

Feb. 16, 1937.

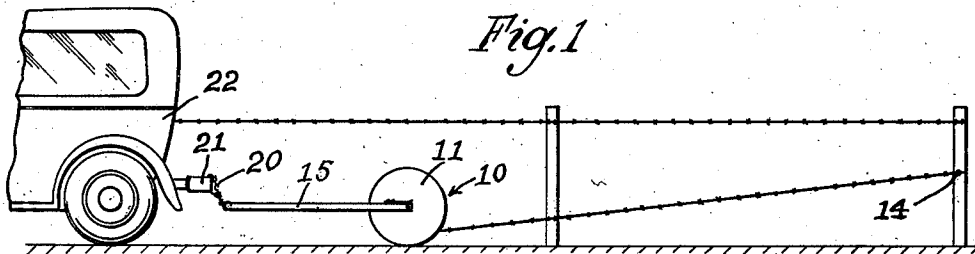
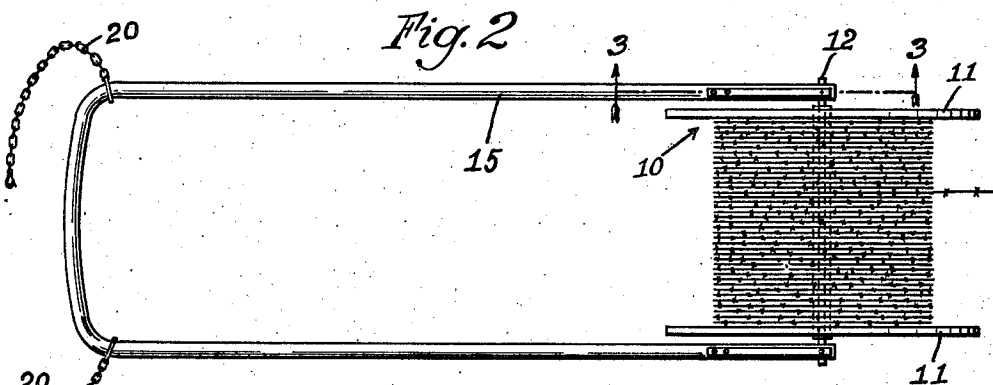
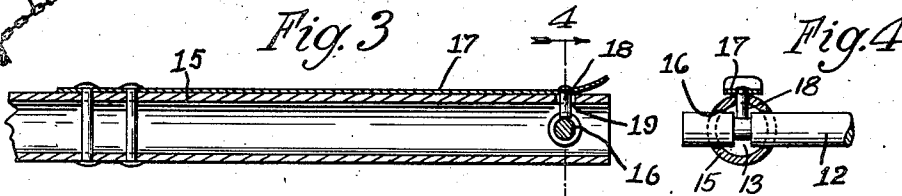
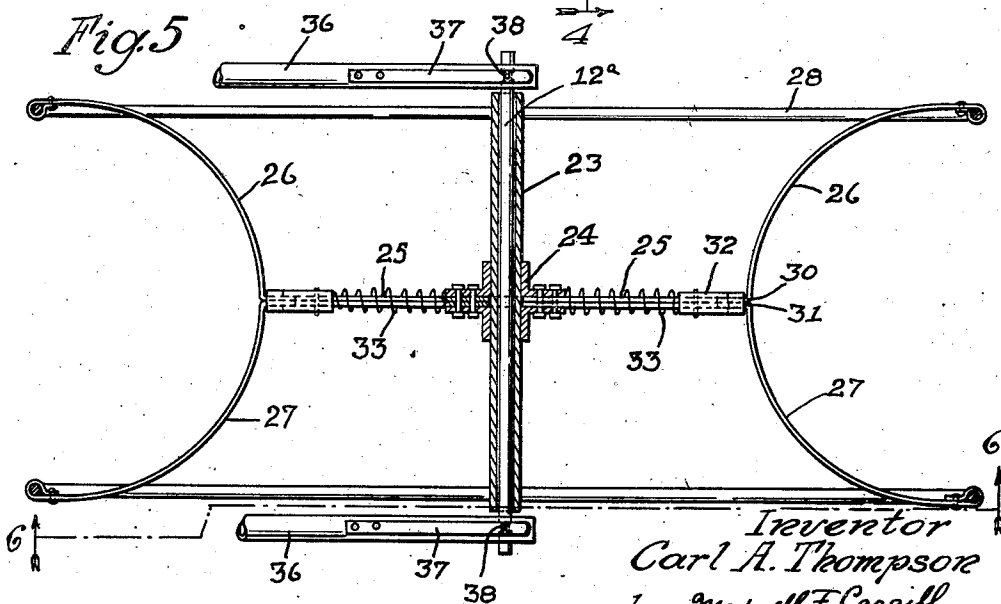
C. A. THOMPSON

2,070,934

WIRE HANDLING DEVICE

Filed Oct. 14, 1935

2 Sheets-Sheet 1



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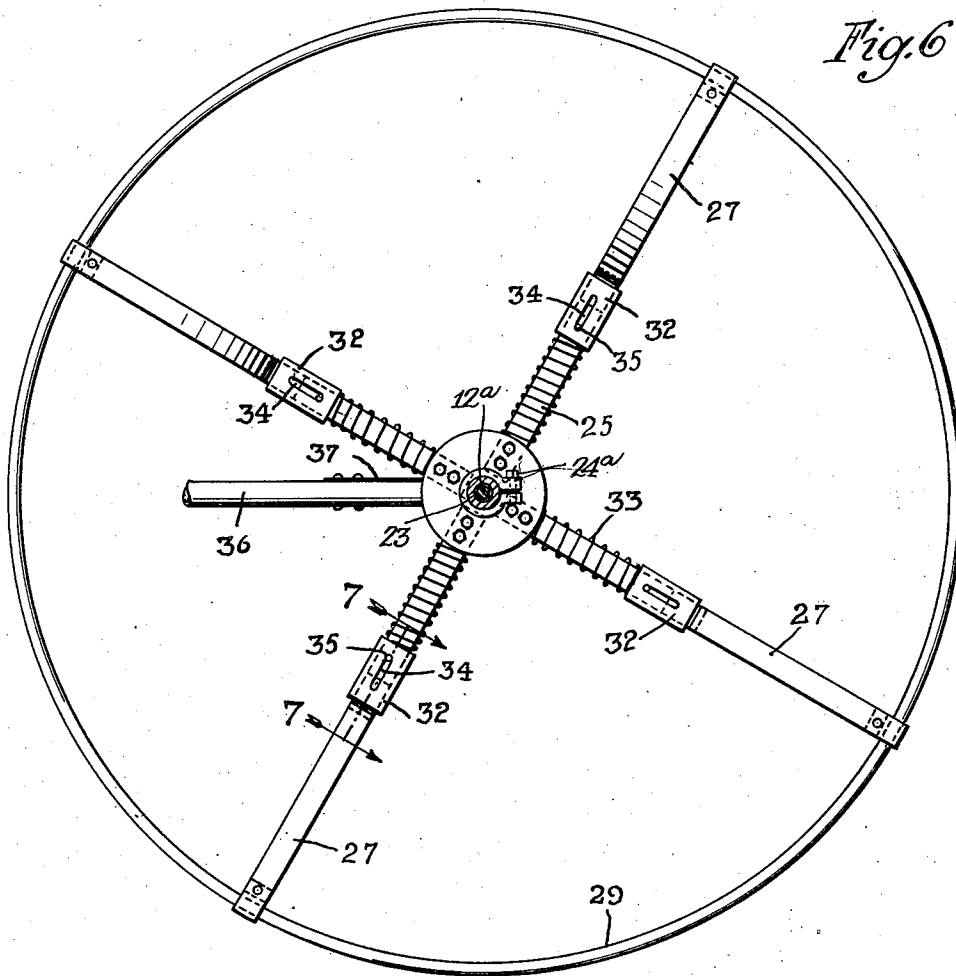
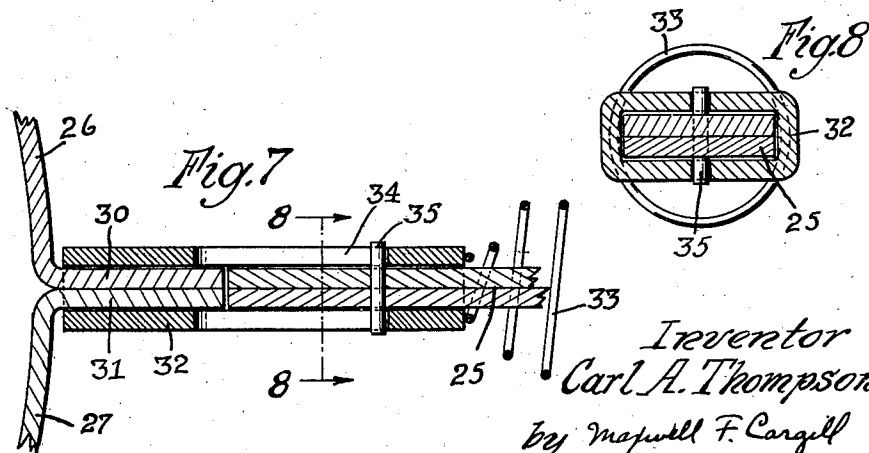
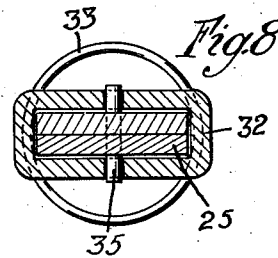
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C. A. THOMPSON
WIRE HANDLING DEVICE

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,070,934

WIRE HANDLING DEVICE

Carl A. Thompson, Harvard, Ill.

Application October 14, 1935, Serial No. 44,904

5 Claims. (Cl. 242—94)

This invention relates to improvements in wire handling devices.

Unwinding spools of barbed wire preparatory to using the same in fence building or winding up used wire is usually not only difficult but is also more or less hazardous.

One object of the present invention is to provide apparatus of simple and economical construction for unwinding spools or coils of wire, such as barbed wire, preparatory to use in fence making, and by means of which loose wire on the ground can readily be wound up.

Another object of the invention is to provide a wire handling device comprising a reel having two separable sections which upon separation enable the coil of wire wound thereon to be removed or a coil of wire previously wound to be inserted for the purpose of unwinding the same.

Other objects of the invention relate to various features of construction and arrangement of parts which will be apparent from a consideration of the following specification and accompanying drawings, wherein:

Figure 1 is a broken side elevation illustrating one mode of using my improved wire unwinding device.

Figure 2 is a top plan view of the device illustrated in Figure 1.

Figure 3 is a sectional view taken on line 3—3 of Figure 2.

Figure 4 is a section taken on line 4—4 of Figure 3.

Figure 5 is a top plan view partially in section of a modification of the improved wire wind-up or unwinding device.

Figure 6 is a sectional view taken on line 6—6 of Figure 5.

Figure 7 is an enlarged broken sectional view taken on line 7—7 of Figure 6.

Figure 8 is a section taken on line 8—8 of Figure 7.

In the drawings, 10 is a spool or reel upon which barbed wire is adapted to be wound as illustrated in Figure 2. The spool shown has disk shaped ends 11.

Conventional barbed wire spools are provided with axial recesses for receiving rods for convenience in handling the wire. Extending through the axial recess of the spool 10 shown in Figures 1 and 2 is a shaft 12 having annular grooves 13 adjacent the outer ends as shown in Figure 4. For pulling the spool along the ground for unwinding the wire after one end of the same has been attached to a post as indicated at 14 in Figure 1, I provide a ball-like draft device

15 preferably of U-shape and formed of tubular material. The ends of the ball are provided with openings 16 for receiving the ends of the shaft 12. A spring 17 is secured adjacent each end of the ball and each spring carries a pin 18 which projects through an opening 19 into the annular grooves 13 of the respective ends of the shaft to retain the ends of the ball in operative position thereon. In using the device the operator may walk within the confines of the ball 15 and pull it along the ground, thus unwinding the wire from the spool as the latter rolls over the ground. When the circumference of the wire on the spool is less than the circumference of the reel ends 11, each revolution of the spool on the ground will tend to move the spool a distance away from the anchored end 14 of the wire greater than the length of wire paid out during such revolution and hence tension will be exerted on the wire which will cause it to be unwound without kinking.

As shown in Figure 2, the ball 15 may have attached thereto a pair of short chains 20 or the like, by means of which the device can be attached to the bumper 21 of a vehicle 22 and the wire unwound by driving the vehicle along the line of the fence to be built.

The device shown in Figures 1 and 2 may be employed also in winding up wire lying on the ground, for example a wire removed from a line of posts. In utilizing the improvements for this purpose, one end of the wire is attached to the spool or reel and by means of the ball or draft device 15, the spool is rolled along the ground over the wire, causing it to be wound around, although not tightly upon, the spool. The disk shaped ends 11 of the spool thus constitute ground wheels during the winding of wire upon or unwinding wire from the spool or reel as the latter is moved along the ground.

When the wire has been wound upon the spool the second end of the wire can be suitably secured against unwinding, the springs 17 elevated to effect the disengagement of the pins 18 from the grooves 13, the shaft or axle 12 removed from the spool and an empty spool inserted in the ball if desired.

The modified form of wire handling device illustrated in Figures 5 to 8 inclusive comprises a tubular housing 23 through which a shaft 12a extends, which corresponds to the shaft 12 shown in Figures 1 to 4 inclusive. Mounted on the housing 23 is a hub 24 to which are attached, in the embodiment shown in Figure 6, four spokes 25. The hub is shown as comprising two split

sections which are clamped upon the housing 23 by bolts 24a, as illustrated in Figure 6. Carried by the ends of the spokes is a group of arcuate arms 26 and a group of mating arms 27. The outer ends of the arms 26 are secured together by a ring or tire 28 while the corresponding ends of the arms 27 are likewise attached to a ring 29. The inner ends of the arms 26 and the mating arms 27 have radially disposed ends 30 and 31 which are disposed within sleeves 32 slidably positioned on the respective spokes 25. Disposed on the spokes 25 between the respective sleeves 32 and the hub 24 are springs 33 which press the sleeves 32 outwardly to the position shown in Figures 5 and 6.

The sleeves 32, as shown in Figure 7, preferably are provided with slots 34 through which extend pins 35 which are carried by the spokes 25. Detachably secured to the projecting ends of the shaft 12a is a bail 36 similar to bail 15 of the above described modification and having springs 37 carrying pins 38 for attachment to the slotted shaft 12a. By releasably attaching an end of a wire lying on the ground to one of the arms 26 or 27 and pushing or pulling the device along the wire it will be wound upon the arms into coil form. After the outer end of the wire has been suitably attached to the coil, a sleeve 32 can be pressed inwardly in a radial direction against the action of its spring 25 and the inwardly directed ends 30 and 31 of the arms separated. When the corresponding ends of the other arms 26 and 27 have been released in like manner and the bail 36 removed, one half of the reel comprising the arms 26 and the loop or ring 28 can be separated from the opposite half and the coil of wire removed. Thus by means of this device wire can be wound up into a coil and removed from the device in coil form.

The device shown in Figures 5 to 8 can be used for unwinding wire wound thereon as above described or a coil wound upon the reel and subsequently removed therefrom may be replaced in the reel for unwinding in the same manner as illustrated in Figure 1.

While I have shown and described certain embodiments of my invention for the purpose of illustration, I do not wish to be restricted specifically thereto except as so limited by the appended claims.

I claim:

1. A wire winding reel comprising a hub, spokes carried thereby, two separable groups of wire

receiving arms carried by said spokes, annular members connecting the ends of each group of arms and constituting tires whereby the reel can be rolled along the ground, and slidable sleeves detachably connecting both groups of arms to said spokes and enabling the separation of the same from said spokes and from one another for releasing therefrom in coil form the wire wound thereon.

2. A wire winding reel comprising a hub, spokes carried thereby, two separable groups of wire receiving arms carried by said spokes, annular members connecting the ends of each group of arms and constituting tires whereby the reel can be rolled along the ground, and means detachably connecting both groups of arms to said spokes and enabling the separation of the same from said spokes and from one another for releasing therefrom in coil form the wire wound thereon, said means comprising spring pressed sleeves carried by said spokes and arranged to engage portions of said arms.

3. A reel for winding up wire comprising a hub, spokes carried thereby, two groups of separable arms, an annular tire secured to the outer ends of each group, the inner end of each of said arms of one group being paired with the inner end of an arm of the other group, and a slidable sleeve on each spoke for releasably engaging and supporting one pair of said arms.

4. A reel for winding up wire comprising a hub, spokes carried thereby, two groups of separable arms, an annular tire secured to the outer ends of each group, the inner end of each of said arms of one group being paired with the inner end of an arm of the other group, a slidable sleeve on each spoke for releasably engaging and supporting one pair of said arms, and means for retaining said sleeves in arm engaging position during operation of the reel.

5. A wire winding device comprising a reel provided with a hub, spokes carried thereby, two groups of complementary wire receiving arms detachably mounted on said spokes, a tire secured to each group of spokes to prevent radial outward displacement of said arms from said spokes, and spring pressed sleeves for said spokes each for engaging a complementary pair of said arms, said sleeves being slidable longitudinally of said spokes against the action of the respective springs for releasing the arms whereby the arms can be removed axially from a coil of wire wound thereon.

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