Dec. 17, 1929. E. F. NUSSER 1,740,368

CARRIER

Filed May 26, 1927

Fig. 1.

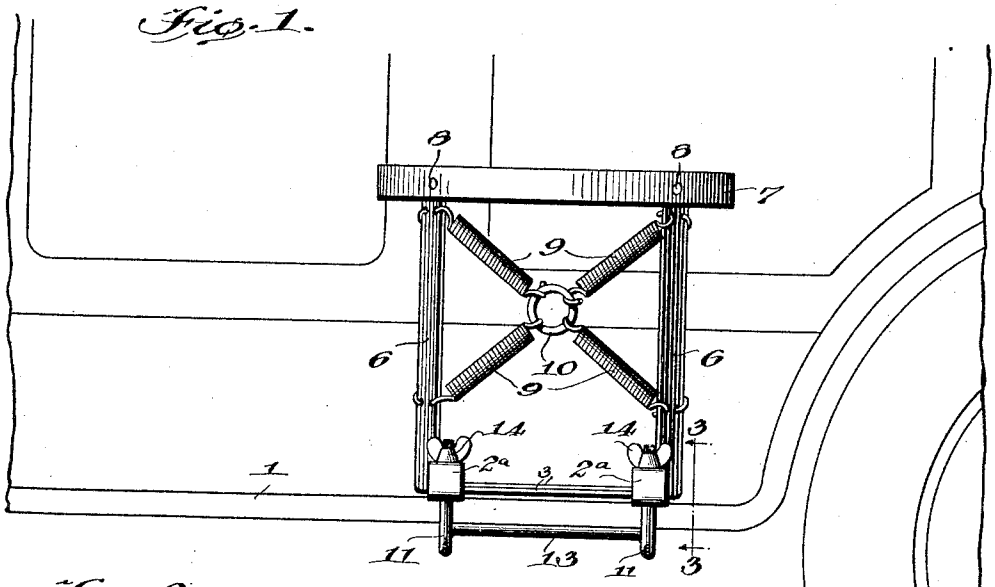


Fig. 2.

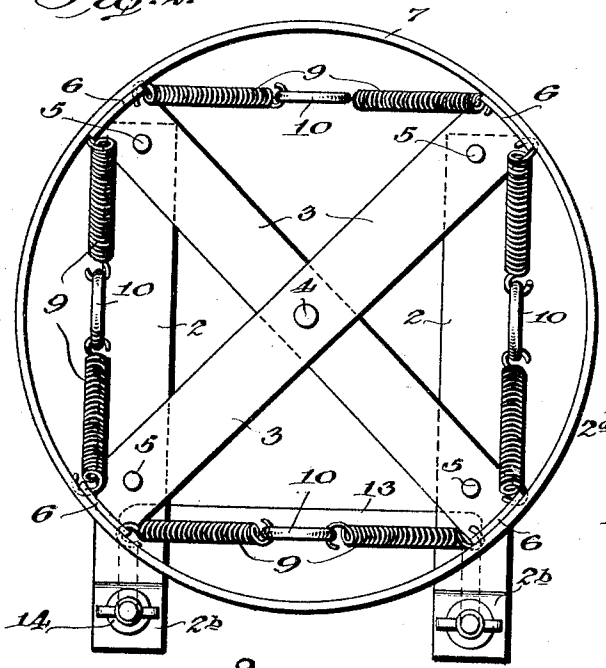


Fig. 3.

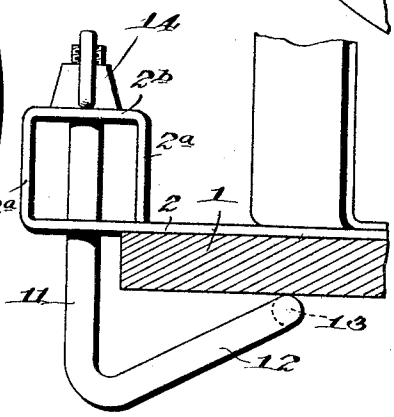
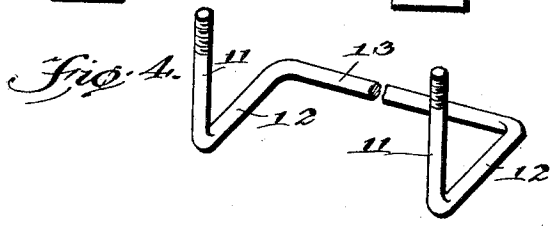


Fig. 4.



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UNITED STATES PATENT OFFICE

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CARRIER

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This invention relates to carriers and is more particularly concerned with carriers for that class of articles of more or less fragile nature which must be supported and held against displacement and which are exemplified by jugs, jars and containers of "thermos" variety. The familiar or common use of such devices is for the running board of automobiles, although any moving vehicle in which such articles are transported and which imparts the vibration or movements tending to dislodge such articles from their support is also included within its field of use.

A feature of the invention consists in the provision of a frame adapted for detachable clamping engagement with a shelf, running board, boat seat, etc., and providing a skeleton cage sustaining expansible gripping instrumentalities. As a further and related feature, these instrumentalities are in the form of resilient means defining an area less than that inclosed by the cage in their normal unexpanded positions. Conveniently, in the specific embodiment illustrated, the expansible members may form the walls of the cage.

These and other features of the invention are more fully described in the following detailed specification, when read in connection with the accompanying drawing forming part thereof and in which:—

Figure 1 is a view in elevation illustrating the application of the carrier of the invention to the running board of an automobile,

Figure 2 is a top plan view on an enlarged scale of the carrier so applied,

Figure 3 is a view in end elevation of the clamping means, this view being taken on the line 3—3 of Figure 1,

Figure 4 is a perspective detail of the clamping yoke by which the carrier is secured to the running board, shelf, etc.

In the drawings, I have illustrated the carrier comprising the subject matter of the present invention as mounted upon the running board 1 of an automobile, this running board typifying a supporting shelf or base for the carrier.

The carrier itself is in the form of a skeleton frame whose base comprises spaced parallel frame bars 2 intended to extend transversely of the shelf or other support and connected at diagonally opposite points 5 by the diagonal brace bars 3 which at their point of overlap are interconnected as at 4, the connecting means, being preferably rivets to insure a rigid construction.

From the points 5 of these connections, framing bars in the form of risers 6 upstand, these bars being spaced substantially equidistantly and defining points embraced in a common circumference. The upper ends of these bars or risers 6 are embraced and rigidly inter-connected by a hoop member 7. As before, the connecting means is preferably in the form of rivets 8 to make this portion of the skeleton cage defined by the base, risers and hoop member rigid.

Sustained within this skeleton cage are expansible gripping instrumentalities, providing side walls for the cage below its top hoop and said side walls in their unexpanded condition defining an area less than that inclosed by the hoop and within the circle whose circumference is defined by the risers 6. The side walls may be formed of suitable resilient members in the form of resilient outwardly expansible linkage, and a preferable form comprising diagonally extending pairs of coil springs 9 centrally spaced by an interconnecting link ring 10 and having their outer ends hooked to risers 6 at diagonally opposed points. It will be evident that the expansible gripping walls provided by these members are well adapted to be engaged, and resiliently to grip the rounded walls of such jugs, jars and other similar articles within reasonable size ranges. It will also be obvious that cages are constructed as described in different ranges of sizes, each size range being limited by the expansion of the gripping walls of the cage.

To securely clamp the cage with its article against displacement from the running board, shelf, etc., upon which it is mounted I provide novel means involving a clamping spring yoke engaging with the under side of the support and with a reinforced bearing on the cage base. The clamping strain against the extended outer ends of the bars 2 will nor-

mally tend to bend these ends downwardly. Accordingly as best seen in Figure 3, the outer ends of the bars 1 as shown, which are intended to extend beyond the edge of the supporting shelf, are strengthened by being formed as boxes. As shown, the projecting ends of the bars are bent upwardly thence at right angles in parallel with their base and thence again downwardly at right angles to engage said base, the verticals of the box being indicated at 2^a and the upper face at 2^b. Aligned apertures formed in the base and upper face 2^b of these boxes receive the upper threaded ends of the long arms 11 of a clamping yoke, preferably of spring steel, this yoke at the lower end of the long arms 11 being bent at an acute angle forming parallel companion arms 12 connected by the longitudinally extending support engaging bar 13. Preferably and as shown, the entire yoke is integrally formed of round stock. The upper ends of the long arms 11 which extend through the reinforcing boxes at the outer edges of the carrier base, are appropriately threaded to receive clamping wing nuts 14, the under face of which in clamping position bear against the upper faces 2^b of the reinforcing boxes. Because of the acute angles of the arms 11 and 12, it will be evident that strong clamping pressure can be transmitted from the bar 13, of the spring yoke engaging the under side of the shelf through arms 12 and 11 to the base of the carrier.

The described construction is particularly advantageous when used in the carrying of large jars of a frangible nature and while it is specifically adapted to that end, it is to be understood that the invention is not to be limited in such respect expect as necessitated by the prior art and the specific averments of the appended claims.

What I claim therefore and desire to secure by Letters Patent is:

1. In a device of the character described, a frame providing a base and a skeleton cage of circular outline having spaced riser members defining points substantially equi-distant in a common circumference, and resilient article gripping means connecting said riser members to provide article gripping side walls for said cage normally embracing an area less than that enclosed by the cage.

2. In a device of the character described, a rigid frame forming a skeleton cage of tubular outline and comprising a base with spaced framing members extending perpendicularly upward therefrom and defining points substantially equi-distant in a common circumference, the ends of said framing members being interconnected by a hoop member, and expansible resilient side walls between and spanning said frame members.

3. In a device of the character described, a cage comprising spaced parallel base bars, braces interconnecting said bars, risers upstanding from adjacent to the ends of said bars representing points in a common circumference and braced and connected at their upper ends by a top hoop member, springs interconnecting said risers and providing resilient expansible walls for the cage normally defining an area less than that enclosed by the cage, and clamping means to secure said cage to a support.

4. In a device of the character described, a carrier frame providing base bars having extended ends bent into box formation for strength, and a clamping device providing support engaging means and connected threaded clamping members extending through said boxes and held under clamping tension by engaging means seating against said boxes.

5. In a device of the character described, a frame comprising spaced rigidly connected base bars and risers rigidly connected thereto and upstanding therefrom and so arranged as to define points in a closed curve, with resilient outwardly expansible connections between said risers forming expansible article gripping side walls and a band extending around said risers and connected to each riser to maintain them in spaced curve defining position.

6. In a device of the character described, a frame comprising spaced rigidly connected base bars, risers rigidly connected thereto and upstanding vertically therefrom and so arranged to define spaced points in the circumference of a circle with resilient outwardly expansible linkage spanning said risers below their upper ends and forming article-gripping side walls engageable and expansible by articles of rounded contour, said expansible linkage normally embracing an area less than that of the circumference defined by said risers and a circular band spanning and connected to said risers at their upper ends.

7. In a device of the character described, a frame comprising spaced rigidly connected base bars, risers rigidly connected thereto and upstanding vertically therefrom, and so arranged as to define spaced points in a circular support engaging and gripping means connected with said base bars, a circular band enclosing and fixed to the upper ends of the risers and resilient outwardly expansible linkage spanning said risers below their upper ends and forming outwardly expansible article gripping side walls for the frame.

8. In a device of the character described, a frame comprising spaced rigidly connected base bars and a plurality of spaced risers rigidly connected to and upstanding from said bars and so arranged as to define points in a closed curve, said risers sustaining and being spanned by resilient outwardly expansible article gripping side walls attached to said risers below the upper ends thereof, and a

band encircling and connected to said risers at their upper ends and cross bracing them in spaced curve defining relation.

9. In a device of the character described, an article carrier for mounting upon the upper side of a shelf type support comprising a carrier frame to receive and inclose an article and having spaced base bars extending laterally outward to project beyond the edge of the shelf support and formed with bores therein adjacent their outer ends, and a spring clamping member for engaging and clamping said carrier to the shelf type support comprising a main body portion in the form of a bar of resilient metal of inverted U-shape with the base of the U of an extent to underlie and engage the shelf between said lateral base bars of the article carrier and with integral sides extending outwardly therefrom in the same plane to project beyond the edge of the shelf and provided with upwardly bent portions extending at an acute angle thereto and threaded at their upper ends to extend through the bores in the outer ends of said bars and clamping nuts engaging said outer ends to draw the bar of said U-shaped portion upwardly and tension it against the under side of said shelf support.

EARL F. NUSSER.