No. 701,317. Patented June 3, 1902.

F. ENGLISH.

COLLAPSIBLE REEL.

(Application filed Aug. 23, 1901.)

(No Model.)

Fig. 1.

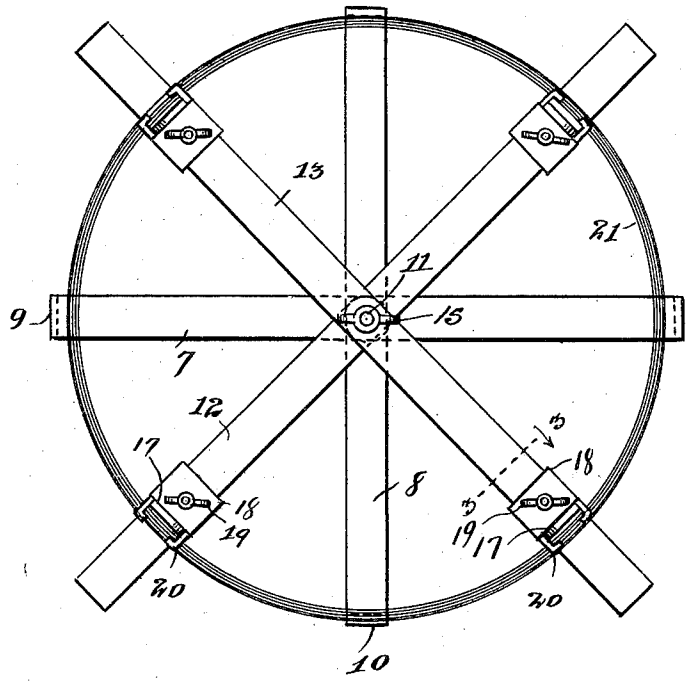


Fig. 2.

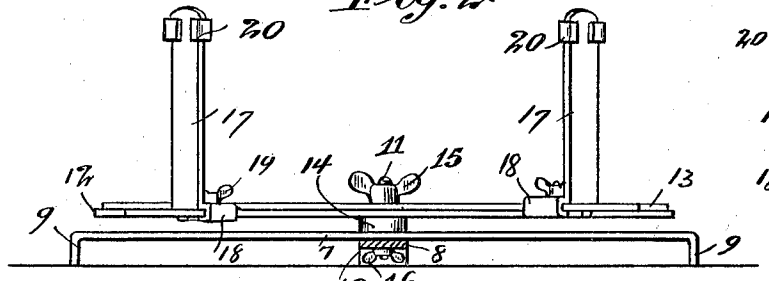


Fig. 3.

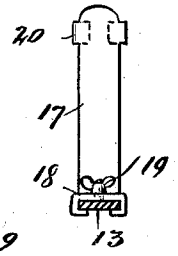


Fig. 6.

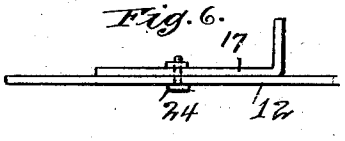


Fig. 5.

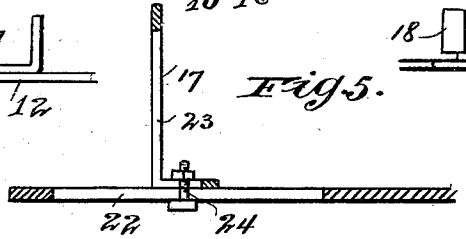
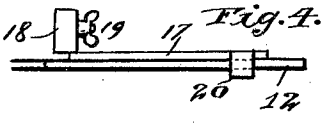


Fig. 4.



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UNITED STATES PATENT OFFICE.

FRANK ENGLISH, OF BENTON HARBOR, MICHIGAN.

COLLAPSIBLE REEL.

SPECIFICATION forming part of Letters Patent No. 701,317, dated June 3, 1902.

Application filed August 23, 1901. Serial No. 73,077. (No model.)

To all whom it may concern:

Be it known that I, FRANK ENGLISH, a citizen of the United States, residing at Benton Harbor, Michigan, have invented certain new and useful Improvements in Collapsible Reels, of which the following is a specification.

My invention relates to collapsible reels designed to hold wire, cordage, and the like, the same being designed more specifically for use by electrical wiremen to receive and hold in a convenient manner coils of line-wire, the device being collapsible in its nature and capable of being folded and packed in small compass for purposes of shipment or transfer from place to place and in use being capable of receiving and holding coils of varying sizes in such a manner as to facilitate the ready unwinding of the wire or other article therefrom.

A reel embodying my invention is illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the device set up in operative position and showing a reel of wire carried thereby. Fig. 2 is a side elevation thereof, one of the supports being shown in vertical section. Fig. 3 is a sectional detail illustrating the manner of supporting and adjusting the wire-receiving arms thereon. Fig. 4 is a detail in side elevation illustrating the relative disposition of the spider-arm and wire-holding arm when collapsed for shipment. Fig. 5 is a detail in vertical section illustrating a modification in the manner of connecting the spider-arm and holding-arm, and Fig. 6 is a side elevation of the parts shown in Fig. 5 and illustrating their collapsed position.

Referring to the drawings in detail, 7 and 8 designate two base-bars horizontally disposed and arranged in intersected relation and provided at their opposite ends with downwardly-turned feet portions 9 and 10, respectively. These base-bars are pivotally united at their centers, so as to be capable of folding together in parallel relation for the more compact storing of the device, and to this end the bars are preferably made of slightly-differing lengths, the total length of the under bar 8 being substantially equal to the length of the upper bar 7 between its feet portion. This enables the lower bar to be turned to occupy a position directly within and under the upper bar.

Upon the central pivot-bolt 11, which unites the base-bars, are mounted a pair of spider-arms 12 and 13, also arranged at right angles to each other, but capable of being folded into the same plane for storing. The spider-arm bars are separated from the base-bars by means of a suitable space-block 14, and that portion of the pivot-bolt 11 lying above the block 14 is screw-threaded to receive a thumb-nut 15, which serves to lock the spider-arms together in fixed relation to each other, but does not prevent the free rotation thereof on the bolt 11, which forms the vertical axis of the reel. Another thumb-nut 16 engages the lower threaded end of bolt 11, serving to clamp together the two base-bars 7 and 8.

17 indicates a series of upstanding arms which are slidably disposed upon the spider-arms 12 and 13 by means of integral clips 18 at their bases, each clip having a thumb-screw 19 passing through its upper face whereby the upstanding bars may be fixed relatively to their supporting-bars at any desired radial distance from the center of the reel. Each one of the upstanding bars 17 is also provided at its upper end with a similar clip 20, which enables the arm 17 to be engaged with its corresponding spider-arm in a horizontal or parallel relation thereto, as shown in Fig. 4, when the device is not in use and is to be collapsed for shipment or storage.

The operation of the device will be evident from the foregoing description in connection with the drawings. The device is intended to serve as a dispensing-reel, and a coil of wire or the like 21 is applied thereto by loosening the thumb-screws 19, setting the uprights 17 toward the center of the reel to such an extent that the coil may freely pass over and around them and then moving them outwardly until they contact the inner face of the coil and then securing them in such adjusted position by the thumb-screws 19. The reel being readily rotatable about its central supporting-pivot, by merely exerting a slight pull on the free end of the wire the latter will be automatically fed or dispensed therefrom in the quantities desired for use. When the reel is empty, the same can be readily collapsed and packed in small compass, in which

operation the upstanding arms 17 are removed from the spider-arms and then replaced, so as to lie at a full length thereon, the clips 20 engaging the spider-arms and securing the two parts together, as shown in Fig. 4. The thumb-nut 15 then being loosened the arms 12 and 13 can be turned to lie close together, while the base-bars 7 and 8 can be similarly turned to cause the bar 8 to lie within and under the bar 7. The reel thus dismantled and collapsed can be made to occupy a very small space for storage or shipment, it also being noted that the simple construction and skeleton formation of the whole device renders the same light in weight, and hence easily transported.

It is obvious that a variety of mechanically equivalent means may be employed for securing arms 17 in their interchangeable positions relatively to the supporting spider-arms 12 and 13. Figs. 5 and 6 illustrate a modification of this kind in which the spider-arm and the upright carried thereby are both longitudinally slotted, as shown at 22 23, respectively, and are secured together in either position of the upright arm, as shown in Figs. 5 and 6, by means of a simple clamping bolt and nut 24. This modification is merely typical of many that might be made to secure the desired relation between the horizontal spider-arms of the reel and the adjustable upstanding arms carried thereby, which engage the inner face of the coil. I do not, therefore, limit myself to the particular means shown and described for uniting said parts so long as the adaptability of the upstanding arms to engage the spider-arms in the operative and collapsed positions shown and described is preserved.

I claim—

1. A collapsible reel to hold coils of wire and the like, comprising in combination interfoldable supporting members united crosswise by a central vertical pivot-bolt, a plurality of intersecting spider-arms also mounted crosswise on said pivot-bolt above said supporting members, said spider-arms also being interfoldable in a plane parallel with the plane of the supporting members, and a series of upstanding arms clamped on said spider-arms and adjustable radially of the reel thereon, substantially as described.

2. A collapsible reel to hold coils of wire and the like, comprising in combination a pair of interfoldable supporting-bars united crosswise on a central vertical pivot-bolt, a pair of intersecting spider-arms also mounted crosswise on said pivot-bolt above and in a plane parallel with the plane of the supporting-bars, said spider-arms being interfoldable to overlie the interfolded supporting-bars longitudinally thereof, and a series of shorter arms adapted to be adjustably secured in either parallel or upstanding relation on said spider-arms, substantially as described.

3. A collapsible reel to hold coils of wire and the like, comprising in combination a pair of interfoldable supporting-bars united crosswise on a central pivot-bolt, a pair of spider-arms mounted crosswise on said pivot-bolt above and in a plane parallel with the plane of the supporting-bars, and a series of angularly-bent shorter arms provided with clamping devices on their opposite ends, whereby they can be adjustably secured in either parallel or upstanding relation on said spider-arms, substantially as described.

4. The hereinabove-described reel to hold coils of wire and the like, the same comprising in combination the horizontal supporting-bars 7 and 8 pivotally united by the bolt 11, the spider-arms 12 and 13 also pivoted crosswise on bolt 11, the space-block 14, and the angularly-bent arms 17 having clamps 18 and 20 at their opposite ends, whereby they may be secured in either parallel or vertical relation to the arms 12 and 13, substantially as described.

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