

G. PYBURN.
MANUFACTURE OF WIRE ROPE.
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1,341,003.

Patented May 25, 1920.

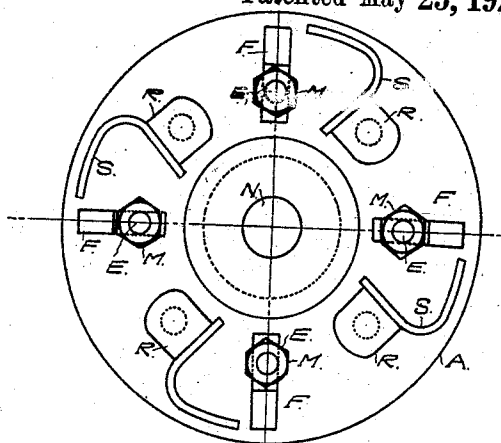


Fig. 1.

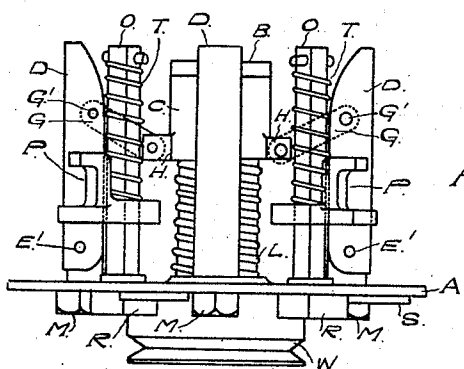


Fig. 2.

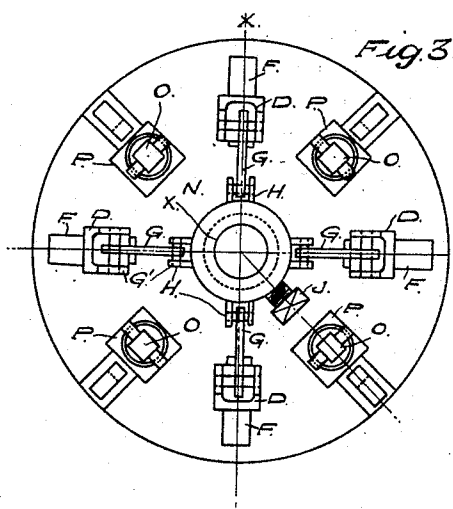


Fig. 3.

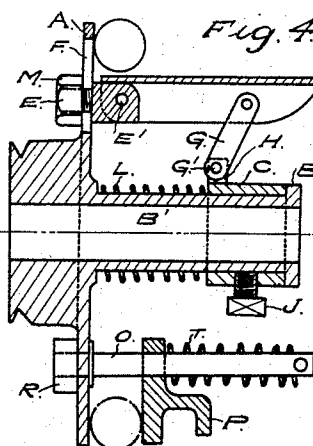


Fig. 4.

Inventor.
George Pyburn
By A. Singer, Atty.

UNITED STATES PATENT OFFICE.

GEORGE PYBURN, OF AIRDRIE, SCOTLAND.

MANUFACTURE OF WIRE ROPE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE PYBURN, of Caledonia House, Cairnhill Road, Airdrie, Scotland, foreman wire-rope maker, have invented certain new and useful Improvements Relating to the Manufacture of Wire Ropes, of which the following is a specification.

My invention which relates to the manufacture of wire-ropes has for its object to provide an appliance of a more simple and effective nature than at present in existence for obviating the necessity of all winding of wire from the hank as manufactured by wire-drawer on to bobbins, than placing these in the stranding machine, and it also obviates the necessity of winding the wire by using a collapsible reel on the machine, all as hereafter described with reference to the drawings and pointed out in the claim.

In order that my invention may be properly understood and readily carried into effect, I have hereunto appended one sheet of drawings, of which—

Figure 1 is a view looking on the under-side of reel.

Fig. 2 is an elevation.

Fig. 3 is a plan looking on top of reel.

Fig. 4 is a section in line X. X. Fig. 3.

In carrying out my invention, I provide a plate A of any suitable metal or material having distance pieces O fixed thereto at equal distances apart, the ends of which distance pieces O pass through holes or openings in the plate A and have each a spring S bearing on the face R of the distance pieces O on the underside of the plate A.

Carried on each distance piece O there is a spiral spring T which bears upon and has a tendency to press down catch P on the coil or wire which lies between the plate A and catch P thereby retaining the wire in the coil as it was wound when being manufactured.

When placing the wire hank in position the catches P are turned out of the way by twisting or turning the distance pieces O and which are held in that position by the springs S bearing against the plates R of the distance pieces O on the under-side of the base plate A. After the hank has been placed in position on the collapsible reel the catches P are again turned back when the springs T automatically press the catches on to the hank of wire.

The plate A has an opening N in the center through which the spindle (not shown) passes.

The collapsible reel consists of four, or less or more, pins or bars E, the ends of which pass through slots or openings F in the plates A and are held in position by the nuts M. Pivoted at E¹ to each of the pins or bars E there is a collapsible adjustable arm D of trough-shaped formation. Carried on a cross-bar or pin G¹ fixed to or forming part of each of the collapsible arms D there is a link G, the other end of which being pivoted between two snugs H fixed to or forming part of a loose sleeve C carried on the boss B¹. Under the sleeve and also carried on the boss B¹ there is a spiral spring L which causes the collapsible arms D to automatically return to their normal position. A collar B is also provided at upper end of boss B¹ to limit the movement of the sleeve C. There is also an adjustable screw J for tightening up the sleeve C after adjusting the arms D. The collapsible reel is always adjusted before the coil or hank is placed thereon so as to accommodate the hank to be uncoiled. The wire is drawn from the coil between the plate A and catches P by the action of the machine which revolves and twists the wire into strands. As this action proceeds, the coil between the plate A and catch P is reduced in size, and in order that the same may retain its form and thus enable the wire to be drawn off the catch P by means of the springs T press on the wire and thereby keep it firm and this prevents looseness in the hank of wire. The adjustment of the arms D to enable the coil to be placed in position is effected by loosening the screw which enables the collar or sleeve C to be moved up or down on the boss B¹. The upper ends of the adjusting arms are thus pulled inward the desired distance and in so doing the collar C moves down the boss B¹ taking with it the inner ends of the links G when they are fixed in that position by the tightening screw J. When the collar or sleeve C is again released by the screw J, the sleeve C, by the action of the coiled spring L rises admitting of the adjusting arms returning to their normal position. The circumference of the collapsible bobbin or reel is adjusted by the nut M carried on the threaded part of the pin or bars E being loosened and the pins or bars E carrying

the tightening bars D being moved outward or inward, as desired. The coil of wire is placed on the collapsible reel above referred to to hold it firmly and retain it in position in the machine whereby there will be no trouble of any fankled hanks or looseness at the finish of the hank.

A suitable friction brake W is placed on the underside of the plate A.

10 Claim.

A reel of the class described comprising a plate having a central opening, a tubular boss on one side concentric with said opening, said plate having radial slots; distance
15 pieces pivotally mounted on said plate, arranged equidistant from the center thereof and having angular faces at the pivotally mounted end, catches slidably mounted on

the distance pieces, springs to move said catches toward said plate, springs to engage
20 the said angular faces and hold said distance pieces and catches against casual turning movement; members on the plate radially adjustable in said slots and having securing means, arms pivotally mounted on
25 said members, a sleeve adjustably mounted on the tubular boss, links pivotally connected to said sleeve and to said arms, and a spring on said tubular boss to move said sleeve outwardly.

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

GEORGE PYBURN.

Witnesses:

JOHN LIDDLE,
JOHN TRAIN LIDDLE.