Sept. 15, 1942. D. R. McCLARY 2,296,043

SUPPORTING STAND

Filed Aug. 28, 1941 2 Sheets-Sheet 1

Fig. 1.

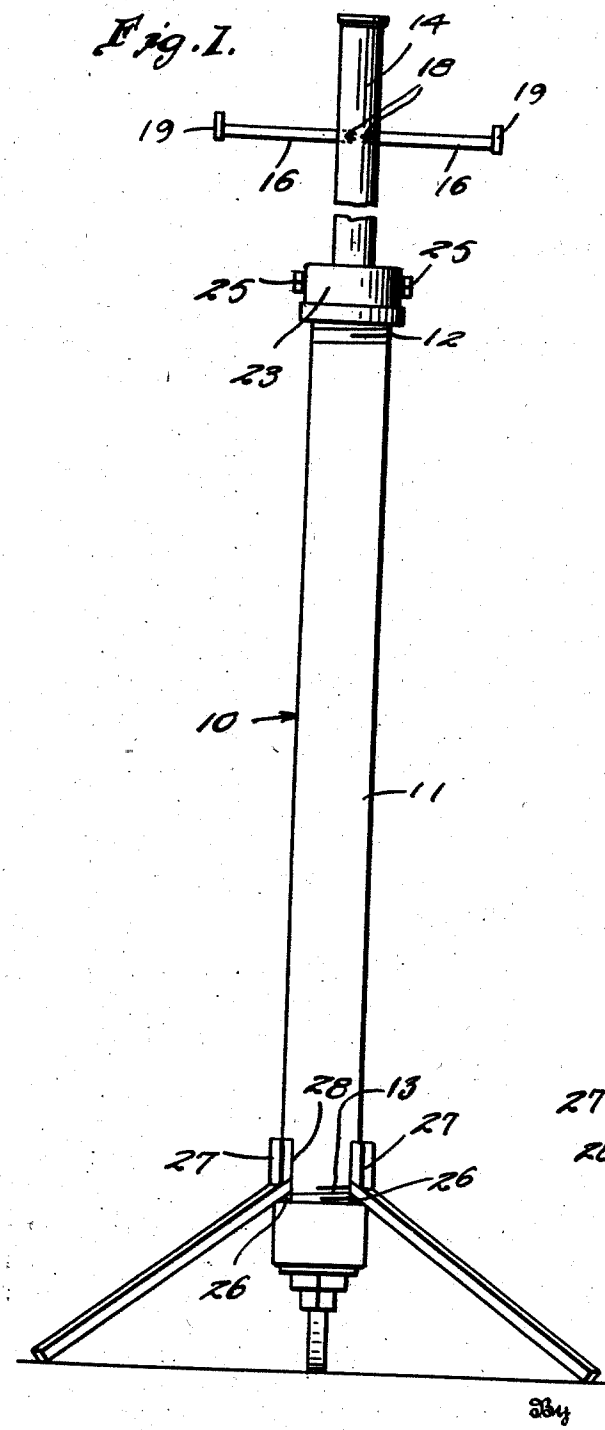
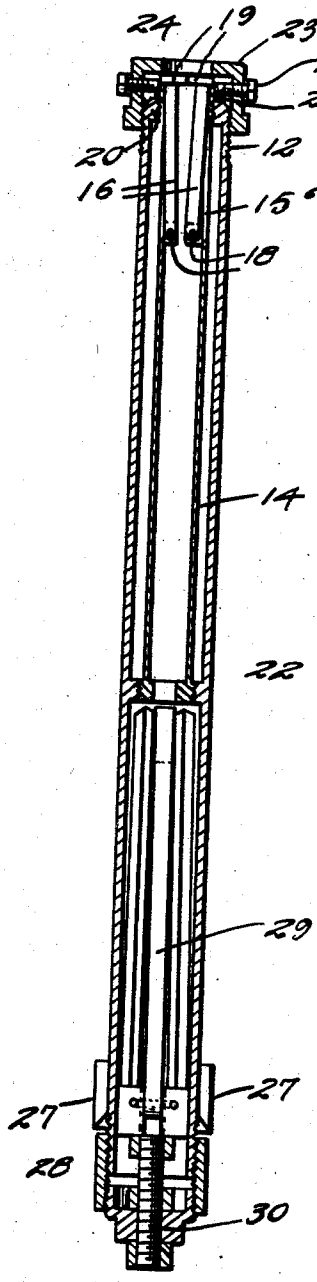


Fig. 2.



Inventor

Dillon R. McClary

By

Attorney

Sept. 15, 1942. D. R. McCLARY 2,296,043

SUPPORTING STAND

Filed Aug. 28, 1941 2 Sheets-Sheet 2

Fig. 3.

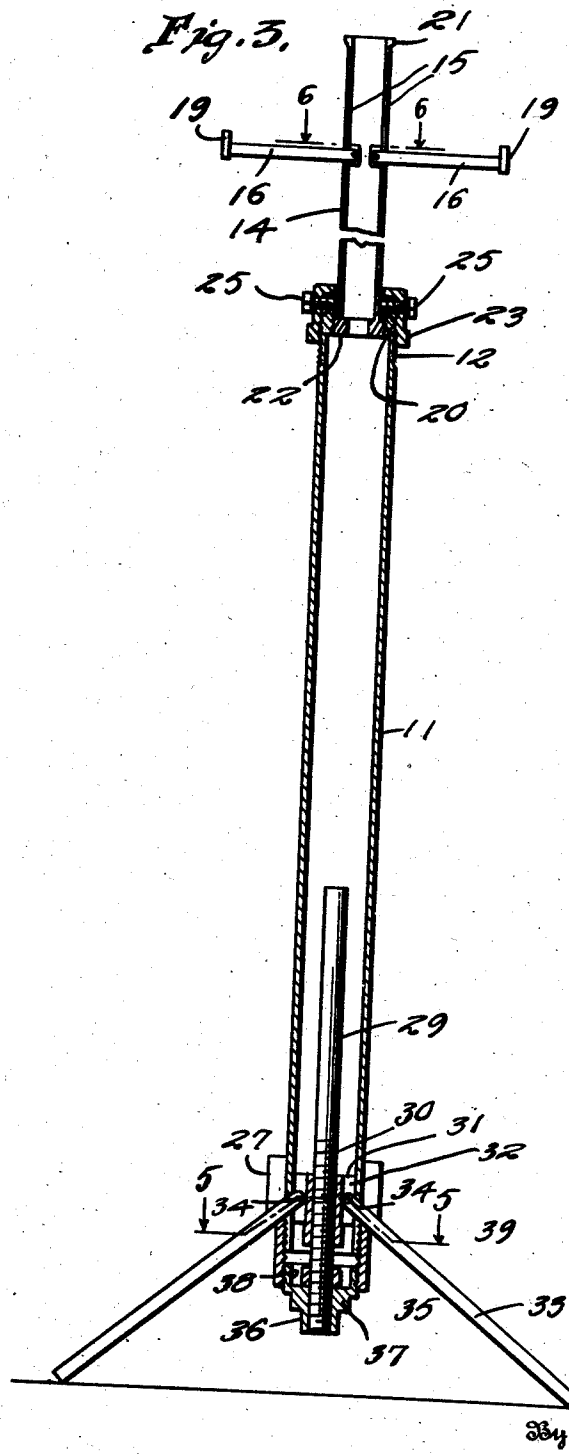


Fig. 4.

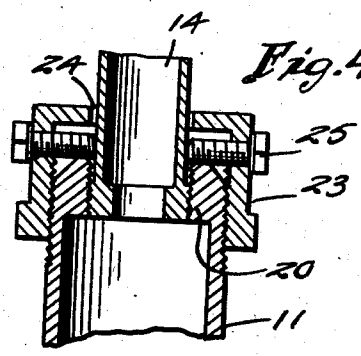


Fig. 5.

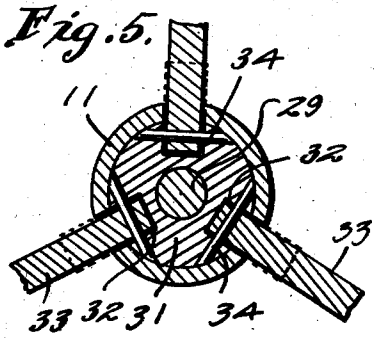
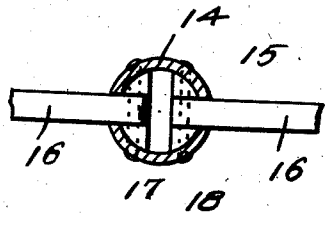


Fig. 6.



Inventor

Dillon R. McClary

By K. F. Randolph

Attorney

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SUPPORTING STAND

Dillon R. McClary, Lynchburg, S. C.

Application August 28, 1941, Serial No. 408,679

5 Claims. (Cl. 248—188)

This invention relates to a portable supporting stand which is capable of being extended to various lengths or heights, and which is so constructed that when not in use the parts thereof may be readily nested within one part and effectively retained therein so that the stand may be conveniently carried or transported or stored.

More particularly, it is an aim of the invention to provide an irrigating stand adapted to be used by doctors and nurses and in hospitals for holding apparatus used in administering medical irrigations at various desired elevations.

Still a further aim of the invention is to provide a stand of the above described character having supporting legs at the lower end thereof and which form a tripod for supporting the stand in an upright position, and which may be readily folded within a primary standard or post of the stand, when not in use.

Still a further object of the invention is to provide an irrigating stand of simple construction that may be economically manufactured and sold and which will be durable and sturdy.

Other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawings, which illustrate a preferred embodiment thereof, and wherein:

Figure 1 is a side elevational view showing the supporting stand extended,

Figure 2 is a longitudinal substantially central sectional view, partly in elevation, showing the stand in a folded position,

Figure 3 is a longitudinal central vertical sectional view, partly in elevation, showing the stand extended, as in Figure 1,

Figure 4 is an enlarged fragmentary central vertical sectional view of a portion of the stand shown in Figure 3, and

Figures 5 and 6 are cross sectional views of portions of the stand, when in an extended position, and taken substantially along the planes indicated by the lines 5—5 and 6—6, respectively, of Figure 3.

Referring more particularly to the drawings, wherein like reference characters designate like or corresponding parts throughout the different views, 10 designates generally the stand in its entirety, and which includes an elongated tubular member 11 having an externally threaded upper end 12 and an externally threaded lower end 13.

An elongated tubular member 14 telescopes into the end 12 of the member 11, and is provided with diametrically opposed longitudinally extending slots 15, which extend from intermediate of the ends of the member 14 through its outer end. A pair of corresponding arms 16 extend inwardly through the inner ends of the slots 15 and, as best seen in Figure 6, have their inner ends disposed between shoulders 17, within the member 14, and pivotally connected to the member 14 by means of pivot pins 18 which extend therethrough and through the shoulders 17. The arms 16, when in extended positions, are supported substantially at right angles to the member 14 by engagement with said member at the inner ends of the slots 15. The outer ends of the arms 16 are provided with hooks or abutments 19. The arms 16 may be swung upwardly from their positions, as seen in Figures 1 and 3, through the slots 15 for positioning the arms 16 in the upper or outer end of the member 14, and with the hooks or abutments 19 disposed beyond the outer end thereof, as seen in Figure 2. The upper end 12 of the member 11 is provided with an inwardly extending annular internally threaded portion 20 and the outer or upper end of the member 14 is provided with an outwardly projecting collar 21 which is adapted to rest on the portion 20, as seen in Figure 2, when the inner member 14 is in a retracted position to limit the movement of the member 14 inwardly of the member 11. The opposite, inner end of the member 14 is provided with an externally threaded collar 22 which can be connected to the portion 20 for holding the member 14 in an extended position, by turning the member 14 relatively to the member 11 after it is in substantially an extended position. It will likewise be readily obvious that by continuing to revolve the member 14 that it can be detached from the member 11 but that when the member 14 is slidably engaging the member 11 it cannot be slid out of engagement therewith without revolving it.

A cap 23 is internally threaded to engage the threaded end 12 and is provided with an opening 24 in the top thereof through which the member 14 is slidable. Cap 23 is provided with inwardly extending set screws 25 which can be advanced to hold the member 14 in a partially extended position, or which can be advanced to engage the shoulder 21 for holding the member 14 in a retracted position.

The lower end 13 is provided with three slots or elongated openings 26 which extend through the end thereof and which are equally spaced from one another circumferentially. The member 11 is provided with three longitudinally extending enlargements 27 on the outer side thereof which are disposed in alinement with the slots 26

and which are provided with beveled lower ends 28 which are inclined upwardly and inwardly relatively to the member 11 and which are disposed at the inner ends of the slots 26.

A rod 29 is provided with a threaded portion 30 at the lower end thereof to which a collar 31 is threadedly connected. The collar 31 is provided with longitudinally extending grooves 32 which open outwardly of the periphery thereof and which are equally spaced circumferentially. A corresponding end of a supporting leg 33 is loosely disposed in each of the grooves 32 and is pivotally connected to the collar 31 by means of a pivot pin 34. The pivot pins 34 extend through the grooves 32 and have their ends anchored in the collar 31. It will thus be readily apparent that the legs 33 can be folded against the rod 29 or extended relatively thereto to project outwardly therefrom. Also, the pivoted ends of the legs 33 can be adjustably positioned relatively to the rod 29 by turning the collar 31 for longitudinally adjusting it relatively to the rod. A nut 35 is mounted on the threaded portion 30 and engages the lower end of the collar 31 for holding it against movement in a direction out of engagement with the rod 29. Two nuts 36 are mounted at the outer end of the threaded portion 30 and in spaced apart relationship to one another, and a collar or washer 37 is turnably mounted and loosely disposed on the threaded portion 30 and between the nuts 36, and is adjustably positioned relatively to the rod 29 by means of the nuts 36. The washer or collar 37 is provided with an upwardly projecting annular externally threaded flange 38 to which one end of an internally threaded sleeve 39 is detachably connected. The sleeve 39 is arranged to project upwardly from the portion 38 and is adapted to detachably engage the threaded end 13 for holding the rod 29 in position in the lower end of the member 11.

From the foregoing it will be readily obvious that the legs 33 can be arranged to project outwardly through the slots 26 and the sleeve 39 can be attached to the end 13 and advanced relatively thereto by being turned with the washer or collar 37 so that the upper end of the sleeve 39, as seen in Figure 3, will engage against the legs 33 for holding each leg flush against a beveled end 28 so that the three legs 33 will be disposed at the same angle to the longitudinal axis of the member 11 and so that said legs will project outwardly and downwardly therefrom to form a tripod which is adapted to rest on a suitable supporting surface for supporting the tubular members 11 and 14 in substantially upright positions. When the stand 10 is thus supported on the legs 33 the member 14 can be extended to any desired extent and retained by the set screws 25 or the threaded portions 20 and 22, as previously described, for positioning the supporting arms 16 at any desired elevation. It will be obvious that the supporting arms 16 are adapted to support any apparatus used in the administering of a medical irrigation or may be used for any other desired purpose, and their hook portions or abutments 19 will prevent such apparatus, not shown, from sliding off of the outer ends of the arms.

When the stand 10 is not in use the tubular member 14 may be nested in the upper end of the tubular member 11, as previously described and illustrated in Figure 2. Also, the sleeve 39 may be unscrewed from the threaded end 13 so that the rod 29 and legs 33 can be detached from the member 11 after which the legs 33 can be folded against the upper end of the rod 29 and inserted into the lower end of the member 11 so as to nest therein and be retained by the sleeve 39 being again engaged with the threaded end 13, as illustrated in Figure 2. It will thus be readily apparent that when the parts are nested, as seen in Figure 2, that the stand 10 can be stored in a very restricted space or readily transported or carried.

Various modifications and changes in the invention as disclosed are contemplated and may obviously be resorted to, provided they fall within the spirit and scope of the invention as hereinafter defined by the appended claims, as only a preferred embodiment of the invention has been illustrated and described.

I claim as my invention:

1. A supporting stand comprising a tubular member, an elongated rod removably mounted in one end of the tubular member and provided with a threaded end, a collar having a threaded bore connected to said threaded end, legs pivotally connected to the collar, said end of the tubular member being provided with longitudinally-extending slots opening outwardly of the end thereof for receiving said legs, said slotted end being externally threaded, and a cap screw turnably mounted on said rod for engaging the threaded end of the tubular member for retaining the legs in extended positions.

2. A supporting stand comprising a plurality of sections including an outer section and an inner section in telescoping engagement with one end of the outer section, supporting arms pivotally connected to the inner section and arranged to fold therein when the inner section is in a retracted position, said supporting arms being extensible, when the inner section is extended, a cap detachably connected to said aforementioned end of the outer section and provided with an opening through which the inner section is movable, and means carried by the cap for engaging the inner section for holding it in an extended, partially extended or retracted position.

3. A supporting stand, comprising a tubular member, a rod removably mounted in one end thereof, legs pivotally mounted on the rod, means for adjusting the legs longitudinally of the rod, said legs, when in a folded position, being disposed in said tubular member and, when in an extended position, projecting outwardly therefrom, and means detachably connected to said end of the tubular member for engaging and holding the legs in extended positions and at oblique angles to the outer section.

4. A stand as in claim 2, said end of the outer tubular section being provided with a restricted internally threaded portion, and the inner end of the inner tubular section being provided with an externally threaded collar for engaging said internally threaded portion, to detachably hold the telescoping sections in extended positions.

5. A stand as in claim 2, the outer end of the inner tubular section being provided with an outwardly projecting collar for engaging the aforementioned end of the outer tubular section for limiting the movement of the inner tubular section toward a retracted position.

DILLON R. McCLARY.