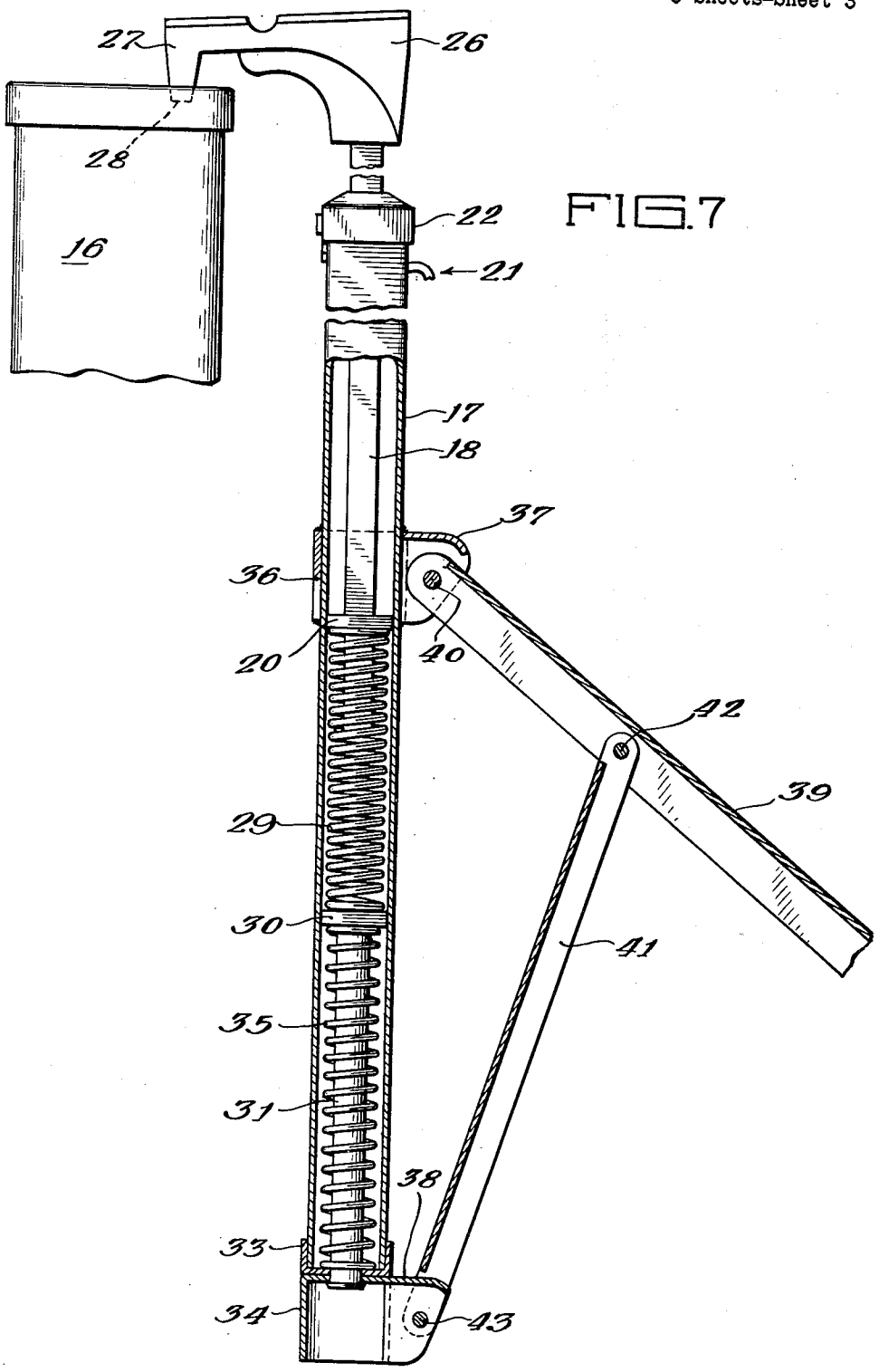


FIG. 7

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3,164,349

STAND FOR PORTABLE MOVIE SCREEN

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Filed Oct. 15, 1963, Ser. No. 316,240
15 Claims. (Cl. 248—171)

This invention relates to a portable movie screen structure, and more particularly to a stand for such a screen structure having a leg unit adapted to be automatically swung from a supporting position to a closed position when the stand is lifted from its supporting surface.

The primary object of this invention is to provide a new and improved support for a portable movie screen.

Another object of this invention is to provide a portable movie screen stand in which the leg unit is moved by a movable bracket to a closed position when lifted from its supporting position on a surface.

A further object is to provide a movie screen stand in which the leg unit is capable of being held in closed position adjacent the standard without the use of conventional latch means.

Still another object is to provide a movie screen stand having a leg unit which is moved by a movable bracket from a closed position adjacent the standard to an open supporting position.

A further object is to provide a movie screen stand having a leg unit in which a first spring means moves a movable bracket so that when the leg unit is lifted from its supporting surface the movable bracket pulls the leg unit to a closed position adjacent the standard.

Yet another object is to provide a portable movie screen stand having a leg unit in which a second spring means within the standard is moved by a first spring means to move a slidable bracket to pull the leg unit to a supporting position upon release of the first spring means.

Still a further object of this invention is to provide a movie screen stand having a leg unit in which a first spring means within the standard cooperates with a collar to move the same axially of the standard when the leg unit is lifted from a supporting surface to swing the leg unit to a closed position, and in which a second spring means cooperates with the first spring means to urge the leg unit to a supporting position upon the release of the first spring means by moving the collar in a direction opposite to the movement imparted by the first spring means.

The invention is illustrated in a preferred embodiment in the accompanying drawings, in which:

FIGURE 1 is a side elevational view of a movie screen device with the leg assembly or leg unit in closed position and the screen casing also held in closed position parallel to the standard;

FIGURE 2 is a side elevational view of the movie screen device with the leg unit in supporting position, the leg unit having been released for outward movement to said supporting position by releasable means operative between a telescoping member to permit upward projection of the telescoping member so as to release the casing and at the same time release the leg unit to permit the casing to swing automatically from the dotted line position 90° to the full line position perpendicular to the standard as shown;

FIGURE 3 is an enlarged fragmentary sectional view taken as indicated on line 3—3 of FIGURE 2;

FIGURE 4 is an enlarged fragmentary sectional view of the lower end of the standard showing the position of the legs of the leg unit in closed position (only one leg being shown for clarity) and illustrating the position of the spring means and related parts after the leg unit has automatically swung to closed position;

FIGURE 5 is an enlarged fragmentary sectional view of the lower end of the standard, similar to FIGURE 4, showing one leg of the leg unit in supporting position and illustrating the spring means in released position;

FIGURE 6 is an enlarged fragmentary view partially broken away in section of the upper end of the standard illustrating the clamp means used in conjunction with the telescoping rod and tubular member of the standard to selectively position the rod at different positions of extension relative to the standard; and

FIGURE 7 is an enlarged broken fragmentary view of the standard, partially in section, showing one leg of the leg unit in supporting position and showing the telescoping rod depressed so that the stud of the bail support latches the movie screen casing and the lower end of the rod compresses one of the spring means within the standard, and illustrating the cooperative relation between the first and second spring means of the standard, the stem and movable bracket, and the bracing links which adapt the leg unit for automatic movement to closed position when the standard is lifted from its supporting surface.

Referring now to the drawings, a standard, generally designated **12**, is adapted for support in an upright position preferably by a tripod-type leg unit, generally designated **13**. The standard carries a handle member, generally designated **14**, which is slidably mounted on the standard **12** and is provided with a latching member **15** for adjustably positioning the handle member **14** vertically of the standard **12**.

The forward face of the handle member **14** is provided with a mounting surface to which a conventional screen casing, generally designated **16**, is pivotally mounted. The casing **16** is preferably mounted in a manner illustrated in the Petrick et al. Patent No. 3,022,816, entitled "Portable Movie Screen," issued February 27, 1962, so that the screen casing **16**, when released from its carrying position parallel to the standard (as shown in FIGURE 1), will automatically pivot 90° to its operative position perpendicular to the standard, as shown in FIGURE 2.

The standard **12** is comprised of a main tubular member **17** and a telescoping rod **18** which is slidably received in the tubular member **17** and generally guided at its lower end by a guide washer **20** affording close tolerance of the inner walls of the tubular member **17**. The telescoping rod **18** is normally held in varying positions of extended adjustment by a clamping member, generally designated **21**, located near the upper end of the tubular member **17**. A cap **22** is provided with a centrally disposed aperture **22***a* through which the telescoping rod **18** passes.

The clamping means **21** includes a nipping lever **23** having a first portion **23***a* which is positioned in the interior of the tubular member **17** and a second portion **23***b* which extends through an opening **17***b* in the tubular member and projects to the exterior providing a surface for manual manipulation thereof. The portion **23***a* is positioned generally transverse to the rod **18** and mounted thereabout by means of a centrally disposed opening **23***c* therein to permit the passage of the rod **18** therethrough. For locking the rod in different positions of extended adjustment, a spring **24** is provided and is biased against both the rod **18** and the inside of the portion **23***b* of the lever **23** to cause the portion **23***a* to tilt slightly downward and the opening **23***c* to impinge on the rod **18**, preventing the rod from moving relative to the standard. A stop means **25** is provided and projects inwardly from the wall of the tubular member **17** on the side opposite the opening **17***b* so that when the lever **23** is pressed to release the impingement of the rod **18**, the movement

of the portion 23*a* will be restricted to continually maintain the clamping means 21 in operable condition.

The upper end of the rod 18 carries a bail support 26 from which the free end of the movie screen is supported in a conventional manner. The bail support 26 is provided with a depending lug 27 of a size to fit within a well 28 in the end of the casing 16 to hold the casing 16 in its carrying position parallel to the standard, as shown in FIGURE 1.

As best seen in FIGURES 5, 6 and 7, a coil spring 29 is positioned within the lower end of the tubular member 17. The spring 29 abuts the washer 20 at its upper end and abuts the washer 30 at its lower end affording guiding and bearing surfaces to the coil spring 29. The washer 30 is secured to the inner or top end of the stem or plunger 31 which passes through an opening 32 in the lower cap 33 at the lower end of the standard. A second coil spring 35 is positioned in the tubular member 17 about the stem 31 and abuts the inside of the cap 33 and the underside of the washer 30. The function of the coil spring 29 is to cooperate with the extension rod 18 and the stem 31 so that the leg unit 13 can be held adjacent the standard 12 in a closed position when desired. The function of the spring 35 is to cooperate with the spring 29 and the stem or plunger 31 so that the leg unit 13 can be moved outwardly to a supporting position as illustrated in FIGURES 2 and 5.

To this end, the standard is provided with a lower collar or bracket 34 which is secured to the outer or free end of the stem 31 for movement axially of the standard. An upper collar or bracket 36 is provided on the lower end of the standard also and is axially spaced relative to the movable or lower collar 34. The upper collar may be provided with three pairs of spaced ears 37, and the lower collar 34 may likewise be provided with three pairs of spaced ears 38.

As best seen in FIGURES 2, 4, 5 and 7, a channel-shaped leg member 39 is swingably secured to each pair of ears 37 by a rivet 40. A channel-shaped bracing link 41 is similarly pivotally secured at one end to each pair of ears 38 on the lower collar 34 by a rivet 43. The opposite end of each of the bracing links 41 is pivotally secured to its corresponding leg member 39 by a rivet 42 preferably at a point near the pivotal mounting of the leg members in the collar 36. The location of the point of pivot 42 on each leg member will be seen to be related to the amount of movement desired in the stem 31, the length of the bracing links 41, and the degree of spread desired in the leg unit in supporting position. The points of pivot 42 should be located so as to provide a leg support which is stable and which will move to closed position after a relatively small amount of longitudinal outward movement of the stem 31. As shown in FIGURE 2, it is preferred that the points of pivot 42 be located on the leg members at a distance from the collar 36 which is no more than one-quarter of the length of a leg member.

In this invention the springs 29 and 35, rod 18, stem 31, collars 34 and 36, bracing links 41 and leg members 39 combine to provide a structure adapted to move the legs to an outwardly spread supporting position automatically when the rod 18 is released from a minimum depressed position by the clamping means 21, or to automatically bring the legs to a closed position adjacent the standard when the rod 18 is depressed to a minimum position and the standard is raised from its supporting surface.

The movement of the leg unit is accomplished by transforming the relative axial movement imparted to the lower collar 34, into pivotal movement of the leg members by means of the bracing links. The only springs are in the tubular standard and, with the exception of the telescoping rod, the springs act only upon the stem 31 which supports the collar 34. No other intermediate latching means, actuating members, or springs are required. As the stem 31 is pulled inward relative to the standard, the collar 34 pushes the leg member out to a spread supporting position by means of the intermediate bracing link 41. Conversely, as the stem 31 is pushed outward relative to the standard, the collar 34 pulls the leg members into a closed position adjacent the standard.

FIGURE 5 illustrates the relative positions of the components of this structure when the legs are in a spread supporting position holding the standard upright. The rod 18 is in a released position and is merely being supported by the spring 29 which is exerting no significant compressive force. In turn, the spring 29 exerts no significant force to the washer 30 on the spring 35. The spring 35 does exert a sufficient force on the washer 30 to cause the stem 31 to be urged inwardly of the tubular member so that the stem 31 urges the collar 34 to a position adjacent the lower end of the standard and the bracing links support the leg members in the outwardly thrust position as shown.

Referring now specifically to FIGURE 7, when the telescoping rod 18 is depressed to a position of minimum elevation with respect to the standard to permit the stud 27 to engage the well 28 of the screen and latch the same relative to the standard, the washer 20 at the lower end of the rod compresses the spring 29 as shown. The clamping means 21 holds the rod 18 in this depressed position. However, in FIGURE 7, the standard is still on the supporting surface and the weight of the standard is sufficient, acting through the leg members and bracing links upon the collar at the lower end of the stem 31, to prevent the spring 29 from moving the stem 31 downwardly thereby permitting the standard to be maintained in its upright supporting position. The spring is held in a compressed state between the bottom of the clamped rod 18 and the top of the stem 31 due to the weight of the standard and can be said to be "cocked" for potential action upon the release of one of the opposing forces.

In the embodiment shown, the spring 29 is stronger than the spring 35 so that, as seen in FIGURE 4, when the standard is lifted from its supporting surface and the weight of the device can no longer exert any influence on the stem 31, the spring 29 as compressed and "cocked," opposes the force of the spring 35 and urges the stem 31 longitudinally relative to the tubular member 17. This causes the collar 34 to be moved axially with respect to the standard and away from the collar 36, which, in turn, causes the bracing link 41 to be drawn in toward the standard. As the bracing link is drawn toward the standard it in turn pulls its respective leg member thereto, pivoting the leg member about its pivotal mounting 40 with the stationary collar 36 so that the leg unit assumes the position shown in FIGURE 4 under the influence of the pull of collar 34. The spring 29 is permitted to slightly expand as the spring 35 is compressed, but both springs are now in a state of compression. The clamped rod 18 still bears against the spring 29 which in turn bears against stem 31, causing stem 31 to bear against and confine spring 35 in the space between the washer 30 and the cap 32. Thus the spring 35 has also been "cocked" for potential action upon release of the spring 29.

Returning now to FIGURE 5, when the clamping means 21 is released, it permits the rod 18 to be moved outwardly relative to the standard under the influence of the spring 29. This permits the spring 29 to expand which, in turn, permits the spring 35 to exert influence on the underside of the washer 30. As the spring 35 urges against the underside of the washer 30 and draws the stem 31 inward relative to the standard, the collar 34 moves axially upward relative to the standard and is pulled toward the collar 36. When the leg unit is in a closed position adjacent the standard, as shown in FIGURE 4, the pivotal mounting 42 of the bracing link to the leg member lies slightly outside of the line between the pivotal mounting 40 of the leg member to the collar 36 and the pivotal mounting 43 of the bracing link to the collar 34, so that

the upward movement of the collar 34 relative to the tubular member 17 permits the bracing link, through the pivotal mounting 42 to urge the leg members outwardly relative to the standard to a spread supporting position as shown in FIGURE 5 under the influence of the push exerted by the collar 34. In other words, the bracing links, when the leg unit is in closed position, are slightly angled outwardly and upwardly to swing the leg members outwardly when the spring 35 is released.

The foregoing detailed description is given for clearness of understanding only, and no unnecessary limitations should be understood therefrom for some modifications will be obvious to those skilled in the art.

I claim:

1. A portable stand adapted to be maintained in an upright position upon a supporting surface, comprising: an elongated standard having a lower end portion provided with a plunger, the plunger being constructed and arranged to move upwardly and downwardly with respect to said lower end portion and being normally urged in an upward direction; a pair of brackets spaced axially of the lower end of the standard and being mounted for relative movement axially of the standard with respect to each other; a leg unit on the lower end of the standard for supporting said standard in an upright position, the leg unit having a plurality of leg members swingable between a closed position adjacent the standard and an outwardly spread supporting position, each leg member being provided with a bracing link and being pivotally secured to the upper bracket, the bracing links each being pivotally secured to the lower bracket and to its respective leg member at least one bracing link and the plunger being positioned to cooperate with each other to move the brackets away from each other and to fold the leg members and bracing links in closed position adjacent to the standard when the plunger is moved downwardly with respect to the lower end portion of the standard; and spring means for exerting thrust on the plunger to move the plunger downwardly when the stand is removed from the supporting surface thereby automatically to swing the leg members and bracing links to closed position, the weight of the stand maintaining the leg unit in supporting position in opposition to the spring means when the leg unit rests upon the supporting surface.

2. A portable stand adapted to be maintained in an upright position upon a supporting surface, comprising: an upright standard; a telescoping rod in said standard, said rod being adapted for movement to different positions of extended adjustment relative to the standard; a pair of brackets spaced axially of the lower end of the standard and being mounted for relative movement of the standard with respect to each other; a leg unit on the lower end of the standard for supporting said standard in an upright position, the leg unit having a plurality of leg members swingable between a closed position adjacent the standard and an outwardly spread supporting position, each leg member being provided with a bracing link and being pivotally secured to the upper bracket, the bracing links each being pivotally secured to the lower bracket and its respective leg member; and a spring in said standard in a position to be cocked by said rod when said rod is depressed inwardly with respect to the standard, said spring when cocked adapted to normally bias one bracket away from the other bracket whereby the leg unit is automatically swung to a closed position when lifted from the supporting surface, the weight of the stand maintaining the leg unit in supporting position when the leg unit rests upon the supporting surface.

3. The stand of claim 2 wherein said lower bracket is slidably mounted with respect to said standard for movement relative to said upper bracket.

4. A portable stand adapted to be maintained in upright position upon a supporting surface, comprising: an upright standard; a telescoping rod in said standard adapted for movement relative to the standard to selected positions of extended adjustment; a pair of brackets spaced axially of the lower end of the standard, the lower bracket being slidably mounted thereon for relative movement axially of the standard; a leg unit on the lower end of the standard for supporting said standard in an upright position, the leg unit having a plurality of leg members swingable between a closed position adjacent the standard and an outwardly spread supporting position, each leg member being provided with a bracing link and being pivotally secured to the upper bracket, the bracing links each being pivotally secured to the lower bracket and its respective leg member; a first spring in said standard in a position to be cocked by the rod when the rod is moved inwardly relative to the standard, said spring when cocked adapted to normally bias the lower bracket away from the upper bracket to collapse the leg member when the standard is lifted from the supporting surface, the weight of the stand maintaining the leg unit in the supporting position when the leg unit rests upon a supporting surface and the first spring is cocked; and a second spring in said standard, said second spring being in a position to be cocked by said first spring, said second spring when cocked adapted to cause the lower bracket to move toward the upper bracket to open the leg unit to a supporting position when the first spring is released by moving the rod outward relative to the standard.

5. A portable stand adapted to be maintained in an upright position upon a supporting surface, comprising: an upright standard; a rod in said standard adapted for movement relative to the standard to selected positions of extended adjustment with respect to the upper end of the standard; a stem in said standard adapted for movement relative thereto with respect to the lower end of the standard; a pair of brackets spaced axially of the lower end of the standard, the lower bracket being mounted on the free end of said stem for relative movement axially of the standard; a leg unit on the lower end of the standard for supporting said standard in an upright position, the leg unit having a plurality of leg members swingable between a closed position adjacent the standard and an outwardly spread supporting position, each leg member being provided with a bracing link and being pivotally secured to the upper bracket, the bracing links each being pivotally secured to the lower bracket and its respective leg member; a first spring in said standard in a position to be cocked by the telescoping rod when the telescoping rod is moved inwardly, said spring when cocked adapted to bear against the stem to cause the lower bracket to move away from the upper bracket to collapse the leg members when the standard is lifted from the supporting surface, the weight of the stand maintaining the leg member in the supporting position when the leg unit rests upon the supporting surface with the first spring cocked; and a second spring in said standard, said second spring being positioned to be cocked by said first spring, said second spring when cocked adapted to bear against said stem to cause the lower bracket to move toward the upper bracket to open the leg unit to a supporting position when the first spring is released by moving the telescoping rod outward relative to the standard.

6. The portable stand of claim 5 including clamping means on said standard for locking said telescoping rod at different positions of extended adjustment.

7. A portable stand adapted to be maintained in an upright position upon a supporting surface, comprising: an upright standard; a telescoping rod in said standard adapted for movement relative to the standard to selected positions of extended adjustment with respect to the upper end of the standard; clamping means on said standard for securing said rod in different positions of extended adjustment; a stem in the lower end of said standard adapted for movement relative to the standard; a pair of brackets spaced axially of the lower end of the standard, the lower bracket being mounted on the free end of the stem for relative movement axially of the standard; a leg unit on

the lower end of the standard for supporting said standard in an upright position, the leg unit having a plurality of leg members swingable between a closed position adjacent the standard and an outwardly spread supporting position, each leg member being provided with a bracing link and being pivotally secured to the upper bracket, the bracing links each being pivotally secured to the lower bracket and its respective leg member; a first spring in said standard, said first spring mounted between the bottom end of the telescoping rod and the top end of said stem in a position to be cocked by the telescoping rod when the telescoping rod is moved inwardly relative to the standard and locked by said clamping means, said first spring when cocked adapted to bear against said stem to cause the lower bracket to move away from the upper bracket to collapse the leg members when the standard is lifted from the supporting surface, the weight of the standard maintaining the leg unit in the supporting position when the leg unit rests upon a supporting surface and the first spring is cocked; and a second spring in said standard, said second spring mounted about said stem and being positioned to be cocked by said first spring when the standard is lifted from the supporting surface and the lower bracket moves away from the upper bracket to collapse the leg members and thereby compress the second spring in response to the urging of the first spring, said second spring when cocked adapted to urge said stem inward relative to the standard to cause the lower bracket to move toward the upper bracket to open the leg unit to a supporting position when the clamping means is released permitting the telescoping rod to move outward relative to the standard in response to the urging of the first spring.

8. A portable stand adapted to be maintained in an upright position upon a supporting surface, comprising: an upright standard having a telescoping rod therein adapted for movement relative to the standard to selected positions of extended adjustment with respect to the upper end of the standard; a pair of brackets spaced axially of the lower end of the standard and being mounted for movement axially of the standard relative to each other; a leg unit on the lower end of the standard for supporting said standard in an upright position, the leg unit having a plurality of leg members swingable between a closed position adjacent the standard and an outwardly spread supporting position, each leg member being provided with a bracing link and being pivotally secured to the upper bracket, the bracing links each being pivotally secured to the lower bracket and to its respective leg member, each of said links being inclined upwardly and outwardly of the standard when said leg members are in said closed position; and spring means at the lower end portion of the standard positioned to be cocked by moving the telescoping rod inwardly of the standard, the spring means when cocked normally urging the brackets toward each other so that the upwardly and outwardly inclined bracing links move the leg members outwardly to a spread supporting position when the telescoping rod is moved outwardly of the standard to release the spring means.

9. A portable stand adapted to be maintained in an upright position upon a supporting surface, comprising: an upright standard having a telescoping rod therein adapted for movement to different positions of extended adjustment relative to the upper end of the standard; a stem in said standard mounted for movement relative thereto with respect to the lower end of the standard; a pair of brackets spaced axially of the lower end of the standard, the lower bracket being mounted on the free end of said stem for relative movement axially of the standard; a leg unit on the lower end of the standard in an upright position, the leg unit having a plurality of leg members swingable between a closed position adjacent the standard and an outwardly spread supporting position, each leg member being provided with a bracing link and being pivotally secured to the upper bracket, the bracing links each being pivotally secured to the lower bracket and its respective leg member so that each of said links is inclined upwardly and outwardly of the standard when said leg member is in said closed position; a spring in said standard embracing said stem, said spring being in a position to be cocked by the rod when the rod is moved inwardly relative to the standard, said spring when cocked adapted to normally bias the lower bracket toward the upper bracket so that the bracing links throw the leg unit to a spread supporting position when the spring is released by movement of the rod outward relative to the standard.

10. A stand adapted to be maintained in upright position upon a supporting surface, comprising: an elongated standard having a lower end portion provided with a plunger, the plunger being constructed and arranged to move upwardly and downwardly with respect to said lower end portion and being normally urged in an upward direction; a compression spring positioned at the lower end portion of the standard so as to exert downward thrust when compressed upon the plunger; a plurality of leg member swingably mounted on the lower end portion of the standard for movement together from a closed position adjacent the standard to a spread-apart supporting position in which the standard is maintained uprightly; a bracing link extending between one of the leg members and the lower end portion of the standard and having one end pivotally secured to said lower end portion and the other end pivotally secured to said one leg member, the bracing link and the plunger being positioned to cooperate with each other to swing the bracing link toward the standard and thereby fold the leg members and bracing link into closed position adjacent to the standard when the plunger is moved downwardly with respect to the lower end portion of the standard; and means for compressing the compression spring to cause the compression spring to exert downward thrust upon the plunger whereby, when the stand is removed from the supporting surface, the plunger is moved downwardly and causes the bracing link to be swung toward the standard to pivot the leg members inwardly to closed position adjacent the standard.

11. A stand adapted to be maintained in upright position upon a supporting surface, comprising: an elongated standard having a lower end portion provided with a plunger, the plunger being constructed and arranged to move upwardly and downwardly with respect to said lower end portion and being normally urged in an upward direction; a compression spring positioned at the lower end portion of the standard so as to exert downward thrust when compressed upon the plunger; a plurality of leg members swingably mounted on the lower end portion of the standard for movement together from a closed position adjacent the standard to a spread-apart supporting position in which the standard is maintained uprightly; a bracing link extending between each leg member and the lower end portion of the standard, each bracing link having one end pivotally secured to said lower end portion and the other end pivotally secured to one of said leg members, at least one of the bracing links and the plunger being positioned to cooperate with each other to swing the bracing links toward the standard and thereby fold the leg members and bracing links into closed position adjacent to the standard when the plunger is moved downwardly with respect to the lower end portion of the standard; and means for compressing the compression spring to cause the compression spring to exert downward thrust upon the plunger whereby, when the stand is removed from the supporting surface, the plunger is moved downwardly and causes said at least one bracing link to be swung toward the standard to pivot the leg members and bracing links inwardly to closed position adjacent the standard.

12. A stand as specified in claim 11, in which the plunger is provided with a plunger spring which affords the normal upward urge to the plunger in opposition to downward thrust exerted by the compression spring, the

downward thrust of the compression spring when compressed being of such magnitude as to overcome the upward urge of the plunger spring when the stand is removed from the supporting surface so as to move the plunger downwardly and thereby fold the leg members and bracing links to closed position adjacent the standard, the plunger being moved upwardly by the plunger spring when the thrust of the compression spring is released whereby the leg members and bracing links can be swung to supporting position.

13. A stand adapted to be maintained in upright position upon a supporting surface, comprising: an elongated standard having a lower end portion provided with a plunger, the plunger being constructed and arranged to move upwardly and downwardly with respect to said lower end portion and being normally urged in an upward direction; a compression spring positioned at the lower end portion of the standard so as to exert downward thrust when compressed upon the plunger; a plurality of leg members swingably mounted on the lower end portion of the standard for movement together from a closed position adjacent the standard to a spread-apart supporting position in which the standard is maintained uprightly; a bracing link extending between each leg member and the lower end portion of the standard, each bracing link having one end pivotally secured to said lower end portion and the other end pivotally secured to said one leg member, the bracing links and the plunger being positioned to cooperate with each other to swing the bracing links toward the standard and thereby fold the leg members and bracing links into closed position adjacent to the standard when the plunger is moved downwardly with respect to the lower end portion of the standard; and means for compressing the compression spring to cause the compression spring to exert downward thrust upon the plunger whereby, when the stand is removed from the supporting surface, the plunger is moved downwardly and causes the bracing links to be swung toward the standard to pivot the leg members inwardly to closed position adjacent the standard.

14. A movie screen device adapted to be maintained in upright position upon a supporting surface, comprising: an elongated standard having a lower end portion provided with a plunger, the plunger being constructed and arranged to move upwardly and downwardly with respect to said lower end portion and being normally urged in an upward direction; a screen casing pivoted to the standard for movement from viewing position perpendicular to the standard to storage position parallel to the standard; an extension rod telescoping with said standard and having a bail support on the free end of the extension rod for engaging one end of the casing to hold the casing in storage position when the rod is depressed inwardly of the standard; clamping means operable between said rod and said standard for holding said extension rod in varying degrees of extended adjustment; a compression spring at the lower end portion of the standard in a position to be

cocked by said rod when said rod is depressed inwardly with respect to the standard, said spring when cocked exerting downward thrust upon the plunger; a plurality of leg members swingably mounted on the lower end portion of the standard for movement together from a closed position adjacent the standard to a spread-apart supporting position in which the standard is maintained uprightly; and a bracing link extending between each leg member and the lower end portion of the standard, each bracing link having one end pivotally secured to said lower end portion and the other end pivotally secured to said one leg member, the bracing links and the plunger being positioned to cooperate with each other to swing the bracing links toward the standard and thereby fold the leg members and bracing links into closed position adjacent to the standard when the plunger is moved downwardly with respect to the lower end portion of the standard, the compression spring in cocked position exerting sufficient downward thrust upon the plunger whereby, when the device is removed from the supporting surface, the plunger is moved downwardly and causes the bracing links to be swung toward the standard to pivot the leg members inwardly to closed position adjacent the standard.

15. A movie screen device as specified in claim 14, in which the plunger is provided with a plunger spring which affords the normal upward urge to the plunger in opposition to downward thrust exerted by the compression spring, the downward thrust of the compression spring in cocked position being of such magnitude as to overcome the upward urge of the plunger spring when the device is removed from the supporting surface so as to move the plunger downwardly and thereby fold the leg members and bracing links to closed position adjacent the standard, the plunger being moved upwardly by the plunger spring when the thrust of the compression spring is released by the clamping means disengaging the extension rod whereby the leg members and bracing links can be swung to supporting position and the bail support disengages the one end of the casing.

References Cited by the Examiner

UNITED STATES PATENTS

2,845,244	7/58	Prokop	248—171
3,003,729	10/61	Petrick	248—171
3,064,932	11/62	Holderman	248—171

References Cited by the Applicant

UNITED STATES PATENTS

1,135,464	4/15	Parnall.
1,961,454	6/34	Reichhart.
2,659,559	11/53	Du Mais.
2,753,879	7/56	Rosen.

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