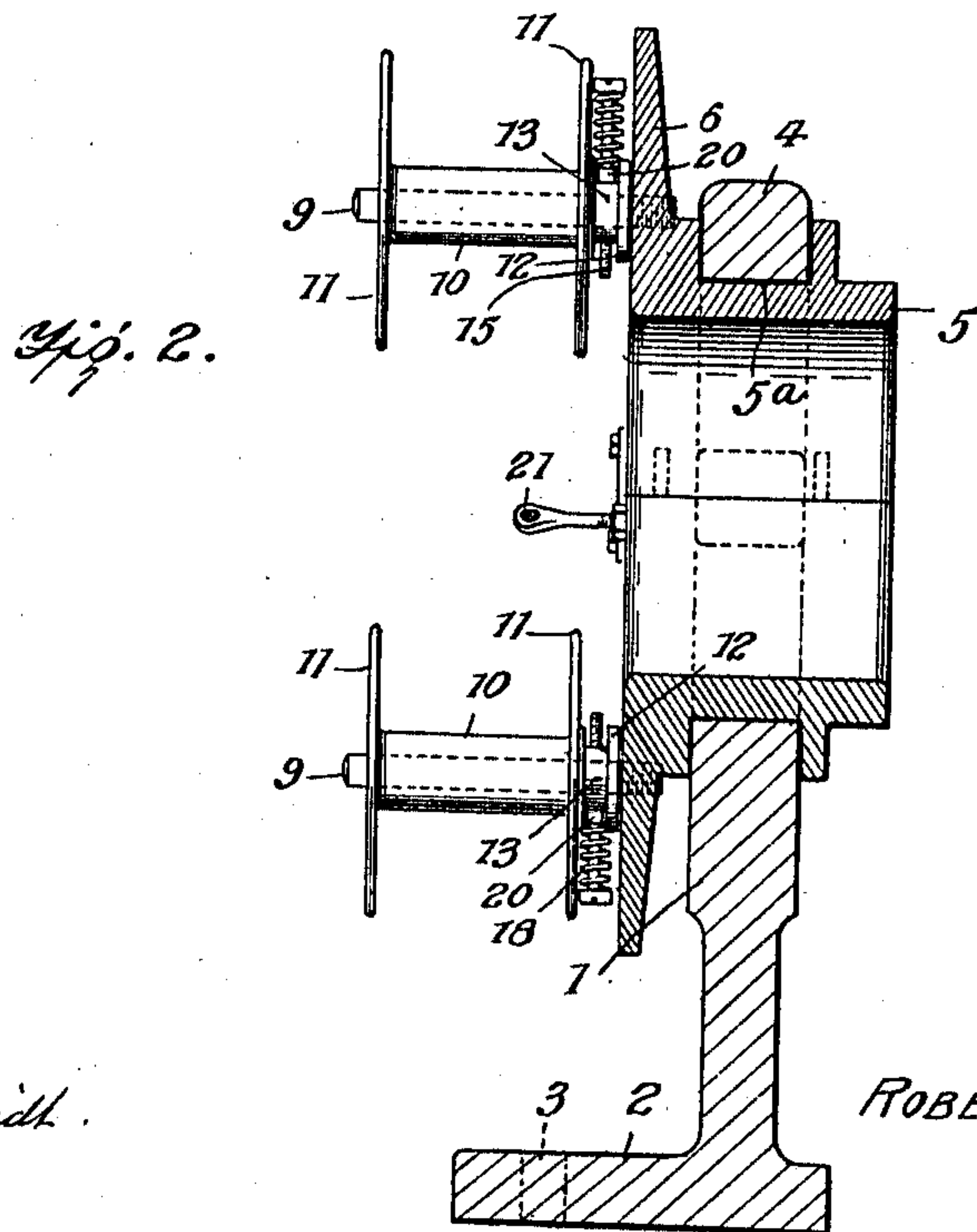
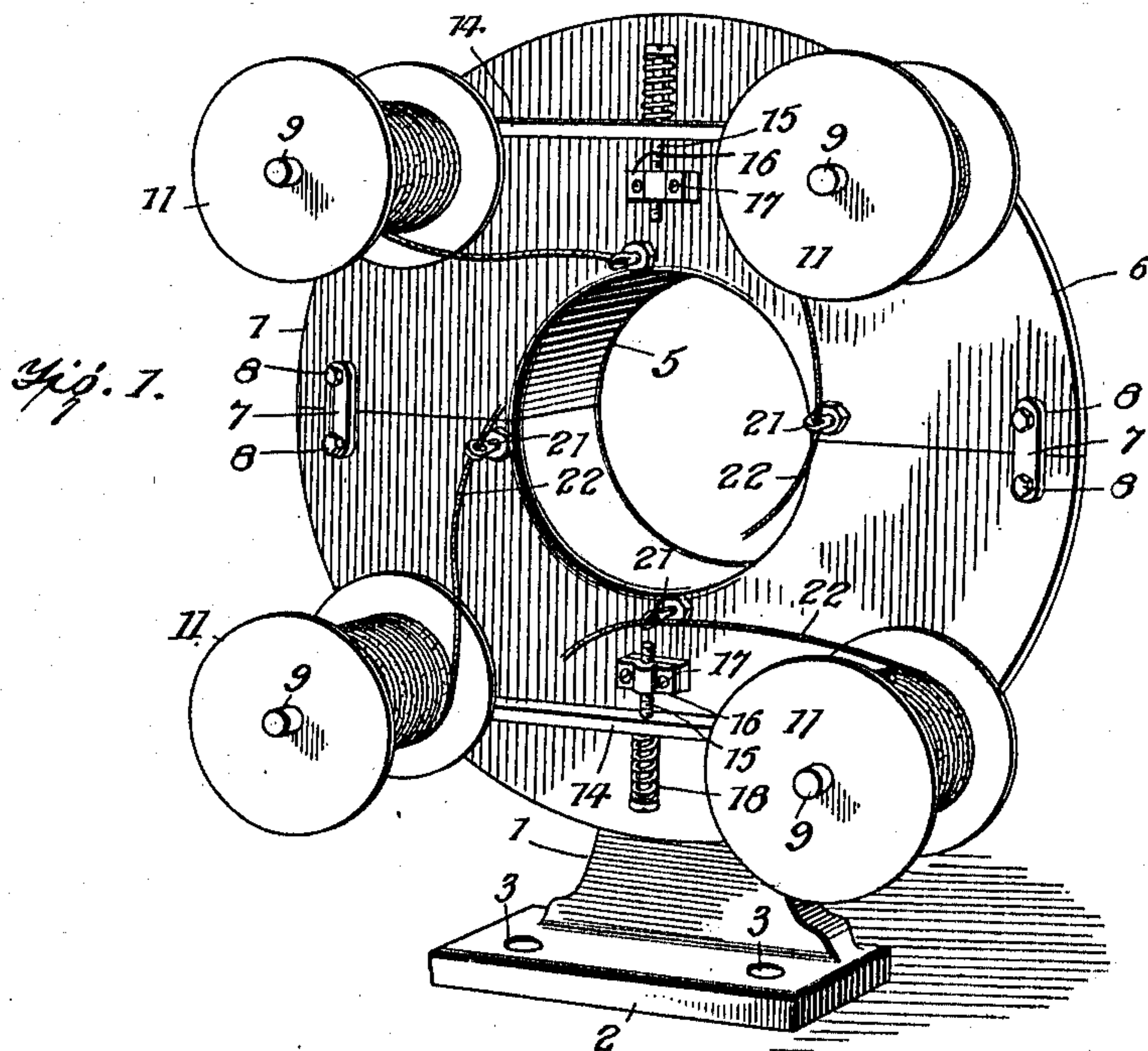


R. C. CAMPBELL.
WINDING MACHINE.
APPLICATION FILED JUNE 8, 1909.

993,151.

Patented May 23, 1911.

2 SHEETS-SHEET 1.



WITNESSES

L. H. Schmidt.
C. E. Francis

INVENTOR
ROBERT C. CAMPBELL,
BY *Munn & Co.*
ATTORNEYS

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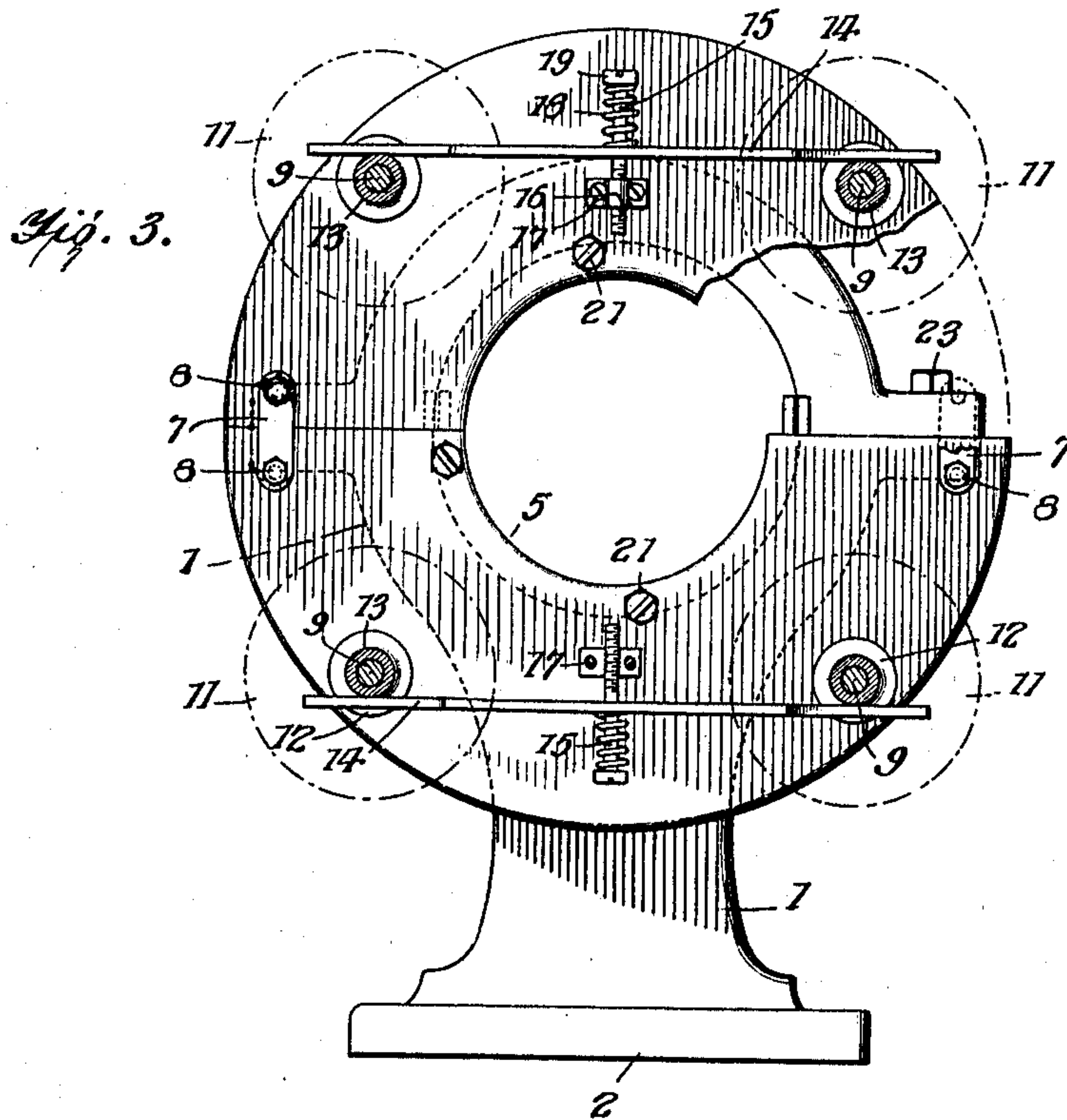
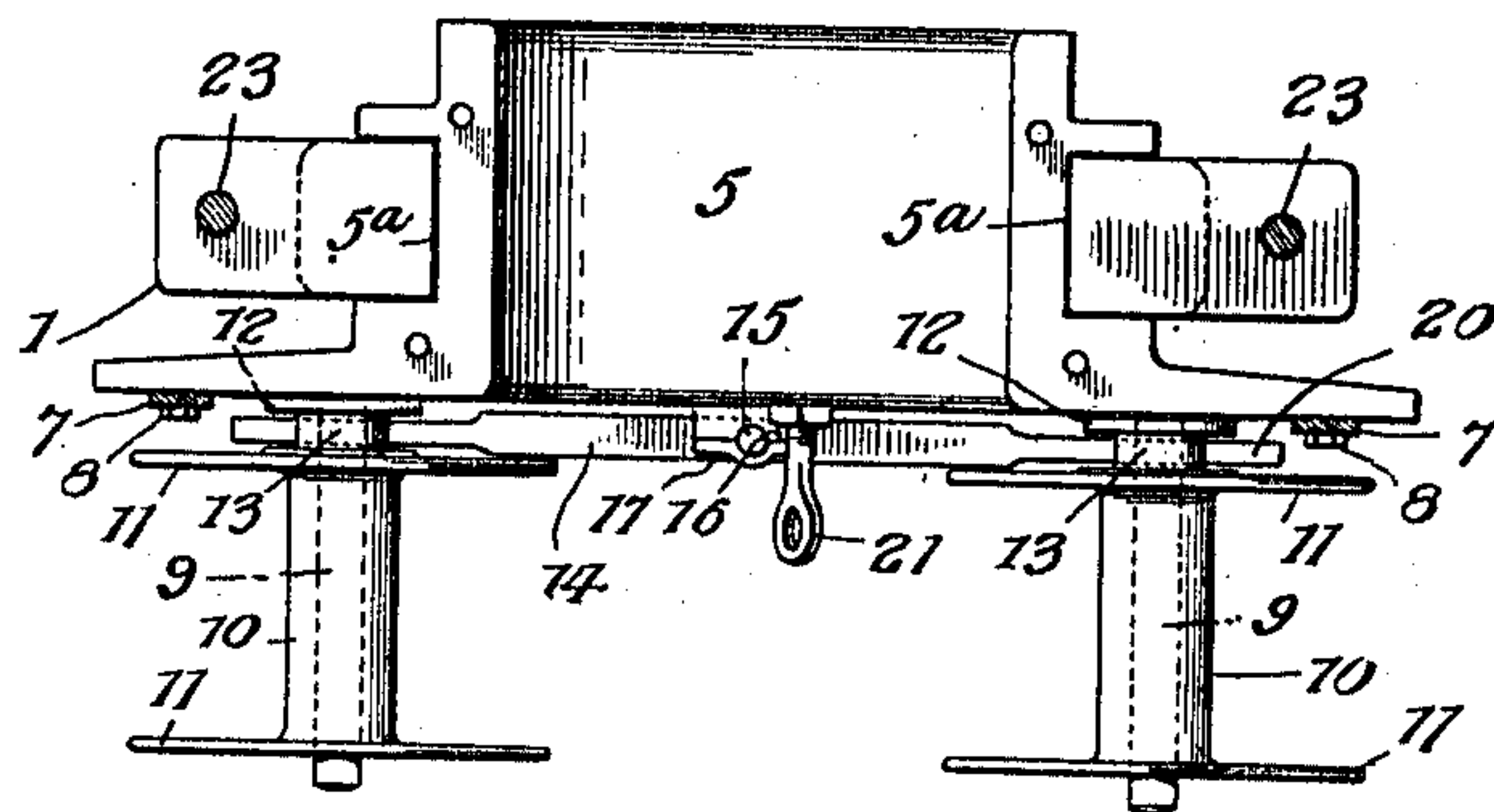


Fig. 4.



WITNESSES

L. H. Schmidt.

C. E. Trainor

INVENTOR

ROBERT C. CAMPBELL,

BY *Munn & Co.*

ATTORNEYS

UNITED STATES PATENT OFFICE.

ROBERT C. CAMPBELL, OF HARLAN, IOWA.

WINDING-MACHINE.

993,151.

Specification of Letters Patent.

Patented May 23, 1911.

Application filed June 8, 1909. Serial No. 500,916.

To all whom it may concern:

Be it known that I, ROBERT C. CAMPBELL, a citizen of the United States, and a resident of Harlan, in the county of Shelby and State of Iowa, have made certain new and useful Improvements in Winding-Machines, of which the following is a specification.

My invention is an improvement in winding machines, and consists in certain novel constructions, and combinations of parts, hereinafter described and claimed.

The object of the invention is to provide a machine for winding yarn or twine tightly on an annular core, in a plurality of overlapping layers.

Referring to the drawings forming a part hereof Figure 1 is a perspective view of the machine, Fig. 2 is a vertical transverse section, Fig. 3 is a rear view, parts of the frame being broken away, and Fig. 4 is a top plan view of the lower section of the frame.

The embodiment of the invention shown in the drawings, consists of a base 1, provided at its lower end with a foot 2, having a plurality of openings 3 therethrough whereby it may be secured to a suitable support, and provided at its upper end with a circular bearing 4. A frame is journaled in the bearing, the frame comprising a hub portion 5, and an annular lateral flange 6, and the frame is divided transversely into a plurality of sections, which are secured together by straps 7 connected to the sections, by lag screws 8. The hub is provided with an annular groove 5^a for receiving the bearing to prevent lateral movement of the hub. A plurality of journal pins 9 are threaded into openings in the flange, the pins being arranged in spaced relation, and projecting laterally from the flange, and upon each pin is journaled a spool or reel, to be presently described in detail.

Each reel consists of a cylindrical portion 10 provided with a longitudinal opening for receiving the journal pin, and having at each end a lateral flange 11, and on the end adjacent to the frame, each reel is provided with an extended hub 12, which is annularly grooved as at 13 for a purpose to be presently described.

A bar 14 is arranged transversely of the frame, one end of the bar resting in the groove of one hub, while the other end rests

in the groove of another, and each bar is provided at its center with an opening, through which extends a screw 15, whose threaded end engages a split bearing nut 16, secured to the frame by screws 17, and a coil spring 18 encircles the screw between its head 19, and the bar. It will be evident that by turning the screw 15 in the proper direction the bar may be forced against the hubs with more or less pressure, and the ends of the bar are reduced as at 20 to fit the grooves 13. Adjacent to the inner circumference of the hub and near each reel is a screw eye 21, which is threaded into the frame, the eye acting as a guide for the twine 22 on to the adjacent reel.

It will be observed that the bearing 4 is split, the sections being secured together by screws 23.

In operation, the core to be wound, is inserted through the central opening of the hub, by removing the screws 23, the upper section of the bearing, and one section of the frame being removed or lifted to permit the entrance of the core. The parts are now replaced, the twine or yarn is started on the core, and after being started the frame is rotated rapidly by any suitable means. The operator sits or stands facing the side of the machine holding the core on each side thereof, and feeds it slowly through the hub.

* It will be evident that the number of layers on the core corresponds to the number of reels or spools, and this number may be increased or diminished as may be desired. The tightness of the wrapping is dependent on the tension on the spools, and may be varied as desired.

It will be evident from the description that the improvement broadly considered, comprises a disk mounted for rotation, and provided with a central opening, the disk being divided transversely through the opening, and provided with means for detachably connecting the sections, together with the reels and the tensioning device.

I claim—

A winding machine comprising a base provided with a split bearing, a frame comprising a hub journaled in the bearing, and a lateral annular flange, said frame comprising a plurality of sections, and means for detachably securing them together, a plurality of journal pins projecting from

the face of the flange, a reel journaled on each pin, said reel having at one end an extended hub provided with an annular groove, a bar for each pair of spools, having
5 its ends engaging the grooves of the hubs, a nut on the frame, a screw passing through the bar and threaded into the nut, a spring arranged between the head of the nut and the bar, and a screw eye on the frame adjacent to each reel.

ROBERT C. CAMPBELL.

Witnesses:

L. M. KERR,

C. F. SWIFT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
