June 17, 1941. O. C. RITZ-WOLLER 2,245,873

MOUNTING MEANS FOR FLARES

Filed July 19, 1939

Fig. 1

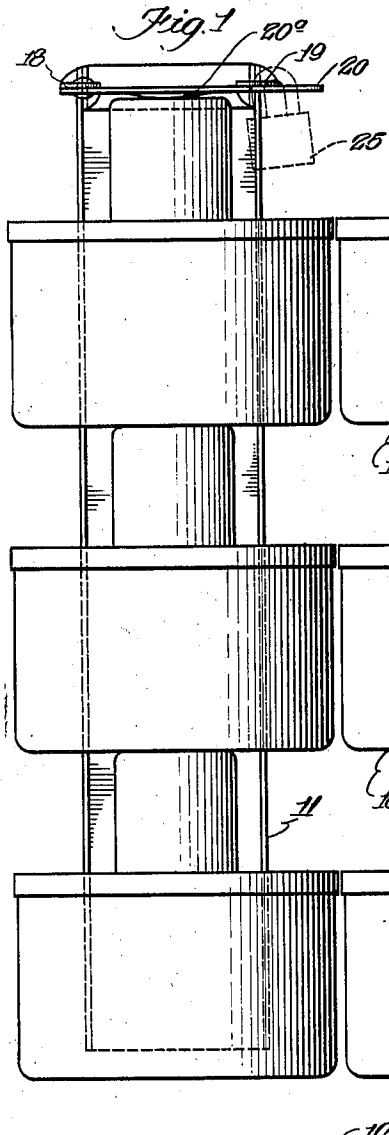


Fig. 2

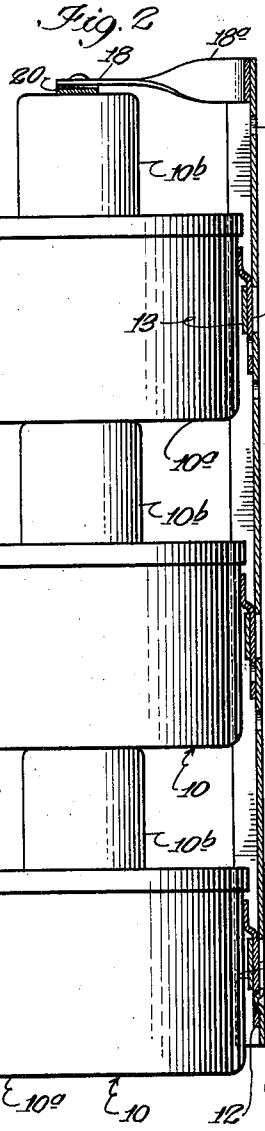


Fig. 3

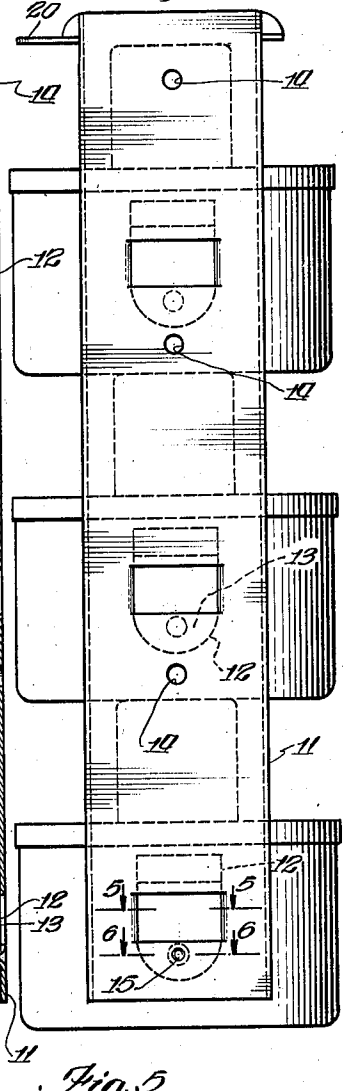


Fig. 4

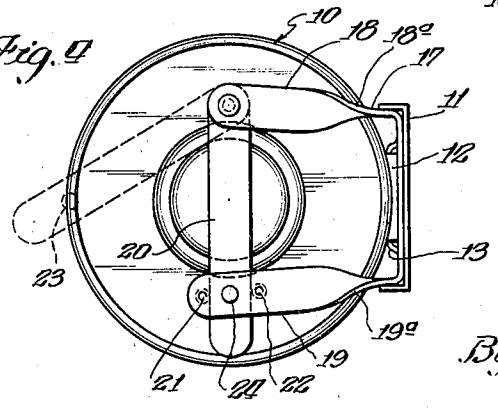


Fig. 5

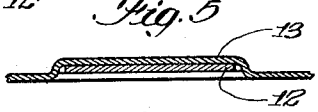


Fig. 6



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MOUNTING MEANS FOR FLARES

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6 Claims. (Cl. 211—4)

My invention relates to a mounting arrangement for flares and it has for one of its objects the provision of a new and improved form and arrangement of parts for supporting a plurality of flares on a truck or other vehicle in position to be readily available.

It is also an object of my invention to provide an improved arrangement of this type for mounting a plurality of flares in such manner that there will be no rattling by intermittent contact between the individual flares or between the mounting means and the flares upon vibration of the vehicle to which the flares are attached.

It is a further object of my invention to provide an improved arrangement of this type by means of which a plurality of flares may be locked in position with a single lock.

The invention consists of the novel constructions, arrangements and devices to be hereinafter described and claimed for carrying out the above stated objects and such other objects as will appear from the following description of a certain preferred embodiment illustrated in the accompanying drawing, wherein—

Fig. 1 is a front view of my improved flare mounting arrangement;

Fig. 2 is a side view of my improved arrangement, part of which is in cross section;

Fig. 3 is a rear view of my improved arrangement;

Fig. 4 is a top view of my improved arrangement;

Fig. 5 is a cross sectional view on an enlarged scale of a connection between a flare and the mounting member taken at line 5—5 of Fig. 3; and

Fig. 6 is a cross sectional view also on an enlarged scale of the boss and recess means in the mounting member and in the tongue of the lowermost flare taken at line 6—6 of Fig. 3.

Like characters of reference designate like parts in the several views.

The flares 10 comprise body portions 10*a* and removable caps 10*b*, the latter being smaller in diameter than the body portions as shown. The flares are mounted on a channel-like mounting member 11 by means of slip connections comprising tongues 12 fastened at the upper ends thereof, preferably by welding, to the body portions of the flares and fitting in holding elements 13 with which the mounting member is provided, the holding elements being in the form of loops or eyes stamped out of the web of the channel member. The holding elements are so spaced that when the tongues are fitting therein as shown in the figures, the flares are aligned or stacked one in contact with another. The mounting member 11 is provided with a plurality of openings 14 which are adapted to receive screws or bolts (not shown) for fastening the mounting member in a vertical position to the side of a truck or other vehicle. Below the lowermost of the holding elements the mounting member 11 is formed with a boss 15 as shown. Each of the tongues 12 is provided with openings 16 therethrough which are adapted to receive the boss for purposes hereinafter described.

A U-shaped member 17 of spring metal is fastened, preferably by welding, at the top and to the inside of the channel-like mounting member 11 and provides two outwardly extending spring arms 18 and 19. The arms 18 and 19 are each bent through 90° at 18*a* and 19*a*, respectively, and thus are horizontal outwardly from these points. A third arm 20 of spring metal is provided with a depressed central bearing portion 20*a* as shown in Fig. 1 and is pivotally mounted to the arm 18. When the spring arm 20 is in normal position, as shown in full lines in Fig. 4, it bears with spring pressure with its depressed portion 20*a* against the cap 10*b* of the uppermost flare and it is supported by arms 18 and 19 which are then in upwardly sprung condition. Arm 20 is then also sprung upwardly slightly at its center. The arms 18 and 19 are spaced apart a distance greater than the diameters of the caps 10*b* for purposes hereinafter described.

The arm 19 is provided with two downwardly extending projections 21 and 22 which lie on both sides of the arm 20 when it is in flare-holding position, and the projections tend to keep the arm 20 in such position. The arm 20 is provided with an opening 23 therethrough which is in alignment with an opening 24 in the arm 19 when the arm 20 is in flare-holding position. The openings 23 and 24 are adapted to receive the hasp of a padlock 25, as shown in dotted lines in Fig. 1, which prevents any unauthorized person from swinging the arm 20 out of flare-holding position.

When the lowermost flare is in position the opening 16 in its tongue receives the boss 15 as shown in Figs. 3 and 6 and the flare is thereby held from either upward or downward movement. The intermediate flare rests with its body portion 10*a* against the cap portion 10*b* of the lowermost flare, and the uppermost flare rests similarly on the intermediate flare, the tongues on the flares engaging the holding elements formed on the mounting channel as shown in

Fig. 2. The opening 16 and the boss 15 thus hold the stack of flares against downward movement. The quick-acting releasable spring locking means comprising the three spring arms 18, 19 and 20 bears with spring pressure on the cap of the uppermost flare and thus causes this flare and the intermediate flare to bear with spring pressure on the respective flares immediately therebelow. As is apparent, the flares 10 with the associated tongues 12 are removable from the holding elements 13 only by upward movement, and each of the lower flares are removable from position only after the flare immediately thereabove has been removed. The spring locking means holds the uppermost flare and thereby the lower flares against upward movement out of position and, due to the spring pressure it applies between the flares, it prevents the flares from rattling by intermittent contact with each other or with the mounting means upon vibration of the truck or other vehicle to which the mounting member is attached.

When it is desired to remove the flares, the padlock 25 is removed from the openings 23 and 24, and the arm 20 is swung outwardly past the projection 21 to such a position as is shown in dotted lines in Fig. 4 or to some position therebeyond. The uppermost flare is then moved upwardly with its cap 10b between the arms 18 and 19 until the tongue 12 thereof is completely free of its holding element 13, and the flare may then be moved horizontally away from the mounting member 11. The intermediate flare and the lower flare may then be removed by upward and outward movement. In moving the lowermost flare upwardly it is necessary, as is apparent, to use more force than with the other flares, since the boss 15 must be snapped out of the recess or opening 16.

In returning the flares to position any of the flares may be selected for use in the lowermost holding element 13 since the tongues on all the flares are provided with openings 16. The flare selected is moved downwardly with its tongue sliding in the lowermost holding element 13 until the boss 15 is received in the opening 16. The intermediate flare and thereafter the upper flare are put into position by horizontal and then downward movements. The arm 20 is swung back into holding position under the arm 19, and the lock 25 is applied, thus putting the arrangement back into normal condition.

I have provided a mounting arrangement for flares which may be easily and economically manufactured. A plurality of flares may be locked in position by a single lock, and the flares are held by spring locking means in contact with spring pressure one against another whereby rattling of the flares is prevented upon vibration of the truck or other vehicle to which they are attached. The yielding spring locking means of my arrangement permits flares which vary in height within manufacturing tolerances to be used with the same desirable results.

I wish it to be understood that my invention is not to be limited to the specific construction shown and described, except so far as the claims may be so limited, as it will be apparent to those skilled in the art that changes in the construction may be made without departing from the principles of my invention.

I claim:

1. In an arrangement for supporting on a vehicle a road flare having on its side one of a two-element slip connection, the combination of a mounting member having the other element of said slip connection for engaging the element carried by the flare and for limiting downward movement of the flare with respect to the mounting member, and releasable means carried by said mounting member and adapted to bear with spring pressure on the flare and hold it tightly at said connection against upward movement relative to the mounting member.

2. In an arrangement for supporting on a vehicle in vertically stacked relation a plurality of road flares each having on its side one of a two-element slip connection, the combination of a mounting member having the other element of each of said slip connections for engaging the elements carried by the respective flares and thereby limiting downward movement of the flares with respect to the mounting member, the elements on the mounting member being spaced so that the bottom of one flare will rest on the top of the adjacent flare below, and releasable means carried by said mounting member and adapted to bear with spring pressure on the uppermost flare and hold the stacked flares tightly at said respective connections against upward movement relative to the mounting member and to each other.

3. In an arrangement for supporting on a vehicle a road flare, the combination of a mounting member having means for engaging the flare and limiting downward movement of the flare with respect to the mounting member, and quick-acting releasable means carried by said mounting member and adapted to bear on the flare, said releasable means comprising two spaced arms carried by said mounting member and a third arm pivoted to one of said two arms and adapted to be swung into engagement with the other of said two arms, certain of said arms being of spring metal, said arms being arranged so that the flare is held under spring pressure against upward movement relative to the mounting member.

4. In an arrangement for supporting on a vehicle a plurality of road flares in vertically stacked relation, the combination of a mounting member having means for engaging the respective flares and for limiting downward movement of the flares with respect to the mounting member, the means on said mounting member being spaced so that the bottom of one flare will rest on the top of the adjacent flare below, and quick-acting releasable means carried by said mounting member and adapted to bear on the uppermost flare, said releasable means comprising two spaced arms carried by said mounting member and a third arm pivoted to one of said two arms and adapted to be swung into engagement with the other of said two arms, certain of said arms being of spring metal, said arms being arranged so that the flares comprising said stack are held under spring pressure against upward movement relative to the mounting member and to each other.

5. In an arrangement for supporting on a vehicle a road flare having on its side one of a two-element slip connection, the combination of a mounting member having means including the other element of said slip connection for engaging the element carried by the flare and for limiting downward movement of the flare with respect to the mounting member, and quick-acting releasable means carried by said mounting member and adapted to bear on the flare, said releasable means comprising two spaced arms

carried by said mounting member and a third arm pivoted to one of said two arms and adapted to be swung into engagement with the other of said two arms, certain of said arms being of spring metal, said arms being arranged so that the flare is held under spring pressure against upward movement relative to the mounting member.

6. In an arrangement for supporting on a vehicle in vertically stacked relation a plurality of road flares each having on its side one of a two-element slip connection, the combination of a mounting member having means including the other element of each of said slip connections for engaging the elements carried by the respective flares and for limiting downward movement of the flares with respect to the mounting member, the elements on the mounting member being spaced so that the bottom of one flare will rest on the top of the adjacent flare below, and quick-acting releasable means carried by said mounting member and adapted to bear on the uppermost flare, said releasable means comprising two spaced arms carried by said mounting member and a third arm pivoted to one of said two arms and adapted to be swung into engagement with the other of said two arms, certain of said arms being of spring metal, said arms being arranged so that the flares comprising said stack are held under spring pressure against upward movement relative to the mounting member and to each other.

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