No. 745,206. PATENTED NOV. 24, 1903.

S. G. LEWIS.

LACE MACHINE.

APPLICATION FILED AUG. 29, 1902.

NO MODEL.

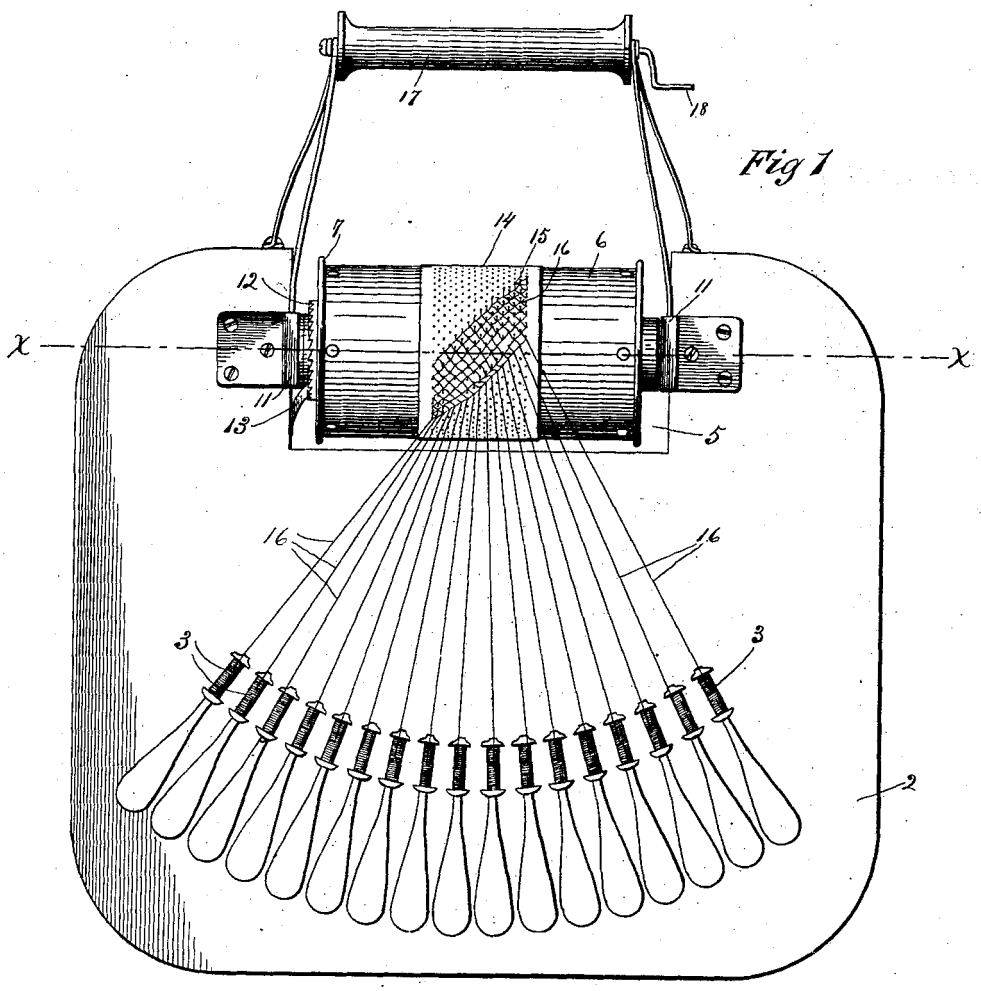


Fig 1

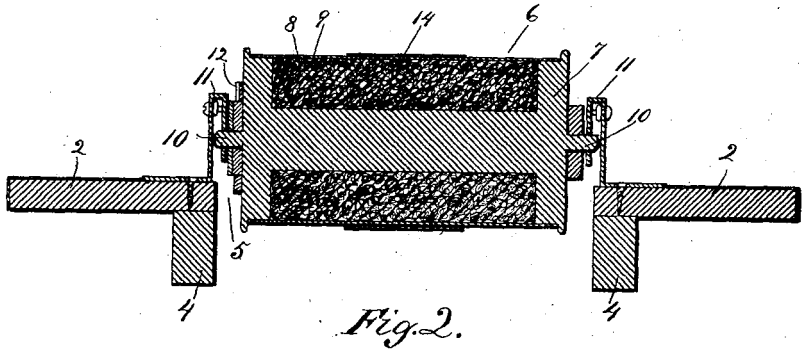


Fig. 2.

WITNESSES:

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No. 745,206. Patented November 24, 1903.

# UNITED STATES PATENT OFFICE.

SYLVESTER G. LEWIS, OF CHICAGO, ILLINOIS.

## LACE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 745,206, dated November 24, 1903.

Application filed August 29, 1902. Serial No. 121,430. (No model.)

*To all whom it may concern:*

Be it known that I, SYLVESTER G. LEWIS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Lace-Machines, of which the following is a specification.

This invention relates to devices for facilitating the manufacture of lace by hand.

While I have not sought to depart from the general principles underlying the exceedingly old method of "pillow-lace" production, the general object of my invention is the construction of an apparatus by means of which the old process may be more simply, readily, rapidly, and effectively carried out and which when used in connection with a suitable pattern will enable others than artizans to produce lace by hand.

In my device I employ a cylindrical cushion upon which the threads are netted, a plurality of bobbins of a character to permit of ready handling carrying the threads which are unwound therefrom as the work progresses, and ordinary pins for use in the usual manner to temporarily separate the meshes and about which the threads are closed.

No patentable novelty is claimed for any of the above parts or the general manner in which they are used, my invention consisting in the novel manner of assembling these, in connection with other parts, into a simple and practical device, and particularly in the combination therewith of a portable and convenient bobbin-table.

My invention further consists in the various details of construction and in combinations of parts, all as hereinafter described, and particularly pointed out in the claims.

My invention will be more readily understood by reference to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a top plan view of a lace-machine embodying my invention. Fig. 2 is a vertical section of the same substantially on the line *x x* of Fig. 1.

Referring now to the drawings in detail, numeral 2 refers to a portable bobbin-table of suitable and convenient size and preferably covered with plush or other fabric (not shown in the drawings) to increase the friction, and thus prevent so far as possible the slipping or sliding of the bobbins 3 3 thereon. Said bobbins are preferably provided with suitable handles, as shown, to facilitate their manipulation. The table 2 is preferably mounted upon suitable supports 4 4 and has a recess 5 at the rear thereof, within which the cylindrical cushion 6 rotates. This cylindrical cushion preferably comprises a wooden spool 7, surrounding which is a cylindrical pad 8 of soft penetrable material, preferably felt, and an outer coat 9 of thin fabric, preferably felt, to provide as near as possible a uniformly-smooth cylindrical working surface. The spool 7 is provided with an axle 10, rotatable in bearings at each side of the recess 5, preferably in the U-shaped arms or braces 11 11. At one end of said spool is provided the ratchet 12, with the teeth of which a spring-actuated detent 13 is adapted to engage to limit rotation of said cylindrical cushion to one direction only.

Numeral 14 refers to a detachable paper pattern carrying out any scheme of direction or suggestion whereby each successive step is made apparent as the work progresses. The pattern is not an essential element of this invention, as one skilled in the art of lace-making may produce lace upon my machine without a pattern, which merely serves as a guide in the work. When wrapped or rolled about the cylinder, this pattern should be endless or continuous and designates, among other things, the points at which the common pins 15 15 are to be inserted.

The threads 16 16 are suitably wound upon the bobbins 3 3, the extremities being fastened at the proper points upon the cylinder. The intertwining is accomplished by passing the bobbins back and forth over and under each other by hand in the usual manner. These bobbins should thus be of a size and shape to facilitate ready handling.

I prefer to provide my lace-machine with a reel 17, hand-operable by means of a suitable crank 18, upon which the finished lace is wound as the work progresses, the pins being removed from the finished work from time to time.

Many modifications of the minor details of my improved lace-machine will doubtless readily suggest themselves to those skilled in

the art to which it appertains, and I therefore do not desire to limit my invention to the specific construction herein shown and described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a lace-machine, the combination with a suitable bobbin-table of a rotatable, cylindrical cushion and means limiting rotation of said cushion to one direction.

2. In a lace-machine, the combination with a suitable bobbin-table of a cylindrical cushion rotatable within a recess in the rear edge of said table, and means limiting rotation of said cushion to one direction.

3. In a lace-machine, the combination with a recessed bobbin-table of a cylindrical cushion rotatable within said recess, means limiting rotation of said cushion to one direction and a reel upon which the product is wound as finished.

4. In a lace-machine, the combination with a suitable bobbin-table of a rotatable, cylindrical cushion and a reel upon which the lace is wound as finished.

In testimony of the foregoing I have hereunto set my hand, this 21st day of August, 1902, in the presence of two witnesses.

SYLVESTER G. LEWIS.

Witnesses:
F. E. STEWART,
F. B. MACKINNON.