I. W. Lamb.

Take-up for Knitting Mach.

No. 49,895. Patented Sept. 12, 1865.

Fig. 1.

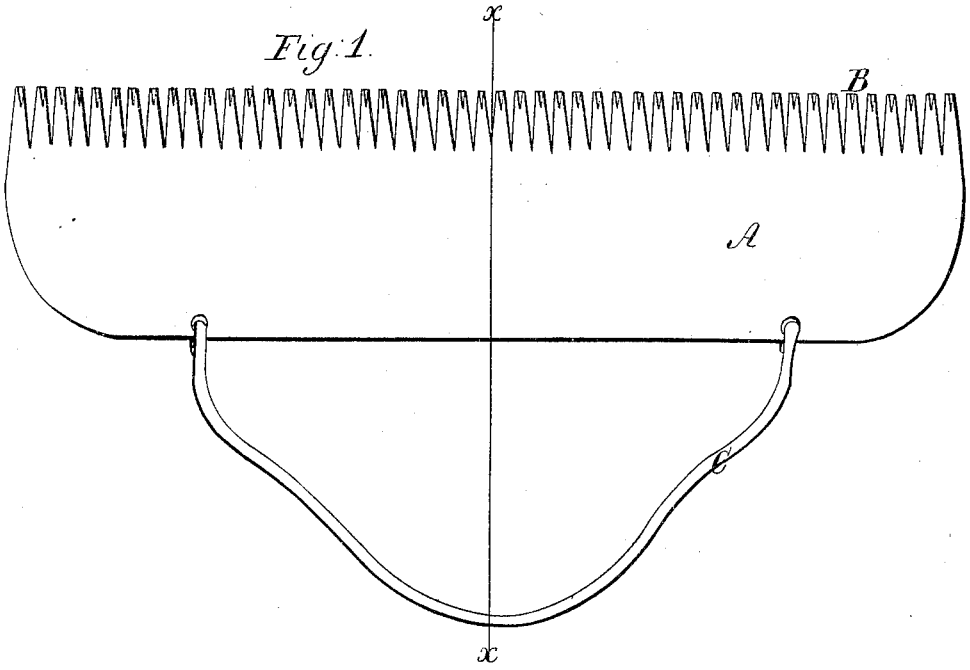

Fig. 2.

Witnesses;

J. M. Congdon

Geo. Tuck

Inventor;

I. W. Lamb

By Munn & Co

attys

UNITED STATES PATENT OFFICE.

ISAAC W. LAMB, OF ROCHESTER, NEW YORK.

APPARATUS FOR SETTING UP WORK IN KNITTING-MACHINES.

Specification forming part of Letters Patent No. **49,895**, dated September 12, 1865.

To all whom it may concern:

Be it known that I, ISAAC W. LAMB, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Apparatus for Setting Up Work on Knitting-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation of an apparatus to be used in setting up work in knitting, made according to my invention. Fig. 2 is a vertical section taken on the line *x* of Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention consists in an apparatus for setting up work on knitting-machines, by the aid of which the work may be set up on a knitting-machine almost instantly without the aid of old work, and thereby a great saving of time is secured upon any knitting-machine to which it may be adapted, in beginning the work when by accident it may have run off a machine; but its value is especially apparent in the facility that it affords for knitting the heels of stockings.

The apparatus herewith presented is one designed to be used on a machine of the class known as "straight" machines, and especially that class of straight machines that employ two rows of needles, operating alternately, as in the knitting-machine patented to me September 15, 1863; but it is plain that the same device may be used upon circular-knitting machines by making it in a circular form, or upon straight-knitting machines employing but one row of needles.

A is a plate of metal of a length a little greater than the row of needles of the machine on which it is to be used. The upper edge has a series of wedge-shaped fingers, B, formed thereon, whose distance apart is to be equal to the distance of the needles apart, and their breadth is to be such as will permit them readily to pass between the needles. Their ends are bent over into the form of hooks. The opposite edge of the plate has a bail, C, which serves the purpose of holding the weights which are to be applied when the work has been set up and the fabric is being produced.

The manner of applying and using the apparatus is as follows, taking the process of knitting a stocking, as an example, upon one of my knitting-machines: The foot of the stocking is first knit up to the line where the heel is to be joined thereto. The machine is then set in condition so that only the back row of needles will operate, and the crank is turned once around, while the yarn-carrier is held still or with the yarn broken and taken out of the carrier. The loops are thus all let off of the back row of needles, while those on the front row remain on. The yarn is then inserted through the eye of the yarn-carrier, and the crank is started until the first needle is started up about a half of its movement. The plate A is then inserted between the rows of needles from beneath, behind the work, the hooked fingers being placed against the back row of jacks, with the hooks toward the work already on the machine. The plate is to be also so tipped or inclined that the hooks will be behind the yarn-carrier, and the tops of the hooks are to be placed nearly as high as the top of the jacks, between the needles, and against the jacks, not between them. The plate A is held in this position while the machine is operated or moved one stroke or a half-revolution of the crank. The back row of needles will come up between the hooked fingers B, and when the needles retire, after having received the yarn in their hooks, they will draw the yarn into the hooks of the fingers B, so that the plate A may be suspended upon the yarn by the hooks of fingers B, which have hold of the yarn between each of the needles, and thus a loop is formed upon each needle. Proper weights are now attached to the bail C of the plate, and the knitting is proceeded with the same as though loops had been placed by hand upon each needle and weights attached to the old fabric, as in the former manner of setting up work. When sufficient is knit for the heel of a stocking the machine is set to knit hollow or tubular work, and the leg is produced.

If it is desired to set up new work on one of my knitting-machines, the machine is set in position to operate only the back row of needles, and the work is set up on that row; then

both rows of needles are operated together once across, when loops are formed on both rows of needles, and the work can be progressed with the same as when knitting any plain tubular work.

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

The setting-up apparatus, made substantially as above described, having fingers B to be placed between the needles of a knitting-machine, with hooks or their equivalents on the ends of such fingers, for the purpose of holding onto the yarn between the needles, and thus setting up the work on a knitting-machine without the aid of old work.

ISAAC W. LAMB.

Witnesses:
JOSEPH DEWEY,
DANIEL W. BUSH.