March 31, 1964 R. A. McMASTERS 3,127,018

CARRIER FOR COILS OF STRAND MATERIAL

Filed Dec. 6, 1963

FIG. 1.

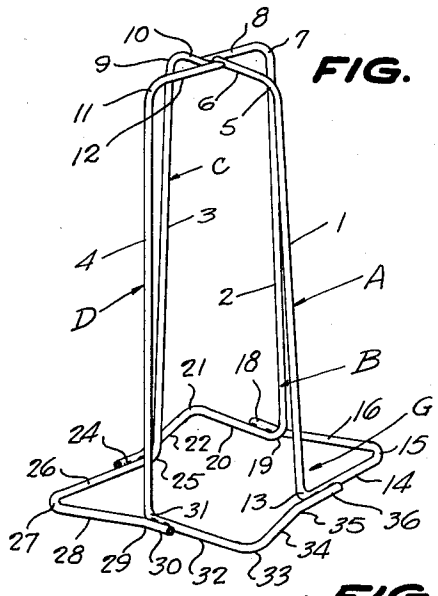


FIG. 3.

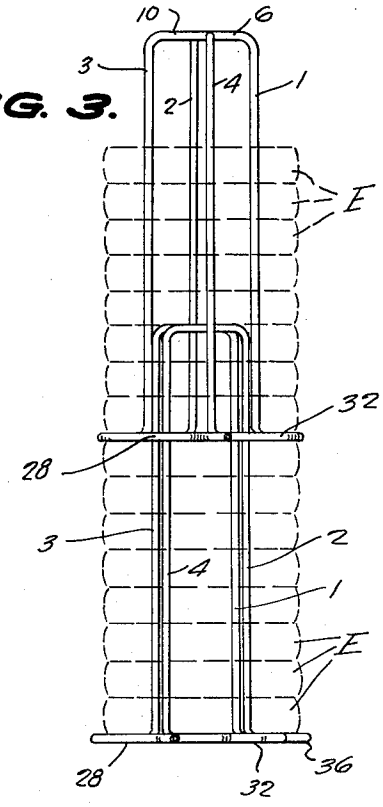


FIG. 2.

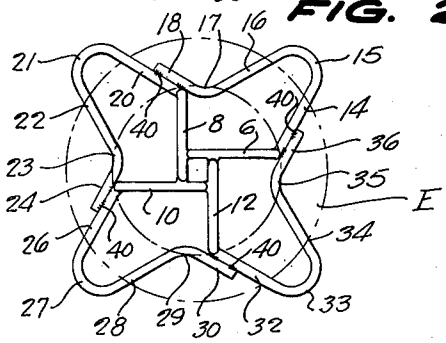


FIG. 4.

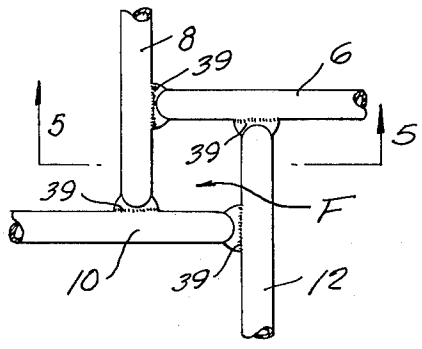
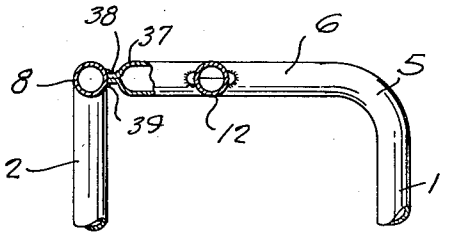


FIG. 5.



INVENTOR.
ROBERT A. McMASTERS,
BY
Linton and Linton
ATTORNEYS.

United States Patent Office 3,127,018
Patented Mar. 31, 1964

3,127,018

CARRIER FOR COILS OF STRAND MATERIAL

Robert A. McMasters, Birmingham, Ala., assignor to Southeastern Metals Company

Filed Dec. 6, 1963, Ser. No. 328,747
6 Claims. (Cl. 211—59)

The present invention concerned with a portable support for strand material such as wire, rope and the like and is more particularly concerned with a carrier for one or more coils of strand material as well as additional similar carriers.

The principle object of the present invention it to provide light-weight, strong, and economically produceable carriers for one or more coils of 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 coils 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 bottom of a carrier for raising the same or raising the carrier and further similar carriers stacked thereon with or without coiled strand material on one or all of the carriers and which carriers are each composed of a minimum number of elements connected by spot welding.

A still further object of the invention is to provide carriers for coiled strand material which carriers are formed entirely of tubular material and are so constructed that each can support heavy loads of coiled material without reinforcing and strengthening members.

An equally important object of the present invention is to provide carriers for coiled strand material each formed from a plurality of identical tubular or rod-like members whose assembly permits a carrier to be provided having a smaller stem or arbor than with known carriers of a tubular construction.

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 with a coil of strand material shown in dotted lines thereon,

FIG. 3 is a side elevation of two carriers, one stacked on the other and with coils of strand material shown thereon in dotted lines.

FIG. 4 is an enlarged view of the top center portion of a carrier, and

FIG. 5 is a cross-sectional view taken on line 5—5 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 identical tubular or rod-like elements A, B, C, and D. Element A has a straight medial portion 1, while elements B, C, and D have similar portions 2, 3 and 4 respectively.

Element A further has a bent portion 5 curved through an angle of 90° to 105° relative to medial portion 1 and from which extends the top straight end portion 6 of the element. Elements B, C and D have similar bent portions

7, 9, and 11 respectively, and end portions 8, 10, and 12 respectively.

The opposite end portion of element A is bent providing a curved portion 13 having an arc of 90° to 105° relative to said medial portion 1 and on an obtuse angle to end portion 6. A straight portion 14 extends from said curved portion 13 and diverges from a second straight portion 16 joined thereto by a curved portion 15, providing a V-shaped section of element A.

A third but shorter straight end portion 18 is connected by curved portion 17 to straight portion 16. Said portions 14, 15, 16, 17 and 18 are all situated in the same plane.

Element B has portions 19, 20, 21, 22, 23 and 24 corresponding to said portions 13 to 18 respectively of element A, while element C has corresponding portions 25, 26, 27, 28, 29 and 30 and element D also has corresponding portions 31, 32, 33, 34, 35 and 36. As a result, all portions 14 to 18, 20 to 24, 26 to 30 and 32 to 36 are in the same plane providing a flat base for the carrier.

The end portions 6, 8, 10 and 12 have similar ends 37 and 38 which as shown in FIG. 5 are rounded at 37 and have flat lips 38 extending therefrom. The end portions 6, 8, 10 and 12 extend normal to the adjacent end portions with the lips 38 of each end portion abutting the periphery of the adjacent end portion and connected by welds 39 on each side of said lips. The connection of end portion 6 to end portion 8 is made at a distance from the lips 37 of said end portion 8 as best shown in FIG. 4 and the connections between end portions 8 and 10, 10 and 12 and 12 and 6 are similarly spaced providing a square opening therebetween, the size of which can be varied to provide a stem or arbor of medial portions 1, 2, 3 and 4 of various sizes and thus vary the slant inwardly of said medial portion from their bottom ends 13, 19, 25 and 31 respectively to their top ends 5, 7, 9 and 11 respectively.

End portion 18 of element A extends alongside portion 20 of element B and is welded thereto at 40. Similarly, end portions 24, 30, and 36 extending along the outer side of portions 26, 32 and 14 respectively and are connected thereto by welds 40 as shown in FIG. 2.

In the use of the present carrier, coils of strand material such as E can be mounted upon the carrier by inserting the medial portions 1 to 4 through the center of the coil until the first coil rests upon the base provided by the lower end portions of said elements A to D. Further coils can then be superimposed one upon the other on said first coil as shown in FIG. 3. However, it is to be appreciated that the carrier can be mounted upon a revolving turntable (not shown) and strand material such as wire, rope and the like around said medial portions or feed from the carrier in a like manner or from the coils thereon. In this connection, means such as a hold-down rod (not shown) may be mounted upon the flap top 6, 8, 10 and 12 of the carrier and connected to the turntable for retaining the carrier thereon.

Said flat top 6, 8, 10 and 12 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 connected to said flat top or a hook inserted through the opening F of said flat top for lifting the carrier by a crane, for example. Eliminating cross bracing within the carrier permits the nesting of the loaded or empty carriers for conserving space and providing the lifting or revolving of superimposed carriers at the same time.

Said flat top 6, 8, 10 and 12 of the carrier is smaller than the opening G between the base portion of the carrier whereby said flat top is insertable through opening G of a second carrier superimposed thereon as shown in FIG. 3, a distance depending upon the inward slant of the medial portions 1, 2, 3 and 4 of said elements. Ac-

cordingly, a plurality of the carriers of the present type can be nested by superimposing one carrier upon the next. Also, as shown in FIG. 3 where one carrier has a plurality of superimposed coils E of strand material mounted upon the base thereof with the medial portions 1 to 4 extending through the center of said coils, a second similarly loaded carrier can be superimposed upon the first carrier by inserting the top of the lower carrier through the base of the upper carrier until said second base rests upon the top coil of the lower carrier.

Elements A and D can be formed from tubular or rod-like material preferably a metal such as steel, aluminum, copper or the like and also a plastic.

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

I claim:

1. A carrier for coiled material comprising a plurality of identical elongated elements each having a straight medial portion, a laterally extending V-shaped lower end portion and a straight laterally extending upper end portion, each element having its V-shaped lower end portion partially extending alongside of and fixedly joined to a part of the V-shaped lower end portion of an adjacent element and each element having its upper end portion extending normal to and fixedly joined to the upper end portion of an adjacent element.

2. A carrier for coiled material as claimed in claim 1 wherein each element V-shaped lower end portion has a leg connected to said element medial portion, a terminal end leg, a rounded apex connecting said connected leg and said terminal leg and a straight short end extending on an obtuse angle from said terminal leg and overlapping and fixedly joined to a connected leg of the corresponding end of an adjacent element.

3. A carrier for coiled material as claimed in claim 1 wherein each element upper end portion has its end abutting and joined to the upper end portion of an adjacent element, but spaced from the end of said adjacent element upper end portion.

4. A carrier for coiled material as claimed in claim 1 wherein the medial portions of said elements slant inwardly from their lower end portions to said upper end portions and said upper end portions are smaller than said lower end portions.

5. A carrier for coiled material as claimed in claim 1 wherein said elements are of a tubular material, each element has the end of the upper end portion thereof rounded with a longitudinally extending lip abutting the periphery of the upper end portion of an adjacent element and welds joining said lips to the adjacent upper end portion periphery.

6. A carrier for coiled material as claimed in claim 1 wherein each element has the upper end portion thereof extending on an obtuse angle to a leg of its V-shaped lower end portion.

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