

[54] **SPOOLED WIRE REEL AND HANDLING DEVICE THEREFOR**

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[58] Field of Search ..... 242/94, 115, 116, 85, 86.4, 242/118.61, 118.62

[56] **References Cited**

**UNITED STATES PATENTS**

804,225	11/1905	Hedlund .....	242/94
848,932	4/1907	Tellington.....	242/94
2,029,953	2/1936	Sutilef.....	242/94
2,140,676	12/1938	Hohner.....	242/94
3,680,807	8/1972	Fortson.....	242/94

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 Assistant Examiner—Edward J. McCarthy  
 Attorney, Agent, or Firm—Clarence A. O'Brien; Harvey B. Jacobson

[57] **ABSTRACT**

A knockdown-type reel for use when unwinding and paying out fence wire from a spool of barbed wire comprising first and second disk-type reel heads which are centrally apertured and have opposed inwardly disposed oriented faces, each inward face having an elongated tubular or sleeve-like bushing. These bushings are alike in construction, are alignable with each other and the bores thereof provide coordinating bearings. An assembling axle can be inserted and passed through the respective bearings, the end portions of said axle being capable of cooperatively uniting the two heads. The heads are capable of serving as wheels and can be rolled along the surface of the ground adjacent to the fence posts on which the unwound wire is adapted to be stapled. The end portions of the axle are constructed to not only assemble the two heads but to rotatably mount the overall reel on adapter brackets carried by the legs of a push-pull type handling and maneuvering frame.

**2 Claims, 3 Drawing Figures**

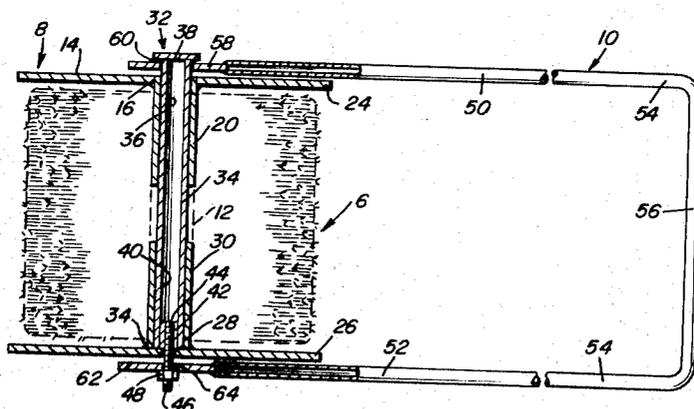


Fig. 1

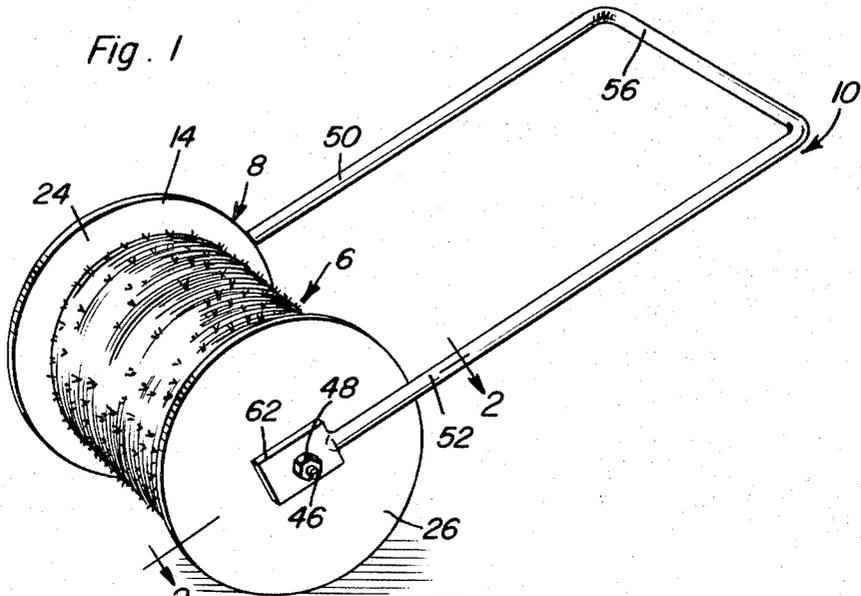


Fig. 2

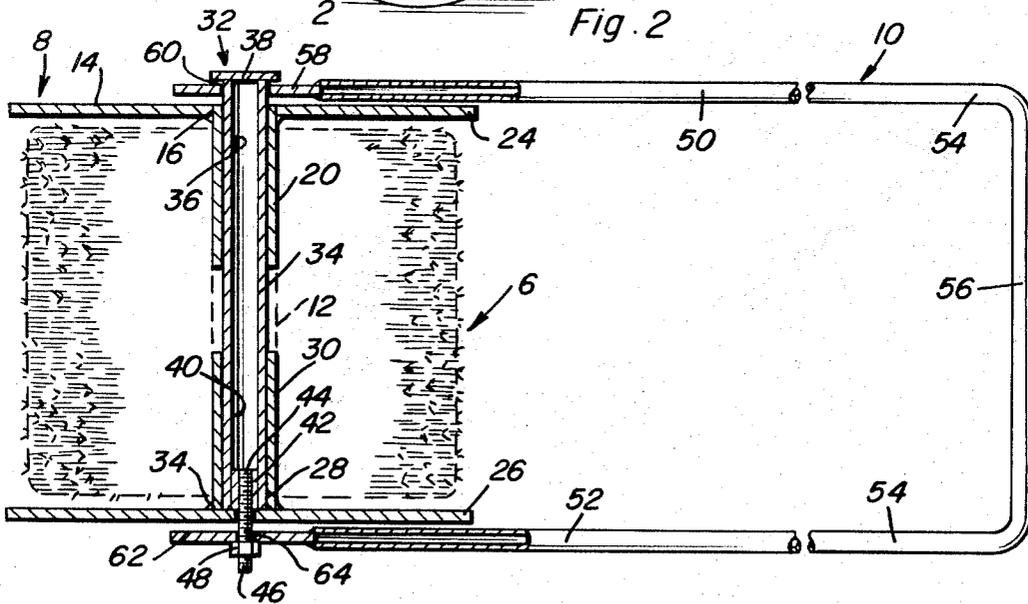
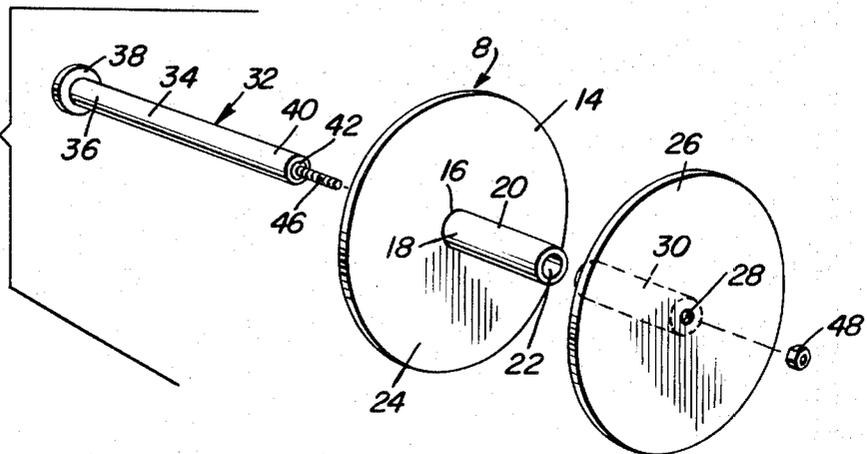


Fig. 3



## SPOOLED WIRE REEL AND HANDLING DEVICE THEREFOR

The present invention relates to maneuvering and handling devices and carriers for dual headed reels such as are employed for storing and dispensing barbed wire and has to do, more particularly, with a novelly constructed sectional or knockdown reel and an elongated supporting and handling frame which functions to mount the reel for roll-along use or, alternatively, for supported use on a conveniently usable farming machine or equivalent vehicle.

As implied by the preceding general statement of the invention, it is old in the art of reel carriers to provide a reel of one type or another and a trundling-type push-pull frame having facilities at one end for rotatably mounting the spooled wire reel. As indicative of the state of the art to which the invention relates reference may be made to the reel carrier shown in U.S. Pat. No. 804,225, granted to Henry Hedlund and also to a similar adaptation shown in U.S. Pat. No. 848,932, granted to J. J. Tellington. As exemplary of closer and more pertinent art and because it shows bearing equipped reel heads mounted on an axle or shaft on a frame structure attention is directed to the wire handling device shown in U.S. Pat. No. 2,140,676, granted to M. J. Hohner.

An object of the present invention, generally stated, is to structurally and functionally improve upon prior art spooled wire supporting and handling devices and, in so doing, to provide a novel sectional or knockdown reel and a simple, practical and economical U-shaped handling frame, the legs or arms of which straddle the heads of the reel and have simplified brackets for supporting and maintaining the coaxing end portions of the reel mounting axle or shaft.

Briefly the concept is characterized by two principal units, namely, a spooled wire supporting knockdown reel and a readily maneuverable supporting and handling frame for the reel. The reel is characterized by a pair, that is first and second disk-type reel heads whose axial or hub portions are centrally apertured and have aligned therewith tubular integrally mounted bushings. These bushings are some six inches more or less in length and the adjacent ends are ordinarily spaced apart. These bushings can be plugged into the usual central hub-like passage of the coiled wire spool. Once the bushings are pressed into the end portions of the spooled wire the hollow portions then constitute and serve as bearings. These bearings in turn serve to accommodate the insertable and removable shaft or axle. The axle has a flanged positioning and retaining head at one end and a reduced axial and projecting stud at the opposite end, the respective end portions being fitted into apertures or openings provided therefor in adapter brackets carried by the end portions of the legs of the U-shaped push-pull frame.

In carrying out the preferred embodiment of the invention an end portion of the bushing on one or the first reel head is anchored in a hole provided therefor at the center of the head. The corresponding and companion bushing has its outward end welded to an inner surface of the apertured portion of the second or other reel head. These thus-constructed heads accommodate the respective end portions of the readily insertable and removable axle. To the ends desired the axle is preferably hollow so that one end portion serves to accommo-

date a collar carried by an end of the reduced extending stud to, in this manner, achieve the knockdown result desired.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout.

FIG. 1 is a view in perspective of a spooled wire reel and handling frame or device therefor readied for fence building or other dispensed wire use.

FIG. 2 is an enlarged detail view taken approximately on the plane of the section line 2—2 of FIG. 1 with parts appearing in section and also elevation.

FIG. 3 is an exploded perspective view showing the aforementioned spooled wire supporting reel and how the parts thereof are constructed.

The aforementioned spooled wire comprises a spool of barbed wire denoted, generally stated, by the numeral 6. The supporting reel is denoted at 8 and the complementary handling device or frame is denoted at 10. As brought out in FIG. 2 the hub-like passage through the spooled wire is of common construction and open-ended and denoted in phantom lines at 12 in FIG. 2.

With respect now to the sectional or knockdown reel it is characterized by a first disk-type reel head 14 the central axial portion of which is provided with an aperture or hole as at 16. A terminal end portion 18 of a laterally projecting sleeve or bushing 20 is aligned with the aperture and welded or otherwise anchored therein as brought out in FIG. 2. In actual practice this sleeve or bushing is about six inches, more or less, in length and the bore 22 thereof provides a bearing in the manner shown in FIG. 2. This bushing projects from the inward surface or face 24 of the head 14. The corresponding inward flat surface 24 of the second disk-type head 26 is constructed to function in the manner also illustrated in FIG. 2. To the ends desired there is a somewhat smaller opening 28 which is in axial alignment with the inwardly projecting second sleeve or bushing 30. Hereagain the bushing 30 corresponds to the bushing 20 except that the outer end is welded or otherwise correspondingly fixed to the head 26 as brought out in FIG. 2. The bores of the respective bushings provide bearings for the insertable and removable axle 32. This axle comprises a tubular shaft 34 of a length to achieve the assembled result brought out in FIG. 2. An outward end portion 36 is provided with a flanged assembling and retaining head 38. The other end portion 40 serves to accommodate a fitting or collar 42 (FIG. 2) which is screw threaded to accommodate a screw-threaded portion 44 of the reduced screw threaded stud 46. The collar is plugged and frictionally or otherwise retentively fitted into the hollow end portion of the axle in a manner to permit the outer end portion of the stud to project through and beyond the hole 28 and to in this manner accommodate an assembling and retaining nut 48.

In practice the first disk-like head has its bushing 20 telescopically plugged into the passage 12 at one end of the spool of barbed wire. The other head has its bushing plugged into the other end portion of the passage 12 whereby to permit the thus constructed heads to be attached to the respective end portions of the barbed wire spool 6. The axle means 32 serves not only to

achieve the overall end or assembled result desired but facilitates attachment of the substantially U-shaped push-pull handling frame. This frame is of U-shaped form and preferably made of a length of tubular metal bent upon itself to provide a pair of spaced parallel coplanar legs 50 and 52 connected at their corresponding end portions 54 by a transverse bight portion 56. The part 56 provides a satisfactory handle for controlled maneuverability. The left hand end portions of the legs in FIGS. 1 and 2 are provided with adapter brackets one bracket being denoted by the numeral 58 and having an enlarged hole 60 for passage of the headed end 38 of the axle or shaft. The similarly constructed and performing adapter bracket on the leg 52 is denoted by the numeral 62 and it has a somewhat smaller aperture or hole 64 through and beyond which the nut-equipped end portion 46 of the aforementioned stud is passed for proper assembling and retaining purposes. It follows that the knockdown or sectional reel made up of bushing-equipped heads and the insertable and removable specially constructed axle or shaft 32 go to make up a novelly constructed and performing reel. The heads can be assembled or mounted on the end portions of the wire spool 6 or the spool 6 can be mounted first on the bushing 20 after which the bushing 30 on the second head can be pushed into place. This is to say, the procedural steps followed in attaching the reel components to the coiled wire and vice versa may vary. Once the heads are applied the bracketed ends of the arms 50 and 52 can be caused to straddle the outer surfaces of the heads after which the axle means 32 can be inserted and fastened in place. The reverse of these steps can be followed in dismantling the structure for whatever purposes desired.

The ready-to-use device shown in FIGS. 1 and 2 can be trundled along the ground surface near the fence posts so that the wire can be payed out and controllably handled. It is also within the purview of the invention to support the entire structural device on whatever farm machinery is available so that the wire can be progressively withdrawn and stapled to the fence posts in whatever manner is deemed to be desirable.

The foregoing is considered as illustrative only of the

principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

What is claimed as new is as follows:

1. For use when unwinding and paying out fence wire from a spool of barbed wire, a knockdown spooled wire supporting reel comprising: an axle having a flanged head fixed on one end and provided at its other end with an outstanding axially projecting screw threaded nut-equipped stud, a first disk-type reel head having a centralized axle opening and a bushing having an outer end aligned with and fastened in said opening, said bushing being adapted to fit telescopically into one end portion of the usual hub portion of the spooled wire and the bore thereof providing an axle bearing, a second disk-type reel head like and complementary to said first reel head and likewise having a centralized opening adapted for passage of said stud and also having a companion bushing adapted to fit telescopically into the other end portion of said hub portion, said last named bushing being alignable with the first mentioned bushing and the bore thereof providing a complementary bearing for said axle, said axle comprising a hollow shaft, said end of which is fixedly closed by said flanged head, said stud being of a cross-sectional dimension significantly less than the cross-sectional dimension of said shaft and having a fitting on its inner end which is conformingly and fixedly plugged into the hollow terminal portion of said other end of said hollow shaft.

2. A reel defined in and according to claim 1, and, in combination, a substantially U-shaped elongated push-pull reel supporting and handling frame embodying a pair of spaced parallel coplanar legs integrally joined at their handling ends by a bight portion and having apertured adapter brackets at their reel supporting ends, said brackets being capable of mounting and supporting coordinating end portions of said axle.

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