H. A. McILWAIN, C. J. WALTON AND J. W. WRIGHT.

COLLAPSIBLE WIRE REEL.

APPLICATION FILED MAY 10, 1919.

1,365,710. Patented Jan. 18, 1921.

Fig. 1

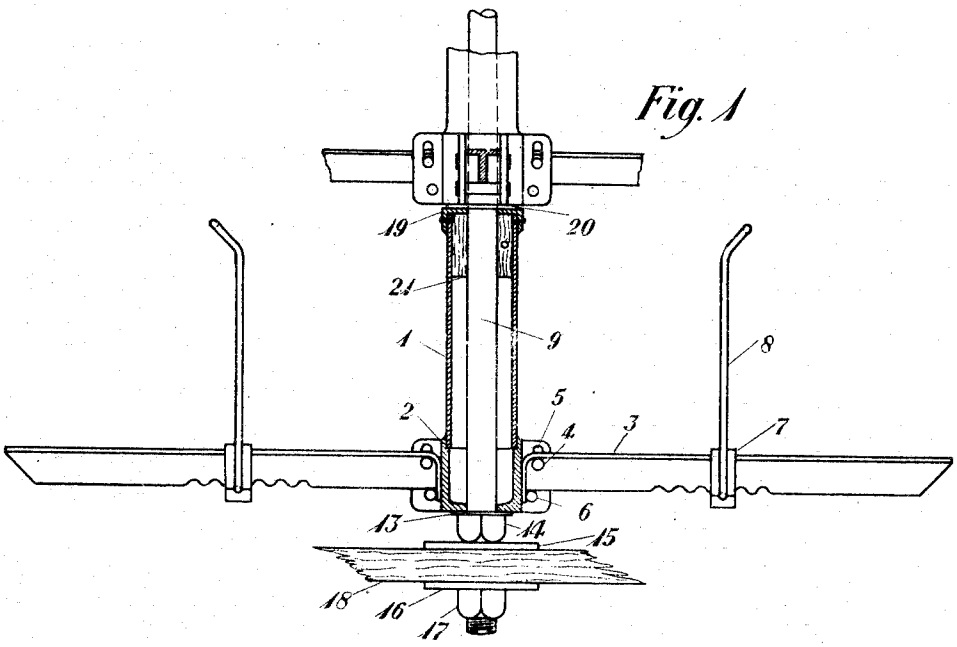
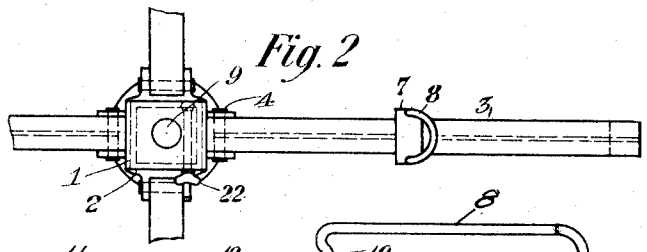


Fig. 2



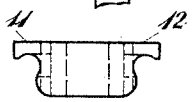


Fig. 7

Fig. 8

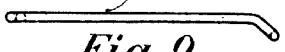


Fig. 9

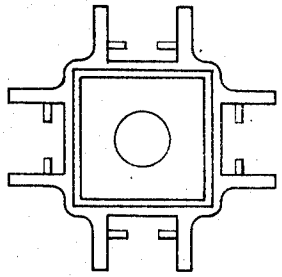


Fig. 3

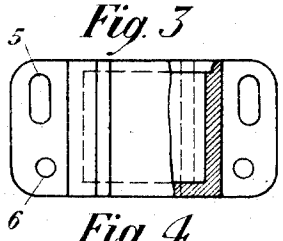


Fig. 4

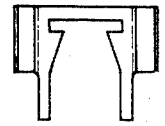


Fig. 5

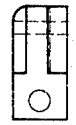


Fig. 6

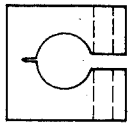


Fig. 10

INVENTORS.

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UNITED STATES PATENT OFFICE.

HERBERT A. McILWAIN, OF NORRISTOWN, PENNSYLVANIA, CLIFFORD J. WALTON, OF COLLINGSWOOD, NEW JERSEY, AND JOHN W. WRIGHT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO AMERICAN TELEPHONE AND TELEGRAPH COMPANY, A CORPORATION OF NEW YORK.

COLLAPSIBLE WIRE-REEL.

1,365,710. Specification of Letters Patent. Patented Jan. 18, 1921.

Application filed May 10, 1919. Serial No. 296,112.

To all whom it may concern:

Be it known that we, HERBERT A. McILWAIN, CLIFFORD J. WALTON, and JOHN W. WRIGHT, residing at Norristown, Collingswood, and Philadelphia, in the counties of Montgomery, Camden, and Philadelphia and States of Pennsylvania, New Jersey, and Pennsylvania, respectively, have invented certain Improvements in Collapsible Wire-Reels, of which the following is a specification.

This invention relates to reels and more particularly to a device for unreeling wire.

The device of this invention has been designed particularly for use in connection with the construction and maintenance of telephone, telegraph, or other types of wire lines. In emergency work on such systems and also in line construction where only a few circuits are to be run, it is often desirable to employ a reeling device especially designed for such work rather than the standard type of payout reel used for general construction purposes. Accordingly a cardinal feature of this invention consists in providing a reeling device which is collapsible, may be folded compactly, and may be stored and shipped with greater convenience and facility than former types. A further feature consists in providing a reel capable of being easily and quickly attached to a wagon, car, or other vehicle. Other phases of the invention will be clear from the detailed description.

A more complete understanding of the invention may be had from reference to the following description when taken in connection with the accompanying drawing in the figures of which is illustrated a preferred form of the invention.

In Figure 1 is shown a sectional view of a side elevation of the device and in Fig. 2 is illustrated a top plan view of the arrangements in Fig. 1. In Figs. 3 and 4 respectively are shown a top plan view and a sectional side elevation view of a base piece of the device. In Figs. 5 and 6 are shown side and end views of a bracket fitting on the arms of the device. Fig. 7 is a top plan view of the bracket. In Figs. 8 and 9 are views of the spreader attached to the bracket. In Fig. 10 is illustrated a top plan view of a braking device associated with the reel.

Similar reference numerals indicate corresponding parts in all the figures of the drawing.

Referring to Fig. 1 there is illustrated a center upright 1 preferably of square steel tubing, which is welded to a malleable casting 2 which forms a base for the upright. A top plan view of the base 2 is illustrated in Fig. 3 and shows the base as having a square body with two projecting members on each side. In each of these members is a slotted opening 5 below which is a fixed pin 6. Adapted to coact with the projecting members of the base piece are four steel arms, such as arm 3, which are of T section and serve to support the coil of wire. A steel pin 4 is fixed in the end of each arm and is adapted to slide in the slotted portions 5 of the projecting members of the base piece. The flat top portion of each of the four steel arms is bent over at the end and may be held between the side of the base 2 and fixed pin 6. When the arm 3 is extended at right angles to the center upright 1 it is held locked in such position by means of the steel pin 4 working in slot 5 and by the flat top portion of the arm 3 being engaged between the side of base 2 and the fixed pin 6. The arm 3 may be folded up into a position parallel with upright 1 by moving the arm upward while in a horizontal position until the bent flat top portion of the arm will clear the pin 6. Sufficient clearance is allowed in slot 5 to permit this. The arm may then be folded up into a position parallel to and alongside the center upright 1.

The under portion of each of the steel T section arms is fitted with a number of notches so that the bracket 7 may be securely fastened on the arm at different distances from the center upright; this factor of adjustability being desirable due to the variations in the sizes of the eye of the coils of wire used. The bracket as shown in Fig. 5 is grooved to fit the T section of the arm 3. In the sides of the bracket as shown in Fig. 6 are openings into which the ends of a spreader 8 are adapted to fit. The spreader 8 is illustrated in Figs. 8 and 9 and has a cam 10 at its lower extremity, which, when the spreader is in an upright position, will engage in the notches on the arm 3. In the top plan view of the bracket shown in Fig. 7 are shown two flanges 11 and 12 against

which the spreader will rest when in an upright position. The flanges are located on the side of the bracket nearest the center upright 1 and accordingly prevent the spreader from giving way in a direction toward the center of the coil of wire. The spreader however may be inclined in a direction away from the center upright thereby disengaging the cam from the notches and allowing the bracket to be moved along the arm to a desired position. When the arms 3 are folded in a position parallel to the center upright the spreader may also be folded flat along the arm thereby allowing the device to be compactly arranged for shipping or storage purposes.

To support the reel device and also to enable it to be fastened to a plant or the rear end of a vehicle a spindle 9 is provided, the lower end of which is threaded. The spindle 9 is inserted through the opening in the center of the base piece 2 and supports the base piece by means of a washer 13 and a nut 14. The device is shown as attached to a plank 18 by means of washers 15 and 16 and the nut 17. On top of center upright 1 is fitted a cap 19. The spindle is made sufficiently long to accommodate more than one reel at the same time. When more than one reel is attached to the spindle a washer 20 is added which acts as a bearing surface for the base piece of the second reel as illustrated in Fig. 1. The second reel is similar to the reel already described.

In order to regulate the speed with which the reel may operate and to insure that the wire may be paid out tautly if desired, the reel is provided with a braking device 21. The braking device 21 consists of a wood block fitting around the spindle inside of the square steel upright 1 and securely fastened to the upright. A top plan view of the brake is shown in Fig. 10 and illustrates the brake as having a slotted opening through which a bolt extends transversely. This bolt is fitted with a wing nut 22, as illustrated in Fig. 2. By adjusting the wing nut the width of the slotted opening of the brake may be varied thereby controlling the pressure of the wood block upon the spindle and providing a means for regulating the speed of revolution of the reel.

While the reel has been described specifically for use with wire, it is understood that it is capable of use with other material. Furthermore while the reel has been disclosed as embodied in certain specific arrangements, which have been deemed desirable, it is understood that it is capable of embodiment in many and widely varied forms without departing from the spirit of the invention as defined in the appended claims.

What is claimed is:

1. The combination with a suitable supporting device of a spindle, a square base piece fitting around said spindle, supporting arms of T section pivotally secured to said piece, a series of notches on the under portions of said arms, bracket members grooved to fit said arms, spreaders pivotally secured to said bracket members, and cams at the lower extremities of said spreaders and adapted to engage in said notches to lock said bracket members to said arms.

2. The combination with a suitable supporting device of a spindle, a base piece fitting around said spindle, supporting arms pivotally secured to said base piece, a series of notches on the under portions of said arms, bracket members movably secured to said arms, spreaders pivotally secured to said bracket members, cams at the lower extremities of said spreaders and adapted when said spreaders are in an upright position to engage in said notches to lock said bracket members to said arms, and flanges on said bracket members engaging said spreaders and preventing said spreaders from being pivoted toward said base piece.

3. The combination with a suitable supporting device of a spindle, a square base piece fitting around said spindle, supporting arms of T section pivotally secured to said base piece, a series of notches on the under portions of said arms, bracket members grooved to fit said arms, spreaders pivotally secured to said bracket members, cams at the lower extremities of said spreaders and adapted when said spreaders are in an upright position to engage in said notches to lock said bracket members to said arms, and flanges on said bracket members engaging said spreaders and preventing said spreaders from being pivoted toward said base piece.

4. The combination with a suitable supporting device of a spindle, a square center upright around said spindle, and a square base piece fitting about said spindle and attached to said upright, supporting arms of T section pivotally attached to said base, bracket members fitted on said arms, means to secure said bracket to said arms at different points, a spreader attached to each of said brackets, a braking device attached to said center upright and bearing against said spindle, and means to adjust said braking device.

In testimony whereof, we have signed our names to this specification this 5th day of May, 1919.

HERBERT A. McILWAIN.
CLIFFORD J. WALTON.
JOHN W. WRIGHT.