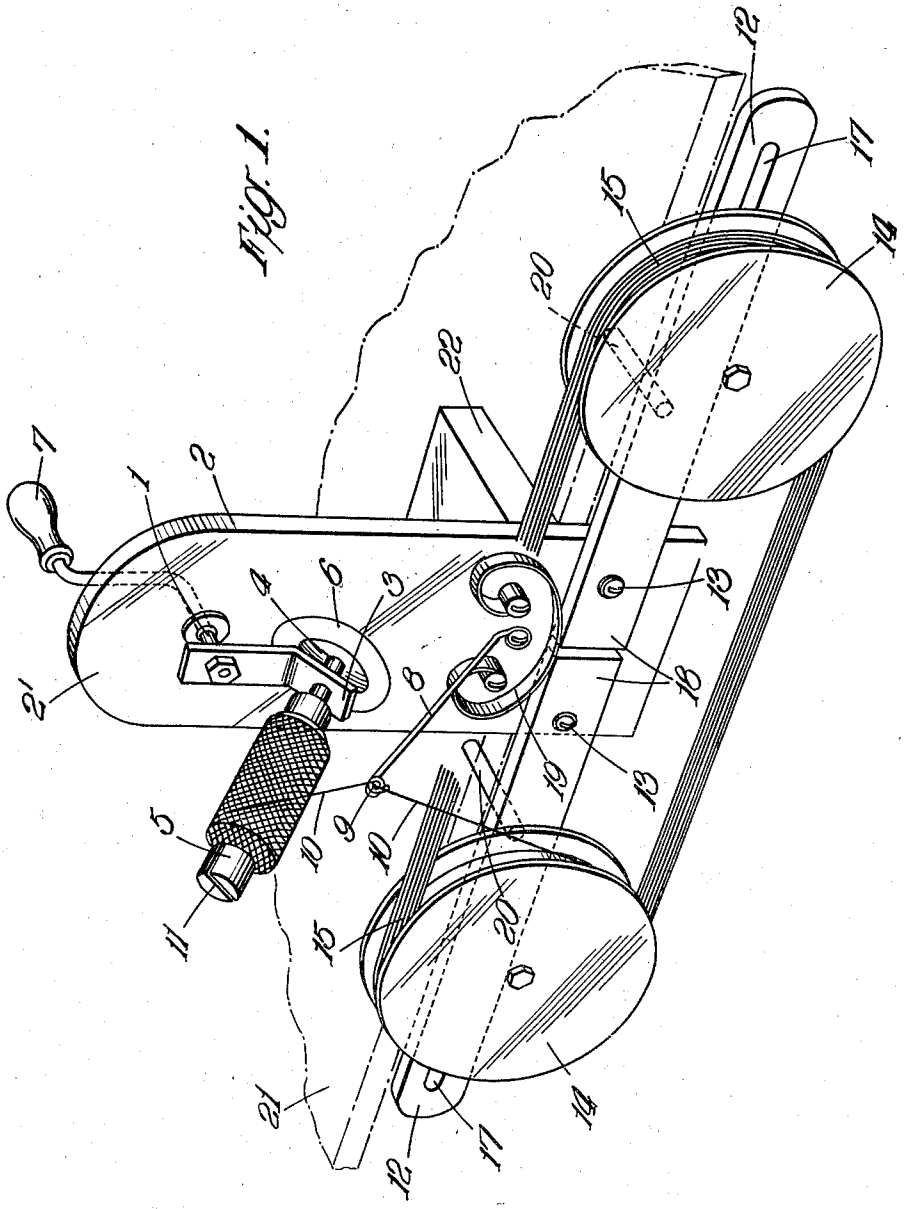
June 27, 1939. R. G. PLUCKROSE 2,164,145

WOOL WINDER

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Fig. 1.



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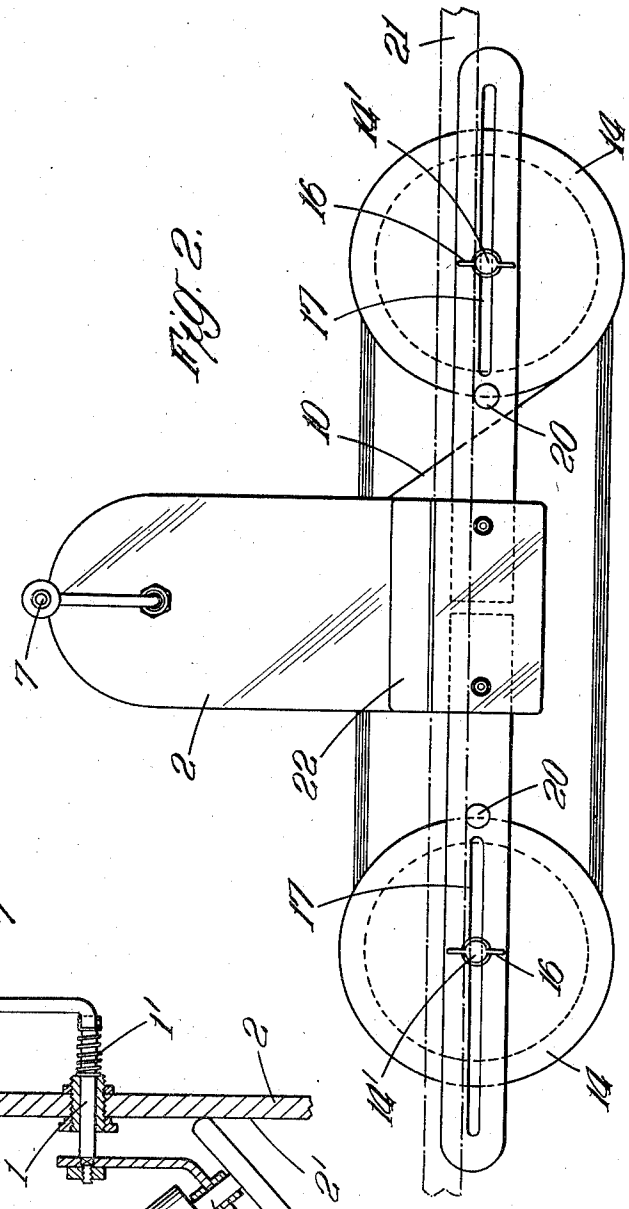


Fig. 2.

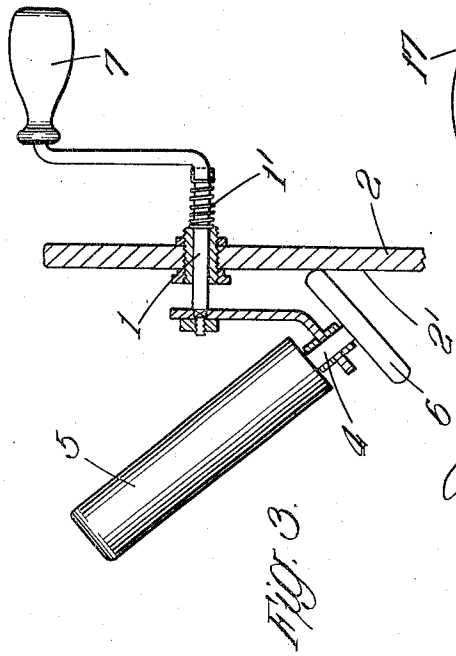


Fig. 3.

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WOOL WINDER

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6 Claims. (Cl. 242—2)

This invention relates to winders for winding wool from skeins into a compact and convenient form for use.

A winder for winding wool from skeins into a compact form for use, according to this invention, comprises an operating spindle mounted on and extending through a support, and carrying a crank on one end, the outer arm of which is off-set to make an acute angle, preferably 45°, with the axis of the operating spindle, the said outer arm carrying a former spindle on which is mounted a former and a wheel which engages the surface of the said support, or a surface mounted thereon in a manner such that when the operating spindle is rotated the crank is rotated and carries the former spindle therewith, the former spindle being rotated about its own axis by the wheel carried thereon engaging with the surface of the said support or a surface mounted thereon.

An arm having an eye or loop at one end is provided in juxtaposition to the former, the wool being passed through said eye and on to the former.

Means for mounting a wool skein are provided and such means may be in the form of two arms pivoted at their inner ends to the said support, and carrying rotatable spools at their outer extremities, the spools being adapted to have the ends of the skein mounted thereon; one or each of the spools may be associated with a spring to impart a certain drag or tension to the skein.

An embodiment of the invention is illustrated in the accompanying drawings wherein:—

Fig. 1 is a perspective front view of the device mounted on a table top;

Fig. 2 is a rear elevation; and

Fig. 3 is a part sectional view on an enlarged scale of the crank mounting.

Referring to the drawings, the winder comprises an operating spindle 1 mounted on and slidably extending through a support 2, and carrying a crank on one end, the outer arm 3 of which is off-set to make an acute angle, preferably 45°, with the axis of the operating spindle, the said outer arm carrying a former spindle 4 on which is secured a former 5 and a wheel 6 which is urged by spring 1' into resilient engagement with the surface 2' of the said support, as shown in Fig. 3, or a surface mounted thereon in a manner such that when the operating spindle is rotated by the handle 7 the crank is rotated and carries the former spindle therewith, the former spindle being rotated about its own axis by the wheel secured thereon engaging with the surface of the said support or a surface mounted thereon.

An arm 8 having an eye or loop 9 at its upper end is provided in juxtaposition to the former, the wool 10 being passed through said eye and on to the former, to which it is initially secured by wedging an end in a slot 11 on the former.

Means for mounting a wool skein are shown in the form of two arms 12, 12, having their inner ends pivoted at 13 to the said support, and carrying rotatable spools 14 at their outer extremities, the spools being adapted to have the ends 15 of the skein mounted thereon, as shown in Fig. 1. The position of the spools on the arms is adjustable, to meet different skein lengths, by means of winged nuts 16 on the ends of the spool spindles 14' which extend through and are slidable in longitudinal slots 17 in the arms 12. One or each of the spools may be associated with a spring to impart a certain drag or tension to the skein.

A clamp or any other suitable means may be provided for mounting the device on a table top or other supporting surface, but according to the preferred mounting means, the inner portions 18 of the arms 12, inwardly of their pivots are associated with spring means shown in the form of a flat bow spring 19, tending to force said portions downwardly about their pivots, whereby pins 20 carried on the rear faces of the outer portions of the arms will be forced into resilient engagement with the under-surface of a table top, or other support, indicated at 21 in broken lines, with the upper face of which a plate 22 secured to and extending from the rear of the support 2 co-acts so as to enable the device to be detachably secured on table tops or other supports of varying thickness within the limits of the resilient displacement of the arms about their pivots.

The wool or the like, as shown in Fig. 1, is wound in a cylindrical manner on the former. After the winding is complete, the end of the wool is detached from the retaining slit in the former and the cylindrical mass is then slid off the former.

The surface on the support engaged by the wheel on the former spindle may be in the form of a ring having a chamfered or inclined side surface so that the plane of rotation of the wheel is at right angles to the plane of said inclined surface.

The inner arm of the said crank to which the operating spindle is secured may be provided with a series of holes or other means to enable the

throw of the crank to be adjusted so as to vary, as may be required, the length of the mass of wound wool on the former, which mass will be in the form of a cylinder.

I claim:

1. In a winding device embodying therein a support, a shaft rotatably mounted in said support, a crank arm thereon, a spindle rotatably mounted in said crank arm at an oblique angle in relation to the surface of said support, a friction wheel carried by said spindle and having a portion thereof in engageable relation with the surface of said support, means operative to frictionally engage said friction wheel with said support, and a guide for thread or yarn positioned intermediate the ends of said spindle.

2. A winding device embodying therein a support, a shaft rotatably mounted in said support for movement upon a horizontal axis, a crank arm thereon, the outer end of which projects at an oblique angle to the axis of rotation of said shaft, a spindle mounted in the outer end of said crank arm and extending substantially perpendicularly thereto, a friction wheel carried by said spindle and having a portion thereof in engaging relation with the surface of said support, means operative to frictionally engage said friction wheel with said support, and a guide for thread or yarn positioned intermediate the ends of said spindle.

3. A winding device embodying therein a support, a shaft rotatably mounted in said support, a crank arm thereon, a spindle rotatably mounted in said crank arm at an oblique angle in relation to the surface of said support, a friction wheel carried by said spindle and having a portion thereof in engageable relation with the surface of said support, means operative to frictionally engage said friction wheel with said support, a plurality of spaced spools for receiving a skein of yarn, supports therefor, and a guide for thread or yarn positioned intermediate the ends of said spindle and between said spools and said spindle.

4. A winding device embodying therein a support, a shaft rotatably mounted in said support, a crank arm thereon, a spindle rotatably mounted in said crank arm at an oblique angle in relation to the surface of said support, a friction wheel carried by said spindle and having a portion thereof in engageable relation with the surface of said support, means operative to frictionally engage said friction wheel with said support, a plurality of arms pivoted adjacent their inner ends to said support, spools rotatably mounted on the ends of said arms adjacent the outer ends thereof for receiving a skein of yarn, means resisting movement of said arms when withdrawing yarn from said spools, and a guide for thread or yarn positioned intermediate the ends of said spindle and between said spools and said spindle.

5. A winding device embodying therein a support having a plate adapted to rest upon a table slab, a shaft rotatably mounted in said support, a crank arm thereon, a spindle rotatably mounted in said crank arm at an oblique angle in relation to the surface of said support, a friction wheel carried by said spindle and having a portion thereof in engageable relation with the surface of said support, means operative to frictionally engage said friction wheel with said support, a plurality of arms pivoted adjacent their inner ends to said support, spools rotatably mounted in said arms adjacent the outer ends thereof for receiving a skein of yarn, pins carried by said arms toward the outer ends thereof respectively, said pins being of a length to engage the under surface of a slab of a table and resist movement of said arms when withdrawing yarn from said spools, a spring carried by said support and acting upon said arms having a normal tendency to engage said pins with a table slab, and a guide for thread or yarn positioned intermediate the ends of said spindle and between said spools and said spindle.

6. A winding device embodying therein a support, a shaft rotatably mounted in said support, a crank arm thereon, a spindle rotatably mounted in said crank arm at an oblique angle in relation to the surface of said support, a friction wheel carried by said spindle and having a portion thereof in engageable relation with the surface of said support, means operative to frictionally engage said friction wheel with said support, a plurality of arms pivoted adjacent their inner ends to said support, spools rotatably mounted in said arms adjacent the outer ends thereof for receiving a skein of yarn, means whereby said spools may be adjusted longitudinally of said arms, means resisting movement of said arms when withdrawing yarn from said spools, and a guide for thread or yarn positioned intermediate the ends of said spindle and between said spools and said spindle.

REGINALD GEORGE PLUCKROSE.