No. 636,242. Patented Nov. 7, 1899.

J. C. CROMWELL.

ROD REEL.

(Application filed Oct. 24, 1898.)

(No Model.) 3 Sheets—Sheet 1.

Fig. 1.

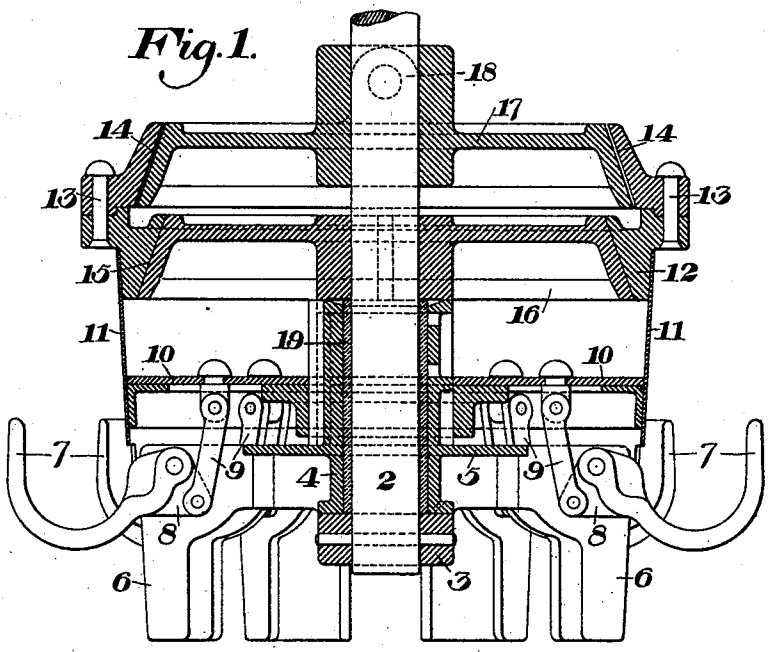
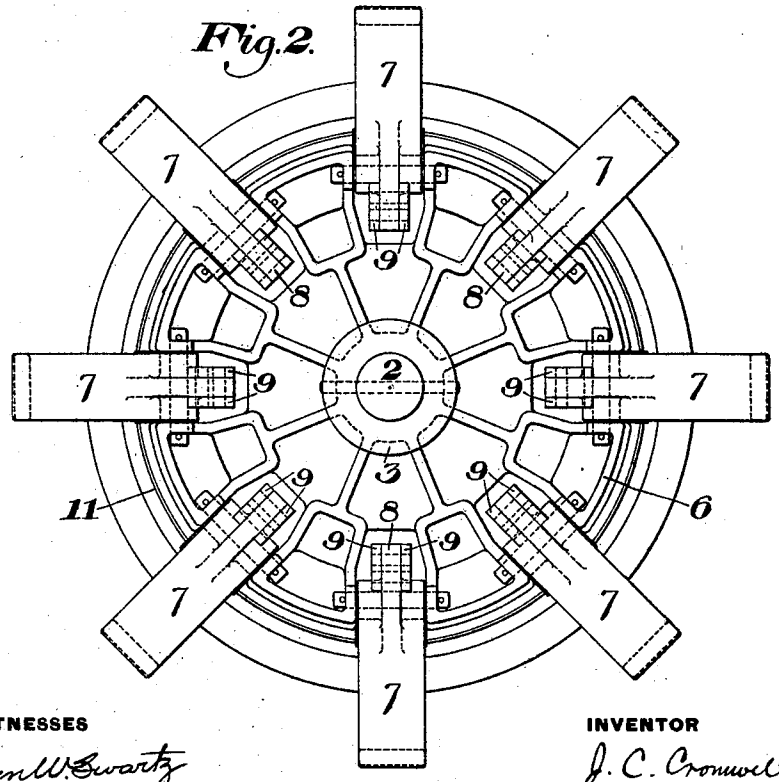


Fig. 2.



WITNESSES

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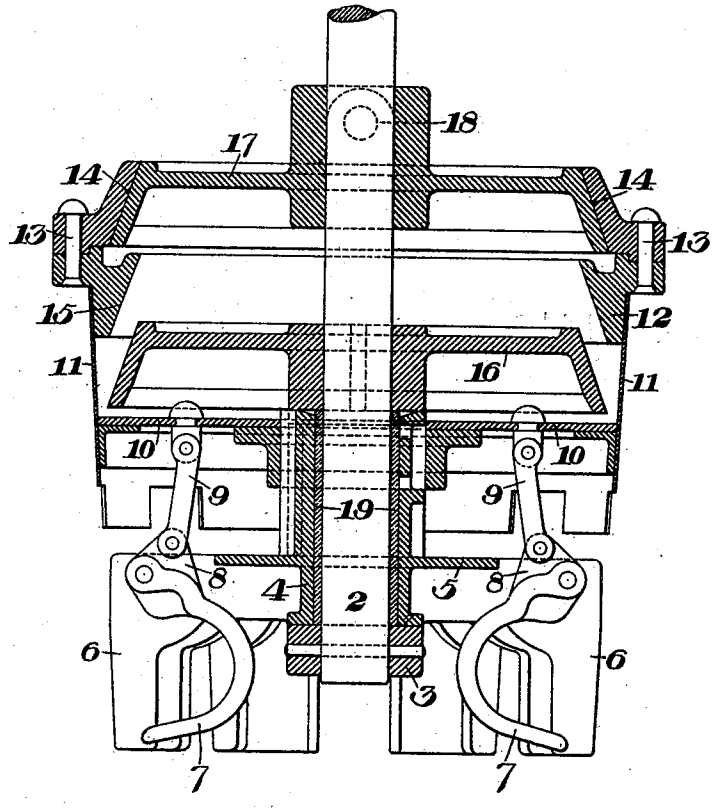
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Fig. 3.



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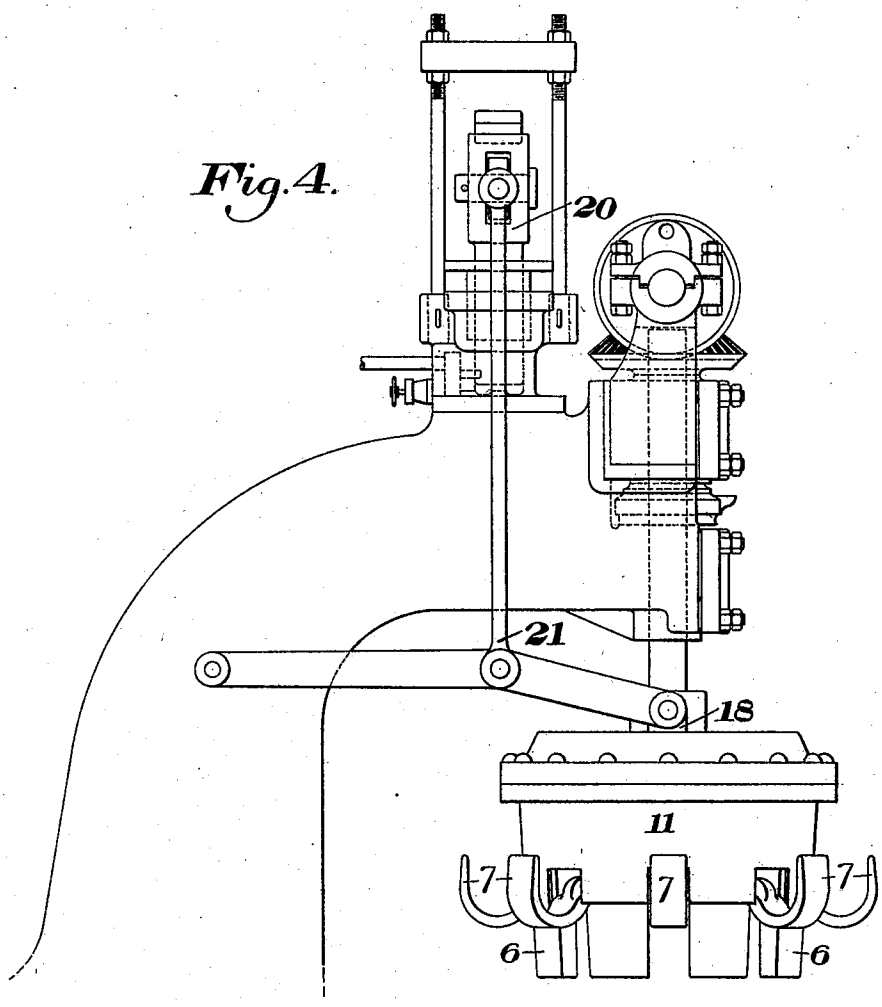
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Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN C. CROMWELL, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF TO WILLIAM GARRETT, OF SAME PLACE.

ROD-REEL.

SPECIFICATION forming part of Letters Patent No. 636,242, dated November 7, 1899.

Application filed October 24, 1898. Serial No. 694,392. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. CROMWELL, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Improvement in Rod-Reels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section of my improved reel, showing the hooks extended and ready to receive the wire rod. Fig. 2 is a bottom plan view of the same. Fig. 3 is a view similar to Fig. 1, but showing the hooks retracted; and Fig. 4 is a side elevation showing the preferred means for raising and lowering the brake-wheel.

My invention relates to that class of wire-rod reels wherein a series of hook-shaped fingers are held in position to receive the coil and are then retracted, so as to discharge it; and it is designed to prevent the accidental holding of the coil by one or more of the hooks when retracted, to provide an improved brake and actuating connections for the reel, and generally to strengthen and improve its construction.

In the drawings, 2 represents a vertical driven shaft having the ring 3 pinned or otherwise secured to its lower end. Surrounding the shaft and resting upon this ring is the sleeve 4, having cast integral therewith the plate 5, which is provided with a depending annular flange 6, slotted at intervals throughout its circumference. Pivoted within each slot in this stripper-plate is a swinging hook 7, the shank of which is provided with a projecting lug 8, connected by pivotal link 9 with an annular plate 10, which is arranged to slide vertically upon the sleeve 4 and is provided with a keyway connection therewith. The plate 10 is secured to a vertical depending shield-plate 11, carried by a friction drum or ring 12. This friction-ring 12 consists of two horizontally-divided parts secured together by bolts or rivets 13 and is provided with two inner beveled or inclined friction-surfaces 14 and 15. A friction-wheel 16 is secured to the shaft and arranged to drive the ring or drum 12 whenever the drum is lowered thereon. To raise the friction-ring out of contact, I provide a friction brake-wheel 17, which is arranged to contact with the surface 14 and may be raised and lowered by a suitable hydraulic motor 20, having connections 21 to lugs 18 upon the hub of this wheel. A brass sleeve 19 is preferably employed, which prevents the friction-disk 16 from bearing upon and clamping the hub 4.

The operation is as follows: The shaft being constantly driven, when the wire rod is to be coiled the friction-ring 12 is lowered into contact with the wheel 16 and being rotated thereby gives a rotary motion to the hooks and the stripper-plate, the hooks being forced out into their operative position by the lowering of the friction-ring. When the rod is coiled, the hydraulic motor being actuated to lift the brake-wheel 17, the friction-ring 12 is thereby lifted from the wheel 16 and the stationary brake-wheel 17 slows down and stops the rotatory motion, the hooks having been retracted automatically as the friction-wheel 12 is lifted. As the hooks move in through the slots in the stripper-plate the coil of rod will drop freely from them.

The advantages of my invention will be apparent to those skilled in the art. By using the stripper-plate, through slots in which the hooks are moved, the coil is positively stripped from these hooks as they move in, where formerly the coil was liable to be caught and held by one or more of these hooks. By the use of the brake-wheel, located as shown, the braking action occurs simultaneously with the retraction of the hooks, while the vertical movement of this brake-wheel itself severs the actuating connections between the continuously-driven shaft and the reel.

Other mechanism may be provided for moving the hooks in or out, and many other variations may be made without departing from my invention, since

I claim—

1. A rod-reel, having a series of movable hook-shaped fingers arranged to receive the coil, a stripper-plate, and mechanism for withdrawing the rod-receiving portions of the fingers through the plate, to strip the coil from said fingers; substantially as described.

2. A rod-reel having a friction-wheel secured to the driven shaft, a vertically-mov-

able friction-ring having the same axis as and arranged to connect with and be driven by the said wheel, hook-shaped fingers arranged to receive the rod, and connections between the fingers and the friction-ring arranged to move them in and out upon its vertical movement; substantially as described.

3. A rod-reel, having a friction-wheel secured to a driven shaft, a vertically-movable friction-drum arranged to contact with the friction-wheel and be driven thereby, a friction brake-wheel arranged to contact with the friction-drum and raise and lower it, and means for moving the brake-wheel vertically; substantially as described.

4. A rod-reel, having a friction-wheel secured to a driven shaft, a vertically-movable friction-drum having an inner face arranged to contact with the friction-wheel, a vertically-movable brake-wheel located within the friction-drum and arranged to contact with and raise and lower said drum, and mechanism arranged to raise and lower the brake-wheel; substantially as described.

5. A rod-reel having a vertical driven shaft, a friction-wheel secured thereto, and having a beveled outer face, a vertically- movable friction-ring arranged to contact therewith, a series of outwardly-movable swinging hooks supported around the shaft, actuating connections between the hooks and the vertically-movable friction-ring and a stripper-plate through which the hooks move; substantially as described.

6. A rod-reel comprising a driven shaft, a friction-wheel secured thereto, and having a beveled annular face, a friction-ring surrounding the wheel, and having an inner face coacting with the face of the friction-wheel, a non-rotatory brake-ring situate within and arranged to raise and lower the friction-ring, a series of pivoted hooks having actuating connections with the ring, and a stripper-plate through which the hooks move; substantially as described.

7. A rod-reel having a series of outwardly-movable hook-fingers, a brake arranged to stop the rotation of the reel, and actuating connections betweeen the brake and the hook-fingers arranged to retract the fingers whenever the brake is applied; substantially as described.

In testimony whereof I have hereunto set my hand.

JOHN C. CROMWELL.

Witnesses:
H. J. UILLIS,
EDWARD W. MUNTZ.