

(No Model.)

M. E. FRETWELL & L. W. HANNE.
WIRE REEL.

No. 540,731.

Patented June 11, 1895.

Fig. 1.

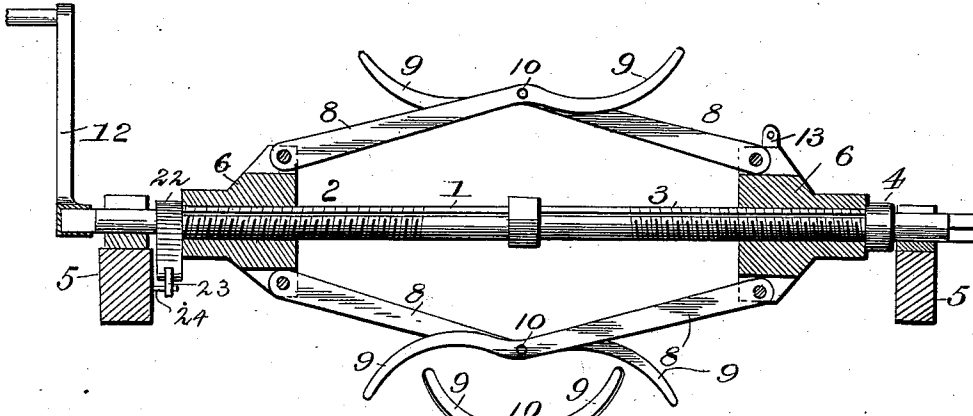


Fig. 2.

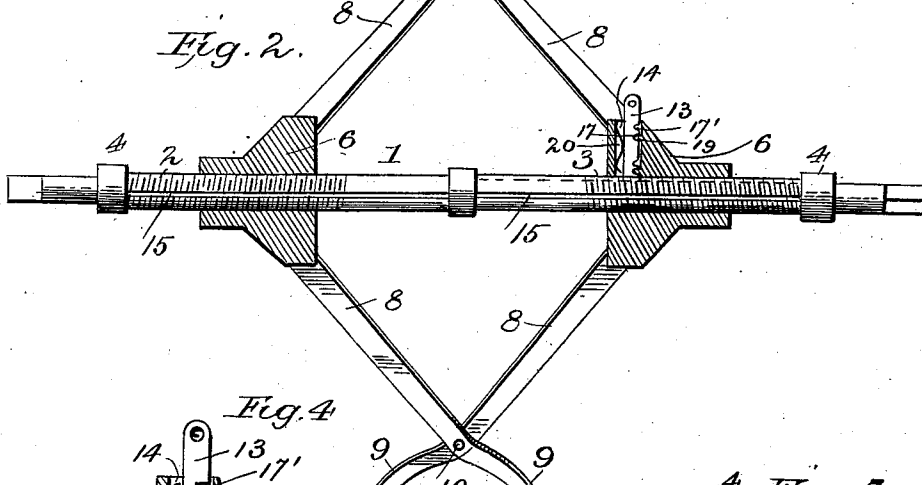


Fig. 4.

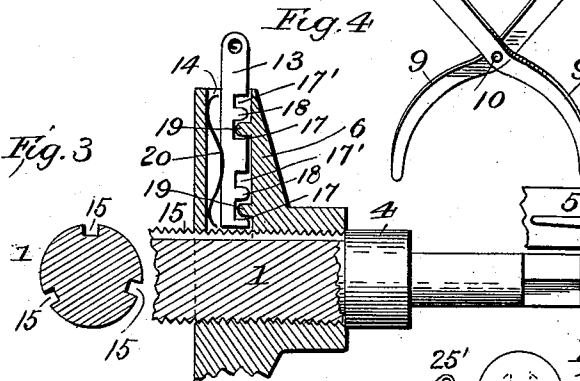


Fig. 3.

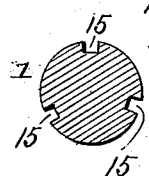


Fig. 5.

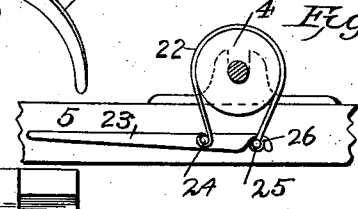
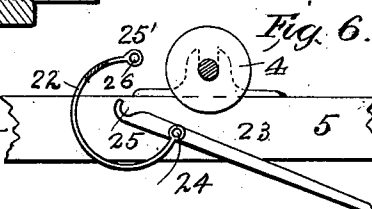


Fig. 6.



WITNESSES
F. L. Oyaraud.
A. J. Smith.

INVENTORS
Marcus E. Fretwell
Louis W. Hanne
By H. R. Willson
Attorney

UNITED STATES PATENT OFFICE.

MARCUS E. FRETWELL AND LOUIS W. HANNE, OF JACKSONVILLE, FLORIDA.

WIRE-REEL.

SPECIFICATION forming part of Letters Patent No. 540,731, dated June 11, 1895.

Application filed February 15, 1895. Serial No. 538,573. (No model.)

To all whom it may concern:

Be it known that we, MARCUS E. FRETWELL and LOUIS W. HANNE, citizens of the United States, residing at Jacksonville, in the county of Duval and State of Florida, have invented certain new and useful Improvements in Wire-Reels; and we 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.

Our invention has relation to wire reels and among the objects in view is to provide a reel, which is adapted to receive coils of wire of various dimensions and to hold the same securely when wound upon the reel, and the latter being also adapted to permit of the ready removal of the wire when desired.

A further object is to provide a reel of simple and inexpensive construction, and our invention consists in the novel construction, arrangement and combination of parts as hereinafter fully described, illustrated in the drawings and pointed out in the appended claims.

In the drawings, Figure 1 is a central vertical sectional view illustrating the hubs adjusted away from each other. Fig. 2 is a like view showing the hubs adjusted inwardly toward each other and showing the hub in a locked position. Fig. 3 is a cross-section through one of the threaded ends of the shaft, showing the longitudinal grooves therein. Fig. 4 is a detail sectional view, enlarged, showing the locking arrangement for the hubs. Figs. 5 and 6 are sectional detail views illustrating the brake device in its tightened and loosened positions, respectively.

Our present invention is an improvement upon the reel forming the subject matter of a prior application for patent made by Marcus E. Fretwell on December 4, 1894, Serial No. 530,788.

In carrying out our invention, we provide the shaft 1, which in the present instance is round instead of square as in the other arrangement, and we provide one end of the shaft 1 with a right hand screw thread 2 and the opposite end with a left hand screw thread 3. Each of these threads extends for about one third the length of the shaft between the collars 4, and the shaft is suitably supported in a support 5.

6 indicates the hubs of the reel, which are provided with bores threaded to correspond with the threads of the shaft and to the hubs are pivotally connected the arms 8 arranged in pairs around the hubs, as in the prior construction and terminating in curved fingers 9, between which the coils of wire are received. The arms 8 are pivotally connected together at their outer ends as seen at 10.

When it is desired to place coils of wire upon the reel, one end of the shaft is raised out of its support and the coil placed on the reel, after which the shaft is replaced in its bearings. Then hold the reel steady with one hand and turn the shaft by the crank 12 with the other hand until the hubs approach each other sufficiently to cause the reel to center itself perfectly in the coil. The crank is adapted to be applied to either end of the shaft.

In order to lock the hubs in their adjusted position we employ locking means for each of said hubs as shown, which consists of a bolt or pin 13 arranged within a recess 14 in the hub and whose lower end is adapted to engage within any one of a series of grooves 15, provided in the shaft ends and running the full length of the threaded portions. One edge of the pin is provided with recesses 17, 17' and intermediate rounded projections 18, while the face of the hub within the recess is provided with projecting studs or pins 19. The pin 13 is actuated by a spring 20 to cause the studs 19 to engage within the recesses 17 when the pin is out of engagement with the grooves in the shaft.

When it is desired to lock the hubs in position, the shaft is turned sufficiently to bring one of the grooves directly beneath the pin, when by pressing downwardly upon the pin, the projections 18 ride over the projections 19, whereby the latter will engage with the recesses 17' and the lower end of the pin be engaged within the groove of the shaft.

To release the hub, the pin will be drawn upwardly to cause its lower end to free the groove and the projections 18 ride past the projections 19, which latter then again engage the recesses 17.

For the purpose of preventing the revolution of the reel when this may be desired, we may employ any suitable brake mechanism,

as for instance, a steel band 22 adapted to encircle one end of the shaft or the collar thereon, preferably the latter, one end of the band and a lever 23 being loosely bolted at 24 to the support 5 for the reel. One end of the lever has a slot 25 and when the said end is passed through a slot 25' in the band, said slot 25 is adapted to engage a bolt 26 in the end of the band, so that by pulling upward upon the lever, the band is tightened around the collar. When the lever is in the position seen in Fig. 5, the band will be tight around the collar and by pressing downwardly upon the lever, the end will release the bolt 26 and move out of the slot, when the band will spring open into the position seen in Fig. 6.

What we claim, and desire to secure by Letters Patent, is—

1. In a reel, the combination with a support and a shaft mounted therein and having oppositely threaded portions, of hubs provided with threaded bores corresponding to and engaging the threads of the shaft, arms arranged in pairs and pivotally connected at one end with the hubs, the arms of each pair being pivoted together toward their outer ends, and fingers carried by the said arms adapted to receive coils of wire, as described.

2. In a reel, the combination with a support and a shaft mounted therein and having oppositely threaded portions, of hubs provided with threaded bores corresponding to and engaging the threads of the shaft, arms arranged in pairs and pivotally connected at one end with the hubs, fingers carried by the said arms, and means for locking the hubs in their adjusted positions, comprising a movable pin carried by a hub, and adapted to engage with a groove in the shaft, said pin being provided with recesses and an intermediate projection

or stud, and a projection or stud on the hub adapted to engage in one or the other of the recesses in the manner described.

3. In a reel, the combination with a support and a shaft mounted therein and having oppositely threaded portions, of hubs provided with threaded bores corresponding to and engaging the threads of the shaft, arms arranged in pairs and pivotally connected at one end with the hubs, fingers carried by the said arms, and means for locking the hubs in their adjusted positions, comprising a radially movable pin arranged within a recess in the hub, the shaft having longitudinal grooves, with which said pin is adapted to engage, and said pin being provided in one edge with recesses, a projection or stud arranged between said recesses and having a rounded end, and a rounded projection or stud on the hub within its recess adapted to engage in one or the other of the recesses in the pin, and a spring operating upon the pin to effect the engagement of the projection on the hub with a recess of the pin, for the purpose specified.

4. In a reel, the combination with the reel shaft, a support therefor, a collar on said shaft, a band adapted to encircle said collar and provided at one end with a slot and bolt and the opposite end of said band being secured to the said support, and a lever pivotally connected to the latter and adapted to engage with the bolt of the band, as and for the purpose specified.

In testimony whereof we affix our signatures in presence of two witnesses.

MARCUS E. FRETWELL.
LOUIS W. HANNE.

Witnesses:

CLAUDE L'ENGLE,
M. A. FRAZEE.