

W. Joslin.
Rope Mach.

N^o 4,931.

Patented Jan. 19, 1847.

Fig. 1.

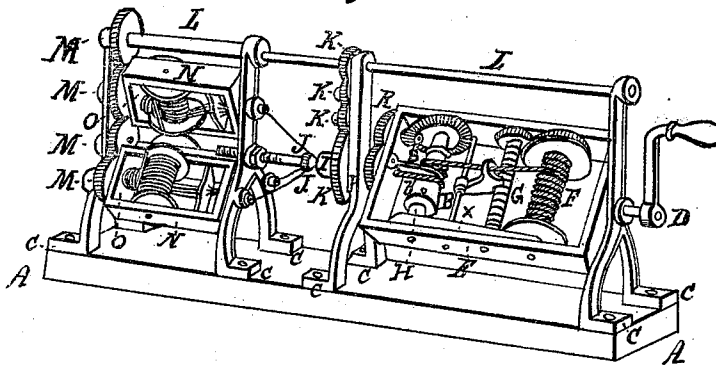


Fig. 2.

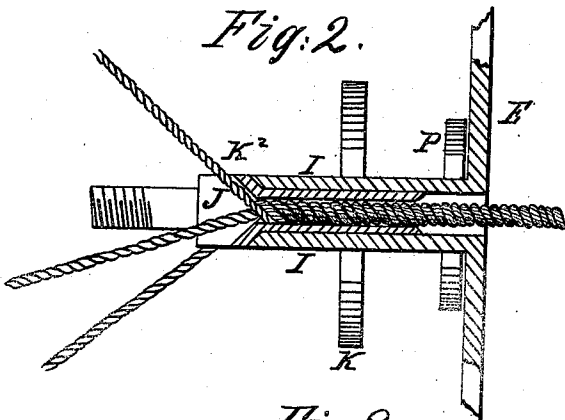
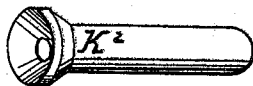


Fig. 3.



UNITED STATES PATENT OFFICE.

WILLIAM JOSLIN, OF WATERFORD, NEW YORK.

IMPROVEMENT IN MACHINERY FOR MANUFACTURING CORDAGE.

Specification forming part of Letters Patent No. 4,931, dated January 19, 1847.

To all whom it may concern:

Be it known that I, WILLIAM JOSLIN, of the town of Waterford, in the county of Saratoga and State of New York, have invented a new and useful Improvement in the Machine for Laying Cables, Rope, Twine, and Cordage of all Kinds, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a perspective view of the machine for laying cordage. Fig. 2 is a longitudinal section of the laying-block and condensing-tube. Fig. 3 is a perspective view of the condensing-tube.

The machine, generally, is made like others in use, such as the base A, stanchions C, driving-shaft D, the large flier E, reel F, right and left screw G for winding the cordage on the reel, the elastic band X to produce a regular draft as the reel fills and increases in diameter, the laying-block J, stationary cog-wheel P, and revolving cog-wheel R, cog-wheels K and M, the small fliers N N, springs O for bearing against the bobbins to prevent the too rapid unwinding of the thread.

The improvement that I have made in the machine consists in combining with the common laying-block J a condensing-tube K², inserted into the cylindrical bore of the journal I of the large flier E and turning with it, said condensing-tube being bored longitudinally in the center with a round aperture corresponding in diameter with that of the cable to be made, said aperture being gradually enlarged at the end next the laying-block, so as to form a conical socket of the exact size and shape of the conical laying-block which lies in said socket in a stationary position, while the tube revolves over it for the purpose of confining the strands of thread in the grooves of the laying-block and causing them to be laid in even parallel spiral lines. The moment they leave the grooves of the conical laying-block at the apex thereof, (by the usual twisting operation of the revolving flier E,) and to be crowded against each other and condensed into a cylindrical cable of a diameter corresponding with that of the bore of the aforesaid tube, the strands all being laid regularly and evenly and of a uniform angle and tension, producing a perfect cable.

The end of the condensing-tube, which covers the conical laying-block, is made of a corresponding conical form and size inside and of the same shape outside, resembling the outer surface of a funnel with a straight tube. The end of the hollow journal into which the aforesaid funnel-shaped condensing-tube is to be inserted is made of the same shape as the outside of the conical laying-block, for the purpose of performing the same office as that performed by the funnel-shaped end of the laying-tube when the latter is withdrawn from the hollow journal, which is done when a cable is to be made of the full diameter of the bore of the journal of the revolving flier. Several condensing-tubes, bored for making various-sized cords, but of uniform size and shape externally to that of the cylindrical chamber or bore of the journal of the flier, are to be provided and used according to the size of the cord required to be made, one being withdrawn when another is to be inserted.

When a yet larger cable is to be made, a larger machine must be provided, furnished with a series of condensing-tubes of different bores, but of uniform diameters externally, all designed to act in the manner above described for laying and condensing the strands into a cable each of uniform twist and size throughout its whole length.

The difference in the spaces between the strands of the cables made by the machines now in use, the want of parallelism of the strands, their unequal tension and riding each other, and consequent weakness and poor appearance of cables now manufactured are owing to the want of the condensing-tube combined with the laying-block, as above described, in manufacturing the cables, which condensing-tube is considered a very important addition to the machine for manufacturing cordage.

Another improvement that I have made in the machine above mentioned consists in the use of a hollow sliding frustum of a cone B, combined with the revolving regulator-shaft H, secured in any required position longitudinally on said shaft for the purpose of graduating the tension of the strands during the operation of laying or twisting them, the tension being increased by moving the frustum

of a cone to the right and decreased by moving it to the left, said frustum of a cone being secured to the shaft H by the screw *b*.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the revolving condensing-tube K² with the stationary laying-block J, the former being constructed and operated in the manner and for the purpose set forth.

2. The combination of the adjustable frustum of a cone with the revolving shaft H and condensing-tube K², for graduating the tension of the strands during the operation of laying them, as described.

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Witnesses:

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