

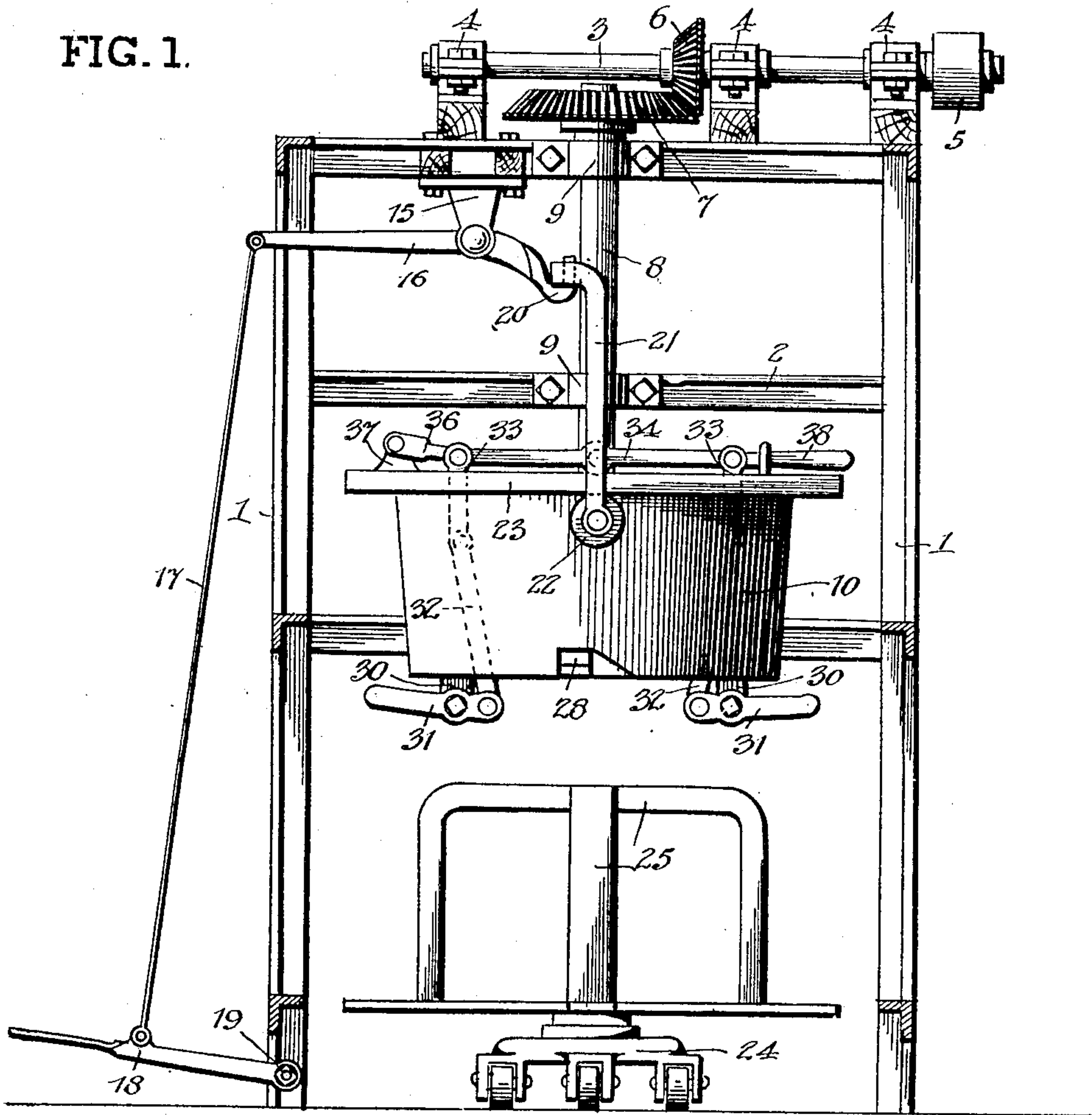
C. A. CARLSON.
WIREDRAWING MACHINE.
APPLICATION FILED DEC. 11, 1907.

904,836.

Patented Nov. 24, 1908.

2 SHEETS—SHEET 1.

FIG. 1.



WITNESSES

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2 SHEETS—SHEET 2.

FIG 2.

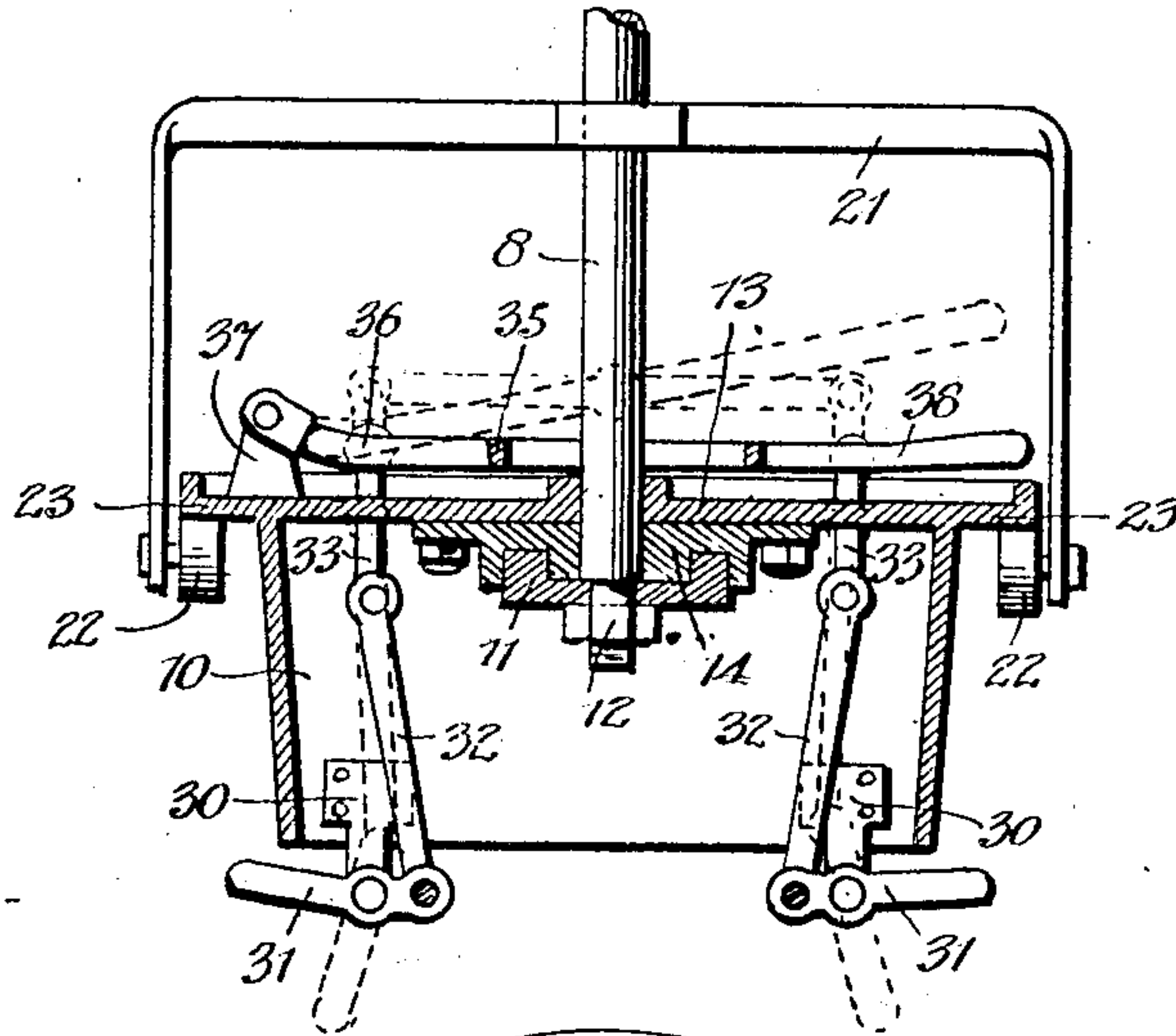


FIG. 3.

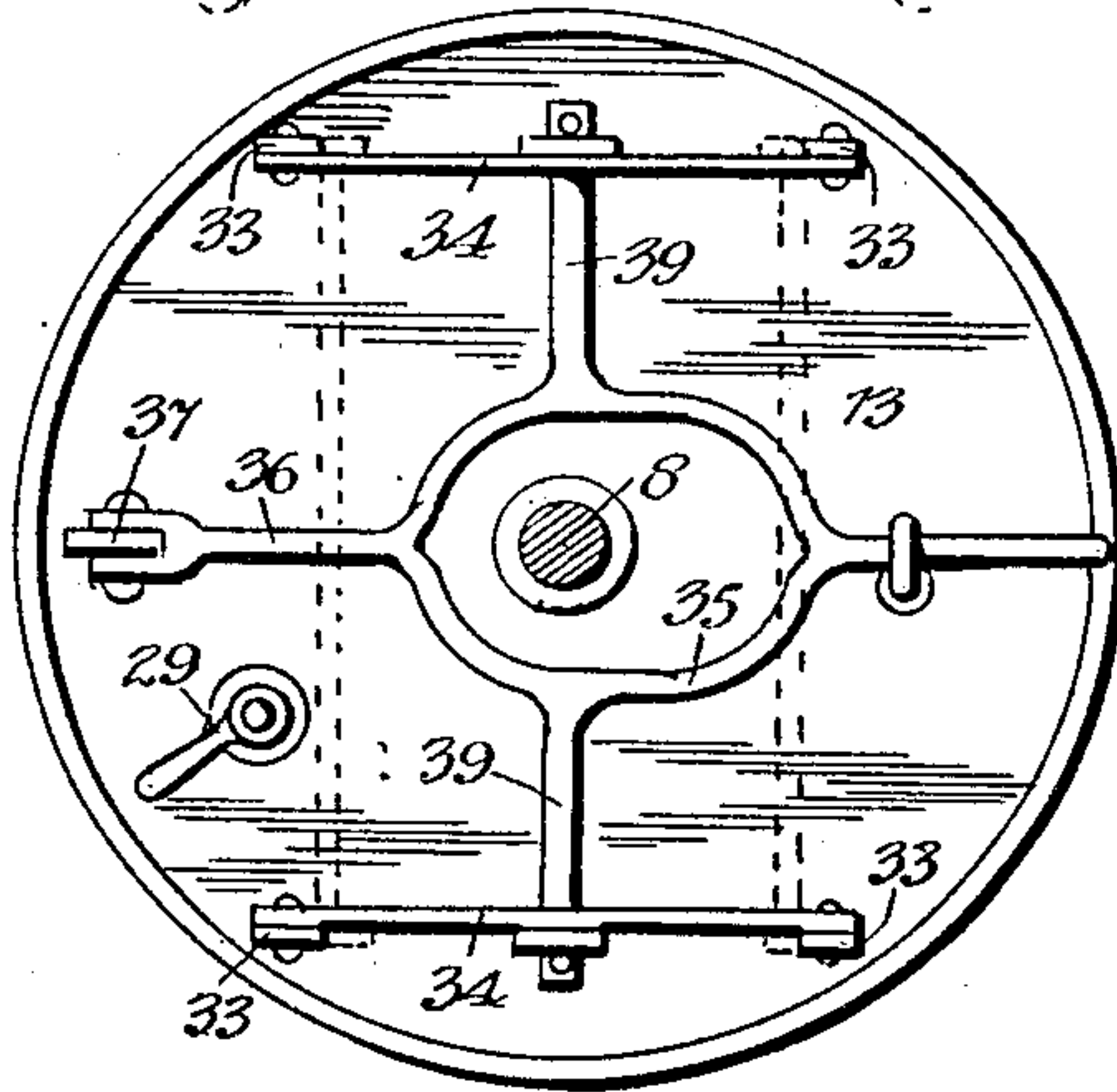


FIG. 5.

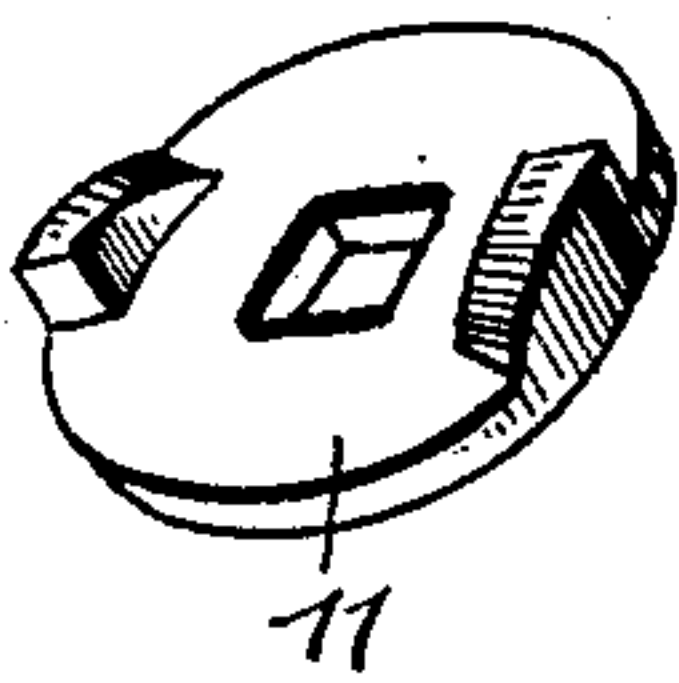


FIG. 4.

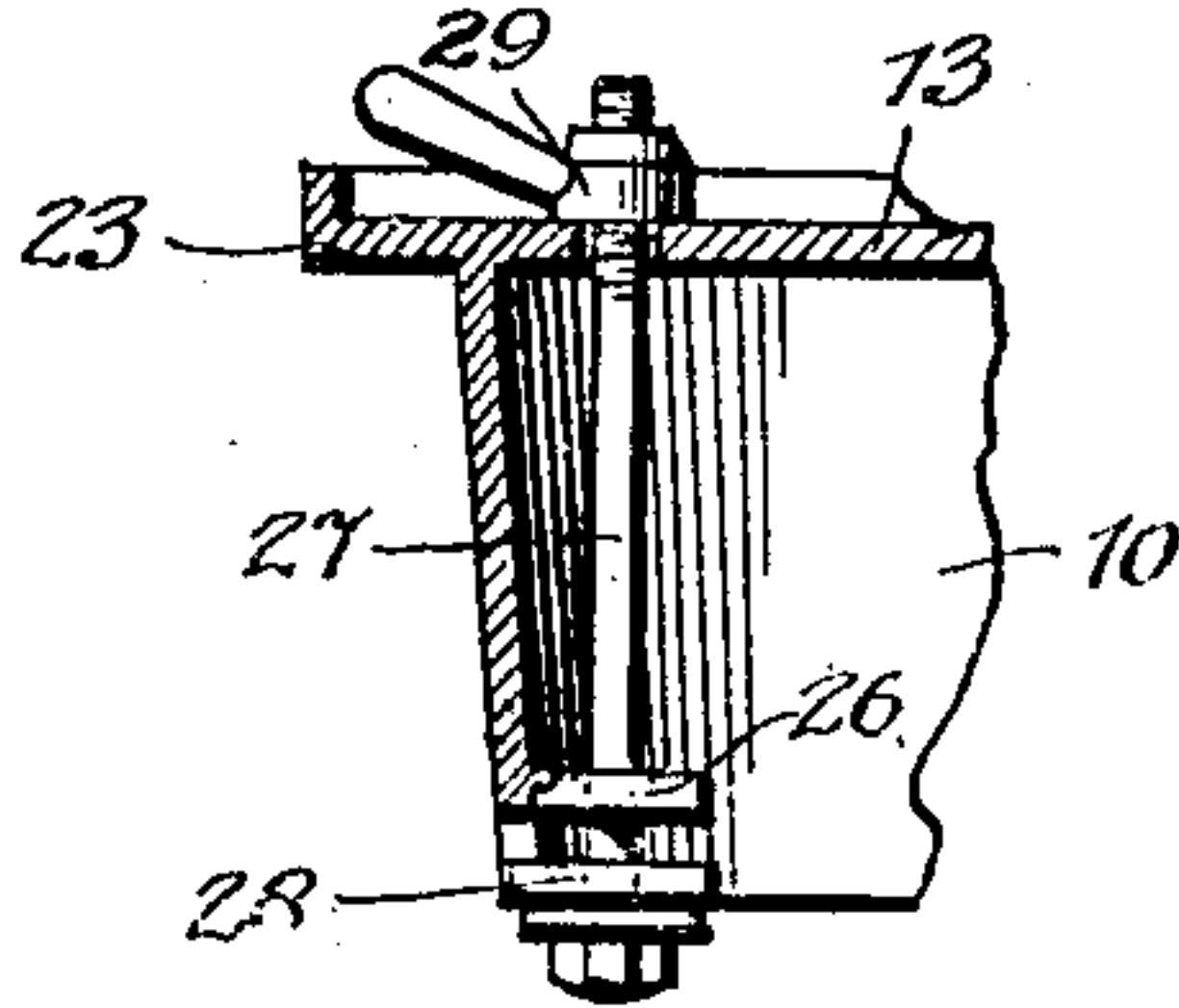
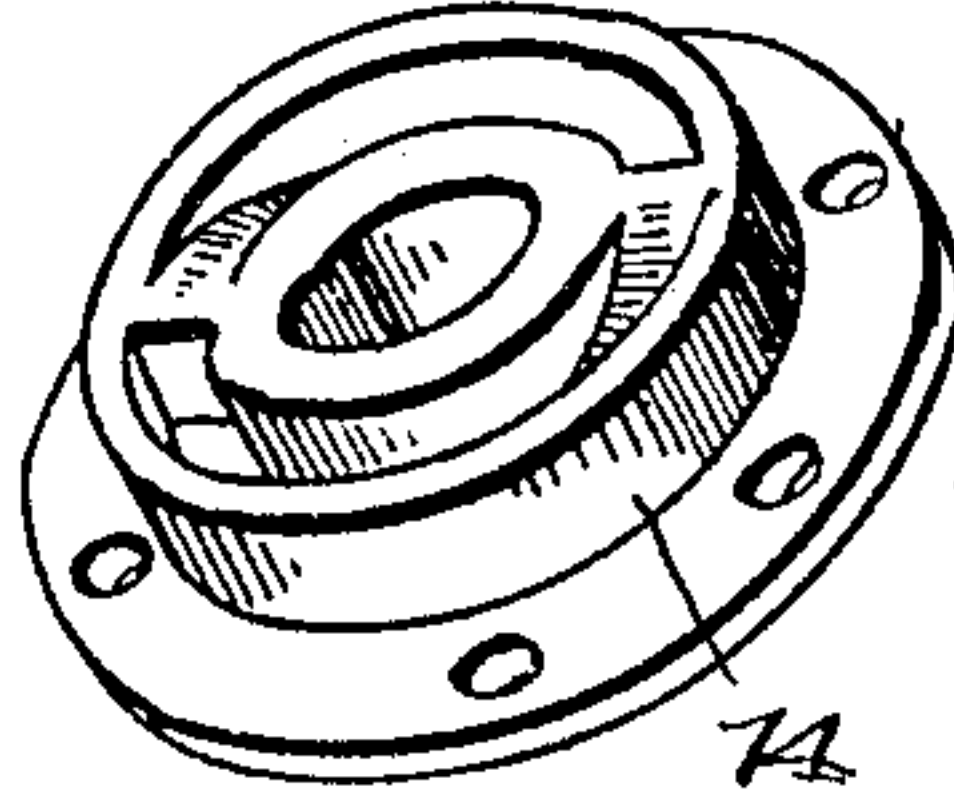


FIG. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES A. CARLSON, OF KOKOMO, INDIANA.

WIREDRAWING-MACHINE.

No. 904,836.

Specification of Letters Patent.

Patented Nov. 24, 1908.

Application filed December 11, 1907. Serial No. 406,036.

To all whom it may concern:

Be it known that I, CHARLES A. CARLSON, a citizen of the United States, residing at Kokomo, in the county of Howard and State of Indiana, have invented certain new and useful Improvements in Wiredrawing-Machines, of which the following is a specification.

My invention relates to wiredrawing machines and particularly contemplates the provision of a simple and inexpensive construction which will be highly efficient in use and which will obviate many of the objectionable difficulties of machines of this character as previously devised.

My invention particularly contemplates the provision of a wire coiling drum having its discharge end lowermost and mounted to rotate within a frame constructed to allow a reel carrying truck to be pushed beneath said drum and to receive the coil of wire directly therefrom.

My invention further resides in the provision of means for raising the drum out of engagement with its rotating mechanism in order to facilitate the withdrawal of the wire coil therefrom.

My invention further resides in the provision of a novelly constructed mechanism of means for normally holding the coil of wire upon the drum together with means for releasing the same, and in the provision of novelly constructed clamping means for securing the end of the wire to the drum.

My invention further and specifically resides in the following features of construction, arrangement and operation to be hereinafter described with reference to the accompanying drawings, forming a part of this specification, in which like numerals are used to designate like parts throughout the several figures thereof, and in which

Figure 1 is a vertical sectional view through the supporting frame and showing the elements of my improved mechanism in elevation therein, Fig. 2 is a detail sectional view through the wire coiling drum, illustrating particularly its connection with its spindle, the wire coil holding mechanism and the drum elevating frame, Fig. 3 is a top plan view of the wire coiling drum, Fig. 4 is a sectional view taken through a portion of said drum and illustrating the wire end clamping mechanism, Fig. 5 is a perspective view of the clutch member carried by the

drum spindle, and Fig. 6 is a similar view of the clutch member carried by the drum.

In the practical embodiment of my invention I provide a supporting frame comprising vertical bars 1 and horizontal bars 2, said frame having a horizontal drive shaft 3 mounted upon the top thereof in journals 4 and provided with a pulley 5 and a bevel gear 6 meshing with the bevel gear 7 carried upon the upper end of the vertical drum spindle 8, also mounted in said frame, and centrally thereof, in journals 9. The drum spindle 8 extends downwardly in the supporting frame to an approximately central point, passing loosely and centrally through the upper closed and flanged end of the tapering wire coiling drum 10 and is provided adjacent its lower end with a squared portion adapted to receive a clutch member 11 thereon, said clutch member being held secure by means of a nut 12 screwing upon the lower threaded end of said drum spindle 8 within the drum 10 and below its closed end 13. The drum 10 is provided therein upon the inner surface of its closed end 13 with a centrally disposed and corresponding clutch member 14 secured thereto, and through which the spindle 8 also loosely passes, to allow its clutch member 11 to engage therewith. Depending from a portion of the supporting frame is a bracket 15 in the lower end of which is intermediately pivoted a rocking lever 16 having a communicating rod 17 extending to a point intermediate the ends of a foot lever 18 pivoted upon its inner end 19 within the supporting frame. The inner end 20 of the rocking lever 16 engages the upper horizontal member of an inverted U-shaped elevating frame 21 carrying an extremity of its downward extension rollers 22 projecting inwardly therefrom and engaging beneath the flanged edge 23 of the drum 10. Thus by virtue of the connection between said drum and its driving spindle as previously described and by means of the foot lever 18 operating the rocking lever 16 and the elevating frame 21 the wire coiling drum 10 may be raised to disengage the clutch members 11 and 14, thus stopping a rotation of said drum and facilitating the removal of the wire coil therefrom.

The supporting frame is so constructed as to admit of the insertion therein of a truck 24 carrying a reel 25 directly under the wire coiling drum 10 to receive the coil of wire

therefrom, in order that the same may be readily transferred from the machine without the necessity of its being carried.

The circular face of the wire coiling drum 10 is provided with a cut-out portion and with an inwardly extending flange adjacent said cut-out portion through which a bolt 27 passes, said bolt carrying a clamping member 28 between said flange 26 and its head end and having its opposite end projecting through the upper closed end 13 of said drum and threaded outside the same to receive a hand screw 29 to draw the same upwardly and clamp the end of the wire to be coiled about the drum 10, between its clamping element 28 and the flange 26 as clearly shown in Fig. 4.

Depending from the inner surface of the drum 10 and below the lower edge thereof are four equi-distantly secured brackets 30 in the lower ends of which are intermediately pivoted coil holding members 31 having portions projecting outwardly beyond the circular edge of said drum 10 when the same are in the horizontal position. Pivotally connected to the inner ends of said coil holding members 31 and extending upwardly therefrom are levers 32 pivotally connected at their upper ends to links 33 passing upwardly and mounted to slide through openings in the closed end 13 of the drum and connected between pairs above said closed end 13 by rods 34. A frame 35 surrounding the drum spindle 8 is provided with an extension 36 pivotally mounted at its end upon a bracket 37 extending upwardly from the closed end 13 of the drum 10 and with an extension 38 opposite said extension 36 and forming a handle for swinging said frame upon its pivot. The frame 35 is further provided with oppositely disposed side extensions 39 extending outwardly beneath the rods 34 connecting the upper ends of the links 33, whereby when said frame 35 is raised upon its pivot by means of its handle 38 links 33 and 32 will be drawn upwardly and the coil holding members 31 will be rocked upon their pivots to a vertical position to allow the coil of wire formed about the drum 10 to drop upon the reel 25 provided for the reception of the same. The

movement just described is clearly illustrated in Fig. 2 in dotted lines.

From the foregoing description it will be apparent that I provide a simple and inexpensive machine which will be thoroughly efficient in use, in which the coiling drum may be readily and easily thrown out of connection with its driving mechanism, and in which the removal of the wire coil, usually a difficult and dangerous operation, is greatly facilitated and the operator's duties greatly reduced.

Having thus fully described my invention, I claim:

1. In a wire drawing machine, a winding drum having its discharge end lowermost, brackets extending from within said drum and below the lower edge thereof, levers pivoted intermediate their ends in the extremities of said brackets and extending beyond the edge of said drum when in a horizontal position, to prevent the coil thereon from dropping, links pivotally connected to the inner ends of said levers and extending upwardly through said drum, and a single lever mounted upon said drum and having pivotal connection with said links for simultaneously raising the same, to rock said levers to a vertical position, substantially as described.

2. In a wire drawing machine, a winding drum having its discharge end lowermost, and provided with a circular outstanding flange upon its upper edge, a spindle for rotating said drum projecting loosely and centrally therethrough, relatively engaging clutch members carried by said spindle and said drum, an inverted U-shaped lifting frame having rollers loosely journaled in the ends of its extensions and projecting inwardly therefrom beneath the circular flange of said drum, and a treadle mechanism suitably mounted and connected to said U-shaped frame for raising the same and said drum, to disengage said clutches, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES A. CARLSON.

Witnesses:

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LESLIE M. SPINGER.