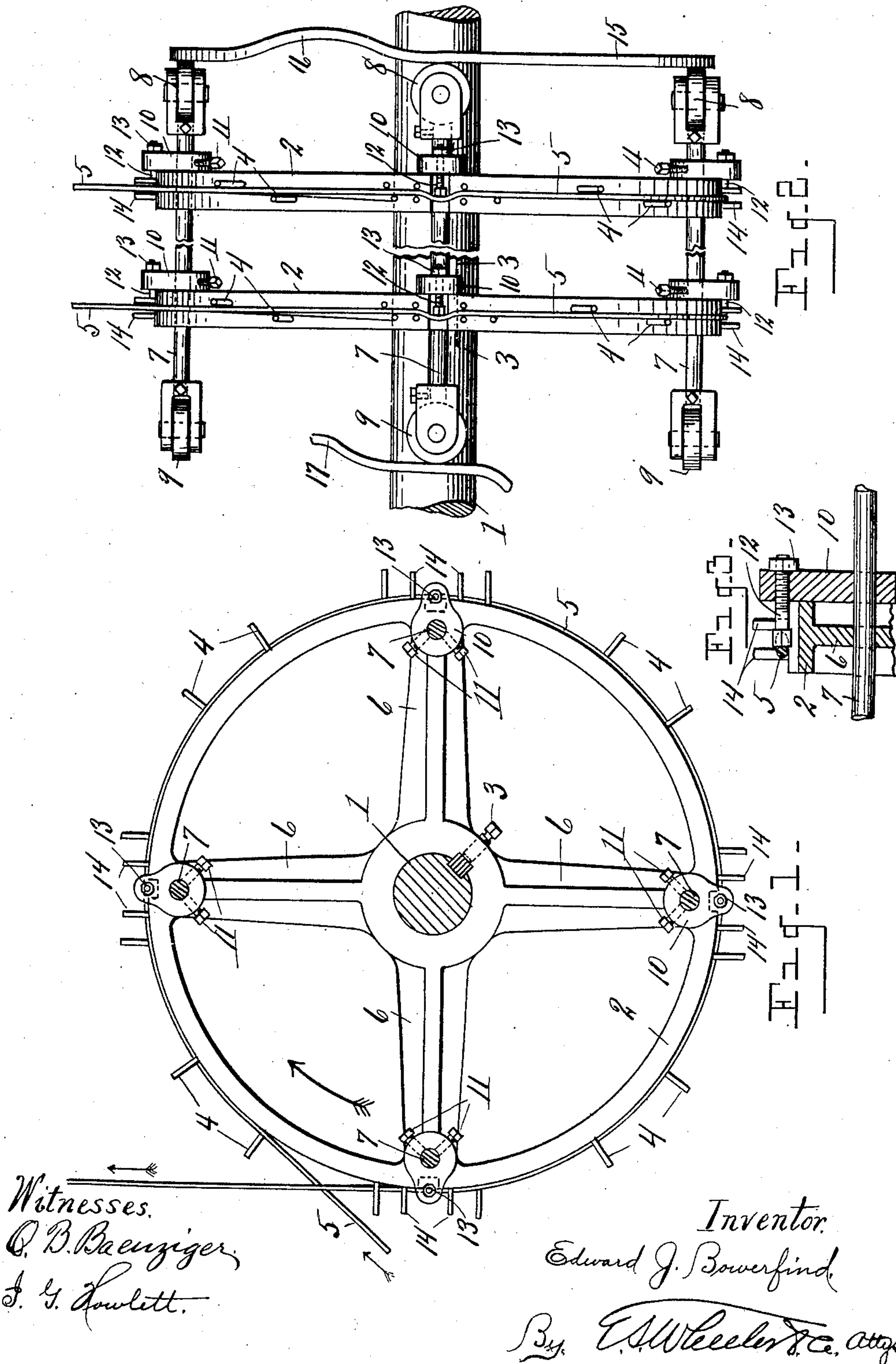


No. 829,624.

PATENTED AUG. 28, 1906.

E. J. BOWERFIND.
WIRE FEEDING AND MEASURING DEVICE.

APPLICATION FILED SEPT. 9, 1905.



Witnesses.
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WIRE FEEDING AND MEASURING DEVICE.

No. 829,624.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed September 9, 1905. Serial No. 277,764.

To all whom it may concern:

Be it known that I, EDWARD J. BOWERFIND, a citizen of the United States, residing at Adrian, in the county of Lenawee, State of Michigan, have invented certain new and useful Improvements in Wire Feeding and Measuring Devices; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to a wire feeding and measuring device; and it consists in the construction and arrangement of parts hereinafter fully set forth, and pointed out particularly in the claims.

The object of the invention is to provide simple and efficient means for feeding the strand-wires into a wire fabric machine in such a manner as to maintain all of said wires of a uniform length, thereby preventing the buckling of the fencing or fabric when strung. The above object is attained by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of one of the wheels around which the wire is passed, said wheel carrying the means for clamping or holding the wire against slipping, the shaft on which the wheel is mounted appearing in section. Fig. 2 is a fragmentary view in elevation, showing the edges of a plurality of said wheels and illustrating the means for actuating the wire-clamping devices. Fig. 3 is a fragmentary view, partly in section, as on line 3 3 of Fig. 2.

This invention is expressly designed for use in connection with machines for making wire fencing, wherein the longitudinal or strand wires are fed into a machine in approximate parallel relation to have the cross-wires attached thereto by means of tying-staples or by weaving, according to the character of fencing being made. It is essential that said strand-wires be maintained at a uniform length, or, in other words, that they all be of the same longitudinal measurement. To accomplish said result, a rotary shaft 1 is journaled in the rear of the fence-machine, (not shown,) upon which are mounted measuring and feeding wheels 2, there being as

many of said wheels as there are longitudinal strands or bars in the fencing, and all of said wheels being of the same circumferential measurement. The wheels are splined upon the shaft 1, so that they may be adjusted to vary the distance between the strand-wires and are locked after adjustment by means of a set-screw 3, as shown in Fig. 1.

The face of each of the wheels is flat, and projecting therefrom are the guide-pins 4, between which the wire-strand 5 is adapted to lie as it is wound onto the wheel. The rim of the wheel is supported by the spokes 6, and passing through each of said spokes at the point of junction of the spoke with the rim is a longitudinally-movable rod 7. Any number of the rods 7 may be employed, according to the need, there being four of said rods in the machine illustrated in the drawings accompanying this specification. These rods 7 are common to all of the wheels 2 and extend from end to end of the machine, the opposite ends of said rods carrying the anti-friction-rollers 8 and 9, respectively. Secured to each of the rods 7 at the point of its passage through the spokes of the wheels are the heads 10, adjustable thereon and secured by the set-screws 11. Threaded in the outwardly-extending portion of each of said heads is a pin 12, having a rounded end squared for the application of a wrench and adapted to be locked by a jam-nut 13. These pins project inwardly transversely across the face of the wheels 2 and are adapted to impinge against the wire 5 to clamp said wire between the opposed confining-pins 14, located in the periphery of the wheel on each side of the pins 12 when the rods 7 are moved longitudinally. The operation of the rods 7 is caused by a circular cam-track 15, located at one end of the machine, against which the anti-friction-rollers 8 at the ends of said rods travel, said track having the depressed portion 16 therein, which permits each rod in its turn to move back sufficiently to release the wires at the point where they lead from the periphery of the wheel to pay into the machine, said reverse movement of the rod being accomplished by the short cam-track 17, which engages the anti-friction-rollers 9 at the opposite ends of said rods, the high point of which is located directly opposite the depression 16 in the cam-track 15. As the wires pay off from the wheels 2 at about the

point they are caused to wind thereon from the bundles, (not shown,) the longitudinal movement of the rods 7 in succession caused by the short cam-track 17 not only with-
5 draws the crimping-pins 12 from engagement with the wire to permit said wire to pay off from said wheels, but also withdraws said pins from the path of the wire which is winding onto the wheels, permitting said wires to
10 draw into close contact with the periphery of the wheels and to lie snugly between the pins 14 before being again engaged by the crimping-pins 12. The cam-track 15 is stationary, and as the wheels 8 ride into and out
15 of the depression 16 said rods 7 are reciprocated longitudinally for the purpose and in the manner before described.

While the heads 10 are adjustable upon the rods 7 by threading the crimping-pins 12,
20 provision is made for an independent adjustment of said pins, so that by loosening the nut 13 the pin may be quickly adjusted to increase or decrease the pressure against the wire and quickly locked by tightening said
25 nut. The cam-track 17, like the track 15, is also stationary, and its only function is to push the rods longitudinally in succession to release the strands of wire at the time the rollers 8 on said rods reach the depression 16
30 in said track 15.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

35 1. In a wire feeding and measuring device, the combination with the rotary shaft, of the wheels mounted thereon, having guide-pins upon their peripheries between which the wire strands are adapted to lie, longitu-

dinally-reciprocatory rods mounted in said wheels carrying engaging members adapted 40 to impinge against the wires between said guide-pins, and means for reciprocating said rods longitudinally in succession.

2. In a wire feeding and measuring device, the combination with the rotary shaft, 45 of the plurality of wheels adjustably mounted upon said shaft, said wheels having guide-pins extending from their peripheries between which the wire strands are adapted to lie, longitudinally-reciprocatory rods mount- 50 ed in said shafts carrying projecting members adapted to impinge against the wires between said pins as said rods are moved longitudinally, and cam-tracks at the ends of said rods for imparting a longitudinal re- 55 ciprocation thereto in succession.

3. In a wire feeding and measuring device, the combination with the rotary shaft, a plurality of wheels upon said shaft having guide-pins on their peripheries between 60 which the wire strands are adapted to lie, longitudinally-reciprocatory rods passing through said wheels, a plurality of adjustable heads upon each rod, a pin adjustable in each of said heads extending into the path of 65 the wire and adapted to impinge there-against, antifriction-rollers at the ends of said rods, and the cam-tracks engaging said rollers for reciprocating the rods longitudinally. 70

In testimony whereof I sign this specification in the presence of two witnesses.

EDWARD J. BOWERFIND.

Witnesses:

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