No. 677,487. Patented July 2, 1901.

C. L. WINGET.

WIRE REELING MACHINE.

(Application filed Mar. 27, 1901.)

(No Model.)

Fig. 1.

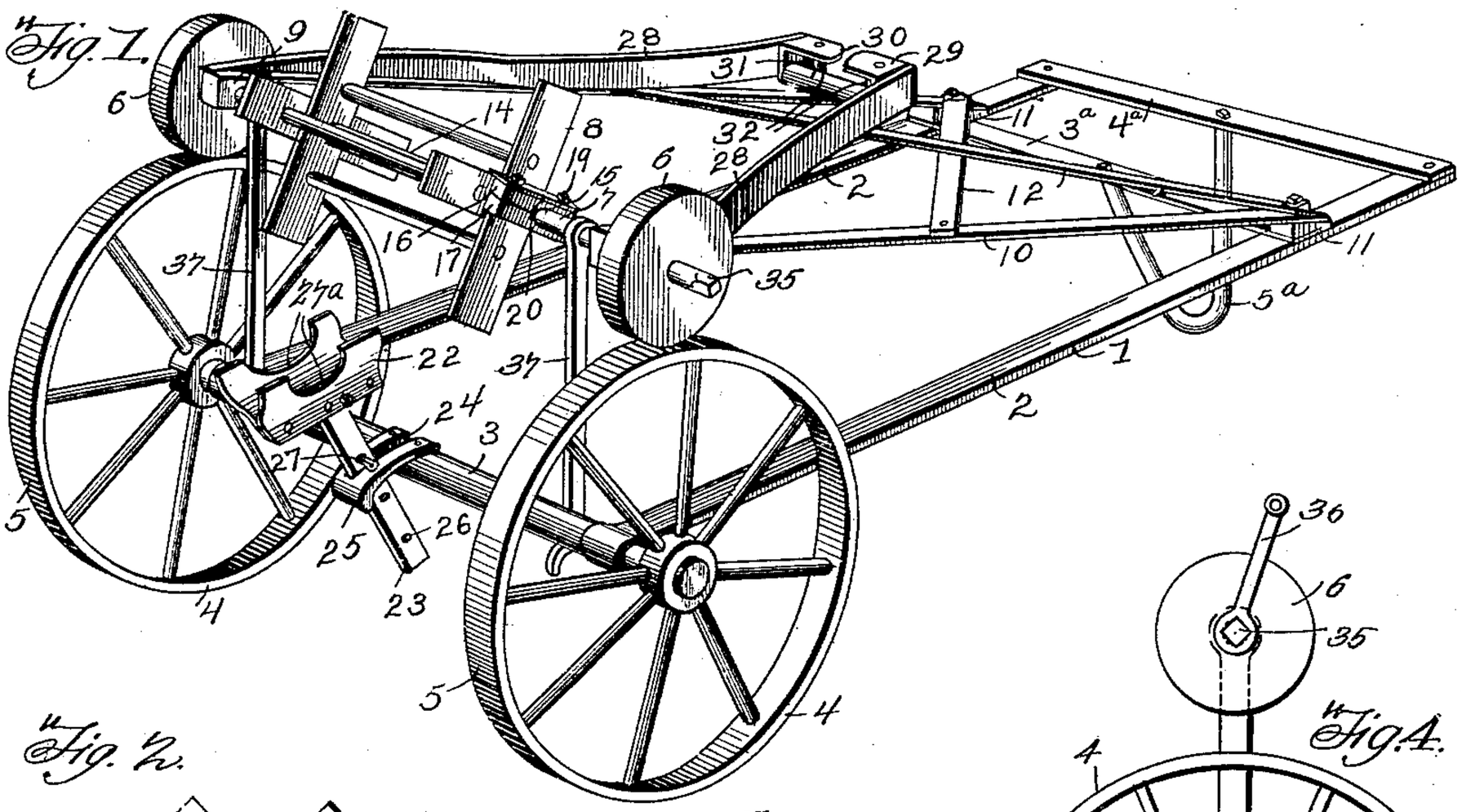


Fig. 2.

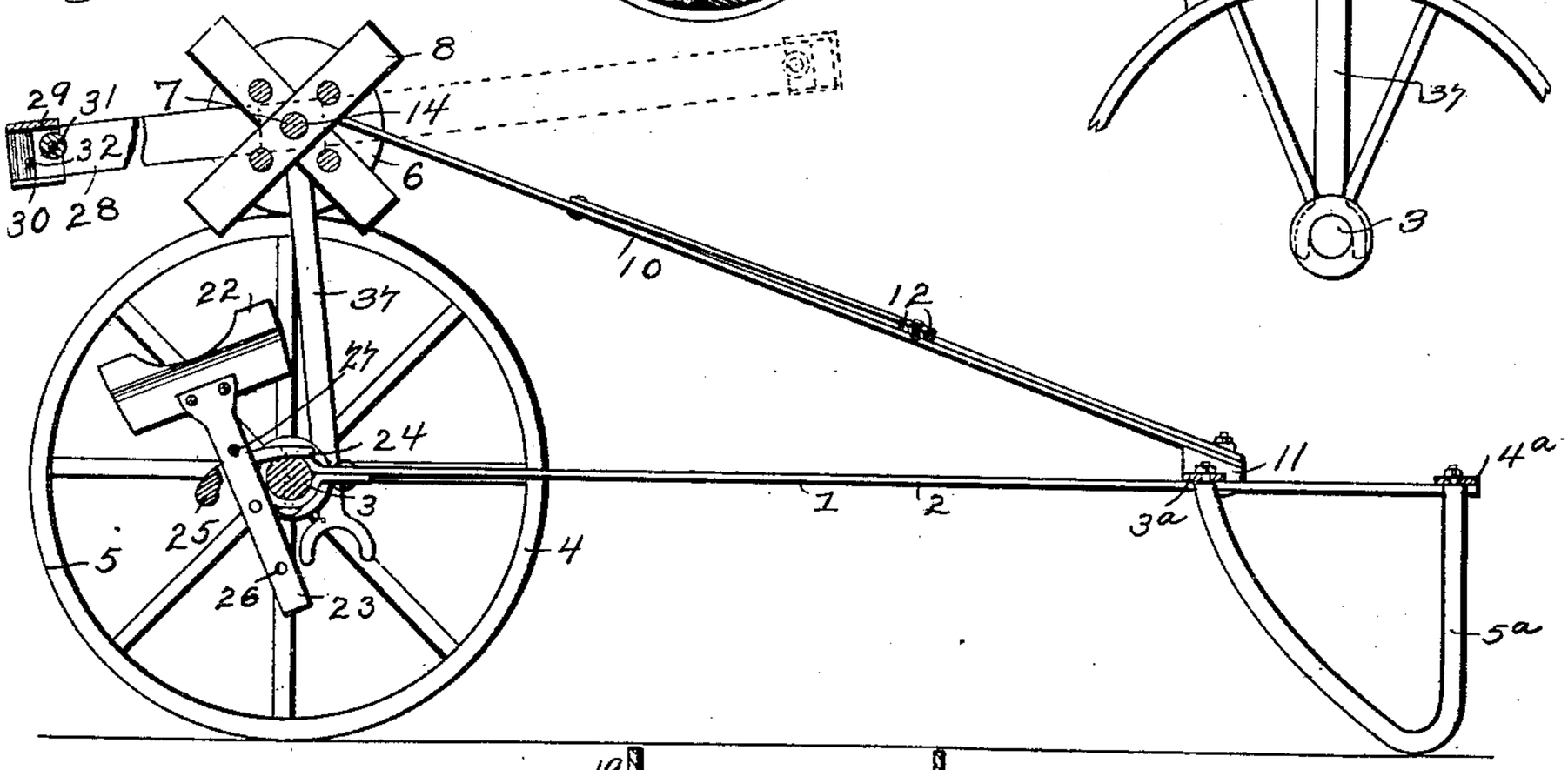
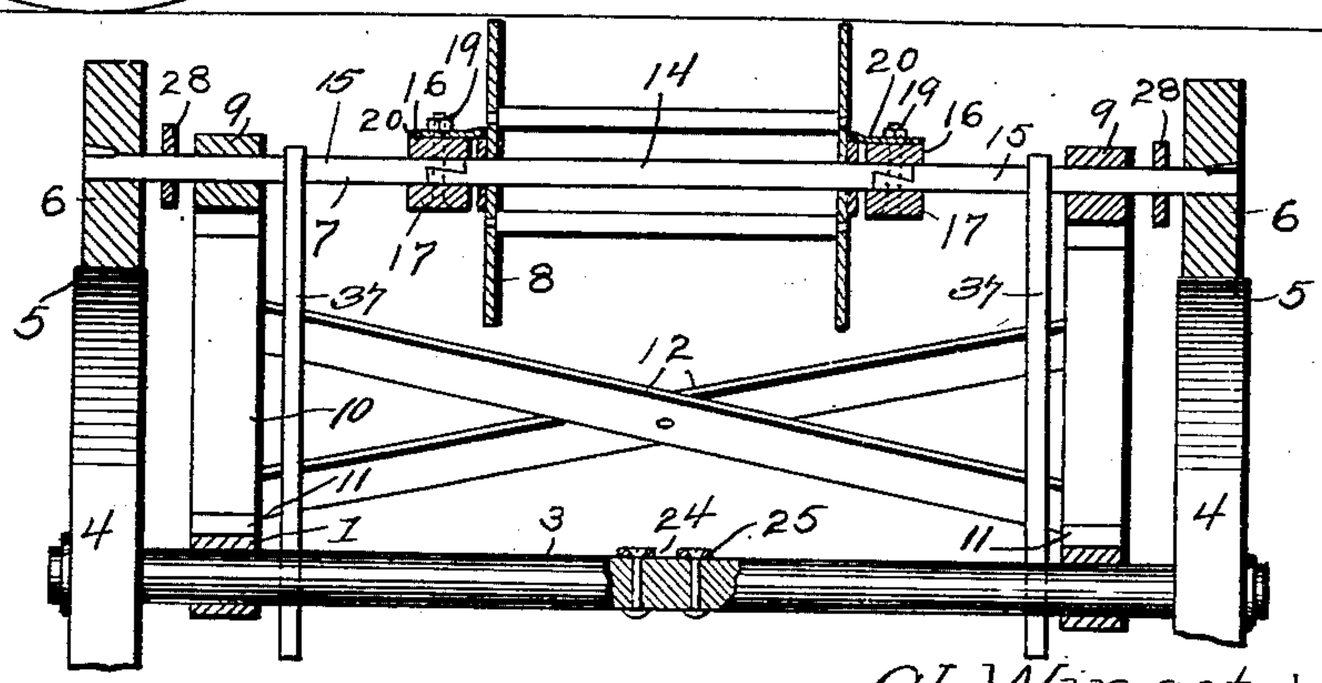


Fig. 4.

Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES L. WINGET, OF LYNDON, ILLINOIS.

WIRE-REELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 677,487, dated July 2, 1901.

Application filed March 27, 1901. Serial No. 53,106. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. WINGET, a citizen of the United States, residing at Lyndon, in the county of Whiteside and State of Illinois, have invented a new and useful Wire-Reeling Machine, of which the following is a specification.

The invention relates to improvements in wire-reeling machines.

One object of the present invention is to improve the construction of wire-reeling machines and to provide a simple, inexpensive, and efficient one adapted to receive an ordinary wire-spool and capable of enabling fence-wire to be readily wound thereon and unwound therefrom in taking down and constructing fences.

A further object of the invention is to provide a machine of this character capable of enabling a spool to be readily mounted on and removed from it and adapted to form a support for the spool when uncoupling the same.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a wire-reeling machine constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view. Fig. 3 is a transverse sectional view. Fig. 4 is a detail sectional view illustrating the manner of supporting the transverse shaft for rotation by hand.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates an approximately oblong main frame composed of side bars 2 and connecting-bars 3^a and 4^a and secured at its rear end to an axle 3 by any suitable means. The axle 3 has carrying-wheels 4 arranged on its spindles, and these carrying-wheels are provided with broad rims or peripheries 5, adapted to support friction-wheels 6 of a transverse shaft 7. The front end of the main frame is provided with a leg or prop 5^a, consisting of an approximately V-shaped rod secured at the upper ends of its sides to the cross-bars 3^a and 4^a, at the centers thereof, and adapted to support the main frame in a horizontal position, as illustrated in Fig. 2 of the drawings. The transverse shaft, which is adapted to receive a spool 8, is journaled in suitable bearings 9 of an inclined frame 10, constructed of resilient material and secured at its lower end to beveled blocks 11 at opposite sides of the main frame. The inclined frame is preferably constructed of light metal, and it has sufficient spring to permit the wheel 6 to rest upon and frictionally engage the carrying-wheels 4, whereby the transverse shaft will be rotated when the machine is moved forward or rearward, as hereinafter explained. The inclined frame is preferably composed of side bars and connecting-bars 12, crossing each other at the front portion of the frame 10 and disposed diagonally thereof. The rear ends of the sides of the inclined frame are secured to the bearings 9, and the transverse shaft, which is located above the axle, is composed of a central section 14 and end sections 15, the end sections 15 being keyed or otherwise secured to the wheels 6 and the central section being removable and receiving the spool 8. The adjacent ends of the sections are overlapped and recessed and are provided with longitudinal abutting faces arranged at an angle to the longitudinal axis of the transverse shaft, whereby the sections when clamped together, as hereinafter explained, are firmly connected and held against longitudinal displacement. The joints or connections between the sections 14 and 15 of the transverse shaft are located beyond the sides of the spool 8 and are located between sections 16 and 17 of clamps which perform the double function of connecting the sections and of holding the spool rigid with the shaft. The sections 16 and 17 are connected by bolts 19, located at opposite sides of the shaft, and also have securing-plates 20 bolted to the sections 16, as clearly illustrated in Fig. 3 of the drawings. The plates 20 project inward beyond the sections of the clamps and form flanges for engaging the adjacent side edges of the bars of the spool. The bolts 19 are provided with nuts, which are preferably arranged at the outer faces of the plates 20 and are adapted to be engaged by a wrench or other tool. The bolts are preferably secured to the sections 17 to obviate the necessity of

holding them while the nuts are being tightened and loosened to clamp and release the sections of the shaft and the spool. By this construction the central section may be readily detached from the end sections 15, and in removing the spool the clamps after being loosened are drawn inward on the end sections 15 to free the central section and to release the spool.

During the operation of removing a spool the latter is arranged upon a vertically-adjustable support consisting of a substantially V-shaped head or rest 22 and a stem 23, which is arranged in a slot or opening 24 of a bracket 25. The bracket 25, which is bolted or otherwise secured to the center of the axle, extends rearward therefrom and is slightly curved, as illustrated in Fig. 2 of the drawings, and the stem 23 is provided with a vertical series of perforations 26, adapted to receive a pin or key 27, which straddles the slot or opening 24 of the bracket 25 and which is adapted to be arranged in any one of the perforations of the stem to arrange the seat or head 22 at the desired elevation. The seat or head 22, which is approximately V-shaped in cross-section, has upwardly-diverging sides and is provided with recesses 27^a, presenting curved edges adapted to conform generally to the configuration of a roll of wire. In practice when it is desired to remove a spool of wire after the same has been wound up the support is raised and placed beneath the spool, being secured in such adjustment by the pin or key, which passes through one of the perforations of the stem. After the spool is released and the central section of the shaft withdrawn it is permitted to fall to the ground, the support being adapted to swing rearward slightly to facilitate such dumping operation. The pin or key which supports the shank or stem in its adjustment rests upon the upper face of the bracket 25, and, if desired, a second pin or key may be placed in one of the perforations beneath the bracket to prevent the support from being lost or jolted from the bracket. When the machine is drawn forward, motion is communicated from the carrying-wheels to the transverse shaft through the friction-wheels 6, and the spool may be mounted on the shaft so that the wire will be unwound from it or wound on it when the said machine moves forward. It may, however, be arranged for winding or unwinding the wire when the machine is moved in the opposite direction. The wire is directed to the spool by an approximately V-shaped guide provided with converging sides 28, secured to a rectangular frame or loop 29, having an opening 30 and receiving antifriction-rolls 31 and 32. The diverging ends of the sides 28 are pivoted on the shaft 7 between the bearings 9 and the wheel 6, so as to swing either to the front or to the rear of the shaft. When the guide is swung rearward, as indicated in full lines in Fig. 2 of the drawings, the opening is at the bottom and it will permit the guide to be swung forward to the position indicated in dotted lines when it is desired to remove the spool. The antifriction-roll 31 extends across the guide and the other rolls are disposed approximately vertical. These rolls are mounted on suitable pins or spindles, which are suitably secured at their ends to the loop or frame.

The machine is adapted to enable wire to be reeled on a spool by hand when it is impracticable to draw the machine over the ground, and for this purpose one end of the transverse shaft 7 is extended and provided with a polygonal portion 35, adapted to receive a crank-handle 36 to enable the transverse shaft to be rotated. The transverse shaft is also provided with depending braces 37, adapted, as illustrated in Fig. 4, to support the friction-wheels 6 out of engagement with the wheels 4. When the transverse shaft is supported by the braces, it is adapted to be rotated in either direction for winding wire on a spool and for unwinding it therefrom.

It will be seen that the machine is exceedingly simple and inexpensive in construction, that it is easily operated, and that it is adapted to guide the wire to the spool and will enable the latter to be readily removed when desired. It will also be apparent that the support, which is vertically adjustable and which receives the spool, is adapted to swing rearward to discharge the spool upon the ground after the same has been removed.

What I claim is—

1. In a machine of the class described, the combination of a frame having carrying-wheels, means for supporting and for rotating a spool, and the vertically-adjustable support arranged to receive the spool and capable of movement to discharge the spool, substantially as described.

2. In a machine of the class described, the combination of a frame having carrying-wheels, a transverse shaft adapted to receive a spool and connected with the said frame, means for communicating motion from the carrying-wheels to the shaft, and a movable support located beneath the shaft and arranged to receive and support a spool while the same is being placed in position, substantially as described.

3. In a machine of the class described, the combination of a frame having carrying-wheels, a transverse shaft connected with the frame and provided with a removable section, means for communicating motion from the carrying-wheels to the shaft, and a movable support located beneath the removable section of the shaft and adapted to receive a spool, substantially as described.

4. In a machine of the class described, the combination of a main frame provided with carrying-wheels, a resilient frame connected with the main frame and provided with bearings, a transverse shaft journaled in the bearings, friction-wheels mounted on the shaft

and resting upon the carrying-wheels, and a support located beneath the shaft and adapted to receive a spool, substantially as described.

5. In a machine of the class described, the combination of a main frame having carrying-wheels, a movable frame connected at its front end to the main frame and extending rearward to the carrying-wheels and provided with bearings, a transverse shaft journaled in the bearings, friction-wheels mounted on the transverse shaft and engaging the carrying-wheels, and a movable guide hinged to the machine by the transverse shaft, and adapted to be swung backward and forward, substantially as described.

6. In a machine of the class described, the combination of a main frame having carrying-wheels, an inclined frame connected at its front end to the main frame and provided with bearings, a transverse shaft journaled in the bearings, wheels mounted on the transverse shaft and engaging the carrying-wheels, a support located beneath the shaft and adapted to receive the spool, and a guide, substantially as described.

7. In a machine of the class described, the combination of a frame having carrying-wheels, a transverse shaft connected with the frame and provided with friction-wheels engaging the carrying-wheels, and the guide comprising the sides mounted on the transverse shaft, the loop connecting the sides and provided at its bottom with an opening, and the antifriction-rolls arranged in the loop, substantially as described.

8. In a machine of the class described, the combination of a frame having carrying-wheels, a shaft connected with the frame and composed of central and end sections having overlapping adjacent ends, the central section being adapted to receive a spool, the clamps engaging the adjacent ends of the sections of the shaft and arranged to engage a spool, and means for rotating the shaft, substantially as described.

9. In a machine of the class described, the combination of a frame having carrying-wheels, a shaft connected with the frame and composed of central and end sections, the central section being adapted to receive a spool, a clamp composed of adjustably-connected sections and provided with a flange for engaging the spool, substantially as described.

10. In a machine of the class described, the combination of a frame having carrying-wheels, means for rotating a spool and for detachably holding the same, and a support composed of a head or seat adapted to receive the spool, and a stem adjustably secured to the machine and adapted to hold the head or seat at the desired elevation, substantially as described.

11. A machine of the class described provided with a slotted bracket, and having a spool-support composed of a head or seat, and a stem adjustably secured in the slot of the bracket and capable of a limited forward-and-backward movement, substantially as described.

12. A machine of the class described provided with a bracket, and having a support composed of a stem adjustably mounted on the bracket, and a head or seat carried by the stem and having opposite sides provided with spool-receiving recesses, substantially as described.

13. In a machine of the class described, the combination of a frame having carrying-wheels, a transverse shaft connected with the frame and provided with wheels adapted to receive motion from the carrying-wheels, a support or brace connected with the transverse shaft and detachably engaging the axle and adapted to hold the wheels of the transverse shaft out of gear, substantially as described.

14. In a machine of the class described, the combination with a frame having carrying-wheels, of a shaft connected with the frame and provided with wheels adapted to receive motion from the carrying-wheels, a brace or support extending from the frame to the transverse shaft and detachably connected with one of the parts and adapted to hold the wheels of the transverse shaft out of engagement to permit the said transverse shaft to be operated by hand, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLES L. WINGET.

Witnesses:
WILLIAM WARD,
JOHN WHALLON.