

(No Model.)

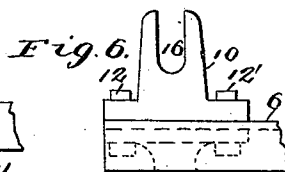
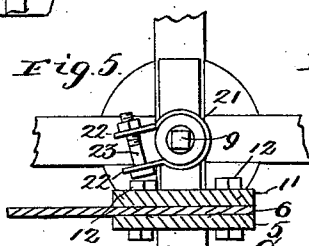
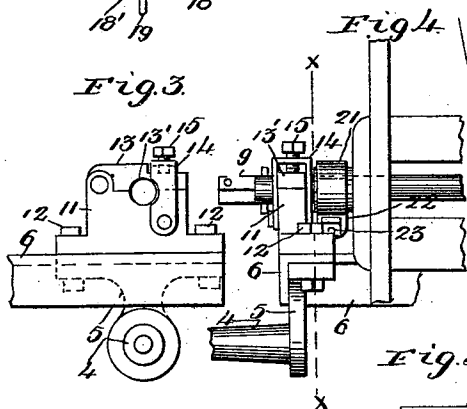
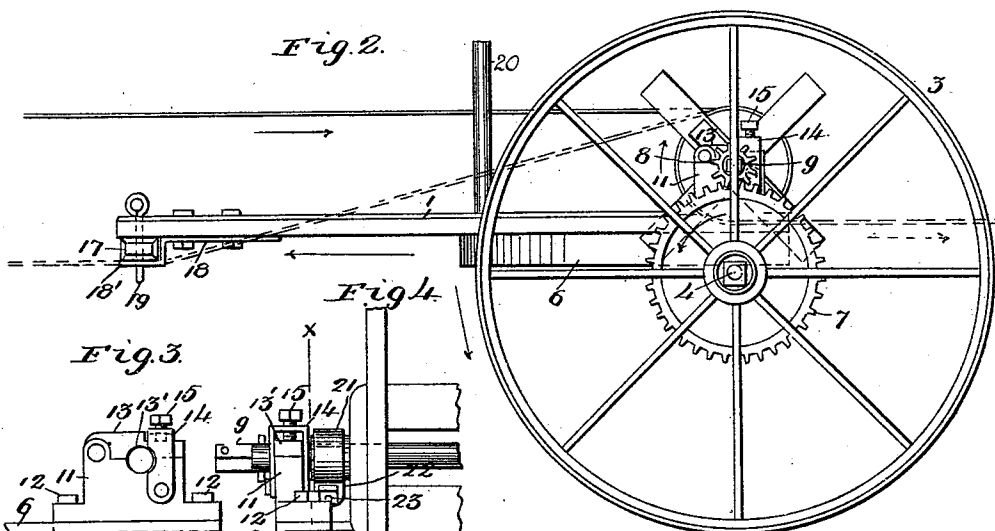
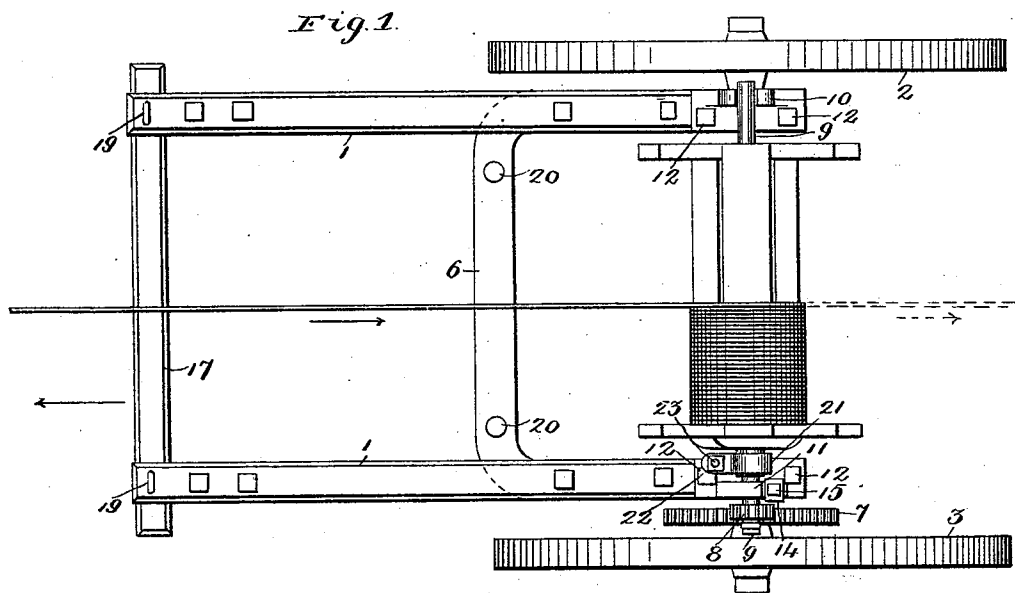
2 Sheets—Sheet 1.

G. A. FEDER.

WIRE WINDING AND DISTRIBUTING MACHINE.

No. 582,727.

Patented May 18, 1897.



Witnesses
Salomon Mueller
Alfred A. Mathew

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By his Attorneys

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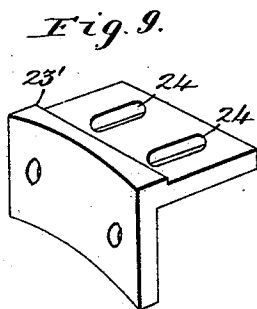
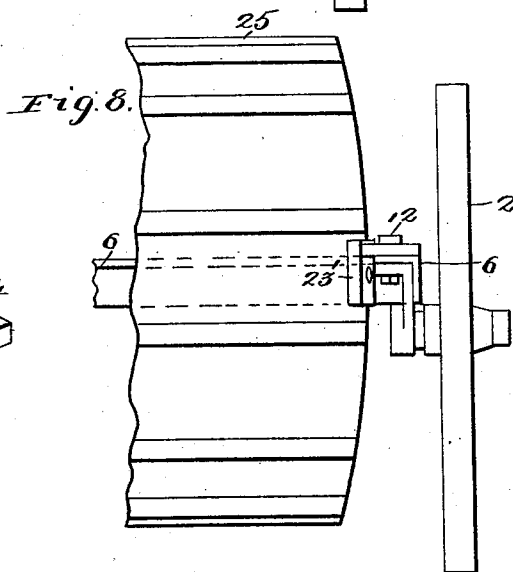
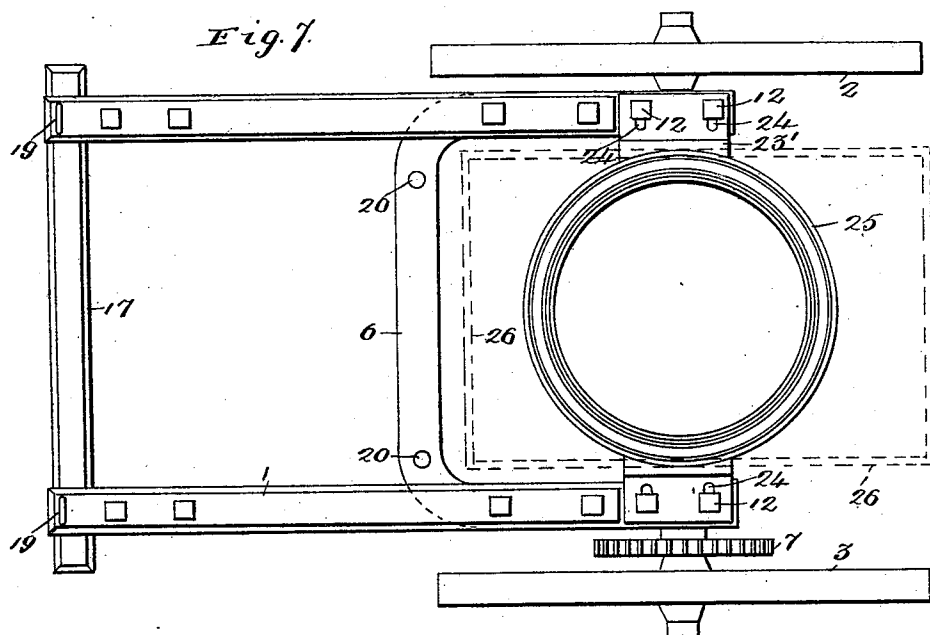
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UNITED STATES PATENT OFFICE.

GEORGE A. FEDER, OF BELLEVILLE, ILLINOIS.

WIRE WINDING AND DISTRIBUTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 582,727, dated May 18, 1897.

Application filed December 11, 1896. Serial No. 615,351. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. FEDER, a citizen of the United States, residing at Belleville, in the county of St. Clair and State of Illinois, have invented certain new and useful Improvements in Wire Winding and Distributing Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in wire winding and distributing machines; and it consists in the novel arrangement and combination of parts more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a top plan view of the invention. Fig. 2 is a side elevation thereof, viewed from the side carrying the driving mechanism. Fig. 3 is a side elevation of the end of one of the arms (and parts carried thereby) of the U-shaped angle-bar of the frame which serves to carry the wheels of the machine and support the reel-shaft. Fig. 4 is an end view of Fig. 3. Fig. 5 is a section on the line *xx* of Fig. 4. Fig. 6 is a view similar to Fig. 3 of the end of the opposite arm of the U-shaped angle-bar, showing the standard for supporting the reel-shaft at that end. Fig. 7 is a top plan view of the machine when converted into a garbage-cart. Fig. 8 is a rear elevation thereof, showing the garbage-barrel partly broken away; and Fig. 9 is a perspective view of one of the angular supporting-plates to which the garbage barrel or box is secured.

The object of the present invention is to construct a wire winding and distributing machine which as a whole is materially simplified and lightened, so that the same can be drawn by hand, if desirable; one wherein the general frame thereof can be used to alternately support the driving mechanism of the machine and the reel carried by it, and then be used to support suitable receptacles for the distribution of garbage or other material. The bearings which support the reel-shaft are in the present instance made detachable from the frame and are replaceable by suitable plates which serve to directly support the garbage barrel or box, as the case may be.

A further object is to provide the device with a specifically-constructed friction band or strap by which the speed of rotation of the

reel-shaft can be controlled and regulated, imparting, as it does, variable resistance to the free rotation of such shaft according to the degree with which it is made to embrace said shaft, in this manner adjusting the tension on the wire during the unwinding thereof from the reel.

In detail the invention may be described as follows:

Referring to the drawings, 1 represents the frame of the machine, at one side of which is mounted a wheel 2, carried by an ordinary axle, and on the opposite side is mounted a drive-wheel 3, carried on an axle 4, each axle being mounted in a depending bracket 5, secured at the free ends of the arms of the U-shaped bar 6, forming part of the frame, each bracket being secured along the under surface of the horizontal member of the angle-bar out of which the said bar 6 is constructed.

Formed integrally with or secured to the hub of the drive-wheel 3 is a gear-wheel 7, which meshes with the terminal removable pinion 8 of the transverse reel-shaft 9, having bearings in the removable standards 10 11, mounted on the upper surface of the horizontal member of the angle-bar 6, the bolts 12, which secure the depending brackets 5, passing through said horizontal members of the angle-bar and simultaneously serving to secure thereto the standards 10 11 referred to.

Carried by the standard 11 is a pivoted arm 13, having formed thereon a groove or depression 13', whereby it can freely embrace the reel-shaft at that end while supported in its bearing, the said arm being adapted to be held down in its locked position over the reel-shaft by a pivoted yoke 14, carried by the standard and adapted to be swung over the free end of said arm, the latter being firmly locked by forcing against it the screw 15, carried by the base of the yoke 14. Upon swinging the yoke downward (or to the right, as shown in Fig. 3) the arm 13 can be swung open, (or to the left, as shown in Fig. 3,) thus enabling the reel to be removed from its bearing at that end, the opposite end being of course always in position to be removed from the U-shaped bearing 15 of the standard 10. The present machine is adapted to be drawn by hand, the forward transverse handle-bar

17 being secured to the side members of the frame 1 by the horizontally-deflected supporting-arms 18' of the angle-plates 18, secured along the under surfaces of the side members of the frame, suitable pins 19 being passed through alining openings of the side members of the frame, the opposite ends of the bar 17, and the arms 18'. Upon the removal of the pins 19 the bar 17 can be withdrawn, and the side members of the frame can be used as shafts in case a draft-animal is hitched to the machine.

The arrows in Figs. 1 and 2 indicate the direction of motion of the several parts, the full lines in Figs. 1 and 2 representing the position of the wire in winding on the reel, the same being adapted to be guided by the guide-rods 20, carried by the angle-bar 6. The wire may be directed under the bar 17, as indicated in dotted lines in Fig. 2. The dotted strand of the wire, as shown in Fig. 1, shows the direction it takes when unwinding, (for the same direction of travel of the machine,) it being understood, of course, that under those circumstances the pinion 8 is removed from its reel-shaft, thus leaving the latter uncoupled from the driving-gear 7.

To regulate the tension of the wire during the unwinding of the same, I provide one end of the reel-shaft (the end adjacent to the standard 10) with a band or strap 21, having outwardly-deflected arms 22, connected by a bolt and nut 23. By screwing down the nut and thus causing the band to firmly embrace the shaft the tendency of the said band or strap will be to rotate with the shaft, but in its rotation the lower arm of the strap comes in contact with the upper surface of the angle-bar 6, whereby its motion is arrested. In this way the ease with which the reel rotates will depend on the friction between its shaft and the inner surface of the strap and of course depend on the resulting resistance offered to the free rotation of the said reel-shaft. The degree of friction is of course regulated according to the firmness with which the strap is made to embrace the shaft. In winding the wire the band or strap is allowed to expand and thus wholly release the reel-shaft by unscrewing the nut carried by the bolt securing the arms of the strap.

The standards 10 11 can be removed altogether and replaced by the angular plates 23' 23', through the slots 24 of the horizontal member of each of which the bolts 12 are passed. Between the vertical walls of said plates a garbage-barrel 25 or other box or receptacle 26 can be secured. Thus the present device is convertible from one form of apparatus to another.

Having described my invention, what I claim is—

1. In a wire winding and distributing machine, a suitable frame, drive-wheels mounted on said frame, a reel-shaft mounted in proximity to the drive-wheels, a removable pinion carried by the reel-shaft for meshing with the gear-wheel, a resilient friction band or strap located between the end of the reel and the shaft-bearing normally loosely embracing a portion of the periphery of one end of the reel-shaft, and adapted to be tightly clamped to said shaft, the free end of the band being adapted to be arrested in its rotation by the frame of the machine and thus offering resistance to the free rotation of the reel, whereby the tension exerted on the wire in unwinding from the reel, is regulated, substantially as set forth.

2. In a wire winding and distributing machine, a suitable reel-shaft, means for imparting rotation thereto, a strap carried at one end of the same and interposed between the reel and shaft-bearing and adapted to normally loosely embrace the shaft, laterally-deflected arms forming a part of the strap and separated a suitable distance from one another, a bolt and nut connecting the free ends of the arms, whereby the strap can be securely tightened or clamped on the shaft, the arms being arrested in their motion of rotation by coming in contact with the frame of the machine, thereby offering resistance to the free rotation of the reel-shaft and adjusting the tension on the wire being unwound from the reel, substantially as set forth.

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

GEORGE A. FEDER.

Witnesses:

EMIL STAREK,
SOLOMON MUELLER.