

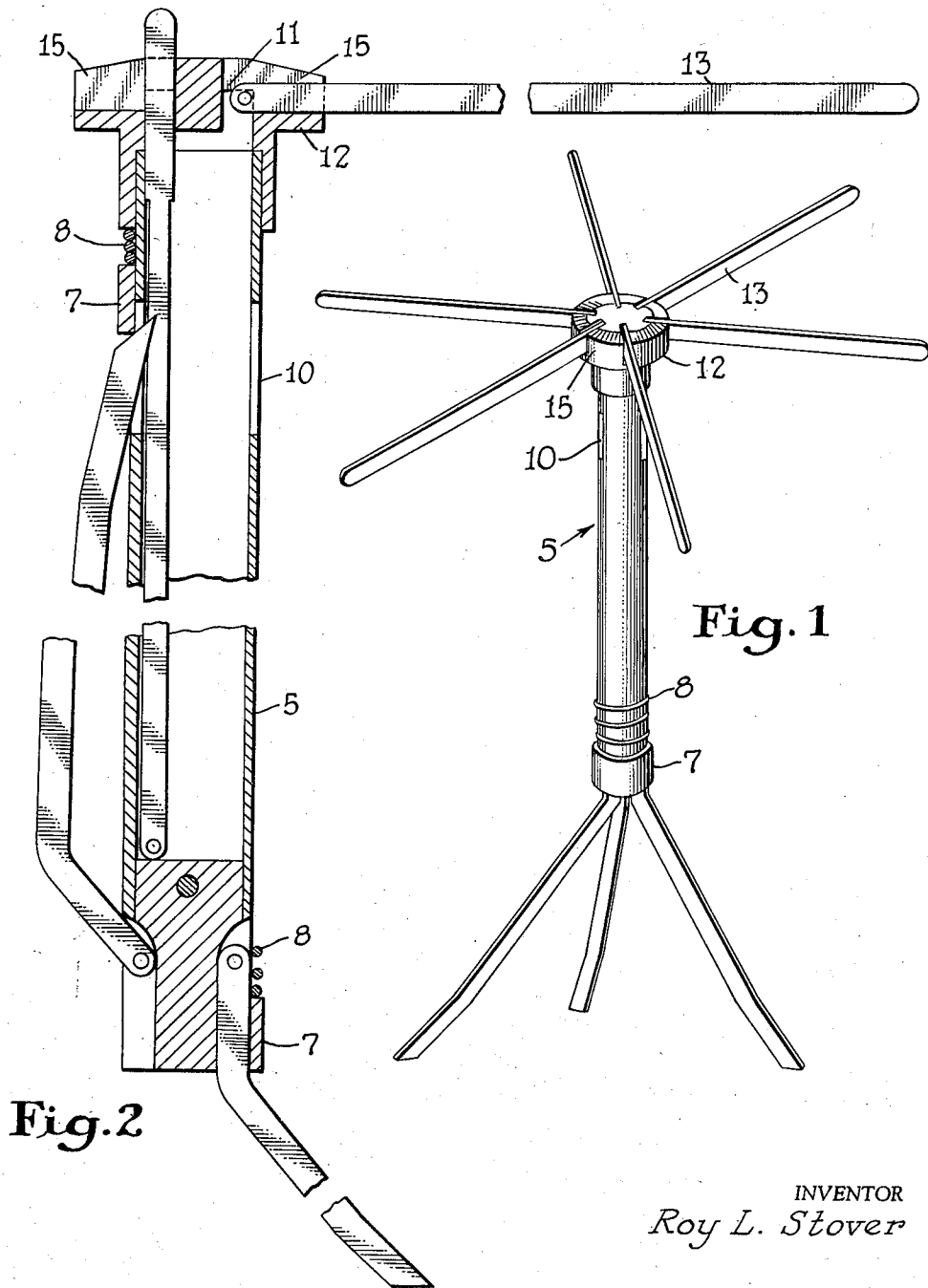
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COLLAPSIBLE STANDS

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COLLAPSIBLE STANDS

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2 Claims. (Cl. 248—170)

The principal object of my invention is to provide a stand on which articles may be supported and which, when not in use may be folded up into small space.

This application is a division of my abandoned application Serial No. 629,601, filed November 19, 1945, for Collapsible Stands.

In the accompanying drawing I have shown one specific embodiment of my invention and I proceed to describe the same.

Fig. 1 is a perspective view of a stand embodying the principles and teaching of my invention, and

Fig. 2 is a vertical section through the stand of Fig. 1; and it shows one leg and one arm in extended position and one arm and one leg in retracted position.

In the drawing 5 is a stem or sheath of suitable material. It may be of any desired size and shape. While I have shown a tubular shaped stem it is obvious that one of angle or channel shape may be used. The stem is shown of one piece of material but where greater height is desired the stem may be made in two parts to fold or telescope, but this is obvious and so not claimed. Pivotally attached at the lower end of the stem are a plurality of legs. I prefer to use three legs. The legs are so pivoted that when in use they form a tripod and when not in use they fold alongside of the stem or sleeve.

While I show the legs as strips of metal, they may be of any desired shape and material. To keep the legs folded when not in use, I prefer the use of a ring 7 which slides on the stem or sleeve and a spring 8 which presses the ring onto or against the ends of the legs. The ends of the legs may be pointed or reduced to permit the ring to hold the legs in place. The stem 5 is free of obstructions so that the ring 7 can respond to gravitational forces to automatically move into the position shown in Fig. 2 where it is below the level of the pivots for the legs and where it overlies and holds the upper portions of those legs. I prefer to provide a slot 10 in stem into which the lower ends of the legs may fit, to hold them against displacement. When it is desired to set up my stand, the ring may be pressed upwardly, thereby compressing the spring and releasing the legs, which may then be moved outwardly to form a tripod. The ring 7 is moved down the stem or sheath and over parts of the pivoted ends of the legs where it now serves to hold the legs rigidly against displacement. When it is desired to fold up the legs, the ring is moved upwardly along the stem or sleeve, where the spring pressed ring engages and holds the ends of the legs against the stem.

As part of or at the upper portion of the stem, I provide an arm holder 12 with a number of arms 13 preferably of thin strips of material. These arms are preferably arranged to fit within or against the stem. The arms preferably fit into slots 11 in the arm-holder 12 from whence they may be withdrawn for use. I prefer to provide a groove 15 in the arm-holder into which the arm fits.

What I claim is:

1. A collapsible stand that comprises an elongated stem of substantially uniform thickness throughout its length, a

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plurality of radially-directed axially extending grooves in said stem at the lower end of said stem, said grooves extending to the bottom face of said stem, a plurality of legs, each of said legs having a short substantially straight upper portion and an elongated lower portion and an intermediate bent portion, each of said upper portions of said legs having an opening at the upper end thereof, pivots that span the said grooves in said stem and extend through said openings in said upper portions of said legs, said legs being selectively rotatable about said pivots to retracted position and to extended position, said legs having the major part of the length of the upper portions thereof extending outwardly from said grooves and having the bottoms thereof disposed adjacent said stem at a point above the bottom face of said stem whenever said legs are in retracted position, said legs having the major part of the length of the upper portions thereof disposed within said grooves and having the bottoms thereof disposed outwardly of and below the bottom face of said stem whenever said legs are in extended position, a sliding member that closely encircles said stem and that translates freely along the surface of said stem to selectively overlie said grooves and enclose and confine said upper ends of said legs and thereby lock said legs in extended position or to lie above said point on said stem and engage said bottoms of said legs and thereby lock said legs in retracted position, and a helical spring that encircles the upper end of said stem and can yield to permit said sliding member to move to a position above said point on said stem but can thereafter urge said sliding member toward said point to engage and hold the bottoms of said legs, and a surface on said stand above said point which resists movement of said helical spring away from the lower end of said stand, whereby movement of said sliding member above said point on said stem can compress said helical spring, the portion of said stem between said point and said bottom face being free of obstructions to the translating movement of said sliding member whereby said sliding member can respond to gravitational forces to automatically move into leg-locking position.

2. A collapsible stand that comprises an elongated stem of substantially uniform thickness throughout its length, a plurality of radially-directed axially extending grooves in said stem at the lower end of said stem, said grooves extending to the bottom face of said stem, a plurality of legs, each of said legs having a short substantially straight upper portion and an elongated lower portion and an intermediate bent portion, each of said upper portions of said legs having an opening at the upper end thereof, pivots that span the said grooves in said stem and extend through said openings in said upper portions of said legs, said legs being selectively rotatable about said pivots to retracted position and to extended position, said legs having the major part of the length of the upper portions thereof extending outwardly from said grooves and having the bottoms thereof disposed adjacent said stem at a point above the bottom face of said stem whenever said legs are in retracted position, said legs having the major part of the length of the upper portions thereof disposed within said grooves and having the bottoms thereof disposed outwardly of and below the bottom face of said stem whenever said legs are in extended position, a sliding member in the form of a collar that closely encircles said stem and that translates freely along the surface of said stem to selectively overlie said grooves and enclose and confine said upper ends of said legs and thereby lock said legs in extended position or to lie above said point on said stem and engage said bottoms of said legs and thereby lock said legs in retracted position, the portion of said stem between said point and said bottom face being free of obstructions to the translating movement of said slid-

ing member whereby said sliding member can respond to gravitational forces to automatically move into leg-locking position, and a resilient element disposed above said point on said stem and a surface on said stand above said point which resists movement of said resilient element away from the lower end of said stand, whereby movement of said sliding member above said point on said stem can compress said resilient element, thereby biasing said sliding member toward said point on said stem.

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