Aug. 16, 1932. H. K. DALTON 1,871,667

SIGNAL FLAG AND LAMP STAND DEVICE

Filed March 13, 1931

Fig. 2.

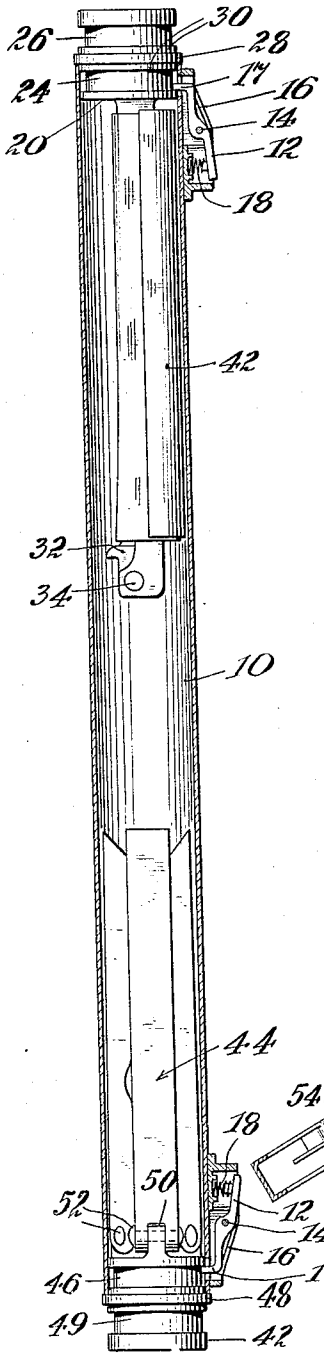


Fig. 1.

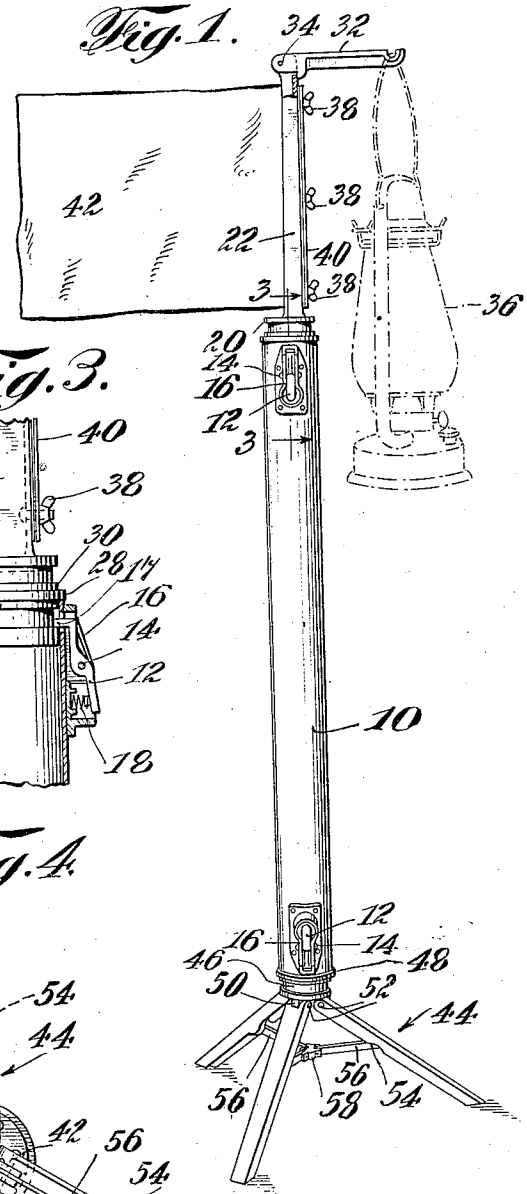
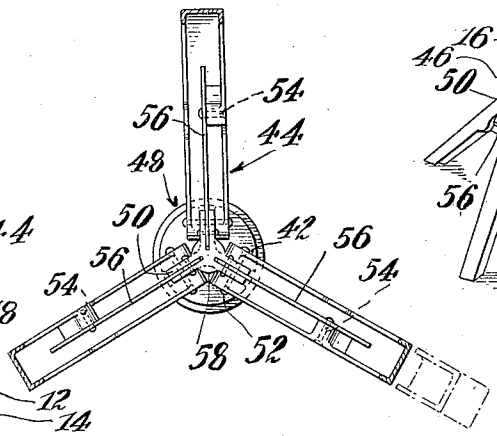


Fig. 3.

Fig. 4.



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UNITED STATES PATENT OFFICE

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SIGNAL FLAG AND LAMP STAND DEVICE

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This invention relates to a signal device. More particularly, it relates to a collapsible and portable stand for supporting a danger flag or signal lamp. In road construction work or the like whenever signal means are required to warn passersby or motorists, most of the signal means such as stands or posts driven into the ground are unwieldy and bulky, and do not lend themselves to convenient assembly on the completion of the job, or to storage, shipment, or re-use.

It is an object of the invention to provide a compact, easily assembled device for a flag or light signal used in connection with repair or construction work along thoroughfares or the like.

Other objects of this invention are to provide a signal stand device which can be readily moved or carried around and, when not in use, can be easily taken apart and compactly folded up, and where used in large numbers can be moved from place to place requiring only a small amount of space in trucks transporting said devices.

Briefly stated, the invention preferably comprises a standard having detachably coupled thereto a support for supporting the standard, and having also detachably coupled thereto a flagstaff with a lantern arm thereon. The support and staff are attachable to the standard and when not in use can be disengaged from the standard and inserted into the respective ends of the standard, thus forming a compact unit which can be easily stored, shipped, or put into use.

Further objects and features of the present invention will sufficiently appear from the following detailed description and the claims appended thereto.

Referring in detail to the drawing in which is shown a practical and simple embodiment of the invention, and in which like references refer to corresponding parts throughout the several views:—

Figure 1 is a side elevation and part perspective of a complete structure in accordance with this invention;

Fig. 2 is a longitudinal section of the structure in its compacted form;

Fig. 3 is a side view on an enlarged scale of the portion of the structure looking in the direction of 3—3 of Fig. 1; and

Fig. 4 is an enlarged bottom view of the supporting means of the structure shown in Fig. 1.

Referring to the drawing which illustrates the invention in its preferred form, a metal tubular or cylindrical standard 10 with walls of sufficient thickness to make it resistant to the rough usage incidental to construction work, is provided at each end with a spring lever 12. The spring lever is pivoted to a pin 14 attached to the sides of a pocket 16, which is riveted to the outer wall of the standard. The pocket has protruding sides to protect the lever from breaking or bending. One end 17 of the lever 12 is extended at right angles to its length through a hole in the wall of the cylinder and into its hollow portion, while the other end of the lever is exposed and rests on a resilient spring 18 seated on the floor of the pocket 16. When the exposed end of the lever is depressed against the spring 18 the end 17 describes a small arc in which it is moved toward the outside of the pocket 16, and free from the interior of the standard 10.

To the upper end of the standard 10 is engaged a coupling member comprising a base 20 of a flagstaff 22. The base 20 in this embodiment is annular in shape and provided with circumferential recesses or slots 24 and 26 separated at the mid portion of the base by a shoulder or extension 28, whose diameter is larger than that of the interior of the standard 10. The shoulder 28 is of any suitable diameter sufficient to rest on the end of the standard 10 and is adapted to prevent the base member from falling into the hollow of the standard 10. The recesses 24 and 26 are provided with circumferential extensions 30 having a diameter approximating the diameter of the standard 10 so as to be inserted in the standard under slight frictional engagement to prevent too loose a fit. It is to be noted that the recesses 24 and 26 are adapted to be engaged at any point of their periphery by the triggered end 17 of spring lever 12 when either part of the base is inserted inwards into the hollow chamber of standard 10.

Attached to the flagstaff 22, which may be integral with the base member 20, is an arm 32 adjustable at right angles to the staff for holding a lantern 36 thereon when necessary, and which is pivoted to the top of the staff by means of a pin 34. The arm 32 can be swung counterclockwise from its right angle position from the pivot to describe an arc until it is in alignment with the longitudinal axis of the staff 22 when not required to hold lantern 36. Alongside the staff and at definite intervals thereon are a number of bolts and nuts 38 for retaining in position a bar plate 40. When required a signal flag 42 can be attached to the flagstaff and held in position by means of the bar plate 40 and the nuts 38.

The other end of the standard 10 has engaged thereto a coupling member 42 in engagement with a collapsible tripod 44. The coupling member 42 used with the tripod for supporting the standard 10 is of the same construction as member 20 used in connection with flagstaff 22 and is also provided with circumferential recesses separated by an extension shoulder 48.

It is to be noted that this base member can be inserted either part inwardly into the interior of the standard 10 up to the shoulder 48, and that the end of spring lever 12 can make contact with any point of either grooves 46 or 49. If the tripod 44 and base member 42 are to support the standard as shown in Fig. 1, the lever will be in engagement with slot 49, whereas if the tripod and base member are to be inserted into the standard 10, as shown in Fig. 2, the lever end will connect with recess 46.

The lower portion of the coupling member 42 has in this embodiment three equally spaced lugs 50 integral to the member 42. Each leg of the tripod is partly cut away so as to engage with the lug 50 and is pivoted by a pin 52 so that the legs form a compact unit with the base member 42 when the tripod is folded. The legs of the tripod 44 are of substantially rectangular cross section and have pivoted thereto by means of a pin 54 a short bar 56. The short bars 56 are also pivoted to a center-piece 58 so that when the legs of the tripod are spread apart to support the standard 10, the center-piece 58 drops or may be pushed below its center point to prevent the legs of the tripod from collapsing when the device is raised or moved about, the bars 56 acting like a toggle. Furthermore, the legs of the tripod, once they are spread apart will not fold if the stand is pushed or falls over.

When the device shown in Fig. 1 is to be taken apart to be compacted, the exposed end of the upper spring lever 12 is depressed to disengage the end 17 from the lower recess 26 of the base 20 of flagstaff 16. The base 20 is withdrawn from the standard and then inverted and inserted into the standard 10, so as to bring the circumferential recess 24 in registration with the end 17 of the lever 12, the flagstaff being inserted into the standard 10. (See Fig. 2.) The end 17 of the upper spring lever 12 in such case engages with recess 24 of the flagstaff base 20, thereby preventing it from sliding or falling out of the chamber of the standard 10. The tripod 44 at the lower end of the standard is disconnected from the main standard by depressing the opposite end of spring lever 12 to disengage its triggered end 17 from recess 49 of the base 42, and then raising the standard 10. The center-piece 58 of the tripod is then pushed upward toward the base 42, thereby drawing the legs 44 together. The folded tripod is then inserted, legs first, into the chamber of standard 10, as shown in Fig. 2, the end 17 of the lower spring lever 12 engaging with recess 46 of the coupling member 42.

In the embodiment of this invention, coupling members 20 and 42 are of the same dimensions and are adapted to fit snugly into either end of standard 10. These members may be made interchangeable and their flagstaffs, tripods, or other devices attached thereto.

The invention in its preferred form is of simple construction. Furthermore, the structure as embodied herein is easily assembled and taken apart and is of such light weight that it can be moved about from place to place by one man. When the device is not in use, and folded, and assembled in compact form, as shown in Fig. 2, it can be readily loaded onto trucks requiring only little room. The device may be made of any metal adapted to resist wear and tear incidental to the use thereof, and also to adverse atmospheric influences.

In the embodiment of this invention, the coupling base members are of the same diameter and are adapted to fit into the interior of the standard at either end and to be engaged by the triggered end of the spring levers. Each coupling member is provided with a circumferential extension or shoulder adapted to rest on the end of the standard so that either of the circumferential recesses contained therein will be engaged at any point thereon by the spring lever. A coupling member as embodied in this invention with a tubular standard affords a sturdy, compact, and easily assembled signal device which can be used on any type of construction or repair job.

While the preferred embodiment of the invention is disclosed in the drawing and described in the specification, it is to be understood that the construction may be modified without departing from the spirit and scope of the invention as defined by the appended claims.

I claim:—

1. In a collapsible and portable signal standard, the combination with a standard having a spring lever at the respective ends, of a base having a plurality of superposed recesses adapted for engagement with said spring lever, and a shoulder for resting against the end of said standard, said base having a flagstaff thereon, adapted to be exposed from the standard as a flagstaff or inserted into the standard.

2. A collapsible and portable signal device comprising a tubular standard, a spring lever on said standard, a circumferentially recessed coupling member for insertion within said cylindrical standard at either end thereof, and adapted to be engaged to the standard by the spring lever at any point within the groove of said coupling.

3. A collapsible and portable signal device comprising a tubular standard, a spring lever at the end of said standard, a coupling member adapted to be inserted into the hollow of said standard, a plurality of circumferential recesses within the member adapted for engagement with said spring lever and a peripheral extension on said member intermediate said recesses and adapted for resting the coupling member on the end of the standard, said coupling being adapted for insertion at either end of the standard and for being engaged on either side of the extension with the spring lever.

4. In a collapsible and portable signal device, the combination with a standard having a pivoted spring lever at one end thereof, of a base having a plurality of superposed circumferential recesses for engagement with said lever and a shoulder intermediate the recesses for making contact with either end of said standard, said base having a collapsible tripod for supporting the standard or upon being collapsed for telescoping into the standard.

5. In a collapsible and portable signal device, the combination with a main cylindrical standard having a pivoted spring lever thereon with one end jutting into the standard, of a cylindrical base member insertable into the standard and kept in position therein by said spring lever, said member having annular recesses therein for accommodating the jutting end of the spring lever, and a radially extending shoulder intermediate the recesses for supporting the member against the end of the standard, and having collapsible supporting means for retaining the standard in upright position.

In testimony that I claim the foregoing as my invention, I have signed my name hereto.

HUBERT K. DALTON.