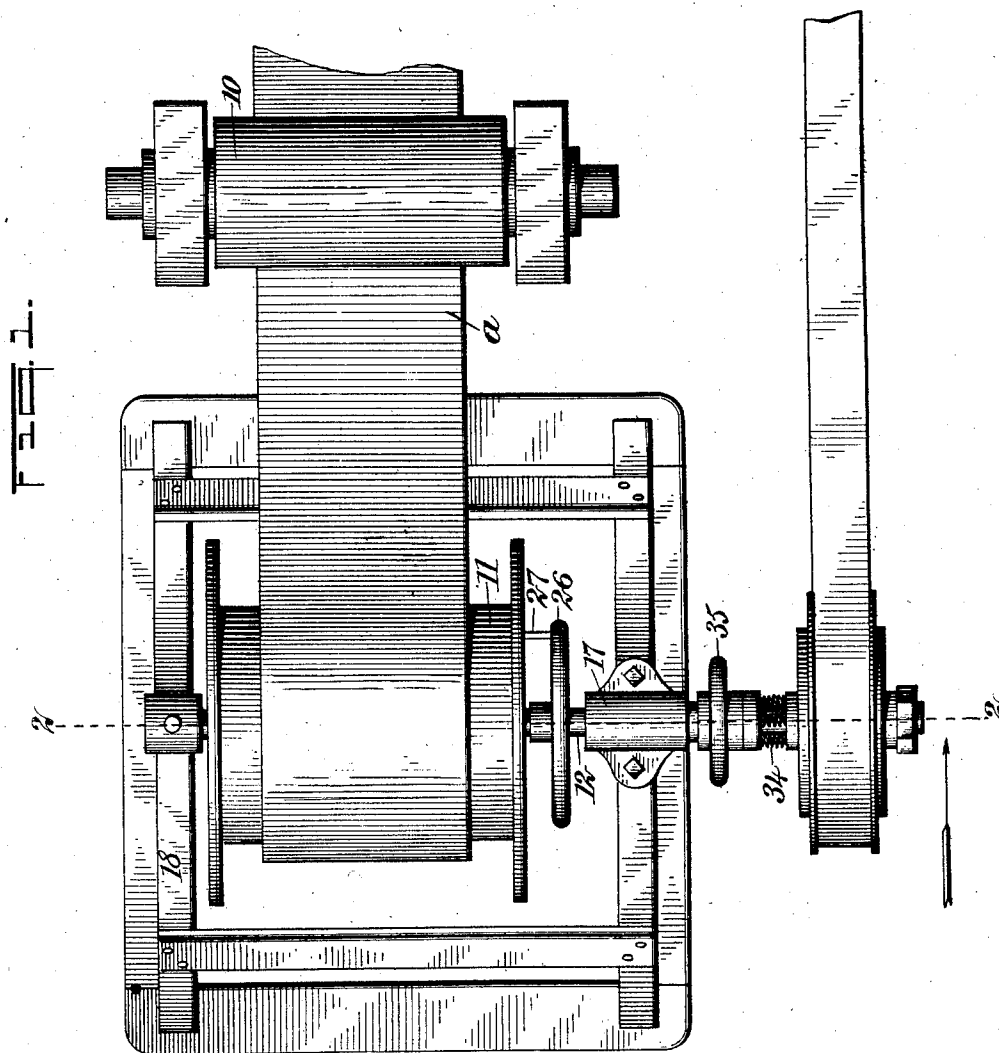


No. 832,974.

PATENTED OCT. 9, 1906.

W. Y. HUNT.
REELING MECHANISM.
APPLICATION FILED FEB. 4, 1905.

2 SHEETS—SHEET 1.



WITNESSES:

W. Y. Hunt

Isaac H. Owens

INVENTOR

Walter Y. Hunt

BY

Mumford

ATTORNEYS

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2 SHEETS—SHEET 2.

FIG. 2.

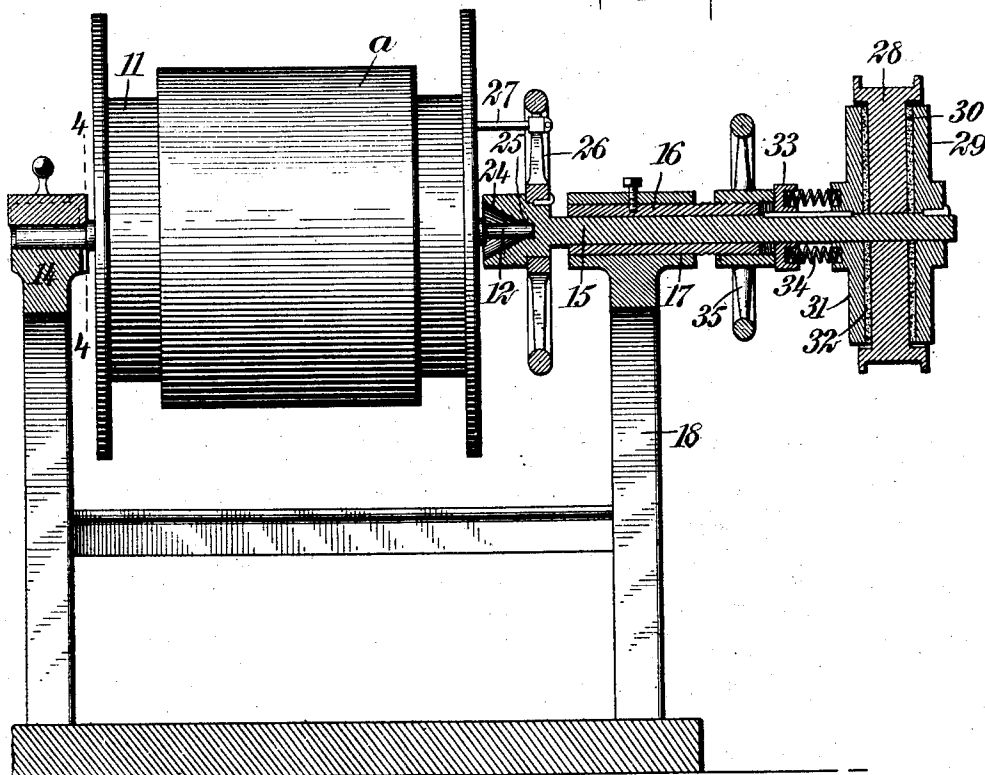
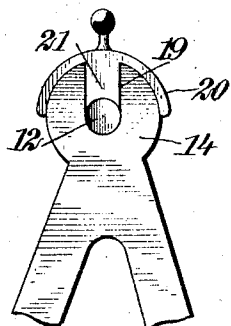


FIG. 3.

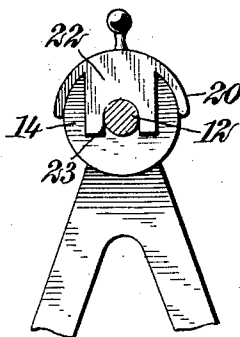


WITNESSES:

W. B. Owens

W. B. Owens

FIG. 4.



INVENTOR

Walter Y. Hunt

BY

W. B. Owens

ATTORNEYS

UNITED STATES PATENT OFFICE.

WALTER YOAMAN HUNT, OF BROOKLYN, NEW YORK, ASSIGNOR TO
WILLIAM J. IRWIN, OF HOBOKEN, NEW JERSEY.

REELING MECHANISM.

No. 832,974.

Specification of Letters Patent.

Patented Oct. 9, 1906.

Application filed February 4, 1905. Serial No. 244,183.

To all whom it may concern:

Be it known that I, WALTER YOAMAN HUNT, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Reeling Mechanism, of which the following is a full, clear, and exact description.

The invention relates to a mechanism for driving reels and the like by which to compensate for the increasing speed with which the material is drawn to the reel, due to the gradually-increasing amount of material wound on the reel. It is particularly useful in connection with tin-foil mills. In these mills it is customary to mount a driven reel adjacent to the mill, so as to take the tin-foil from the mill as soon as it is formed, and with such mechanism the tin-foil is frequently broken, owing to the increasing pull which is exerted thereon by the mill as the foil accumulates on the same. My invention seeks to overcome this disadvantage, and I attain the desired end by means of a friction-drive, which permits a slippage in the driving movement and insures a uniform as contradistinguished from an increasing pull on the foil.

The invention involves various features of construction and arrangement, which will be fully set forth hereinafter and pointed out in the claims.

Reference is to be had to the accompanying drawings, which illustrate, as an example, the preferred embodiment of the invention, in which drawings like characters of reference indicate like parts in the several views, and in which—

Figure 1 is a plan view of the reeling mechanism, showing it juxtaposed to the rolls of a tin-foil mill. Fig. 2 is a vertical section on the line 2 2 of Fig. 1. Fig. 3 is an outer side elevation of one of the bearings of the reel, showing the lock-plate thereon. Fig. 4 is an inner side elevation of the same parts with the reel-arbor in section on the line 4 4 of Fig. 2.

In Fig. 1, 10 indicates one of the rolls of a tin-foil mill, and α in Figs. 1 and 2 indicates the foil which is passing therefrom and being wound on the reel 11, juxtaposed to the mill, as shown in Fig. 1. Said reel is provided with an arbor or axle 12, which projects beyond the ends of the reel, one end of the

arbor being mounted in a box 14 and the other end of the arbor being mounted loose in a shaft 15, which in turn is mounted in a sleeve 16, carried securely in a box 17. The boxes 14 and 17 are mounted on a suitable frame 18. Said box 14 has a vertical slot 19, receiving the shaft 12, the arrangement being such that said shaft may be dropped into the box. On top of the box lies loosely a lock-plate 20, and this plate is provided with a lug 21, which enters the slot 19 and rests on the shaft 12, as shown. The plate is also provided at the inner side with a flange 22, which is formed with a slot 23, that straddles the shaft 12, and the flange bears between the box 14 and a shoulder on said shaft.

The shaft 15 has a conical opening 24 in the end adjacent to the reel, and said end is enlarged, as shown. At the inner part or apex of the conical opening 24 the shaft is provided with a cylindric bore or cavity 25. The reel is mounted in these parts so that it may readily be removed, and to replace the reel one end of the shaft 12 should be entered into the conical opening 24, the reel being then disposed with its axis diagonal to the shaft 15, and the reel should then be dropped into horizontal position and said end of the shaft simultaneously entered into the bore 25, the other end of the shaft being dropped into the bore 14. The reel should then be moved rightward (referring to Fig. 2) until it assumes the position shown in said view, and then the lock-plate 20 should be dropped into place, engaging the shoulder on the shaft of the reel and preventing the reel from being displaced. The shaft 15 drives the reel, and for this purpose it is provided with a wheel 26, having an arm 27 projecting laterally therefrom and engaging the reel, as shown.

The shaft 15 projects beyond the sleeve 16 and carries loosely a flanged driving-pulley 28, which is intended to be driven continuously by a belt or any other desired means. At the outer side of the pulley is located a friction-disk 29, keyed to the end of the shaft. If desired, a friction-plate 30 may be interposed between the parts 28 and 29, as shown. Located at the inner side of the pulley 28 is a friction-disk 31, which is splined on the shaft 15 and between which and the pulley may be interposed, if desired, a fric-

tion-plate 32. A collar 33 is splined on the shaft 15 inward of the disk 31, and springs 34 are interposed between said collar and said disk. The collar 33 is engaged by the hub of a wheel 35, which is threaded on the stationary sleeve 16. By operating the wheel 35 and moving it toward or from the disk 31 the tension of the springs 34 may be increased or diminished, as desired, and these springs will press the parts 28, 31, and 29 together to a degree dependent upon the tension of the springs, and this tension is regulatable by means of the hand-wheel 35. It is in this manner that the shaft 15, and consequently the reel, is driven through friction, and the friction devices allow a constant slippage of the reel, which will enable it to exert an unvarying tension on the foil, such tension being controlled by the tension of the springs 34. In the organized operation of the invention, therefore, after the reel has been placed in position the operator should determine the tension which the reel is to exert upon the foil and the hand-wheel 35 should be operated to establish the necessary friction between the shaft 15 and the pulley 28. The pulley 28 should then be started, and the reel will turn at the inception of the operator at the same speed that the pulley 28 is turning. When, however, the foil accumulates on the reel sufficiently to vary the pull which would be exerted on the foil, the friction devices begin to slip and the reels fall back of the pulley 28, thus not increasing the pull on the foil. The device may be set from time to time by operating the hand-wheel or other nut 35 so as to increase or diminish the tension exerted on the foil when desired.

Various changes in the form, proportions, and minor details of my invention may be resorted to at will without departing from the spirit and scope thereof. Hence I consider myself entitled to all such variations as may lie within the terms of my claims.

Having thus described the preferred form of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of an open bearing, a driving-shaft having a tapering opening with a bearing-bore at its inner end, a reel having one end of its shaft mounted in the

open bearing and the other end mounted in said bearing-bore of the drive-shaft, and means connecting the drive-shaft with the reel.

2. The combination of an open bearing, a driving-shaft having a tapering opening with a bearing-bore at its inner end, a reel having one end of its shaft mounted in the open bearing and the other end mounted in said bearing-bore of the drive-shaft, means connecting the drive-shaft with the reel, and a locking device mounted on the open bearing.

3. In a reeling mechanism, the combination of a reel adapted to have the material wound thereon, the reel having journals at its ends, means for loosely mounting one of said journals, an open bearing adapted to receive the other journal, and a lock-plate adapted to lie between said bearing and the reel, the lock-plate having a rib entering the open bearing above the journal therein.

4. In a reeling mechanism, the combination of an open bearing, a driving-shaft having a tapering opening with a bearing at its inner end, a reel having one of its journals fitted in the open bearing and the other journal mounted in said bearing of the drive-shaft, means connecting the drive-shaft with the reel to drive the latter from the former, and a lock-plate fitting between the open bearing and the reel.

5. In a reeling mechanism, the combination of an open bearing, a driving-shaft having a tapering opening with a bearing at its inner end, a reel having one of its journals fitted in the open bearing and the other journal mounted in said bearing of the drive-shaft, means connecting the drive-shaft with the reel to drive the latter from the former, and a lock-plate fitting between the open bearing and the reel, the said lock-plate having a rib projecting into the open bearing above the journal therein.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALTER YOAMAN HUNT.

Witnesses:

AUGUST HORN,
JAS. McCAMMOND.