A. C. MILLS.

WIRE FEEDER.

APPLICATION FILED NOV. 1, 1909.

986,020. Patented Mar. 7, 1911.

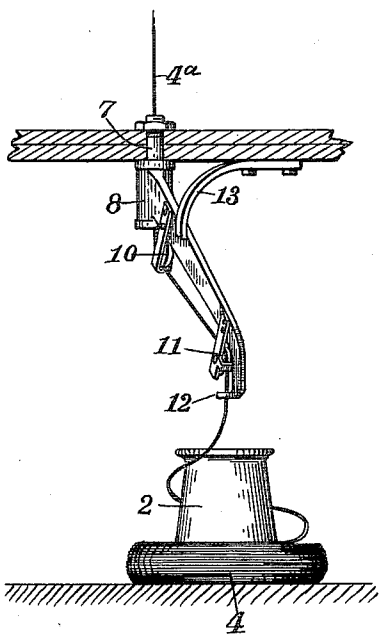

Fig. 1.

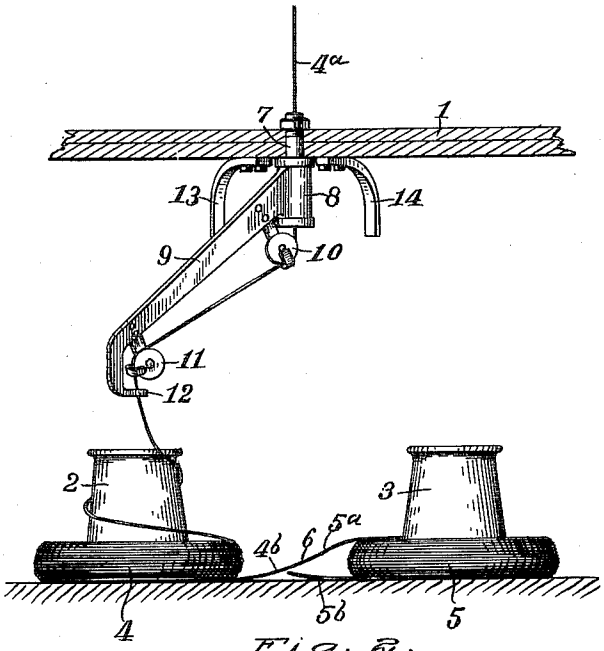

Fig. 2.

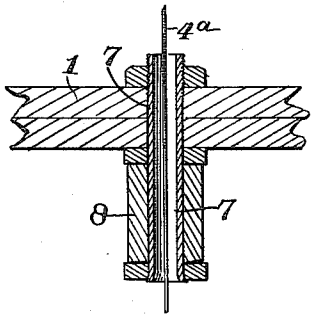

Fig. 4.

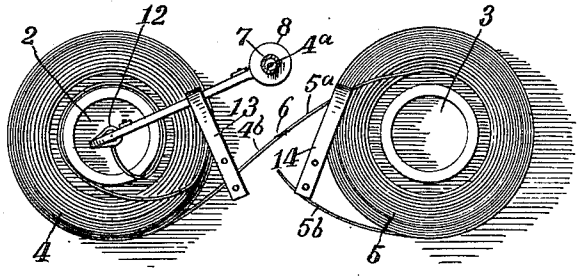

Fig. 3.

Witnesses

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WIRE-FEEDER.

986,020. Specification of Letters Patent. Patented Mar. 7, 1911.

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To all whom it may concern:

Be it known that I, ANSON C. MILLS, a citizen of the United States of America, residing at Jackson, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Wire-Feeders; and I 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.

My invention relates to improvements in means for feeding wire to wire working machines, and its object is to provide means for feeding such a wire continuously from a succession of coils of wire; and to provide the same with various new and useful features, and it comprises means for delivering a wire from two or more coils in succession, guiding means adapted to guide the wire to a machine from either one of the coils alternately, and in various features of construction and arrangement as hereinafter more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings in which:

Figure 1 is an elevation of a device embodying my invention; Fig. 2 the same shown at right angles to Fig. 1; Fig. 3 a plan view of the same; and, Fig. 4 an enlarged detail of the upper part of the guiding mechanism.

Like numbers refer to like parts in all of the figures.

1 represents an upper floor or other elevated support; 2 and 3 are two cones such as are usually employed for feeding wire from a coil, these cones being located near each other and spaced apart sufficient to permit of joining the upper and lower ends of the respective coils therebetween.

4 and 5 represent the respective coils of wire, the upper end 4^a of the coil 4 being inserted in the guiding mechanism and the lower end 4^b thereof joined to the upper end 5^a of the coil 5 at 6, the lower end 5^b of the coil 5 being shown as projecting suitably to be joined to the upper end of another coil whenever the first coil 4 is exhausted and the coil 5 is being fed out.

Guiding mechanism to convey the wire to the machine and adapted to receive the wire from either one of the cones 2 and 3 alternately, is provided, located above said cones and midway therebetween. As shown, this mechanism consists mainly of a tube 7 vertically disposed in the floor 1 and through which the wire extends. Should the distance above the cones be sufficiently great, this tube would be all that would be required in the way of guiding mechanism, but ordinarily the horizontal distance would be relatively too great to feed properly from each cone alternately, and I therefore prefer to provide an arm adapted to automatically and alternately swing directly over each cone.

8 is a sleeve rotative between collars on the lower end of the tube 7. Projecting from this sleeve is an arm 9 adapted to swing alternately over each cone and limited in its movement by stops 13 and 14. This arm carries guide wheels 10 and 11 to properly guide the wire from a cone to the axis of the tube 7. The arm 9 is also prolonged and extended inward beneath the wheel 11 and terminates in a loop or eye 12 to guide the wire to the wheel 11 and prevent its running off the same, more particularly operative when the arm is shifted by the wire as hereinafter described.

In operation, one of the cones is provided with a coil of wire in the usual manner and the upper end of the wire extended through the eye 12 over the guide wheel 11 and under the guide wheel 10, and thence upward through the axis of the tube 7 to any desired machine, the device being especially adapted for use in connection with fence making machines and the like. When the coil 4 is being removed and fed to the machine, the arm will remain in the position shown. During this time a coil 5 is supplied to the other cone and the upper end of the said coil welded, brazed, or otherwise joined to the lower end 4^b of the coil 4, thus making the two coils continuous. The lower end 5^b of the coil 5 is also brought out as shown in convenient position to be joined to a second coil 4 while the coil 5 is being fed to the machine. As the coil 4 is exhausted the wire will begin to feed from the coil 5, and this will laterally engage the wire with the eye 12, and thus automatically swing the arm 9 with its lower end directly over the cone 3, thus automatically shifting the feed to the other coil. The reverse movement obviously occurs when shifted back again to a coil 4 on the cone 2. I am thus able to continuously supply a continuous and

unbroken wire for any time and of any length from a series of coils of limited length to the guiding mechanism and thence to the machine, whereby a machine may be continuously operated without stopping whenever a coil is exhausted as heretofore found necessary.

What I claim is:—

1. In a device for feeding wire, two stationary cones each adapted to deliver a coil of wire upward arranged in close relation to each other, and a shiftable guide for the wire adapted to alternately shift to operative relation to the respective cones.

2. A wire feeder, comprising two cones each adapted to deliver wire from a coil, said cones being in near relation, whereby the ends of the coils may be united therebetween, a swinging arm mounted above the cones and adapted to alternately swing above the respective cones, and guiding mechanism mounted on the arm for guiding the wire from each cone alternately.

3. A wire feeder, comprising two cones in close relation to each other, a tube mounted above the cones and equidistant from each cone, an arm pivotally mounted on said tube, stops to adjust the arm alternately above the cones, and guiding means on the arm to direct the wire from either one of the cones to the axis of the tube.

4. In a wire feeder, two cones in near relation to each other and adapted to deliver wire from coils thereon, a tube above the said cones and equidistant from each, an arm journaled on said tube at one end and adapted to swing directly above each cone alternately at the other end, guide wheels on the arm to guide the wire from each cone alternately to the axis of the tube, and an eye on the end of the arm below the first guide wheel through which the wire is extended.

5. In a wire feeder, the combination of two cones spaced apart in near relation to each other, a tube supported above the cones and equidistant from each, a sleeve journaled on the tube, an arm projecting diagonally downward from the sleeve and adapted to swing with its lower end directly above each cone alternately, an eye on the end of the arm, a guide wheel mounted on the arm above the eye and a second guide wheel mounted on the arm below the tube, and stops to limit the movement of the arm and adjust it above the respective cones.

In testimony whereof I affix my signature in presence of two witnesses.

ANSON C. MILLS.

Witnesses:

THOMAS A. WILSON,

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