

April 18, 1933.

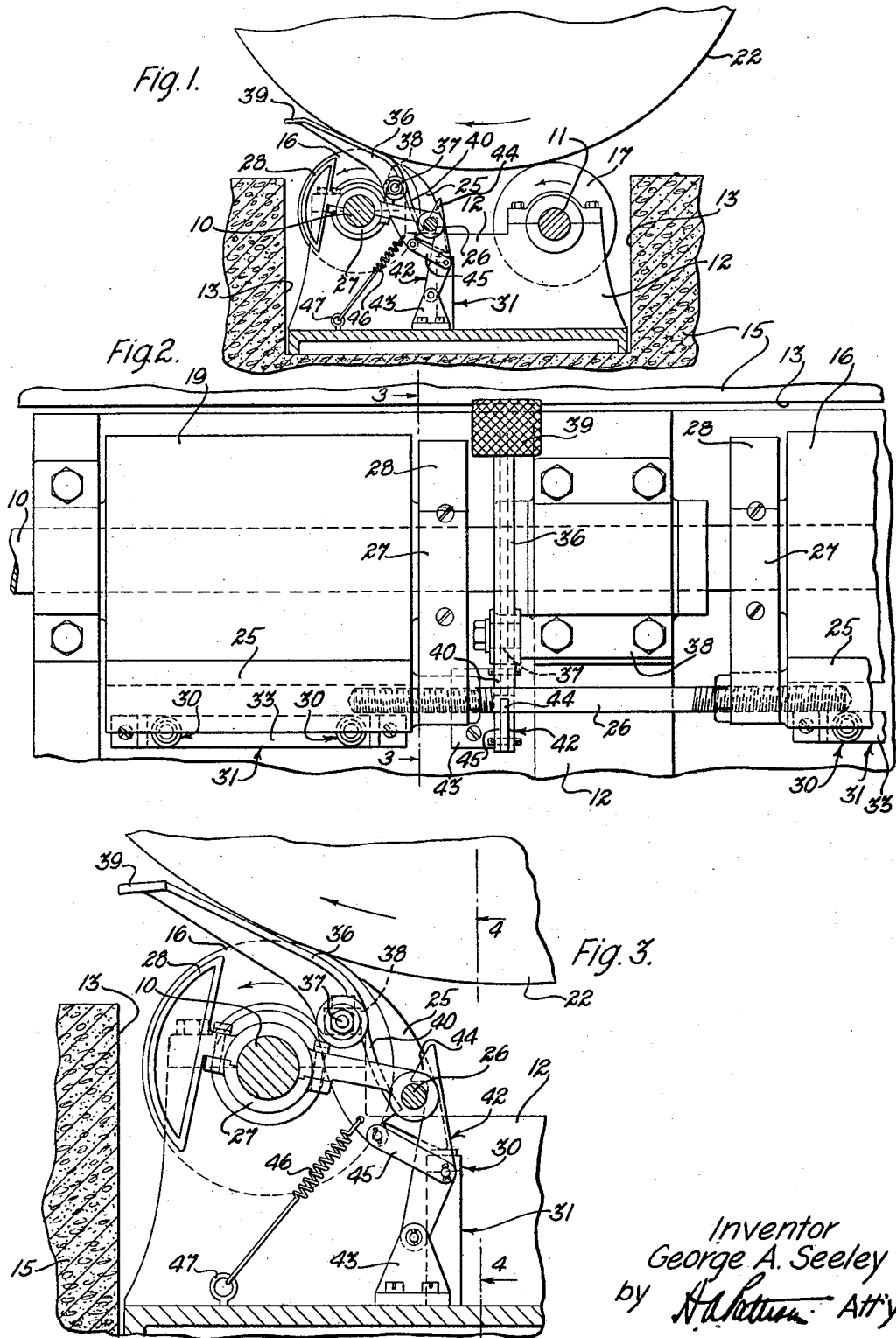
G. A. SEELEY

1,904,255

DEVICE FOR HANDLING REELS

Filed June 4, 1928

2 Sheets-Sheet 1



Inventor  
George A. Seeley  
by *H. H. Peterson* Att'y.

April 18, 1933.

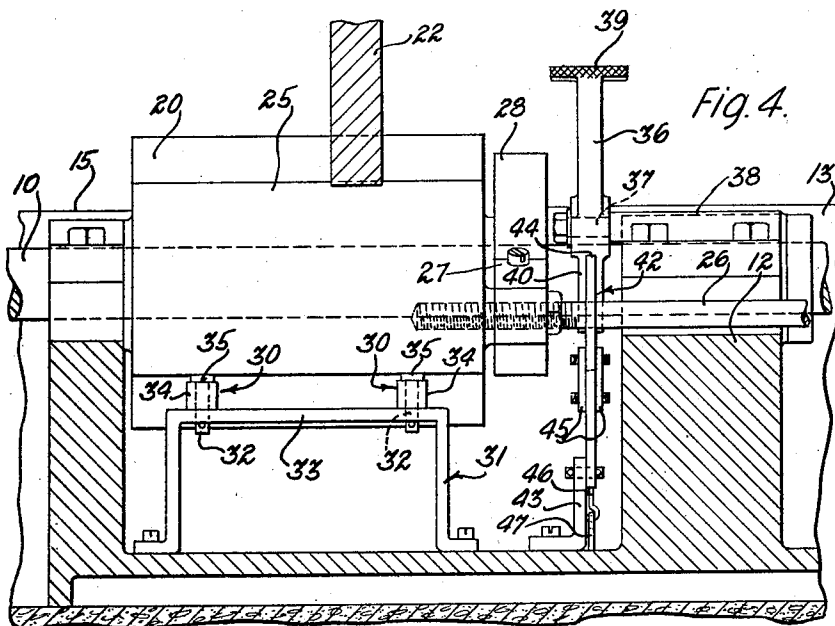
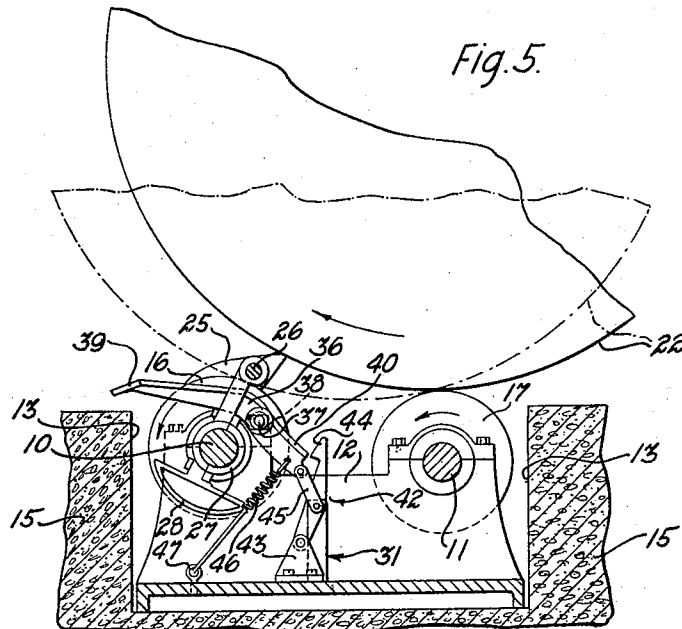
G. A. SEELEY

1,904,255

DEVICE FOR HANDLING REELS

Filed June 4, 1928

2 Sheets-Sheet 2



Inventor  
George A. Seeley  
by *H. Patterson* Att'y.

# UNITED STATES PATENT OFFICE

GEORGE ALLEN SEELEY, OF IRVINGTON, NEW JERSEY, ASSIGNOR TO WESTERN ELECTRIC COMPANY, INCORPORATED, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK

## DEVICE FOR HANDLING REELS

Application filed June 4, 1928. Serial No. 282,729.

This invention relates to a device for handling reels, and has for its principal object to provide a simple and inexpensive device for readily and conveniently handling heavy reels and the like.

In accordance with the general features of the invention, there is provided in one embodiment thereof a device for readily and conveniently disengaging heavy reels from operative association with a plurality of cooperating driving rolls. In its preferred form, the device comprises a pair of crescent-shaped wedge members which are adapted to be inserted between the reel heads and the engaging surfaces of rolls disposed on one side of the reel by means of a cam carried at one end of a pivotally mounted foot lever, whereby the reel is rolled over the centers of oppositely disposed rolls and is thereby discharged. Means is provided for preventing the accidental operation of the device when the foot lever is not operated.

Other features and advantages of the invention will become apparent from the following detailed description, reference being had to the accompanying drawings, wherein

Fig. 1 is a fragmentary vertical section, partly in elevation, showing one form of driving rolls with a device embodying the features of the present invention associated therewith;

Fig. 2 is a fragmentary plan view of the structure shown in Fig. 1;

Fig. 3 is an enlarged fragmentary section taken on line 3—3 of Fig. 2;

Fig. 4 is a fragmentary vertical section taken on line 4—4 of Fig. 3, and

Fig. 5 is a view similar to Fig. 1 with the improved device illustrated in its operative position.

Referring now to the drawings wherein like reference numerals designate corresponding parts throughout the several views, it will be observed that a pair of horizontally disposed rotatable shafts 10 and 11 are suitably journaled in a supporting frame 12 mounted within a pit 13 formed in a concrete slab, a portion of which is indicated at 15. A pair of oppositely disposed driving rolls 16 and 17 (Figs. 1 and 3) are keyed

to the shafts 10 and 11, respectively, so as to be rotatable therewith. A second pair of driving rolls 19 and 20 (Figs. 2 and 4) are also keyed to the shafts 10 and 11, respectively, and are suitably spaced from the first pair of rolls. These driving rolls are all positively driven in the same direction in any convenient manner from any suitable source of power (not shown) and are preferably of sufficient length to accommodate reels of various sizes. In order to conserve space, only a portion of a reel 22 is illustrated in the drawings. When operatively associated with the driving rolls the axis of the reel is parallel to the axes of the rolls, one head of the reel being engaged by the rolls 16 and 17 and its opposite head being engaged by the rolls 19 and 20. The driving rolls are preferably positioned and arranged so that only relatively small portions thereof project above the floor level, the rolls 17 and 20 being disposed slightly below the rolls 16 and 19 in order to facilitate the mounting and removal of the reel. As indicated by the arrows in Figs. 1, 3 and 5 of the drawings, the rolls 16, 17, 19 and 20 are all driven in a counter-clockwise direction, whereby the reel 22 associated therewith is rotated in a clockwise direction.

The above described driving rolls are commonly employed for driving large heavy reels when paying off or taking up wire, cable, etc. In accordance with the present invention, a simple and efficient device is provided for disengaging the reel from operative association with the driving rolls. Associated with each of the rolls 16 and 19 is a crescent-shaped wedge member 25 which preferably extends across the full length of the roll as best shown in Figs. 2 and 4. The wedge members 25 are secured to opposite ends of a horizontally disposed cross bar 26 and are shaped to conform with the peripheral surfaces of the rolls, the tapered ends thereof pointing upwardly as best shown in Figs. 1, 3 and 5. The cross bar 26 is rotatably journaled in suitable bearings formed at one end of rotatable members 27, 27 having enlarged semi-circular hollow portions 28, 28 formed at their opposite ends. The members 27 are rotatably supported in-

intermediate their ends upon the shaft 10, the enlarged end portions 28 thereof serving to partially counterbalance the weight of the wedge members 25.

5 The wedge members 25 normally rest upon a pair of resilient stop members 30, 30 supported upon a bracket 31 secured to the frame 12. Each of these stop members comprises a plunger 32 which is vertically slidable in a horizontal portion 33 of the bracket 31 (Fig. 4). A soft rubber block 34 is interposed between an enlarged head 35 of the plunger 32 and the portion 33 of the bracket 31.

15 A foot lever 36 is pivotally supported intermediate its ends upon a reduced circular portion 37 of a bar 38 suitably secured to the supporting frame 12. A suitable foot pedal 39 formed at one end of the lever 36 is positioned within convenient reach of the operator. An arcuate cam portion 40 formed upon the opposite end of the foot lever slidably engages the cross bar 26 when the foot lever is depressed whereby the wedge members 25 are moved in a counter-clockwise direction and are wedged between the reel and the peripheral surfaces of the rolls 16 and 19. As the wedge members continue to move in a counter-clockwise direction due to the rotation of the rolls 16 and 19, the reel is disengaged from these rolls and is moved over the centers of the rolls 17 and 20 from which it rolls on to the surface of the floor. The wedge members 25, being considerably heavier than the counterweights 28, are returned by gravity to their normal positions, striking the shock absorbing stop members 30.

The means for preventing the accidental operation of the device comprises a latch member 42 pivoted at one end to a bracket 43 and having a lip portion 44 formed at its opposite end (Fig. 3). The lip portion 44 normally engages the cross bar 26 whereby the wedge members are locked against movement in a counter-clockwise direction. The latch member 42 is pivotally connected intermediate its ends to one end of a pair of links 45 (Fig. 3), the opposite ends of which are pivotally connected to the end of the foot lever 36. The arrangement is such that the latch member 42 is disengaged from the cross bar 26 when the foot lever is depressed, thus permitting the movement of the wedge members. A tension spring 46 serves to restore the foot lever 36 and the latch member 42 to their normal positions after each operation of the device. The spring 46 is connected at one end to the foot lever and fastened at its opposite end to an eye-bolt 47 secured to the frame 12.

60 From the foregoing it will be understood that by employing the improved device heavy reels and other similar objects may be very readily and conveniently disassociated from the driving rolls with a minimum amount of effort on the part of the operator. It should be understood, also, that the novel features

of the invention are capable of various other applications and that the invention should be limited only by the scope of the appended claims.

What is claimed is:

70 1. A device for handling reels comprising a crescent-shaped wedge member for engaging a head of a reel, an actuating lever having an arcuate cam portion movable into operative engagement with the member for effecting an operative engagement of the wedge member with the head of the reel to cause a movement of the reel, a pivoted latch member associated with the wedge member and operated by the actuating lever for normally preventing movement of the wedge member, and common means for restoring the actuating lever and the latch member to their normal positions after each operation of the device. 85

2. A device for handling reels comprising a pair of crescent-shaped rotary wedge members, and a pivoted lever having an arcuate cam portion engaging the wedge member and effective upon a movement of the lever for rotating and causing engagement of the wedge members with the heads of the reel to cause an upward movement of the reel. 90

3. In an apparatus for supporting and driving reels, a friction driving roll engaging a head of the reel, a member movable about the axis of the roll and between the peripheries of the roll and the reel for disengaging a reel from the driving roll, and an actuating lever contacts with the movable member for moving the member to cause the reel to be ejected from the apparatus. 95 100

4. In an apparatus for supporting and driving reels, a friction driving roll engaging a head of the reel, a crescent-shaped wedge member movable therebetween for disengaging the reel from the driving roll, an actuating lever having a cam portion movable into operative engagement with the member effective upon an actuation of the lever for causing a movement of the wedge member, and a latch mechanism associated with the wedge member for normally preventing movement thereof. 105 110

5. In an apparatus for supporting and driving reels, a pair of oppositely disposed friction driving rolls engaging a head of the reel, a support rotatable coaxially with one of the rolls, a wedge member carried thereby, and means for moving the wedge member between the head of the reel and one of the rolls whereby the reel is disengaged from said roll and moved over the center of the oppositely disposed roll. 115 120

6. In an apparatus for supporting and driving reels, a pair of oppositely disposed friction driving rolls engaging a head of the reel, a support rotatable coaxially with one of the rolls, a crescent-shaped wedge member pivotally carried thereby, an actuating lever 125 130

having an arcuate cam portion for rotating the support to insert the wedge member between the head of the reel and one of the rolls whereby the reel is disengaged from  
5 said roll and moved over the center of the oppositely disposed roll, and a latch mechanism operated by the actuating lever for controlling the movement of the wedge member.

7. A device for handling reels comprising  
10 a rotary wedge member for engaging the periphery of a reel, an actuating lever provided with a cam portion contacting with the wedge member and effective upon an actuation of the lever for rotating the wedge mem-  
15 ber into engagement with the periphery of the reel for bodily moving the reel to eject the same from the apparatus.

8. In an apparatus for handling reels, a roller for peripherally engaging and driv-  
20 ing a reel, a rotatable member movable about the center of the roller, a wedge member pivoted to the rotatable member movable about the periphery of the roller, and pivoted means for wedging the wedge member be-  
25 tween the peripheries of the reel and the roller to disengage the reel from the roller.

In witness whereof, I hereunto subscribe my name this 16th day of May A. D., 1928.

GEORGE ALLEN SEELEY.

30

35

40

45

50

55

60

65