March 22, 1932. L. R. McGUIRE 1,850,597

METHOD OF AND APPARATUS FOR SHIPPING ARTICLES

Filed Oct. 23, 1929 2 Sheets-Sheet 1

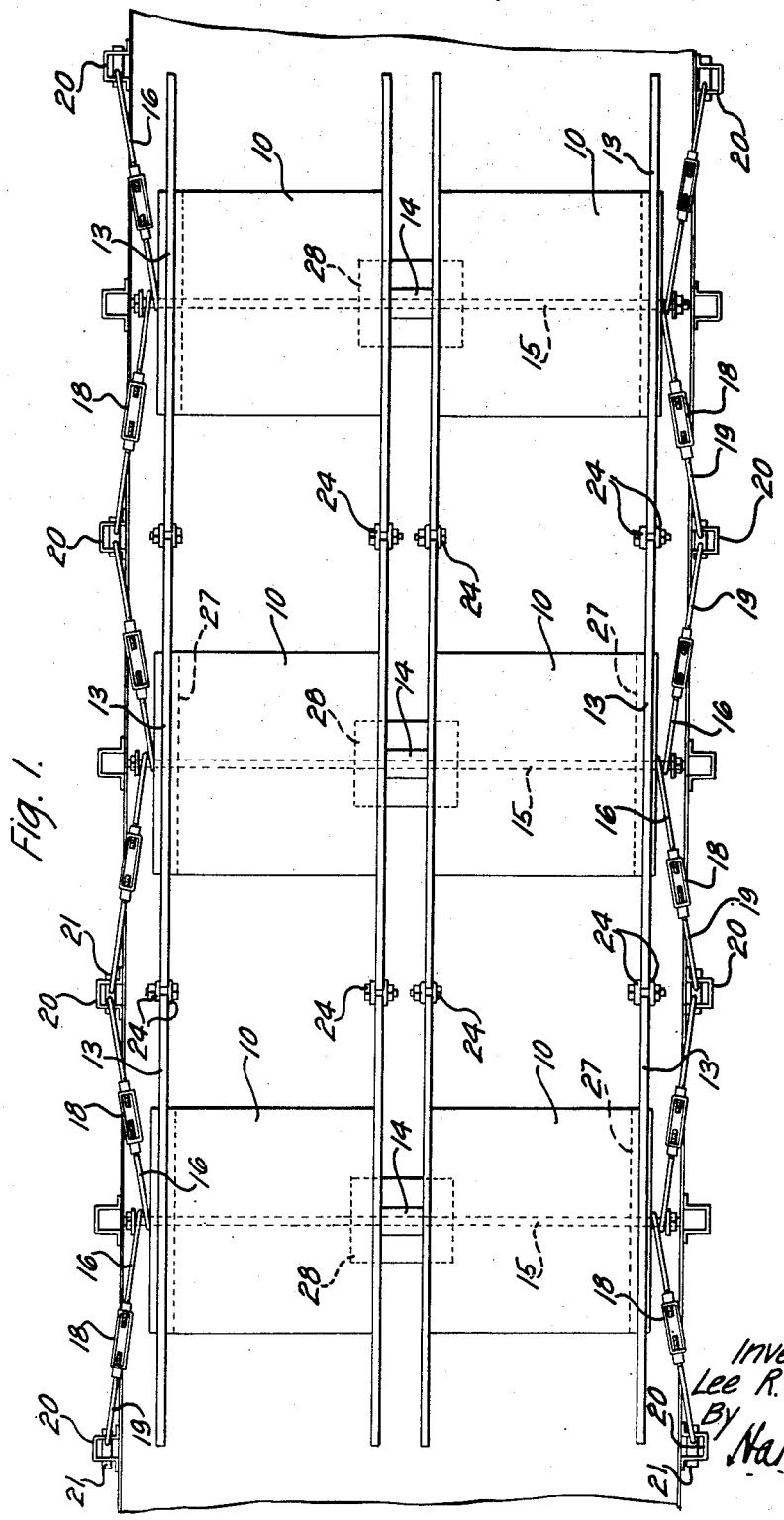


Fig. 1.

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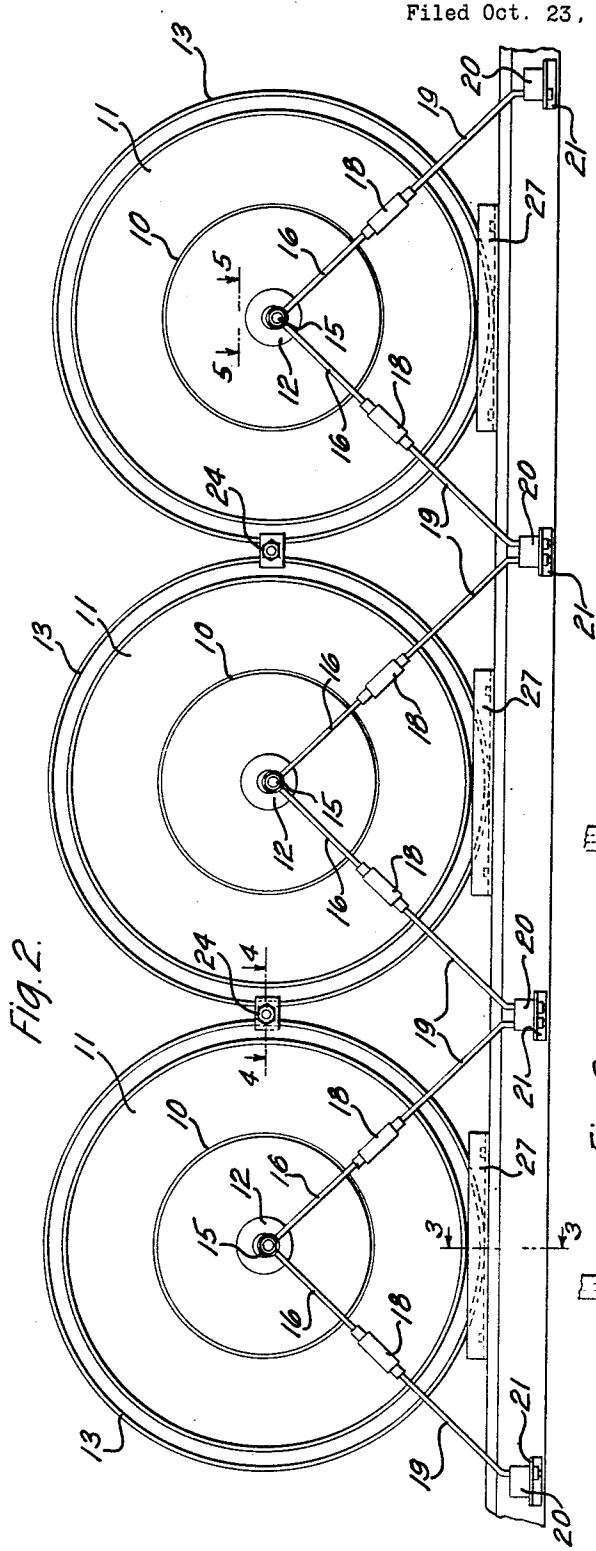


Fig. 2.

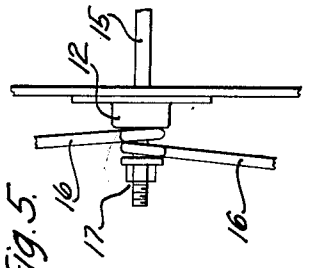


Fig. 5.

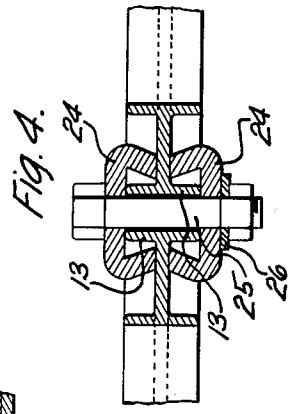


Fig. 4.

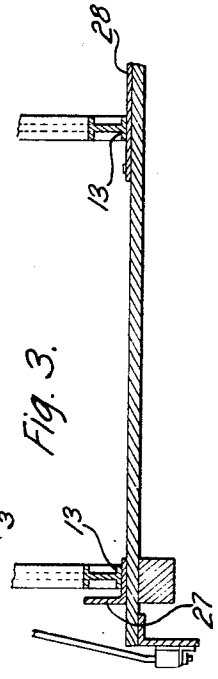


Fig. 3.

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Patented Mar. 22, 1932

1,850,597

UNITED STATES PATENT OFFICE

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METHOD OF AND APPARATUS FOR SHIPPING ARTICLES

Application filed October 23, 1929. Serial No. 401,702.

This invention relates to a method of and apparatus for shipping articles, and more particularly to a method of and apparatus for shipping cable reels.

Objects of this invention are to provide efficient and economical methods of and apparatus for shipping articles.

In accordance with these objects, one embodiment of the invention consists of a method of and apparatus for shipping cable reels wherein the reels are arranged in pairs with the axes of each pair positioned in exact alignment with each other and extending crosswise of the car on which the reels are shipped. Cross rods are inserted through the centers of the reels in pairs and the ends of the cross rods are secured to tie rods which are fastened to the side pockets of the car and which are made adjustable by means of turnbuckles connected thereto. The rims of the adjacent pairs of reels are secured to each other by means of double clamps which grip the flanges thereof while floor or base plates are provided underneath the reel heads to protect and secure the reels in position.

A complete understanding of the invention will be had by referring to the accompanying drawings illustrating one embodiment thereof and, wherein

Fig. 1 is a fragmentary plan view of the reels as arranged in pairs and secured by tie rods fastened to the side pockets of a railway car;

Fig. 2 is an elevational side view of the same;

Fig. 3 is a fragmentary sectional view of the base plates and the rims of a reel taken on the line 3—3 of Fig. 2;

Fig. 4 is a cross-sectional view of the double clamps for securing the rims of adjacent pairs of reels to each other, taken on the line 4—4 of Fig. 2, and

Fig. 5 is a fragmentary enlarged view of the joint between the central cross rod of each pair of reels and the tie rods extending to the side pockets of the car, the view being taken on the line 5—5 of Fig. 2.

Referring now to the drawings in which like numerals designate similar parts throughout the several views, there is disclosed a plurality of cable reels in connection with which the invention may be practiced, each reel consisting of the familiar parts of a cylindrical drum or barrel 10, heads or ends 11, and central annular hub members 12 suitably secured to the ends, the heads 11 being provided with peripheral or rim flanges 13 for a purpose which will appear hereinafter. The rim flanges 13 may be formed in any well known manner but consist, preferably of the outer flanges of annular I-beam rims constructed in detail as disclosed in my copending application, Serial No. 308,661, filed September 27, 1928.

In order to ship the aforedescribed reels by means of the method and apparatus provided by this invention, the reels are arranged in pairs as disclosed in Figs. 1 and 2 upon the floor or platform of a railway car with the axes of each pair in exact alignment with each other and extending crosswise of the railway car, the pairs being somewhat separated, however, for inserting spacers or tubes 14 therebetween. Cross rods 15 common to each pair of reels are inserted through the hub members 12 thereof and the spacers 14 and secured or bolted to the outer ends of the reel heads. The outer ends of the rods 15 have attached thereto a pair of eye bolts 16, each pair of eye bolts 16 being locked to the rods 15 by a nut as shown in Fig. 5. The lower ends of the eye bolts 16 are threaded within adjustable turnbuckles 18, the lower ends of which turnbuckles being threaded upon tie rods 19 which are bent at their lower ends to project through side pockets 20 provided on the frame of the car, and these tie rods are secured or bolted to angle members or clips 21 which extend across the lower edge surfaces of the side pockets 20. Thus each pair of eye bolts 16 and tie rods 19 furnish a truss-like formation for securing each end of each cross rod 15 to the car and the cross rods 15 in cooperation with the spacers 14 serve to maintain the reels separated from each other and to hold them in a rigid position so that they may not contact or bump against each other when the car encounters jolts or jams during transit.

In order to further secure the reels in posi-

tion double U-shaped clamps 24 are inserted over the reel or I-beam flanges 13 of the adjacent pairs of reels, each pair of clamps being secured to the flanges 13 by means of a bolt 25 (Fig. 4) having a lock nut 26. The clamps 24 secure the various pairs of reels to each other as a unit or single mass during shipment and in cooperation with the aforedescribed cross rods 15 serve to securely fasten the reels to the car to provide for safe and protective transit.

To still further secure the reels in position on the car and to protect the reels from damage, metallic angular base plates 27 are placed beneath the outer rim 13 of each pair of reels and secured by lag screws to the car floor, and the central rims of each pair of reels are positioned upon flat base plates 28 which are secured to the car floor by lag screws.

From the foregoing description, it will therefore be understood that the central or axial cross rods 15, the spacers 14, the tie rods securing the cross rods to the side pockets of the car, the double rim clamps 24, and the base plates rigidly and fixedly secure the reels to the car so that there is no possibility of them becoming displaced or bumped or jammed against each other during their shipment on the car, and hence it is apparent that the method and apparatus afforded by this invention for shipping reels provides for their efficient and economical transportation. It is, of course, apparent that various numbers of reels may be centered upon the cross or tie rods 15 depending upon the length of the reel, and also that the clamp provided for joining the reels may be variously formed to cooperate with the particular type of rim structure furnished on the reel. Thus, it is to be understood that the invention is not to be limited by the specific embodiment herein described and illustrated, but is to be limited only by the scope of the appended claims.

What is claimed is:

1. A method of shipping a reel on a car, consisting in disposing the reel on the car and securing rigid interconnecting members to the central portion of the reel and to the car.

2. A method of shipping a reel on a car, consisting in disposing the reel with its axis crosswise of the car and securing rigid interconnecting members to the central portion thereof and to the car.

3. A method of shipping reels, consisting in securing the reels in pairs end to end, and securing the paired reels to the shipping means.

4. A method of shipping reels on a car, consisting in disposing the reel on the car and securing the edges of the reels to each other.

5. A method of shipping reels on a car, consisting in securing the edges of the reels to each other, and securing the central portions of the reels to the car.

6. A method of shipping reels, consisting in pairing the reels, positioning the lateral edges of one pair of reels adjacent to the lateral edges of another pair, securing the central portions of each pair to the shipping means, and securing the adjacent edges to each other.

7. In apparatus for shipping a reel on a car, rigid means for securing a central portion of the reel to the car.

8. In apparatus for shipping reels on a car, means for securing the reels end to end, and means for securing the reels to the car.

9. In apparatus for shipping reels on a car, means for securing the reels to each other both laterally and longitudinally, and means for securing the reels to the car.

10. In apparatus for shipping reels on a car, means for securing the edges of the reels to each other, and means for securing the central portions of the reels to the car.

11. In apparatus for shipping reels on a car, means for pairing the reels end to end, means for securing the paired reels to the car, and means for securing the edges of the paired reels to each other.

12. In apparatus for shipping a reel on a car, means extending through the central portion of the reel and secured thereto, and means for anchoring said means to the car.

13. In apparatus for shipping reels on a car, means common to a plurality of reels for securing them in axial alignment, means for securing such aligned reels edge to edge, and means for clamping these edges together.

14. In apparatus for shipping reels on a car, cross rods for centering the reels in pairs crosswise of the car, tie rods with adjustable turnbuckle for anchoring the cross rods to the car, and double rim clamps for securing adjacent edges of the paired reels to each other.

15. A method of shipping a cylindrical article on a movable platform which consists in disposing the cylindrical article on the movable platform and securing rigid interconnecting members to the central portion of the article and to the platform.

16. A method of shipping cylindrical articles in pairs consisting in securing the articles end to end and securing the paired articles to the shipping means.

17. A method of shipping cylindrical articles on a movable platform which consists in disposing the cylindrical articles on the movable platform and securing the articles to each other at their respective peripheries.

18. In apparatus for shipping a reel on a car, longitudinally adjustable rigid means for securing the central portion of the reel to the car.

19. A method of shipping a reel on a car which consists in disposing the reel on the car and securing longitudinally adjustable rigid

interconnecting members to the central portion of the reel and to the car.

20. A method of shipping a reel on a car consisting in disposing the reel with its axis crosswise of the car and securing longitudinally adjustable rigid interconnecting members to the central portion thereof and to the car.

21. A method of shipping a cylindrical article on a movable platform which consists in securing longitudinally adjustable rigid interconnecting members to the central portion of the article and to the platform.

In witness whereof, I hereunto subscribe my name this 14th day of Oct., A. D. 1929.

LEE R. McGUIRE.