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E. KOZAK

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CAR COUPLER SUPPORT MECHANISM

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Fig. 1

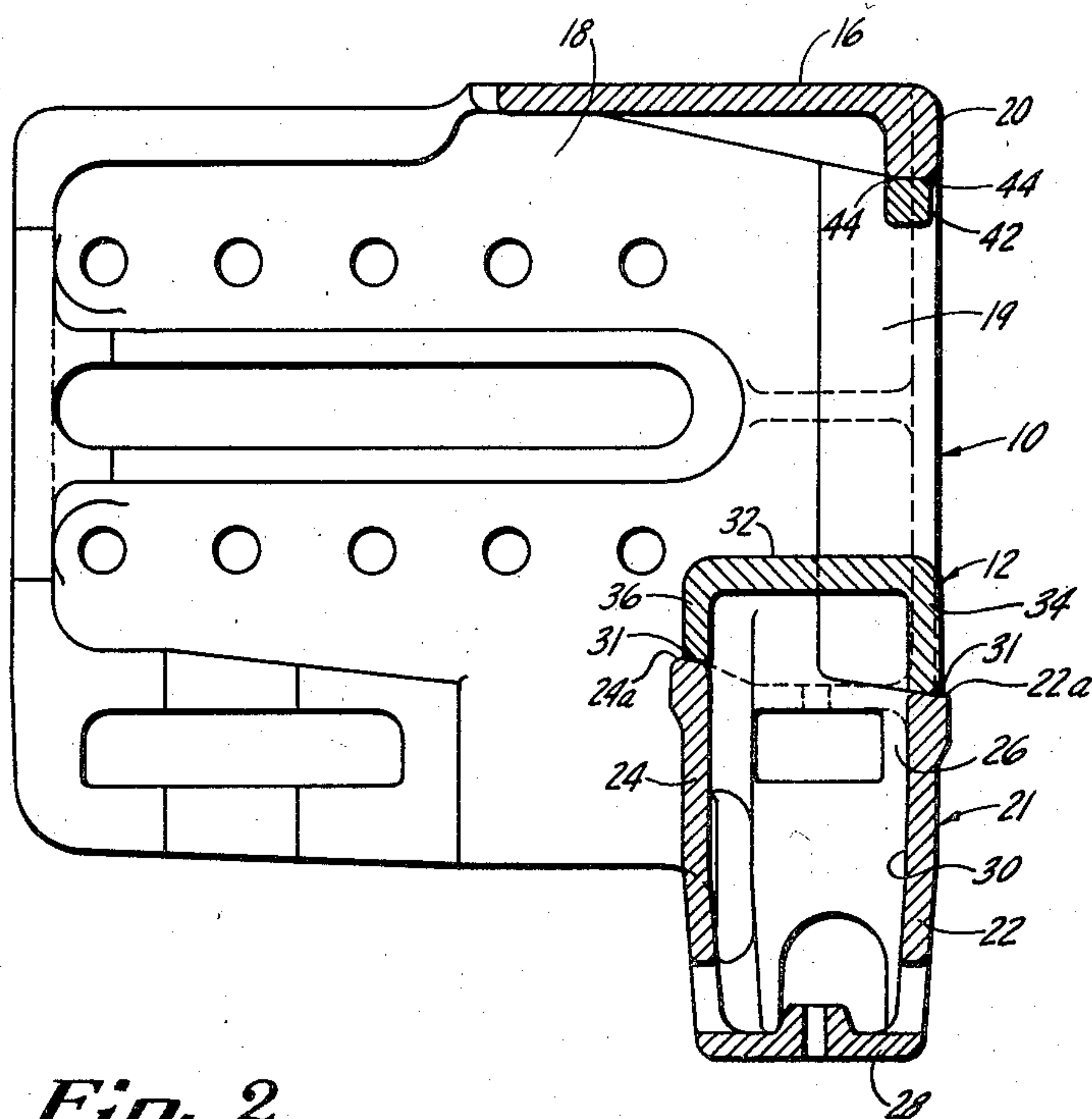


Fig. 2

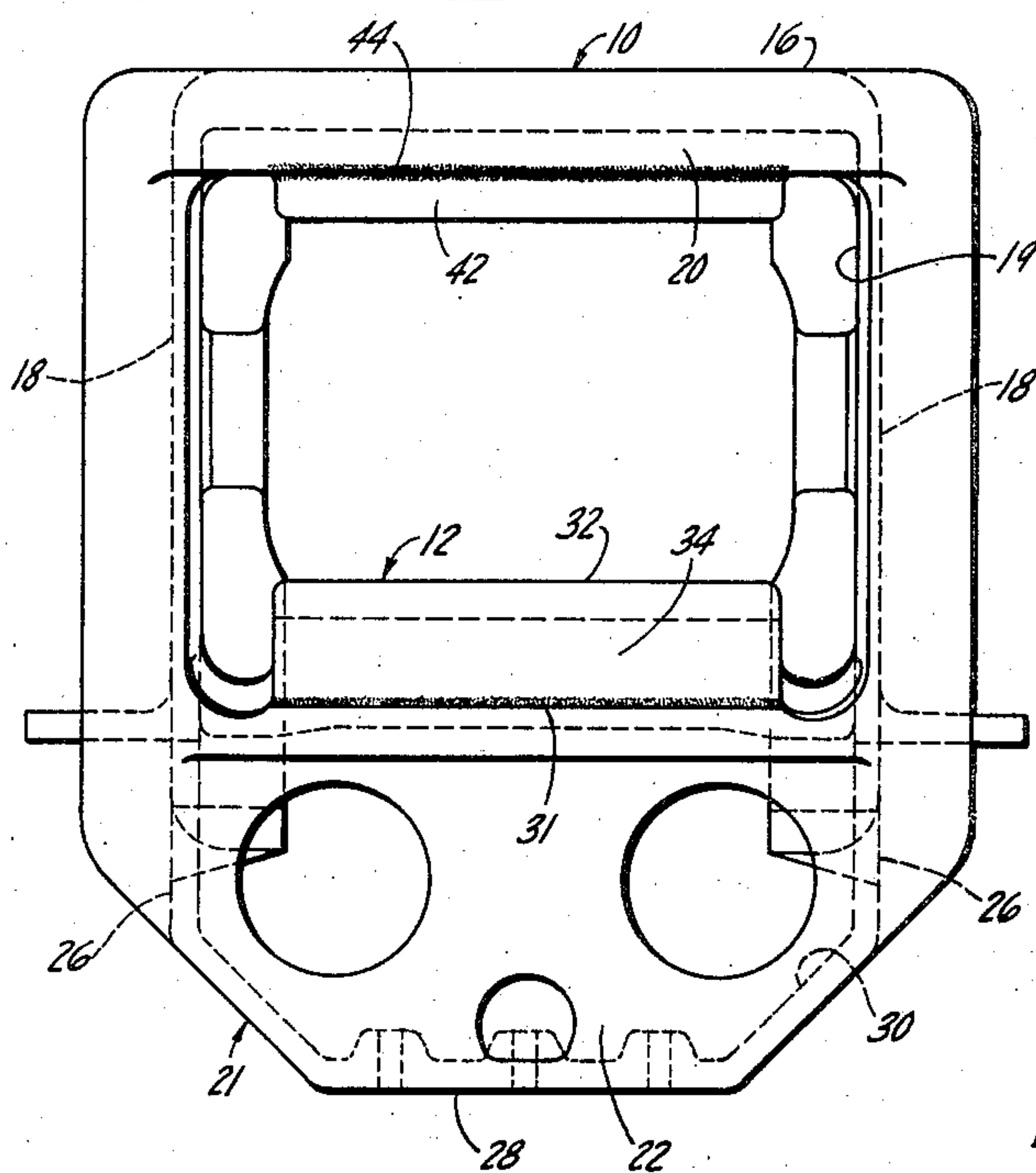


Fig. 3

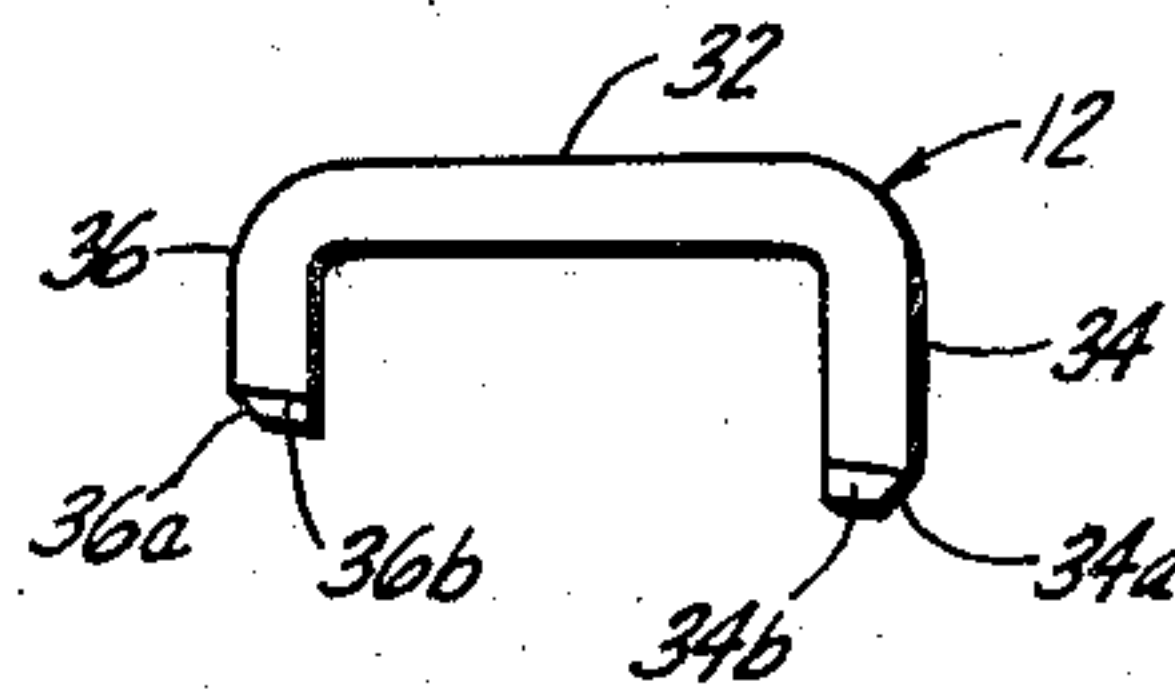
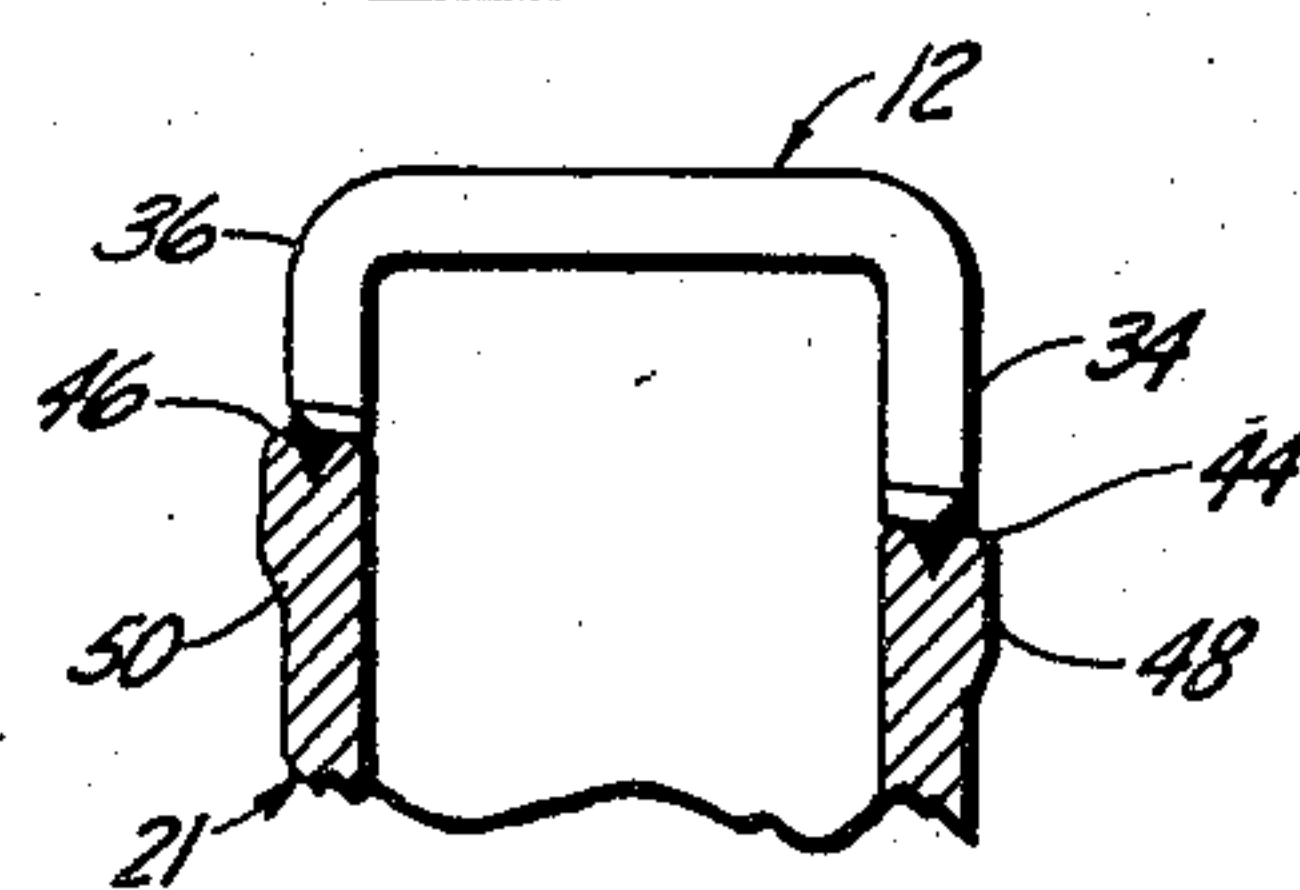


Fig. 4



INVENTOR.
EDWARD KOZAK

BY *Henry Kozak*

ATTORNEY

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CAR COUPLER SUPPORT MECHANISM

Edward Kozak, Cleveland, Ohio, assignor to National Malleable and Steel Castings Company, Cleveland, Ohio, a corporation of Ohio

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6 Claims. (Cl. 213—61)

This invention relates to support mechanism for car couplers, and more particularly to combined striking casting and coupler support mechanism that can be converted from the rigid type, which provides only for horizontal angling of the coupler, to the resilient type, which permits both vertical and horizontal angling of the coupler.

While the invention is especially applicable to the A. A. R. (Association of American Railroads) alternate standard type F interlocking coupler striking casting and coupler support mechanism, it may also be utilized in other coupler support mechanism of similar construction.

It is recognized that an interlocking type car coupler is superior in many ways to the non-interlocking type. Accordingly, it is usually desirable, both in new car construction and in the repair of older cars, to install interlocking couplers and associated resilient coupler support mechanism which as aforesaid provides for vertical as well as horizontal angling of the coupler. However, probably because of their higher cost the interlocking coupler and associated support mechanism have thus far been applied to a relatively small portion of the cars now in use.

The present invention provides means whereby a railroad may, with a minimum of extra cost, prepare old as well as new cars for ultimate use with interlocking couplers. More specifically, it provides a simple and inexpensive device to permit ready conversion of the type of striking casting intended for use with an interlocking coupler to one which will provide a rigid support for a non-interlocking coupler, such as the standard E coupler. Thus, the striking casting, intended for eventual use with the interlocking coupler, is initially converted in accordance with the invention for use with the non-interlocking coupler, after which, by a comparatively simple process, the striking casting may be reconverted for use with the interlocking coupler.

Accordingly, the primary object of the invention is to provide means for temporarily converting a resilient type coupler carrier mechanism into a rigid type carrier mechanism.

Another object of the invention is to provide coupler carrier mechanism of the rigid support type that can be easily and conveniently converted into a resilient type support mechanism.

A further object of the invention is to provide a combined striking casting and coupler support mechanism for use with a non-interlocking type coupler that can be easily converted for use with an interlocking type coupler.

A more specific object of the invention is to provide an inverted U-shaped coupler carrier conversion member for use with a resilient type coupler support mechanism to furnish a rigid support for an associated non-interlocking type coupler.

The foregoing and other objects and advantages will become apparent from the following description taken in conjunction with the accompanying drawings, wherein:

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Fig. 1 is a sectional side elevational view of the combined striking casting and coupler support mechanism embodying the invention.

Fig. 2 is a front elevational view of the mechanism shown in Fig. 1.

Fig. 3 is a side elevational view of the coupler carrier conversion member.

Fig. 4 is a fragmentary side elevational view showing a modification of the invention.

Referring to the drawings, the invention as shown comprises, in its general arrangement, an alternate standard type F interlocking coupler striking casting and coupler support member 10 on which is detachably mounted a coupler carrier member 12 of the rigid support type, in place of the usual carrier member which is resiliently supported. Member 10 is adapted to be suitably secured to the center sills and end sill (not shown) of an associated railway car. The shank of an associated non-interlocking type car coupler is adapted to rest on carrier member 12 and be rigidly supported thereby. Striking casting and coupler support member 10 comprises a top wall 16 and depending side walls 18, forming therebetween a coupler shank receiving opening 19. A front abutment portion 20 extends downwardly from top wall 16 for engagement with the horn of the associated car coupler in event excessive buffing loads are applied to the coupler.

Side walls 18 merge at their lower ends with transverse coupler support portion 21. Support portion 21 comprises the usual front and rear walls 22 and 24, end walls 26 and bottom wall 28 which define therebetween carrier spring pocket 30 for receiving coil springs for supporting an associated resilient type carrier iron (not shown) applied in place of member 12 when an interlocking coupler is used.

It will be noted that rear wall 24 is higher than front wall 22 and that top surfaces 22a and 24a (Fig. 1) of both walls 22 and 24 have been beveled downwardly and forwardly in the usual manner.

In accordance with the invention, coupler carrier conversion member 12 is mounted on top surfaces 22a and 24a of walls 22 and 24 and is rigidly attached thereto by weld means 31. It will be understood, of course, that if so desired, carrier member 12 may be cast integral with support portion 21 of the striking casting, rather than forming it of a separate piece in the manner shown. Member 12 is of inverted U-shaped configuration and comprises substantially horizontal top wall 32 and depending forward and rearward walls 34 and 36, respectively. Forward wall 34 is of greater vertical dimension than rear wall 36 to compensate for the lesser height of front wall 22 of support portion 21 and thereby assures that top wall 32 will be substantially horizontal. The front lower edge of forward wall 34 of carrier member 12 is beveled along its entire length, as at 34a (Fig. 3), and the rear lower edge of rear wall 36 is likewise beveled as at 36a, for a purpose to be hereinafter set forth. The lateral extremities of both front and rear walls 34 and 36 are also beveled as at 34b and 36b, respectively. As aforesaid, carrier member 12 is maintained in its assembled position on striking casting support portion 21 by weld means 31.

It will be understood that carrier member 12, when so disposed on the top of the support portion 21 of the striking casting, will provide a rigid support for a non-interlocking type car coupler. When it is desired to replace a non-interlocking type coupler with an interlocking type coupler, the welds 31 may be easily chipped away and member 12 removed. Thereafter, the conventional support springs and carrier iron member can be inserted in pocket 30 of coupler support portion 21 of the striking

casting to resiliently support the interlocking type car coupler.

In this connection, it will be seen from Fig. 1 that forward and rearward walls 34 and 36, respectively, of carrier member 12 are so spaced apart as to expose the front and rear portions of the top surfaces 22a and 24a of walls 22 and 24. This smaller width of member 12 in conjunction with the aforementioned beveled portions 34a and 36a on the lower extremities of forward and rearward walls 34 and 36 ensures that the outer edges of support surfaces 22a and 24a on walls 22 and 24 will not be covered with weld material but will be visible to enable accurate removal of the welds when it is desired to reconvert the striking casting and support member from a rigid to a resilient type carrier. Beveled portions 34a, 34b, 36a and 36b also produce a stronger weld to ensure positive attachment of carrier member 12 to support portion 21 of the striking casting. It will be noted that the welds 31, attaching conversion member 12 to walls 22 and 24 of the mechanism, extend transversely along the entire extent of member 12.

In conjunction with member 12, a transverse bar 42 (Figs. 1 and 2) is welded as at 44 to the underside of downwardly extending abutment portion 20 of top wall 16. Bar 42 limits the vertical extent of the coupler shank opening 19 of the striking casting to that required for a non-interlocking type coupler. When the striking casting and associated coupler support member is reconverted into a resilient type support by removal of the rigid carrier member 12, bar 42 is also removed.

Fig. 4 shows a modification of the invention wherein transversely extending grooves are provided in top surfaces 44 and 46 of front and rear walls 48 and 50 of support portion 21 of the mechanism. This provides a convenient method of receiving the weld material for securing conversion member 12 to support portion 21 and also provides a stronger weld connection between the parts. When it is desired to remove rigid carrier member 12 to reconvert the striking casting to a resilient support type for use with an interlocking type coupler, any weld material remaining on surfaces 44 and 46 can be ground down to restore the normal contour of these surfaces.

From the foregoing description and accompanying drawings, it will be readily understood that the invention provides novel means for easily and inexpensively converting a resilient type coupler carrier mechanism into a rigid support type carrier. When it is desired to reconvert the carrier mechanism back to the resilient support type, it is merely necessary to remove the rigid carrier member of the invention and replace it with the conventional carrier and springs.

The terms and expressions which have been employed are used as terms of description and not of limitation and there is no intention, in the use of such terms and expressions, of excluding any equivalents of the features shown and described or portions thereof, but it is recognized that various modifications are possible within the scope of the invention claimed.

What is claimed is:

1. In a car coupler support structure having spaced side walls and a support portion connecting the lower ends of said walls, said portion comprising spaced front and rear walls partially defining a spring receiving pocket therebetween, a detachable coupler carrier member of generally inverted U-shaped configuration positioned on the top surfaces of said last mentioned walls forming an upward continuation of said portion and a rigid coupler supporting surface, and weld means connecting said carrier member to said support portion.

2. In a car coupler support structure comprising spaced side walls and a transverse support portion connecting

said walls, said portion comprising front, rear and bottom walls defining a pocket adapted to receive spring means to resiliently support an associated car coupler, said rear wall extending to a higher level than said front wall, and a transversely extending coupler carrier member of generally inverted U-shaped configuration positioned on said front and rear walls and being rigidly attached thereto by weld material, said member having a substantially horizontally rigid coupler supporting portion.

3. Combined striking casting and coupler carrier support mechanism comprising a top wall, depending side walls and an integral support portion extending between said side walls and connecting the lower ends thereof, said portion comprising spaced front and rear walls and a bottom wall defining an open topped spring receiving pocket for resiliently supporting an associated car coupler, said top and side walls and said support portion defining a coupler receiving opening therebetween, and a detachable coupler carrier member received in said opening and supported on said support portion, said carrier member being rigidly attached to said support portion by weld means and forming a separable upward continuation of said support portion.

4. In a car coupler support structure comprising spaced side walls and a support portion extending between and connecting the lower ends of said walls, said portion comprising transverse front and rear walls and a bottom wall partially defining a spring receiving pocket therebetween, a transversely extending coupler carrier member positioned on said last mentioned walls, the outer bottom edges of the front and rear sides of said member being beveled inwardly of said member in a longitudinal direction, and weld means engaging said beveled edges and attaching said carrier member to said support portion, the depth of said carrier member being less than the distance between the outer sides of the upper ends of said front and rear walls, said weld means being disposed totally inwardly of the upper outer edges of said last-mentioned walls.

5. In a striking casting having a coupler receiving opening and a support portion defining the lower end of said opening, said portion comprising a pair of forward and rearward spaced transversely extending walls and a bottom wall defining a spring receiving pocket therebetween, a carrier member bridging said walls and being secured thereto, said member comprising a horizontal coupler supporting portion and front and rear side portions depending from said first named portion and merging with the top of the corresponding one of said forward and rearward walls, the outer sides of said side portions being disposed inwardly of the outer sides of said forward and rearward walls.

6. In a striking casting of the type adapted for resilient support of a car coupler, said casting having a spring receiving pocket portion comprising front and rear walls, end walls and a bottom wall, means for converting said casting to provide a rigid support for a car coupler, said means comprising a detachable inverted U-shaped member supported on said front and rear walls and providing a separable upward continuation of said portion for rigidly supporting an associated coupler, said member being secured to the tops of said front and rear walls by means of a weld.

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