C. F., L. K., C. G. AND J. T. REDMON.

AUTOMATIC CIRCUIT MECHANISM.

APPLICATION FILED FEB. 17, 1920.

Patented Jan. 4, 1921.

2 SHEETS—SHEET 1.

1,364,805.

Fig. 1.

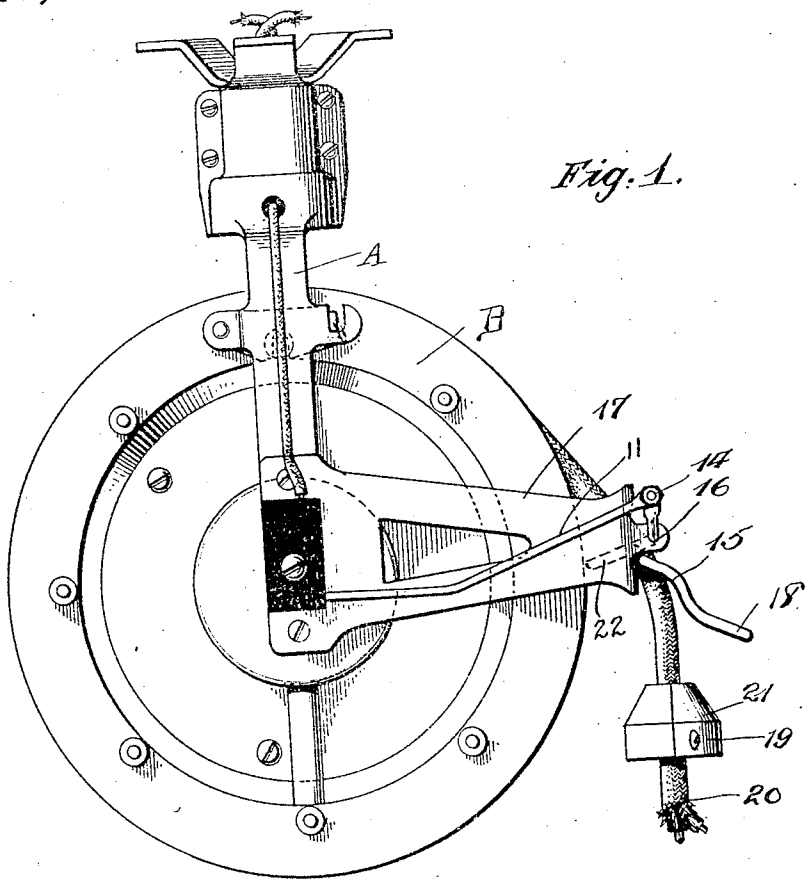
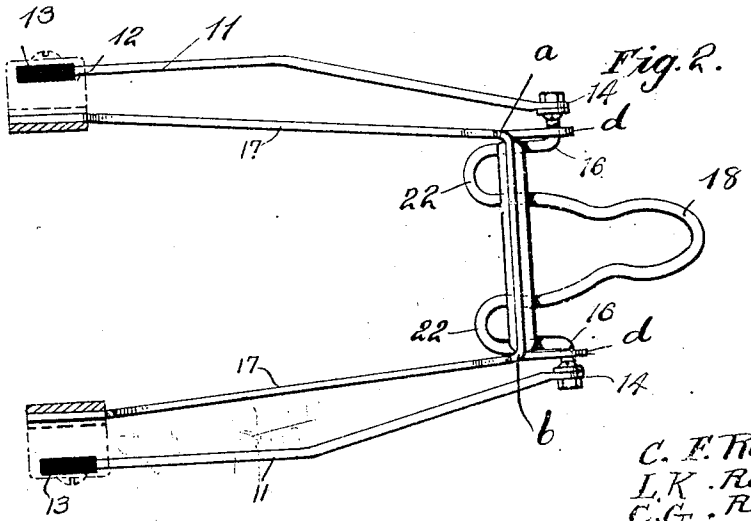


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

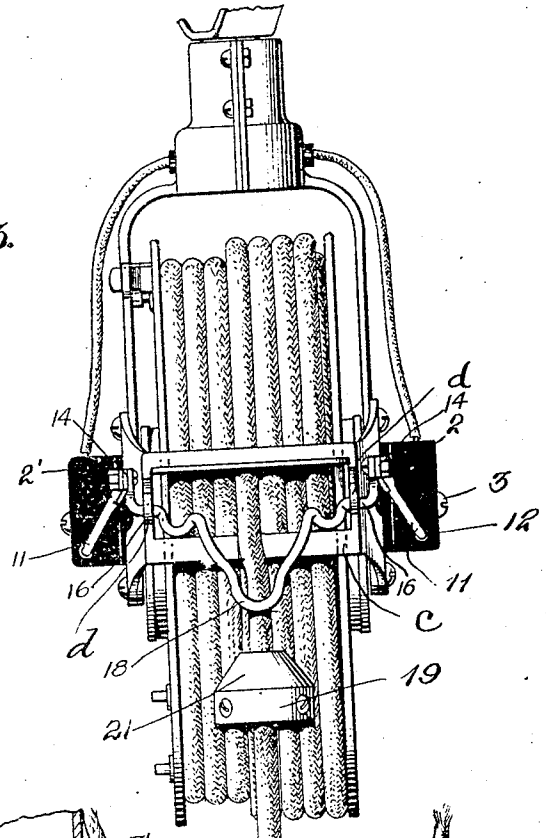


Fig. 4.

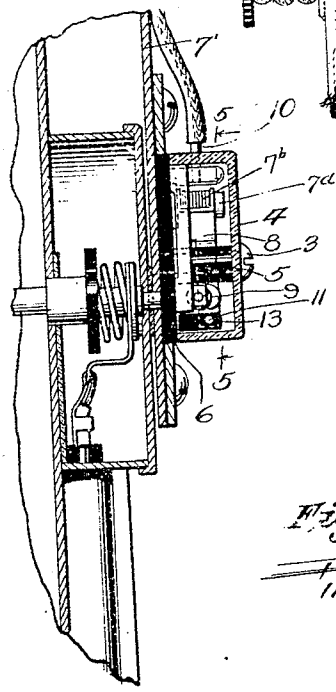


Fig. 5.

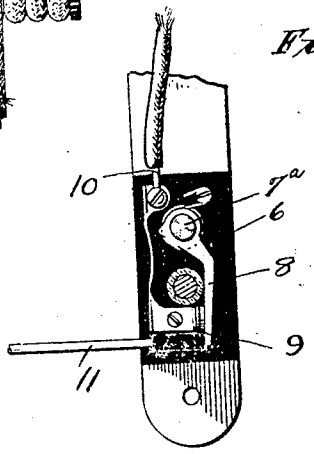


Fig. 6.



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AUTOMATIC CIRCUIT MECHANISM.

1,364,805. Specification of Letters Patent. Patented Jan. 4, 1921.

Application filed February 17, 1920. Serial No. 359,216.

To all whom it may concern:

Be it known that we, C. F. REDMON, L. K. REDMON, C. G. REDMON, and J. T. REDMON, citizens of the United States, residing at Paris, in the county of Bourbon and State of Kentucky, have invented certain new and useful Improvements in Automatic Circuit Mechanism; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to reels and particularly to reels for wires carrying electrical currents, and especially to an automatic circuit mechanism for said reels.

An object of this invention is to provide an improved means for automatically breaking an electrical circuit through a wire wound upon a reel upon the return of the said wire to a predetermined position relative to said reel.

A further object of this invention is to provide an improved structure over that disclosed in our copending application Serial No. 324,640.

With these and other objects in view the invention consists in the construction, the combination, the detail, and arrangement of parts as hereinafter more fully described and claimed.

In the drawings:

Figure 1 is a side elevation of a reel provided with this improvement.

Fig. 2 is a plan view of the supporting yoke and operating lever of the attachment, detached from the reel.

Fig. 3 is a front elevation of Fig. 1.

Fig. 4 is an enlarged fragmentary view of the right hand medial portion of Fig. 3 partly broken away.

Fig. 5 is a view at 5—5 of Fig. 4, with casing removed.

Fig. 6 is a perspective detail of the end push rod shown at the bottom of Fig. 5.

In the embodiment of this invention there is mounted upon the support A of a reel B of any approved type an insulated casing or housing 2 of any suitable non electrical conducting material, and preferably of insulated fiber, which is held in place upon said reel by a screw 3 passing through the outer shell 4 of said fiber and thence through a fiber washer 5 and thence through an insulating plate 6 into the shell 7^1 of the casing. Mounted upon plate 6 is a stud 7^a upon which is pivotally mounted an electrically conductive lever 8 yieldingly held as by coil spring 7^b against an electrode 9, making a circuit through stud 7^a and a circuit wire 10 connected with electrode 9, which in turn is electrically connected to one of the conductors in cord 20. There is also provided a sliding bar 11 guided by a hole 12 in said casing 2. Bar 11 is provided with an insulated tip 13, which is normally in abutment with lever 8. By the reciprocation of bar 11 the lever 8 is moved upon its pivot, and when moved to the right the circuit is broken, but when bar 11 is moved to the left the spring 7^b returns the lever 8 thus throwing the same into abutment with electrode 9 making a circuit. There is also a casing 2′ upon the opposite side of the reel and carrying parts in duplicate to those parts carried in casing 2. Bar 11 is pivotally connected at 14 to a bell crank 15, which bell crank is pivotally mounted at 16 in a yoke 17. The bell crank 15 is provided with a tongue 18 in the path of a button 19 having a conical cam face 21 mounted upon a cord 20 containing a pair of insulated electric wires. Upon the inward movement of cord 20 upon the said reel, the conical face 21 of button 19 engages tongue 18 and operates the crank 15, thus pushing the bar 11 inward and breaking the electrical circuit as hereinbefore described.

Bell crank 15 is provided also with a pair of ears 22 forming a stop in abutment against yoke 17 and is integrally formed from a single wire, the ends of which form the pivotal mount for rod 11. Yoke 17 is formed as follows: A single piece of strap metal is bent at *a* and *b* and cut out at *c*, the cut away portion providing a channel for cord 20, the cut out material forming a pair of ears *d*, which serve as supports for bell crank 15.

It will be noted in this structure that the circuit is cut out from both sides of the reel simultaneously, thus preventing any possible short circuit in the wires of the cord on the reel after the circuit is automatically broken by this attachment.

What we claim is:

1. A reel having wound thereon two electric conductors, a frame for the reel, an electrical conductor leading to each side of the frame; electrical circuit breakers for connecting and disconnecting the reel conduc-

tors, respectively, to the conductors located outside and on each side of the reel, a yoke embracing the reel, and co-acting means carried by the conductor cord and yoke respectively for simultaneously breaking the circuit in both circuit breakers upon winding up the conductors on the reel.

2. In a reel for a conductor cord embracing two electrical conductors, a frame for the reel, a yoke carried by the frame adapted to embrace the reel and having a perforation to form a guide for the conductor cord, a lever pivoted on each side of the yoke having a loop bent therefrom to form a guide for the cord, circuit breakers mounted one on each side of the yoke and electrically connected respectively to each of said conductors, rods pivoted to each side of the lever adapted to operate the circuit breakers simultaneously to make or break the circuit in both conductors, and an adjustable stop carried by the cord adapted to engage and operate the lever.

In testimony whereof we affix our signatures.

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