Jan. 23, 1940. F. MOSSBERG 2,188,086

BEAM HEAD

Filed March 11, 1937

Fig. 1.

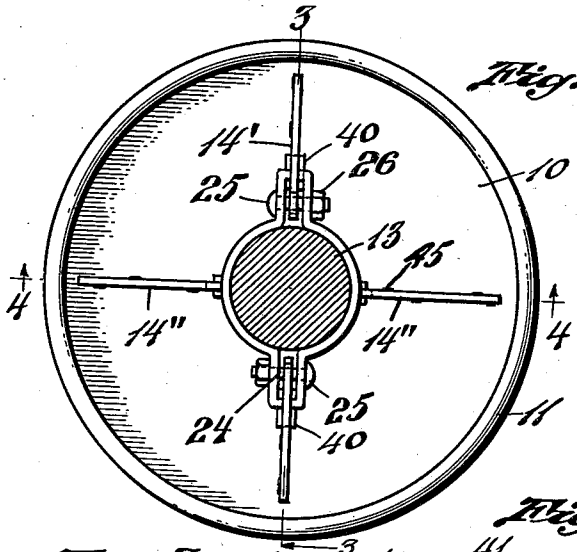


Fig. 2.

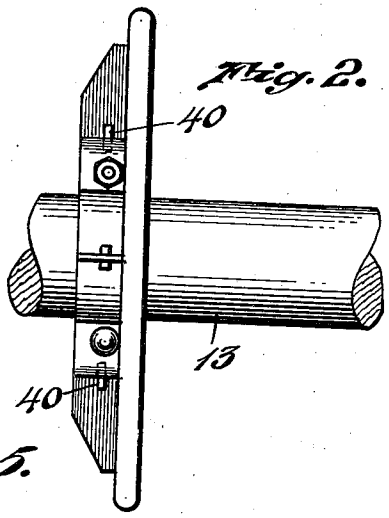


Fig. 5.

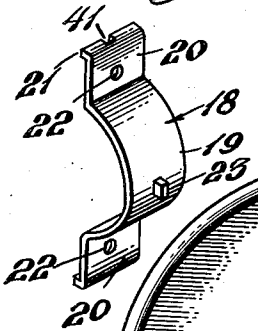


Fig. 3.

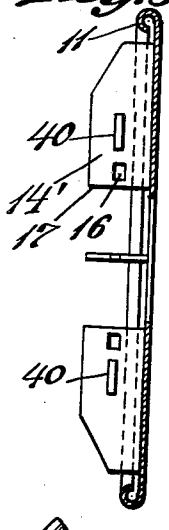


Fig. 4.

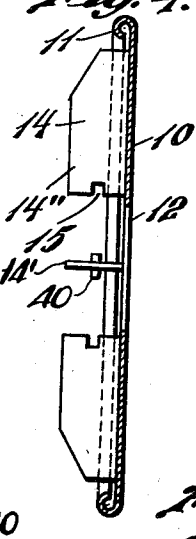


Fig. 6.

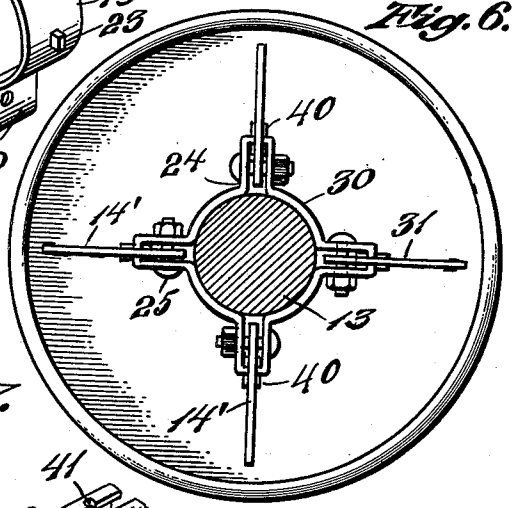


Fig. 7.

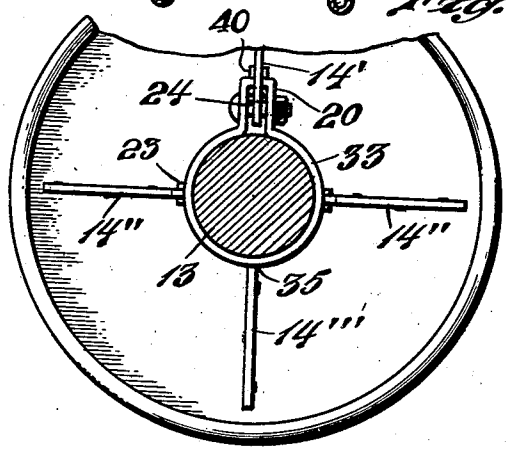
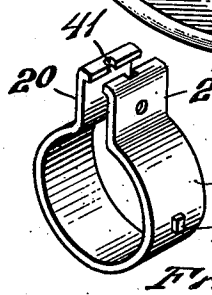


Fig. 8.



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BEAM HEAD

Frank Mossberg, Attleboro, Mass.

Application March 11, 1937, Serial No. 130,256

7 Claims. (Cl. 242—124)

This invention relates to a beam head, and has for one of its objects a simple construction of beam head and one which may be more easily assembled than those which have heretofore been provided.

Another object of the invention is the formation of a beam head of such structure that the face portion or flange and the hub may be formed separately and afterward attached without welding or riveting any of the parts.

A further object of the invention is the formation of a beam head having ribs for stiffening or supporting the face portion or flange with a hub separate from such ribs and assembled after the ribs are attached to the flange of the head.

Another object of the invention is the provision of a hub which will be freely expandable and contractable, the same not being hampered in such expansion or contraction by its attachment to the head or flange.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawing:

Fig. 1 is an end view of the outer surface of the beam head showing a fragmental portion of the barrel;

Fig. 2 is a side elevation thereof;

Fig. 3 is a vertical sectional view on line 3—3 of Fig. 1;

Fig. 4 is a sectional view on line 4—4 of Fig. 1;

Fig. 5 is a perspective view of one section of the hub illustrated in Figs. 1 and 2;

Fig. 6 is a view similar to Fig. 1 of a modified form of beam head but illustrating the same general principle as used in the figures heretofore described;

Fig. 7 is a view similar to Fig. 1 of a still different modification;

Fig. 8 is a perspective view of the hub utilized in Fig. 7.

In the use of beam heads the face portion or flange of the head is usually of stock which is sufficiently thin so that some stiffening ribs are required. Such stiffening ribs are often formed upon the hub and various means are devised for attachment of the hub and ribs in position on the flange. Usually these require some more complicated arrangement than I provide, or mechanism which requires a flexing of the ribs or some structure which deters the free contraction or expansion of the hub, and in order to avoid these undesirable effects, I have provided a construction permitting full contraction and expansion of the hub within its operating range with the hub attached to the flange and ribs separately by a structure which will permit movement of the hub relative to the ribs and flange, and yet the hub is held firmly against the flange in all of its different positions of expansion or contraction, and the following is a more detailed description of the present embodiment of this invention, illustrating the preferred means by which these advantageous results may be accomplished:

With reference to the drawing, the face portion or flange of the head 10 is rolled over as at 11 at its peripheral edge to stiffen the same, while there is an opening 12 for the reception of the barrel 13. Radial ribs 14 are welded as at 45 to the outer surface of the flange 10 and in the showing of Figs. 1 to 5 inclusive these ribs consist of two forms designated respectively 14′ and 14″. Ribs 14″ are notched as at 15, the notches opening inwardly toward the opening 12 in the flange 10 while the ribs 14′ are provided with slots 16 spaced inwardly from their inner edges 17 as shown in Fig. 3, and are provided with projections 40 on both sides of the rib at a location spaced outwardly from the slots 16. These ribs are attached to the outer surface of the flange 10 in advance of attachment of the hub.

The hub consists of two sections 18 of identical formation. These sections each consist of a curved arcuate part 19 and ears 20 extending in opposite directions. The ears are each provided with an inwardly extending lip 21 having a notch 41 and an opening 22 while the arcuate part of the section is provided with a lug 23. These hub sections are positioned with the lugs 23 in the recesses 15 in the ribs 14″ while the ears 20 extend in opposite directions along the ribs 14′ with the lips 21 engaging the opposite surfaces of these ribs and their notches receiving the projections 40. Bolts 24 extend through the openings 22 of the ears and through the slot opening 16 of the rib 14′. These bolts each have heads 25 and are threaded at their opposite ends to receive nuts 26, the head 25 engaging one of the ears and the nut 26 engaging the other ear so that when the nut is turned on the bolt the ears will be drawn toward each other to contract the size of the hub and cause it to bind upon the barrel 13. As tightening occurs there will be a creeping of the bolts in the slots 16 and the lips along the ribs and projections 40 and also a relative movement of the lugs 23 in their slots 15. When the bolts are loosened and expansion takes place a reverse movement of

these bolts and lugs will occur. The lugs **23** and the bolts **24** serve to hold the edges of the hub firmly against the outer surface of the flange **10** and thus assist in stiffening the plate and strengthening all of the parts in their desired maintaining relation. The projections and slots which I have illustrated on the interlocking engagement of the parts may be interchanged to obtain the same effect or other interlocking arrangement may be had to permit a movement of the parts.

In some cases it may be desirable to provide the hub in a greater number of sections than that illustrated in the figures heretofore described. Therefore, in Fig. 6 I have illustrated the hub provided in four sections **30**. In this case all of the ribs **31** will be formed as are ribs **14'** and in place of having lugs **23** and slots **15** the ears **20** will be duplicated at the ends of the quarter sections **30**. Otherwise this head will be the same as in Fig. 1.

In Fig. 7 I have illustrated a still different modification. In this case the hub **33** is made in a single piece and is provided with ears **20** at its opposite ends of the structure identical to that heretofore described. Lugs **23** are also provided on this hub and one rib **14'** will be constructed as heretofore described along which the ears **20** will extend and the bolt **24** pass through. Other ribs **14''** will be provided as heretofore to receive the lugs **23** in the notches **15** while at the location diametrically opposite the rib **14'** another rib **14'''** will be located which, instead of being notched or slotted, will have a plain end portion **17** which will be welded as at **35** to the hub **33** to maintain it in place at this location, or if desired, this rib, of course, may be formed as **14''** and lug **23** may be inserted thereinto. However, as no movement is necessary at this location as the contraction takes place from the opposite sides this rib may be anchored permanently and firmly to the hub as above specified.

Thus it will be apparent that an entirely independent hub is provided with the ribs firmly attached to the outer surface of the face portion or flange which they are to support, thus providing a firmer and better supported flange and a better and more flexible contractable hub which is unhampered in its movement and yet is maintained in its desired location at all times regardless of its contracted position.

The foregoing description is directed solely towards the construction illustrated, but I desire it to be understood that I reserve the privilege of resorting to all the mechanical changes to which the device is susceptible, the invention being defined and limited only by the terms of the appended claims.

I claim:

1. A beam head comprising a flange, ribs fixed on the outer surface of the flange, an individual hub having ears extending along opposite surfaces of one of said ribs, each ear provided with a lip at its end directed inwardly to engage said rib and space the ears therefrom, means on said rib engaging said lip for movably holding the edge of the hub against said flange, and means for moving said ears toward each other to vary the size of said hub.

2. A beam head comprising a flange, ribs fixed on the outer surface of the flange, an individual hub having ears extending along opposite surfaces of one of said ribs, each ear provided with a lip at its end directed inwardly to engage said rib and space the ears therefrom, means on said rib engaging said lip for movably holding the edge of the hub against said flange, and means for moving said ears toward each other to vary the size of the hub, said means also engaging the adjacent rib for attaching the hub to the flange.

3. In a beam head, a flange, a plurality of radial ribs fixed to said flange, an individual hub, contracting means for the hub engaging two of the ribs and means interlocking the hub with other of the ribs, said means movably holding the edge of the hub against the flange.

4. In a beam head, a flange, a plurality of radial ribs fixed to said flange, an individual hub, contracting means for the hub engaging one of the ribs and means interlocking the hub with other of the ribs, said interlocking means comprising a slot in one part and a lug on the other part extending thereinto.

5. In a beam head, a flange, a plurality of radial ribs fixed to said flange, an individual hub, contracting means for the hub engaging one of the ribs and means interlocking the hub with other of the ribs, said interlocking means comprising a slot in the end edge of the rib and a lug on the hub extending into the slot.

6. In a beam head, a flange, a plurality of radial ribs fixed to the outer surface of said flange and extending a substantial distance axially beyond the outer surface thereof, a hub having spaced end portions movable towards each other for contraction of the hub, interlocking means at the movable end portions of the hub connecting the hub and the ribs and positioned only axially outwardly beyond the outer surface of said flange and arranged for movably holding the hub against the flange, and additional means positioned radially inwardly of said interlocking means for contraction of the hub.

7. In a beam head, a flange, a plurality of radial ribs fixed to the outer surface of said flange and extending a substantial distance axially beyond the outer surface thereof, a hub having spaced end portions movable towards each other for contraction of the hub, interlocking means at the movable end portions of the hub on said hub and ribs movably connecting the hub and the ribs and positioned only axially outwardly beyond the outer surface of said flange, and additional means passing through one rib for contraction of the hub, said contracting means also assisting in holding the edge of the hub against the flange.

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