G. PYBURN.

COMPUND WIRE ROPE.

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1,429,529. Patented Sept. 19, 1922.

Fig. 1.

Fig. 2.

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GEORGE PYBURN, OF AIRDRIE, SCOTLAND.

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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-ropes maker, have invented certain new and useful Improvements in and Connected with Compound Wire Ropes, of which the following is a specification.

My invention relates to improvements in all classes of compound wire ropes, and has for its object to construct these, either right or left hand twist, in such a manner as to obtain the advantages of an improved "unkinkable dead Lang's lay rope." At present Lang's lay ropes contain a large amount of "life" owing to the twist engendered in the rope during its construction and this renders the rope very difficult to handle, makes it "kink" readily and thus prevents the rope from giving the best possible results when working. The object of my invention is to get over or obviate these troubles while retaining the advantages a "Lang's lay rope" possesses over an "ordinary lay" rope, and give a much better wearing surface, a longer life, and also be very much easier to handle than ropes presently in use. In addition, my method does not require any special machinery.

According to my invention, I construct the rope of a number of strands, twisted round a hemp rope, wire or other core, each strand containing a number of wires and each being constructed in the same manner or principle as the following example. The number of wires in each strand will vary according to the size of the rope and the work it will require to do, but the principle embodied in the invention and the number of wires forming the core of the strand viz two, will always be the same.

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

Figure 1 is an elevation of a piece of compound wire rope illustrating my invention. Figure 2 is an end view.

Referring to the drawings, which illustrate for example a strand containing 16 wires, the wires are built up in the machine or machines, at either one or more operations, commencing with the core, viz, two wires, A, B, which are covered by six wires C, D, E, F, G, H, and in turn these are covered by eight wires J, K, L, M, N, O, P, Q. The core referred to viz, the two wires A, B, must be laid in the strand horizontally-parallel, and the size of the wire must be not less than half the size of one of the six wires i. e. the size of one of the six wires is .060", the size of the core wire must be .030". The length of the lay put on the eight wires in construction must be the same length as that put on the six wires. Then the length of the lay on the rope must be twice the length of the lay on the strands, i. e. if the lay on the eight and six wires referred to were 4", then the lay on the rope would be 8".

When the strands are made up into the rope, the method of construction detailed above has the effect of imparting to the rope the advantage claimed by me above.

Claim:

A compound wire rope strand comprising two straight core wires arranged in parallel relation, six wires covering the core wires, and of twice the diameter of said core wires, said six wires being arranged in a lay or twist, and a plurality of outer wires of greater diameter than said six wires and also arranged in a lay or twist, of the same length as that of the said six wires, the length of the lay on the rope being twice that of the lay on the strands.

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

GEORGE PYBURN.

Witnesses:

JOHN LIDDLE.

JOHN TRAIN LIDDLE.