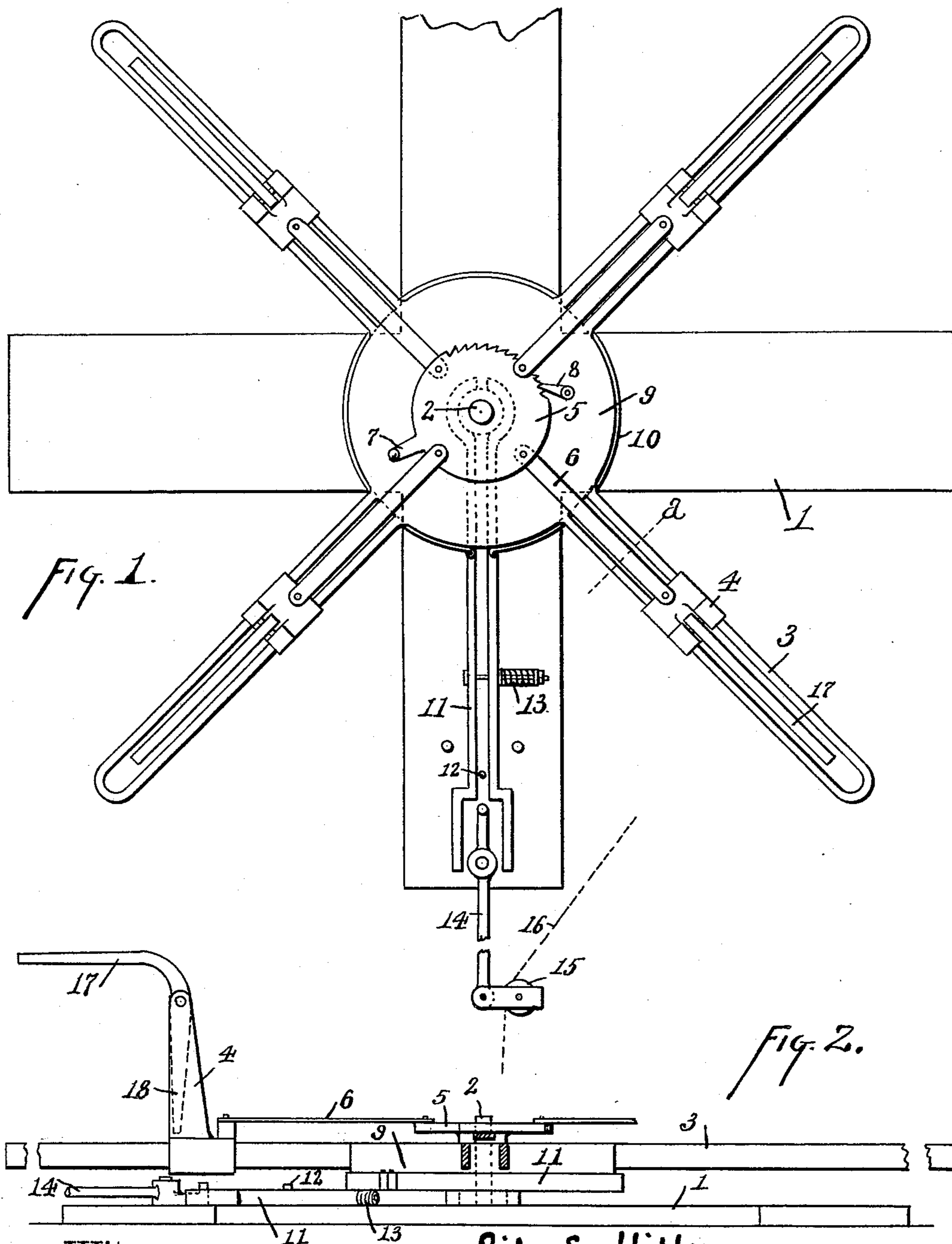


(No Model.)

R. E. MILLER & J. D. BOWMAN.
WIRE REEL.

No. 481,306.

Patented Aug. 23, 1892.



Witnesses:
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UNITED STATES PATENT OFFICE.

RILEY E. MILLER AND JAMES D. BOWMAN, OF COLLEGE CORNER, OHIO; SAID
BOWMAN ASSIGNOR TO MORTON A. MILLER, OF SAME PLACE.

WIRE-REEL.

SPECIFICATION forming part of Letters Patent No. 481,306, dated August 23, 1892.

Application filed April 15, 1892. Serial No. 429,263. (No model.)

To all whom it may concern:

Be it known that we, RILEY E. MILLER and JAMES D. BOWMAN, of College Corner, Butler county, Ohio, have invented certain new and
5 useful Improvements in Wire-Reels, of which the following is a specification.

This invention pertains to improvements in reels for the use of fence-builders, telegraph-linemen, &c.

10 The improvements will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a plan of a reel exemplifying
15 our improvements, and Fig. 2 a side elevation of the same with portions omitted and with portions appearing in vertical section in the plane of line *a*.

In the drawings, 1 indicates a base-piece;
20 2, a spindle erected thereon; 3, a spider arranged to turn on the spindle and support an ordinary coil of wire; 4, studs projecting upwardly, one from each arm of the spider, and adapted for sliding adjustment in and out,
25 these arms engaging within the coil of wire; 5, a disk mounted for partial rotation at the center of the spider and containing a series of wrists and forming a multiple crank for adjusting the studs in and out on the spider;
30 6, links connecting the wrists of the crank with the studs 4 in such manner that as the crank is turned the studs will be adjusted outwardly or inwardly; 7, a handle to serve in turning the crank; 8, a pawl to lock the
35 crank in adjusted position; 9, a brake rim or disk formed on the spider; 10, a brake-strap surrounding the same; 11, a pair of levers pivoted to the base-piece at their heels and adapted for opening and closing motion, each
40 lever engaging an end of the brake-strap, so that when the levers close they draw the strap to the brake-rim and when they open they relieve the strap; 12, a stop to limit the inward motion of the brake-levers; 13, a spring connected with these brake-levers and tending to
45 hold the brake in position of application; 14, a lever pivoted to the base and arranged so that its inner end in swinging to one side or the other engages one of the brake-levers and
50 tends to open the levers and thereby relieve

the brake, there being some degree of lost motion at the point where the heel of this lever engages the brake-levers, so that the lever 14 may swing somewhat before acting on the brake-levers; 15, a small sheave carried in a
55 stirrup swiveled on the outer end of the lever 14, which lever will be hereinafter termed the "wire-lever;" 16, a dotted line indicating the course of the wire on its way from the coil, the wire turning at the sheave 15, the swivel-
60 ing of the sheave-stirrup allowing for the wire coming from the opposite side of the reel; 17, a bent keeper pivoted at the top of each of the studs of the spider and presenting an arm horizontally over the coil of wire which may
65 be upon the reel and presenting an arm vertically at the face of the stud, and 18 the vertical arm of the keeper.

The keepers may be turned so that the arms 18 project horizontally and the other arms
70 vertically. In this condition, the studs being set inwardly far enough to receive the coil freely, the coil is dropped over the studs and onto the spider. As the coil goes down it turns the arms 18 of the keeper down and
75 brings the other arms over the coil and the keepers cannot be turned back except by lifting the entire coil. The horizontal arms of the keepers thus project over the coils and prevent upward displacement of the loose
80 turns of the wire. When the coil has been put in place upon the spider, the crank is turned to adjust the studs outwardly to fit the coil tightly, and the pawl holds the crank in adjusted position. Normally the spring 13
85 holds the brake in application and the reel is not at liberty to turn upon the spindle. The wire leads from the coil off through the eye in the outer end of the wire-lever formed by the sheave, and if the wire be pulled tightly
90 it will deflect the wire-lever and the heel of the lever will act upon one of the brake-levers and cause the release of the brake in an obvious manner, the employment of two brake-levers providing for the lead of the wire in
95 either direction from the reel.

We claim as our invention—

1. In a wire-reel, the combination, substantially as set forth, of a base-piece, a reel journaled thereon, a brake-wheel attached to the 100

reel, a brake mounted on the base-piece and adapted to engage the brake-wheel, a spring arranged to draw the brake forcibly into engagement with the brake-wheel, a lever pivoted to the base-piece and connected with the brake, and an eye in the outer end of said lever for the passage of the wire and so located that the strain of wire passing from the reel through the eye will move said lever against the strain of said spring and hold the brake away from the brake-wheel.

2. In a wire-reel, the combination, substantially as set forth, of a base-piece, a reel journaled thereon, a brake-wheel on the reel, a brake mounted on the base-piece and arranged for engagement with the brake-wheel, a spring urging said brake forcibly into engagement with the brake-wheel, a lever pivoted upon said base-piece and provided with an eye for the passage of wire on its way from the reel, and a pair of levers forming connections between said first-mentioned lever and said brake and serving, as said first-mentioned lever is brought in either direction from the neutral point, to release the brake from the brake-wheel.

3. In a wire-reel, the combination, substantially as set forth, of a base-piece, a reel journaled thereto, a brake-wheel on the reel, a brake arranged to engage with the brake-wheel, a pair of levers arranged for opening and closing motion to release and apply the brake, a spring to hold the levers closed, a third lever pivoted to the base-piece and provided with an eye for the passage of wire leaving the reel, and projections on said third lever adapted, as the lever moves in either

direction from the neutral point, to open said first-mentioned levers and release the brake.

4. In a wire-reel, the combination, substantially as set forth, of a swiveled spider for the support of a coil of wire, studs projecting from the base thereof, and double-armed keepers pivoted to said studs and presenting arms within and over a coil of wire on the reel.

5. In a wire-reel, the combination, substantially as set forth, of a swiveled spider for the support of a coil of wire, studs projecting from the face thereof at some distance inwardly from the ends of the spider-arms and radially adjustable upon the spider, and mechanism, substantially as described, for simultaneously adjusting all of the studs.

6. In a wire-reel, the combination, substantially as set forth, of a swiveled spider, studs projecting from the face thereof and adjustable radially upon the spider, and double-armed keepers pivoted to the studs and adapted to present arms within and over a coil of wire upon the reel.

7. In a wire-reel, the combination, substantially as set forth, of a spider, an annular series of studs projecting from the face of the spider and radially adjustable thereon, a multiple of cranks mounted at the center of the spider, links connecting the crank-pins of said crank with said studs, and means, substantially as set forth, for moving and securing said multiple crank.

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