

Jan. 5, 1932.

R. J. KENT

1,839,321

REELING DEVICE

Filed June 21, 1930

2 Sheets-Sheet 1

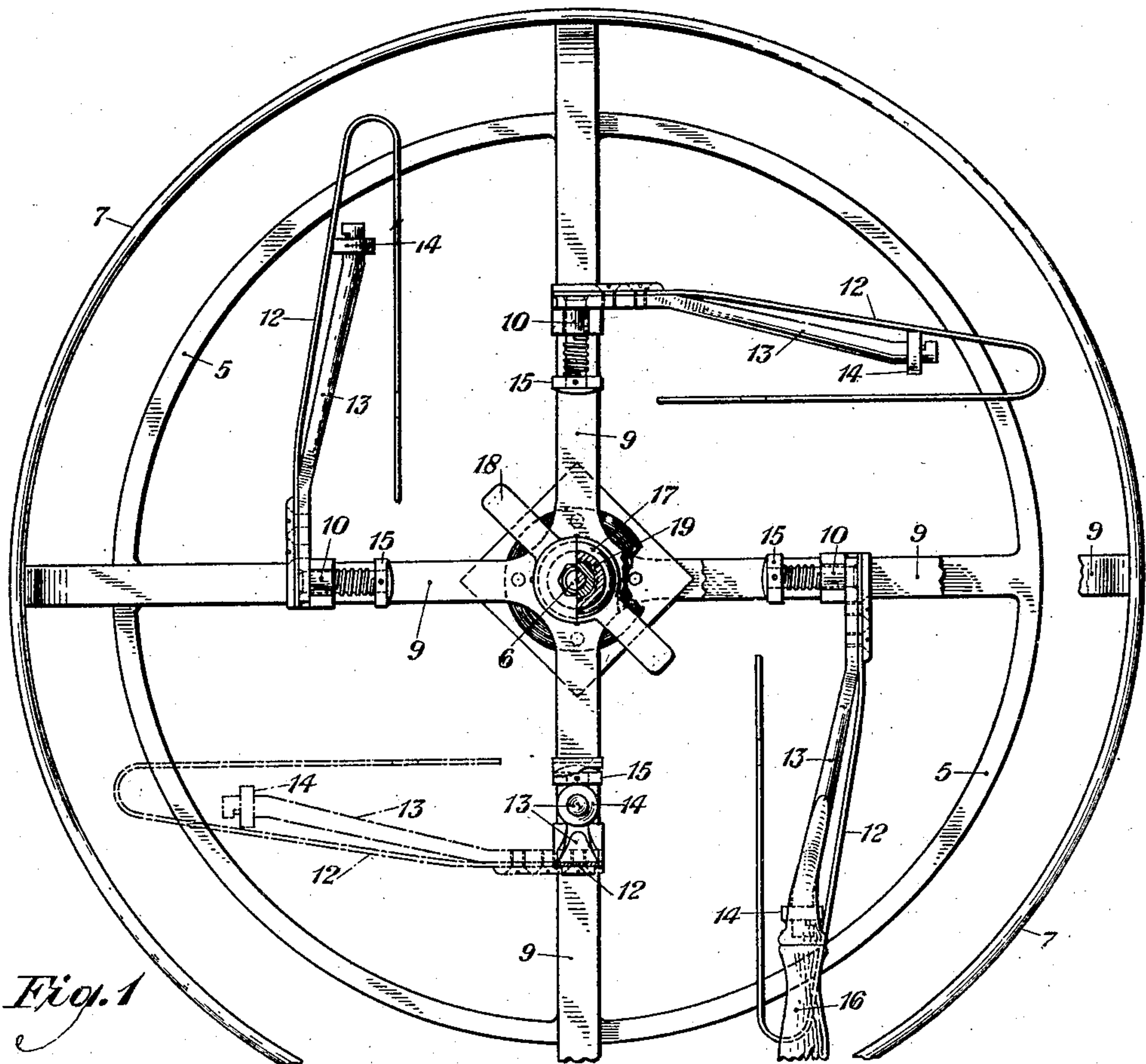


Fig. 1

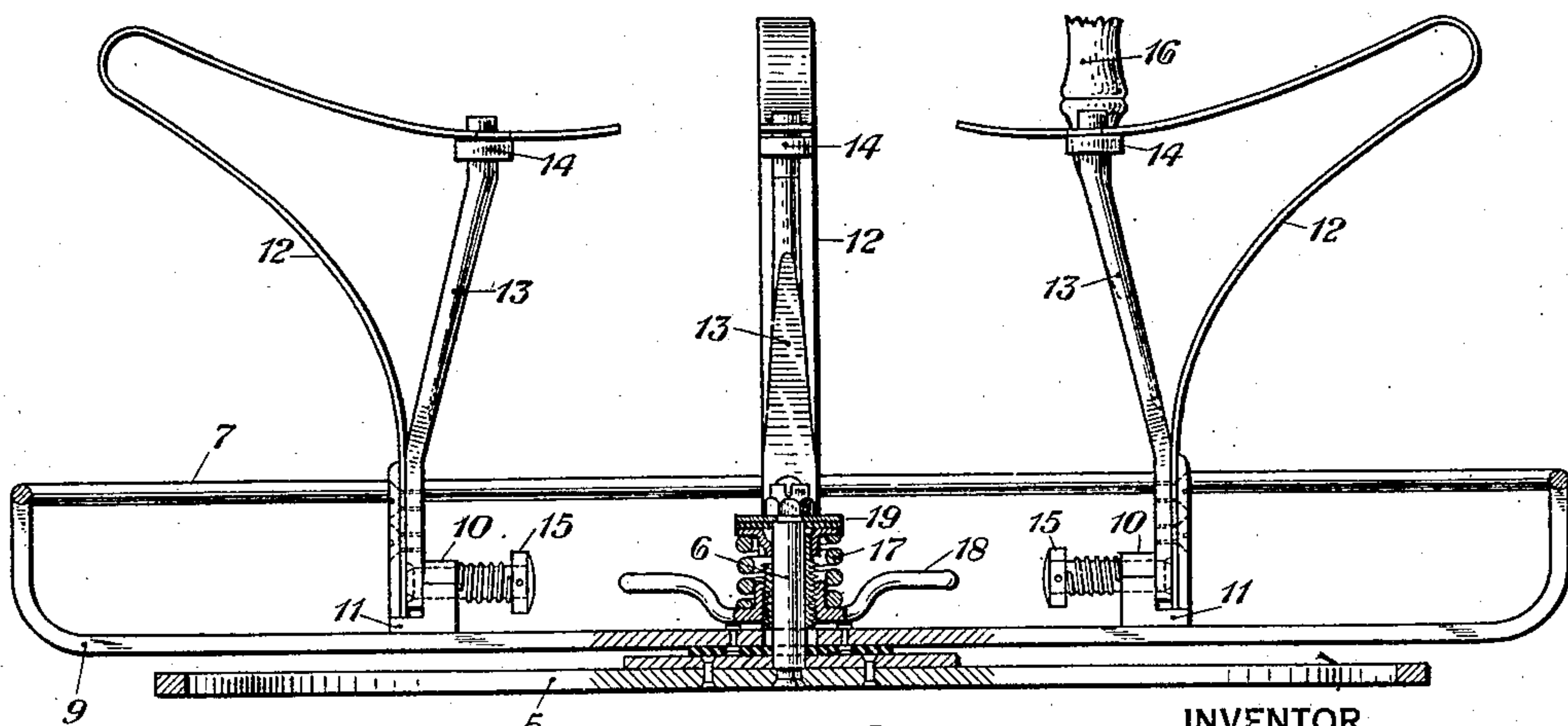


Fig. 2

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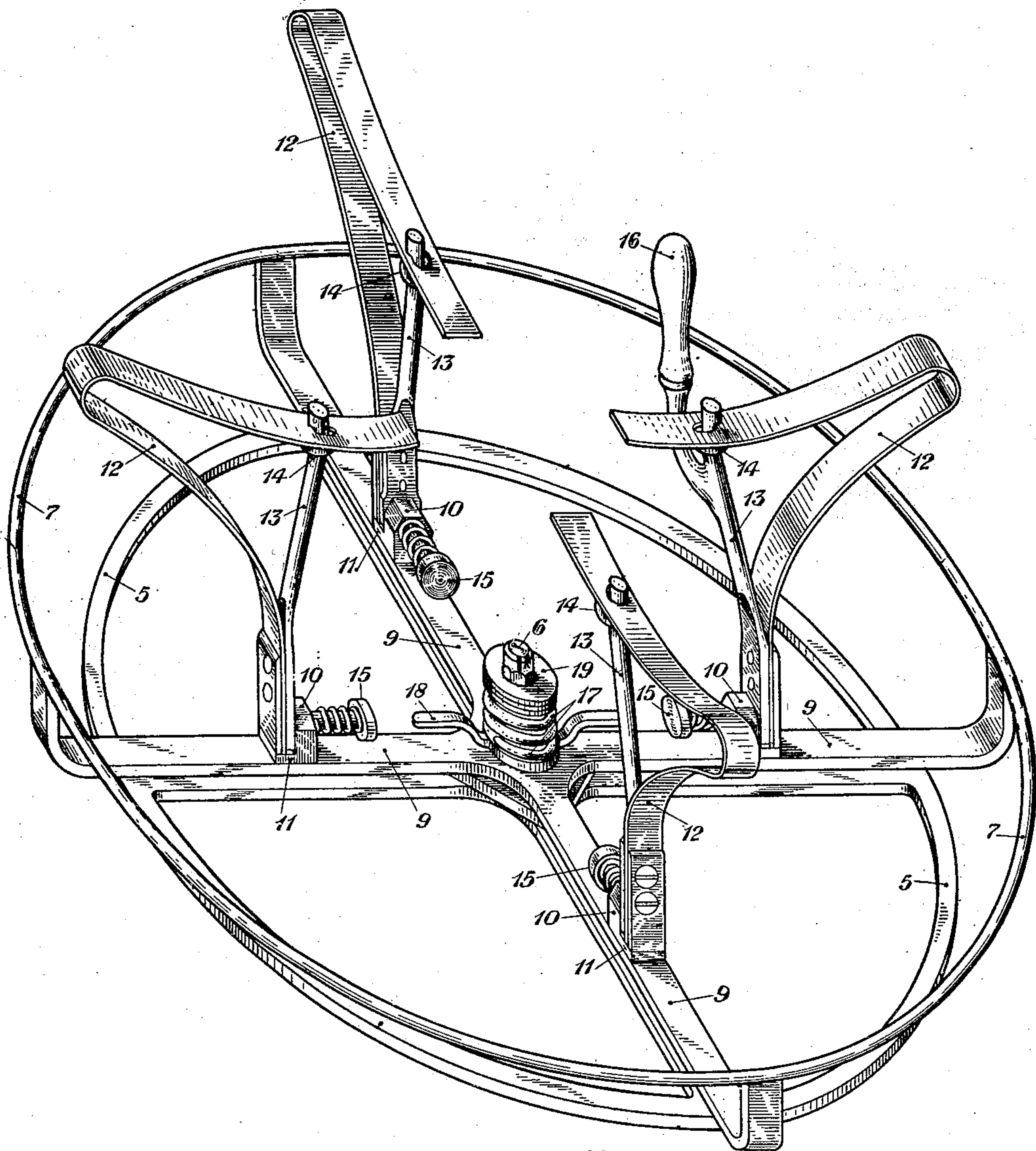


Fig. 3

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REELING DEVICE

Application filed June 21, 1930. Serial No. 462,902.

This invention relates to reels, and more particularly to reels adapted to carry coils of wire.

One of the objects of the invention consists in the provision of a reel adapted to pay out wire from coils placed thereon and rewind the wire on the reel with ease and facility.

Another object consists in providing a reel upon which wire may be wound in such manner that it may be removed in coil formation.

A further object consists in providing a reel which is adapted to be collapsed in compact formation to facilitate its transportation.

The novel features which are considered characteristic of this invention are set forth with particularity in the appended claims. The invention itself, both as to its organization and method of operation, together with other objects and advantages thereof, will be further explained in the following detailed description, having reference to the accompanying drawings consisting of the following figures:

Figure 1 is a top plan view of the device, showing its elements in folded position;

Fig. 2 is an elevation partly in section, showing the elements in extended position, and

Fig. 3 is a perspective view of the improved device in position for use.

Referring to the drawings, the reel is supported on a base 5 which is shown in the present instance as substantially circular in formation. The reel, however, may be mounted on bases of desired formation and construction. For instance, it may be mounted on suitable bracket members supported on a truck frame or the like. A spindle 6 is suitably secured to the base, and the reel is rotatably mounted on the spindle. The reel includes a frame which is of substantially dish-like formation, and comprises a ring 7 which is connected to the arms 9. These arms extend from a hub which is mounted on the spindle 6. An angular bracket 10 is mounted on each of the radial arms 9 at a suitable distance from the spindle 6. The bracket 10, may be

integral with or suitably secured to the arms. The brackets are provided with steps or lugs 11 which extend outwardly therefrom.

A core composed of a plurality of sections is provided for the reel. Each of the sections is mounted on the step or lug 11 of the brackets 10. The core sections each comprises a resilient horn member 12, and a spoke or supporting member 13 therefor. The horns 12 and their supporting spokes 13 are riveted or secured together at their lower ends or bases. The straight edges of the extremities of the attached horn and spoke members rest upon the flat horizontal surfaces of the lugs 11 when the sections are in extended position in readiness to have wire wound thereon. The engagement of the square edges of the bases of the core sections and the square edges of the lugs 11 automatically lock the core sections in their upright or extended positions. In these positions the horn members are bent into two curved prong portions. One prong extends downwardly in an arc from the looped corner of the horn, and is secured at its end to an associated support 13, as previously pointed out. The other prong portion of the horn extends inwardly toward the axis of the reel, and is provided with an opening near its end. The latter prong portions of the horn members are sprung upwardly to cause the registration of their openings with the tops of their associated supporting members 13. The tops of the members 13 extend through said openings, and the upper portions of the horn members are seated on collars 14 provided on the supporting members. The edges of the openings in the upper portions of the horn members register in notches provided in the supporting members, and the inward pressure exerted by the horn members maintain this registration.

Hinge pins 15 extend through openings in the angular brackets 10, and are perpendicularly attached to the base of the supporting members 13 to which are attached at this point the base of the horn members 12. These hinge pins are provided with helical springs about their shanks, and the springs at one end bear against the brackets 10 and

at the other end against the head of the pins 15. The pins in this position exert sufficient pressure on the base portions of the rim sections to lock them in their extended positions.

The core sections may be folded or collapsed as shown in Fig. 1 by rotating the sections sidewise. When it is desired to fold or collapse the core sections the upper portions of the horn members are lifted from engagement with their supports. When the upper prong portion is so lifted, both prong portions will assume a substantially parallel position with respect to each other. The supporting member 13 for the horn members will lie between the prong portions at this time, as shown in Fig. 1 of the drawings. To permit the rotation of the core sections it is necessary to press the hinge pins against the bases of the sections which rest on the step or lug portions 11 of the brackets 10 to cause their dislodgement therefrom. When the bases of the core sections are dislodged from the portions 11, said sections may be rotated sidewise to assume a collapsed or folded position on either side of their associated arms. The manual pressure on the pins 15 is released after the sections are dislodged from their mountings in their vertical positions. When manual pressure is released from the sections in their collapsed position, they will lie at right angles to their associated arms, as shown in Fig. 1. The sides of the section bases will now occupy a position on the steps 11 of the brackets 10 which the bottoms of said sections occupy when they are in vertical or extended positions. The straight edges of the sides of the section bases when thus seated on like edges of the steps 11, with the normal pressure exerted thereon by the hinge pins, will lock the core sections in their folded or collapsed positions. When the core sections are in these positions, they lie within the confines of the dish-like frame member and form therewith a compact structure which may be conveniently transported.

A handle 16 for rotating the reel to wind and unwind wire on the core is integrally mounted on one of the supporting members of a section. In the upright position of said sections this handle extends above the horn members, as more clearly shown in Fig. 3. This position of the handle permits it to be readily grasped. When the section with which the handle is associated is collapsed, the handle will be also folded, as shown in Fig. 1, with its associated supporting member.

The reel is provided with braking mechanism which is associated with the spindle 6. This braking mechanism consists of a helical spring 17 which surrounds the spindle 6, and is seated on an adjusting member 18 carried by the hub of the frame. The top of

the spring 17 thrusts against a washer which is loosely keyed to the threaded hub of the frame. A fibre or other friction washer is positioned between the collar 19 and the washer referred to above.

The frame and its core sections are rotated by the handle to wind wire thereon. The reel may be freely rotated when the wire is being withdrawn from the reel. When the pulling action on the wire is stopped, sufficient friction is exerted by the spring associated with the spindle to prevent further rotation of the reel. This braking action prevents overrunning of the wire from the reel.

It will be obvious that the rim sections may be rotated alternately from an upright or operative position to a collapsed or folded position. In either position the rim sections will be automatically locked.

What is claimed is:

1. A device for reeling wire comprising a dish-like frame member having radial arms, a core having sections mounted on said arms, said sections each including a resilient member and a support therefor and being adapted to be moved to assume positions extending vertically from said arms or alternatively horizontal positions lying within the confines of said frame member, and means for locking the sections in each position.
2. A device for reeling wire comprising a dish-like frame member having radial arms, a core having a section mounted on each arm, each section including a resilient member and an individual support therefor and being adapted to be rotated to assume alternatively positions extending either in a plane substantially parallel to the axis of the frame or extending substantially in the plane of the arms, and means associated with one of said sections for rotating said frame, and braking means for said frame.
3. A device for reeling wire comprising a spindle, a frame member having radial arms rotatably mounted thereon, a core having sections mounted on each arm, each section including a resilient member and an individual support therefor and being adapted to be rotated to assume upright positions on its associated arm and extending above said frame or alternatively collapsed positions lying substantially in the plane of its arm and within the confines of said frame member, means for locking said sections in each position, means associated with one of the radial arms for rotating the frame, and braking means for said frame.

In testimony whereof, I have signed my name to this specification this 20th day of June, 1930.

ROBERT J. KENT.