Oct. 18, 1932. F. R. BANKS 1,883,467

BREAKABLE RING FOR HYDRANTS, STREET LAMP COLUMNS, METAL OR CONCRETE POSTS, ETC

Filed Nov. 8, 1930

FIG. 1.

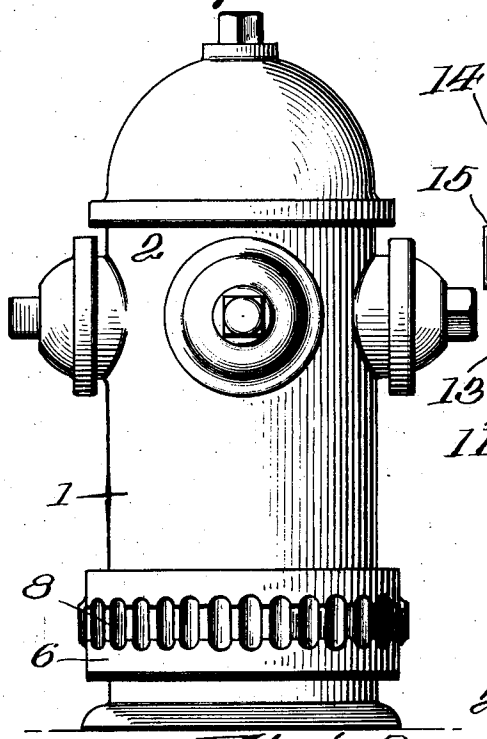


FIG. 4.

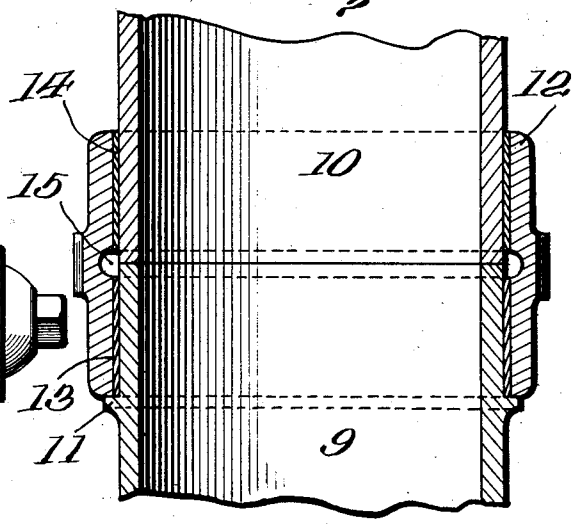


FIG. 5.

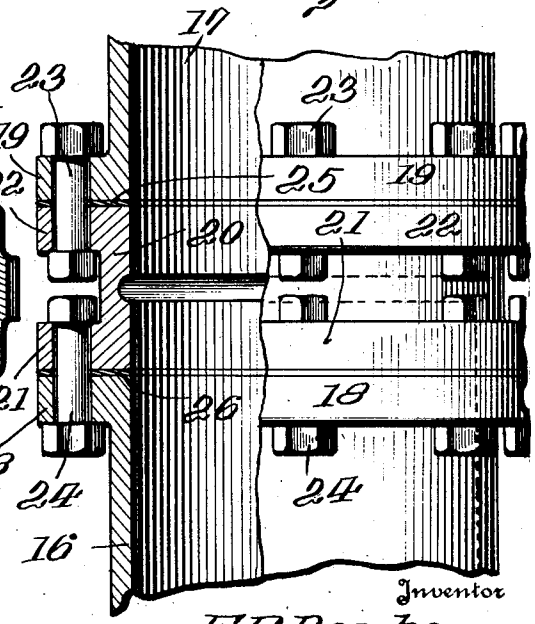


FIG. 2.

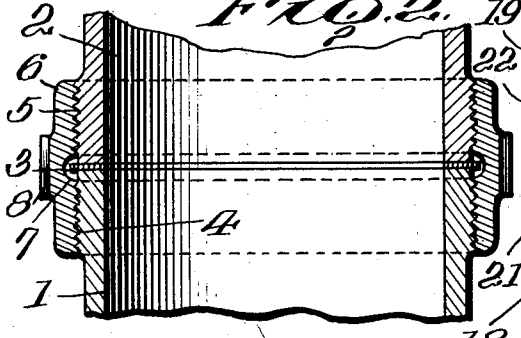
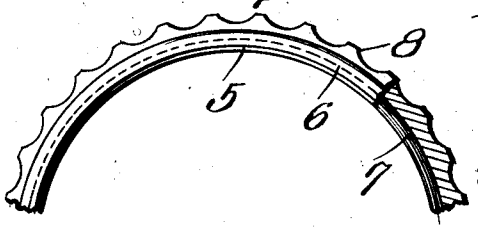


FIG. 3.



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UNITED STATES PATENT OFFICE

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BREAKABLE RING FOR HYDRANTS, STREET LAMP COLUMNS, METAL OR CONCRETE POSTS, ETC.

Application filed November 8, 1930. Serial No. 494,418.

This invention relates to a breakable ring for hydrants, street lamp columns, metal or concrete posts, etc., the object being to provide a breakable ring for connecting sections of hydrants, street lamp columns, metal or concrete posts, etc., together at a point adjacent to impact so that when a moving object strikes one of these stationary objects, the breakable ring will break and allow the sections to separate, whereby they can be readily united by the insertion of a new breakable ring, thereby saving the expense and time in repairing such objects.

Another object of my invention is to provide a breakable ring which is especially adapted to be used in connecting such stationary objects as above referred to and so constructed that it can be designed to break at an impact equivalent to a 3000 pound car moving at 12 miles per hour, or at any breakable point so that in localities where pleasure cars in traffic predominate, a light breakable ring could be used and in localities where heavy trucking prevails, a heavier breaking ring could be employed whereby the ring will break by the impact of a car or truck.

Another object of my invention is to provide a device which overcomes the difficulties existing with such stationary objects, especially fire hydrants, as with my device by employing a breakable ring, a fire hydrant injured by impact by a moving object can be readily repaired so as to reduce the fire hazards and provide a device which saves the expense of an entire new hydrant or a major part thereof and the cost of installing the same.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the appended claims.

In the drawing,

Figure 1 is a side elevation of a fire hydrant showing the application of my improved construction of breakable ring thereto;

Figure 2 is a detail vertical section through a portion of the hydrant showing the application of my breakable ring;

Figure 3 is a detail top plan view of a portion of a ring;

Figure 4 is a detail vertical section showing another form of ring; and

Figure 5 is a side elevation, partly in section, showing another form of ring.

In the embodiment of my invention when applied to a fire hydrant as shown in Figures 1, 2 and 3, the hydrant is formed of sections 1 and 2 between which is adapted to be arranged a packing ring 3, said sections being externally threaded as shown at 4 and 5, over which is adapted to be placed an internally threaded breakable ring 6 which is internally annularly reduced as shown at 7 to reduce the strength of the ring at the point of connection between the sections 1 and 2, so that when the ring is struck by a moving object, such as an automobile, the ring will break at its weakest point, which is in alignment with the connection thereby preventing the sections 1 and 2 from being injured and allowing the sections to be readily connected together again by substituting a new ring.

The exterior surface of the breakable ring is fluted or suitably shaped as shown at 8 in order to allow it to be readily inserted or removed and it will be noticed that the external fluted portion extends to each side of the weakened portions so that the sections of the breakable ring remaining on the sections of the hydrant after the ring has been broken can be readily removed.

In Figure 4 I have shown the hollow columns, such as a post, formed of sections 9 and 10, the lower section being formed with a shoulder 11 against which the lower end of a breakable ring 12 is adapted to abut, said breakable ring being in the form of a slip ring and adapted to be placed over packing rings 13 and 14 arranged over the exterior of the sections of the post so as to form a liquid tight joint between the sections. In this form the ring is also annularly reduced to weaken the same as shown at 15 and this ring is adapted to be placed at a point adjacent to contact so that when struck by a moving object, the ring will break at its weakest point and allow the sections to separate without injuring the same whereby the sections can be readily re-connected together.

In the embodiment of my invention as shown in Figure 5, I show a hollow column or post composed of sections 16 and 17, which are provided with annular flanges 18 and 19, between which is adapted to be arranged a breakable ring 20, which is also provided with annular flanges 21 and 22, the flanges 18 and 19 of the sections 16 and 17 being provided with openings in alignment with the openings formed in the flanges 21 and 22 of the breakable ring 20 and through which bolts 23 and 24 are adapted to pass for securing the ring between the flanged ends of the sections of the column.

In assembling the device packing rings 25 and 26 are preferably secured between the abutting flanges of the rings and sections so as to form a tight joint where the column is used for a conduit of liquid, but it will, of course, be understood that when such a device is used in connection with a post or the like, these rings could be eliminated without departing from the spirit of my invention. This ring is also internally (or externally) annularly reduced as shown at 27 to weaken the same in order to allow it to break centrally by impact from a moving object.

In all of the embodiments of my invention, I have shown a breakable ring arranged for connecting sections of a stationary object together, which ring is arranged adjacent to the point most liable to receive the impact from a moving body so that when a moving body strikes such a stationary object, the ring will break, thereby preventing the sections of the object from being injured and allowing the sections to be readily reconnected together by substituting a new breakable ring.

From the foregoing description it will be seen that I have provided a device intended to centralize the control, not only of the impact force required to cause a break, but to also center the damage within a predetermined inexpensive section so that a comparatively light casting, easily handled and inexpensive to manufacture, may be carried by the user, thereby preventing excessive damage to expensive objects and to further provide a standardized means of quickly repairing breaks of this nature in stationary objects.

While in the drawing and specification I have shown and described certain details of construction of forming a breakable ring for connecting sectional stationary objects together, I wish it to be understood that I do not wish to limit myself to any particular details of construction as my invention consists broadly in connecting stationary objects, such as hydrants, street lamp columns, metal posts or the like, together by a breakable ring which is arranged at a predetermined distance from the surface and adjacent to such a point most liable to be struck by a moving object so that the breakable ring will break by an impact from the moving object, thereby preventing the major sections of the object from being injured to any extent.

What I claim is:

1. A hydrant formed of a base section having an externally threaded upper end and an upper section having an externally threaded lower end arranged on the lower section in abutting relation, a packing ring arranged between the abutting ends of said sections and an internally threaded breakable ring threaded on the adjacent threaded ends of said sections for securing said sections together, said breakable ring being annularly reduced in line with the abutting ends of said sections to form a weakened portion.

2. A column comprising a pair of sections disposed end to end in abutting relation, a coupling member for normally holding said sections together and in aligned position, said member comprising a ring for embracing circumferential engagement with both of said section ends, and said ring being provided with a restricted frangible section at substantially the point of engagement of said adjacent ends.

3. A column comprising a pair of sections disposed end to end in abutting relation, the adjacent ends thereof being threaded exteriorly, and a coupling member for normally holding said sections together and in aligned position, said member comprising a frangible, interiorly threaded ring for threadable engagement with both of said adjacent section ends.

4. A column comprising a pair of sections disposed end to end in abutting relation, the adjacent ends thereof being threaded exteriorly, a coupling member for normally holding said sections together and in aligned position, said member comprising a frangible, interiorly threaded ring for threadable engagement with both of said adjacent section ends, and said ring having a restricted groove extending entirely around its inner surface whereby to localize the fragibility thereof.

In testimony whereof I hereunto affix my signature.

FREDERICK R. BANKS.