Dec. 20, 1966 R. A. McMASTERS 3,292,877

TUBULAR CARRIER FOR O-SHAPED OBJECTS AND STRAND MATERIAL

Filed May 11, 1964

FIG. 1.

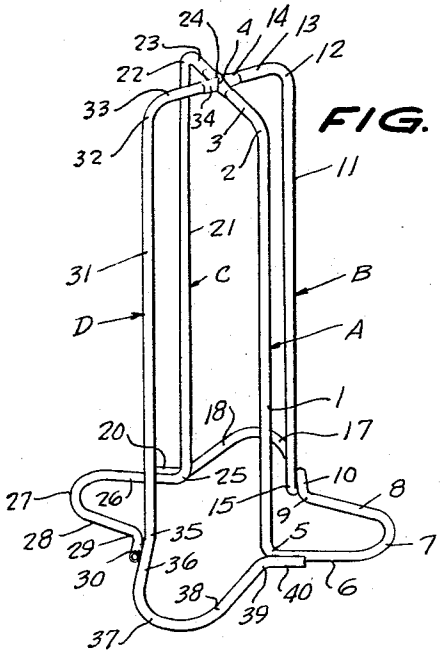


FIG. 2.

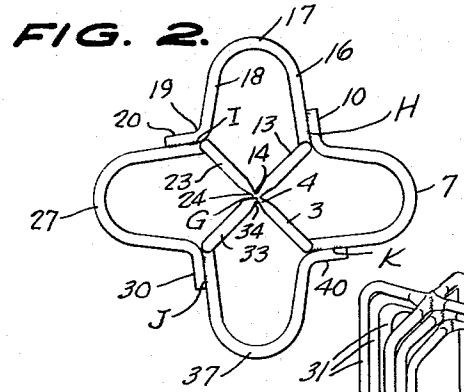


FIG. 3.

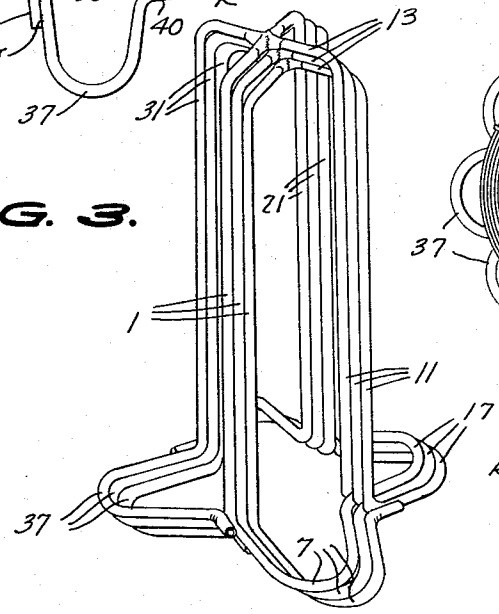


FIG. 4.

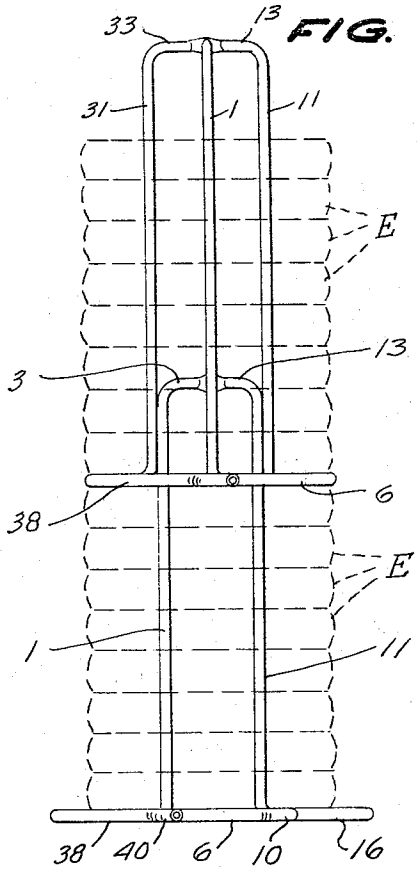
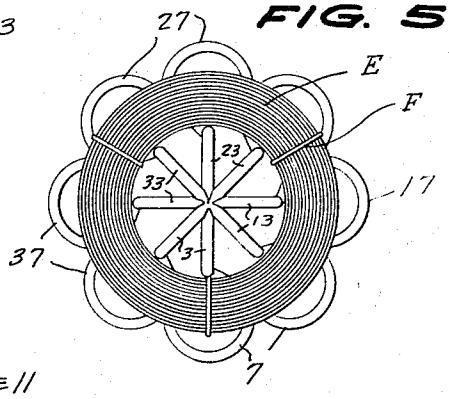


FIG. 5.



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TUBULAR CARRIER FOR O-SHAPED OBJECTS AND STRAND MATERIAL

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The present invention is concerned with a portable support for O-shaped objects and strand material including coils thereof and is more particularly concerned with a carrier for one or more O-shaped objects as well as additional similar carriers.

The principal object of the present invention is to provide light-weight, strong and economically produceable carriers for one or more O-shaped objects or strand material, which carriers can be readily moved from place to place by conventional means, either manually operated or power driven, and which carriers can be stacked one upon the other either while containing objects or strand material thereon or when empty to permit the moving of a plurality of carriers at the same time as well as conserving space when in use or when being stored.

A further and important object of the invention is to provide carriers for strand material which can be used for winding and unwinding the strand material thereon, either manually or in conjunction with conventional coiling and pay-off means as well as supporting previously coiled strands.

Another important object is to provide carriers which can be lifted by conventional means engaging either the top of the carrier or supporting the base of the carrier for raising the same or raising the carrier and further similar carriers stacked thereon with or without O-shaped objects or coiled strand material on one or all of the carriers and which carriers are each composed of a minimum number of rod-like or tubular elements connected together by welding.

A still further object of the invention is to provide carriers for O-shaped objects or strand material which carriers are formed entirely of rod-like or tubular material without reinforcing and strengthening members and yet can support heavy loads thereon.

An equally important object of the present invention is to provide carriers for coiled strand material with each carrier being formed from a plurality of identical members which members are of a tubular or rod-like material and which members can be quickly and easily joined to provide a light-weight, strong, and durable carrier.

Further objects of the invention will be in part obvious and in part pointed out in the following description of the accompanying drawing, in which:

FIG. 1 is a perspective view of the present carrier.

FIG. 2 is a top view of the carrier.

FIG. 3 is a perspective view of three carriers according to the present invention stacked upon one another.

FIG. 4 is a side elevation of two carriers, one stacked on the other and with coils of strand material shown thereon in dotted lines; and

FIG. 5 is a top view of FIG. 4.

Referring now more particularly to the accompanying drawing wherein like and corresponding parts are designated by similar reference characters, the present carrier is formed of four similar tubular or rod-like elements A, B, C, and D, which provide the top, stem or arbor and base of the carrier.

In the drawing, reference character E indicates each coil of strand material which may be a coil of wire, rope or the like or a ring shaped object such as a tire.

Element A has a straight elongated leg portion **1**, a quarter-circle bend **2** at one end of said leg, a straight arm **3** contiguous with bend **2** and extending laterally of leg **1**, a second quarter-circle bend **5**, but at the opposite end of said leg, a pair of divergent legs **6** and **8** connected by a C-shaped base **7** with leg **6** contiguous with bend **5** and leg **8** having a bend **9** with a divergent end portion **10**. Arm **3** has a flattened end **4**.

Element B has a straight elongated leg portion **11**, a quarter-circle bend **12** at one end of said leg, a straight arm **13** contiguous with bend **12** and extending laterally of leg **11**, a second quarter-circle bend **15**, but at the opposite end of said leg, a pair of divergent legs **16** and **18** connected by a C-shaped base **17** with leg **16** contiguous with bend **15** and leg **18** having a bend **19** with a divergent end portion **20**. Arm **13** has a flattened end **14**.

Element C has a straight elongated leg portion **21**, a quarter-circle bend **22** at one end of said leg, a straight arm **23** contiguous with bend **22** and extending laterally of leg **21**, a second quarter-circle bend **25**, but at the opposite end of said leg, a pair of divergent legs **26** and **28** connected by a C-shaped base **27** with leg **26** contiguous with bend **25** and leg **28** having a bend **29** with a divergent end portion **30**. Arm **23** has a flattened end **24**.

Element D has a straight elongated leg portion **31**, a quarter-circle bend **32** at one end of said leg, a straight arm **33** contiguous with bend **32** and extending laterally of leg **31**, a second quarter-circle bend **35**, but at the opposite end of said leg, a pair of divergent legs **36** and **38** connected by a C-shaped base **37** with leg **36** contiguous with bend **35** and leg **38** having a bend **39** with a divergent end portion **40**. Arm **33** has a flattened end **34**.

Arms **3**, **13**, **23** and **33** have their flattened ends **4**, **14**, **24** and **34** abutting and welded together at G with said arms extending radially of said abutment providing the top of the carrier.

Legs **6**, **8**, **16**, **18**, **26**, **28**, **36** and **39** together with bases **7**, **17**, **27** and **37** are all positioned in the same plane and provide a flat, but open base for the carrier. To complete the base, end portion **10** overlaps leg **16** adjacent bend **15** and is welded thereto along line H, end portion **20** overlaps leg **26** adjacent bend **25** and is welded thereto along line I, end portion **30** overlaps leg **36** adjacent bend **35** and is welded thereto along line J and end portion **40** overlaps leg **6** adjacent bend **5** and is welded thereto along line K.

Arm ends **4**, **14**, **24** and **34** may be flattened each to a straight tip end extending in the same plane as their associated arm and leg or said arm ends may each be of a 45° wedge configuration. Said arm ends are positioned with their tip ends abutting and arms **3** and **23** extending in line and arms **13** and **33** also extending in line, but normal to arms **3** and **23**. Welds G are then applied along said abutting tip ends to fixedly join said arm ends together in that position.

Legs **1**, **11**, **21**, and **31** can diverge outwardly from bends **2**, **12**, **22** and **32** respectively towards bends **5**, **15**, **25** and **35** respectively so that the top of the carrier is smaller than the space between said bends **5**, **15**, **25**, and **35** whereby the top of one carrier can be inserted through the space between said bends **5**, **15**, **25** and **35** of a second carrier and further carriers likewise can be superimposed thereon as shown in FIG. 3 for storage or shipping purposes.

In the use of the present carrier coils of strand material E with the strand material of each coil held together by bands F or like O-shaped objects can be mounted upon the carrier by inserting the legs **1**, **11**, **21** and **31** through the center of the objects E until the first object rests upon the carrier base. Further objects E can then be superimposed one upon the other on said first object as shown in FIG. 4. Also the carrier can be mounted upon a revolving turntable (not shown) and strand material fed thereto around said legs or fed from said carrier or from the coils

thereon. In this connection, means such as a hold-down rod (not shown) may be mounted on the top provided by arms **3, 13, 23,** and **33** of the carrier and connected to the turntable for retaining the carrier thereon.

Said top **3, 13, 23, 33** of the carrier has further uses in that a blade of a fork-type lift truck can be inserted thereunder for lifting the carrier or conventional pay-off attachments can be connected to said flat top. Eliminating cross braces within the carrier permits the nesting of the empty carriers as shown in FIG. 3 or of loaded carriers as shown in FIGS. 4 and 5 for conserving space and permits the lifting or revolving of superimposed carriers at the same time.

Thus, a plurality of carriers of the present type can be nested by superimposing one carrier upon the next. Where one carrier has a plurality of superimposed objects E mounted upon the base thereof with the legs **1, 11, 21** and **31,** extending through the center thereof, a second similarly loaded carrier can be superimposed upon the first carrier as shown in FIGS. 4 and 5 by inserting the top of the lower carrier through the base of the upper carrier until said second base rests upon the top object E of the lower carrier.

Elements A to D, inclusive, can be formed from tubular or rod-like material preferably a metal such as steel, aluminum, copper or the like and also a plastic. If a plastic is used, suitable conventional plastic connecting means are used in place of welds. It is to be appreciated that the various legs **1, 11, 21** or **31** and arms **3, 13, 23,** or **33** or said legs can be of any desired length and that the angle of curvature of bent portions **2, 12, 22** and **32** or bases

7, 17, 27, and **37** can also be varied to provide carriers of any given size for use with various sized objects E.

The carrier is thus capable of considerable modification and such changes thereto as come within the scope of the appended claim are deemed to be a part of the present invention.

I claim:

A carrier for annularly positioned material comprising a plurality of identical elongated rod-like elements each having a leg, a straight arm extending laterally from one end of its leg and a base portion, said element arms having ends with flattened tips with said tips welded together, said element arms extending radially of said welded tips, said base portions each having a pair of joined legs each having an end fixedly connected to and extending laterally of one of said elongated element legs with said base portions being in the same plane providing a base for the carrier.

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