

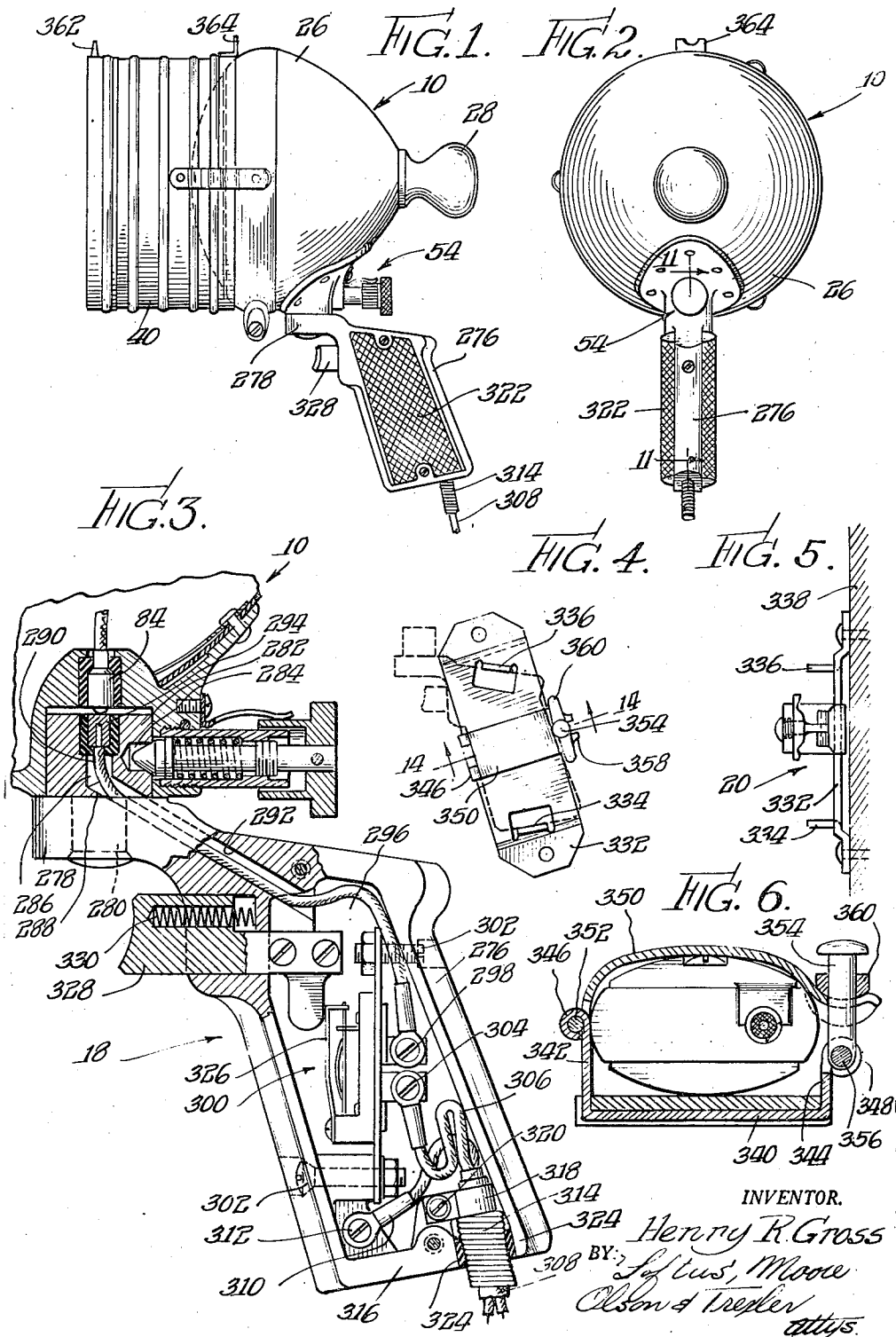
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SPOT-SIGNAL LIGHT

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2,374,282

SPOT-SIGNAL LIGHT

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3 Claims. (Cl. 248—309)

This invention relates to a combined spot and signal light.

This application is a continuation in part of my application, Serial Number 501,954, filed September 11, 1943, and it is an object of the invention to provide improvements rendering the spot-signal light, described therein, more rugged and of greater adaptability.

A further object of the invention is to provide a target locating spot light mounted upon a tank, or the like, in such manner that it may be readily manipulated from without the tank to locate the target.

A further object of the invention it to provide an improved portable stock for the spot-signal light, supporting the light when used as a portable signal light.

Other and further objects and advantages of the invention will be apparent from the following description when taken in connection with the accompanying drawing, wherein—

Figure 1 is fragmentary view in side elevation, illustrating the lamp unit upon the portable base or stock;

Figure 2 is a view in rear elevation of the construction illustrated in Figure 1;

Figure 3 is an enlarged view in vertical section taken substantially along the line 11—11 of Figure 2;

Figure 4 is fragmentary view in side elevation, illustrating the portable base of the unit in its releasable support;

Figure 5 is a view in elevation, and partly in section, illustrating the storage support for the portable base or stock;

Figure 6 is an enlarged view, in substantially horizontal section, taken along the line 14—14 of Figure 4.

The spot-signal light comprises a lamp unit or lamp head 10, a portable mounting unit, pistol grip or stock 18, and a storage support unit 20 for the portable unit 18.

The lamp unit or head 10 preferably comprises a sheet metal shell 26, having a nob 28 fitted onto the base thereof and formed for grasping in the palm of the hand to permit manipulation thereof.

A hood, which prevents the deflection of rays from the lamp, comprises a sheet metal shell 40, having strengthening corrugations.

The shell 26 is riveted or otherwise secured to a mounting bracket formed by a casting having a cylindrical boss bored to receive a mounting stud and, at right angles thereto, a releasable locking device 54, by which the lamp unit may be non-

rotatably secured to a mounting stud received in the central bore of the boss.

It should be noted that one terminal of the bulb-receiving socket of the lamp is grounded to the shell while the other terminal of the lamp socket is connected to a contact pin 84 positioned co-axially of the central bore of the mounting bracket. The pin 84 is insulated from the bracket, as by a sleeve in which is mounted a ball urged outwardly by a suitable spring (not shown).

The lamp unit 10 is stored upon the portable mounting unit, pistol grip or stock 18 (Figures 1 to 4, and 6). This portable mounting unit comprises a hollow casting 276 in the form of a pistol grip having an integral lamp supporting arm 278 apertured to receive a stud 280, the stud having an enlarged portion 282 above the supporting arm. The portion 282 is formed with a radial opening 284, an axial opening 286, and an opening 288 angularly intersecting the opening 286 and extending to the surface of the supporting arm 278. The radial opening 284 is adapted to receive the plunger 56 of the releasable locking device 54, by means of which the lamp unit 10 may be detachably secured to the stud. The openings 286 and 288 provide a passage for the insulated wire 290 which extends through an opening 292 in the arm 278. A contact pin 294 set in an insulating bushing at the upper end of the axial opening in the stud serves to establish electrical connection with the contact pin 84 of the lamp unit 10. The wire 290 extends into the chamber 296 of the casting 276 and is connected to a terminal 298 of a switch 300 mounted in the chamber in any suitable manner, as, for example, by bolts 302. The other terminal 304 of the switch is connected to a wire 306 and a two-wire supply cable 308. The other wire 310 of the supply cable is a grounded wire and is connected, as by the bolt 312, to the casting 276 to establish a grounded connection through the pistol grip to the lamp unit. The cable 308 is provided with a flexible, preferably coil spring, bushing 314 received in the open-ended notch in the lower edge of a flange 316 of the casting 276. The cable is anchored against longitudinal movement by a clamp 318, of conventional form, secured as by screw 320 inside the casting 276. The casting is covered by a knurled face plate 322 having at its lower edge an inwardly directed lug with spaced ears 324 (Figure 3) which cooperate with the base of the notch in the lower flange 316 of the casting 276 to retain the bushing 314 and, hence, the cable 308 firmly in position. The cable 308 extends to a suitable reel (not shown) from which the cable

may be extended, and to which it may be automatically retracted.

The switch 300 may comprise a spring blade 326, normally holding the switch contacts in open position by movably, on the action of a trigger 328 of insulating material, to close the switch contacts. The trigger comprises a slide block, slidably mounted in the pistol grip and projecting therefrom beneath the arm 278, in position for readily grasping and manipulation in the same manner as a pistol trigger. The trigger is urged outwardly to permit the switch to be opened by the spring blade 326, by coil spring 330 bearing upon the trigger and against the housing casting. It will be evident that the lamp unit 10 may be quickly and readily assembled on, or detached from the pistol grip, and then used as a spot or signal light. In use as a spot light, the trigger will be held depressed, but in use as a signal light the trigger will be manipulated according to a predetermined code, so as to flash the light in accordance with that code.

The pistol grip, when not in use, may be detachably mounted on a supporting bracket 332, welded or otherwise fastened to any convenient support within the tank. The bracket 332 is preferably formed of sheet metal on which is struck out lugs 334 and 336 inclined at proper angles relative to each other to engage the upper and lower edges of the pistol grip. The central portion of the bracket 332 is offset outwardly to provide a space between the bracket and the supporting surface 338 on which the bracket is mounted, and this base receiving a base portion 340 of a releasable clamp for retaining the pistol grip on the supporting bracket. The base portion 340 of the clamp is secured, in any convenient manner, to the bracket 332 and is provided with side flanges 342 and 344, the flanges terminating in spaced hinge pintles 346 and 348. A resilient metal strap member 350 is pivoted on the hinge pintle 346 by the pivot pin 352 and is shaped to extend over and beyond the surface of the pistol grip when supported on the bracket 332. A latch rod 354 is hinged on the pintle 348 as by the pivot pin 356 and is adapted to be received by the spaced ears 358 of the bifurcated free end of the resilient strap 350. A cross bar 360 on the rod 354 is provided with an inwardly facing convex edge for clamping engagement with the outwardly facing concave surface of the ears 358, the ears 358 being turned oppositely or inwardly at their ends, having a camming engagement with the inner surface of the cross-bar and tightly force the clamp strap 350 against the pistol grip to prevent it from vibrating while supported on the bracket.

It should be noted that the corrugated light shell 40 is provided with aligned front and rear sights 362 and 364 so positioned as to lie in the vertical plane when the lamp unit 10 is mounted on the pistol grip so as to facilitate sighting of the lamp unit upon the target or upon the airplane, companion tank, or other military unit to which a message is to be transmitted by flashing the light.

It is thought that the invention and numerous of its attendant advantages will be understood from the foregoing illustrative description, and it is obvious that numerous changes may be made in the form, construction and arrangement of the several parts without departing from the spirit or scope of the invention or sacrificing any of its attendant advantages, the form herein described being a preferred embodiment for the purpose of illustrating the invention.

What I claim is:

1. In a device of the character described, a pistol grip for supporting and controlling a combined spot and signal light and a supporting rack for said pistol grip, said rack comprising a bracket having a strap portion from which lugs are struck outwardly to engage opposite side edges of said grip and a releasable resilient clamp comprising a supporting strap fixed to said bracket, a resilient strap hinged at one end to said supporting strap and adapted to encircle said pistol grip, the other end of said resilient strap having spaced ears of curved form to provide a camming surface, and a latching member comprising a member hinged to the other end of said supporting strap for movement into the space between the ears and said resilient strap, and having a cam surface for engaging the cam surface of said ears resiliently to latch the resilient strap in an embracing relation to the pistol grip.

2. Releasable means for mounting a pistol grip of a portable lamp unit, said means comprising a bracket secured to a support and having spaced projections forming shelves adapted to support the pistol grip, latch means comprising a strap pivoted to the bracket and adapted to partially encompass the pistol grip from one side and a second strap pivoted to the first strap and having a keeper receiving latch member and an operating member for moving the latch member into keeper receiving and releasing position, and a keeper comprising a member pivoted to the bracket to encompass the pistol grip from the other side and having a portion for reception by the keeper receiving member of the second strap when the first strap partially encompasses the pistol grip.

3. Releasable means for mounting a pistol grip of a portable lamp unit, said means comprising a supporting bracket having spaced lugs engageable with opposite edges of the pistol grip to support the same, latching means comprising a strap fixed to the bracket and adapted partially to encompass the pistol grip from one side, a keeper comprising a resilient member pivoted at one end to the bracket to encompass the pistol grip from the other side, a latch member pivoted to the strap for swinging movement about an end of the pistol grip to engage the keeper, said latch member and said keeper having cam shaped parts for forcing the resilient keeper against the pistol grip when the keeper and latch member are swung into inter-engagement.

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