Dec. 26, 1922. 1,439,999

R. K. BOADWEE.
WARP KNITTING MACHINE.
FILED FEB. 28, 1922.

2 SHEETS-SHEET 1

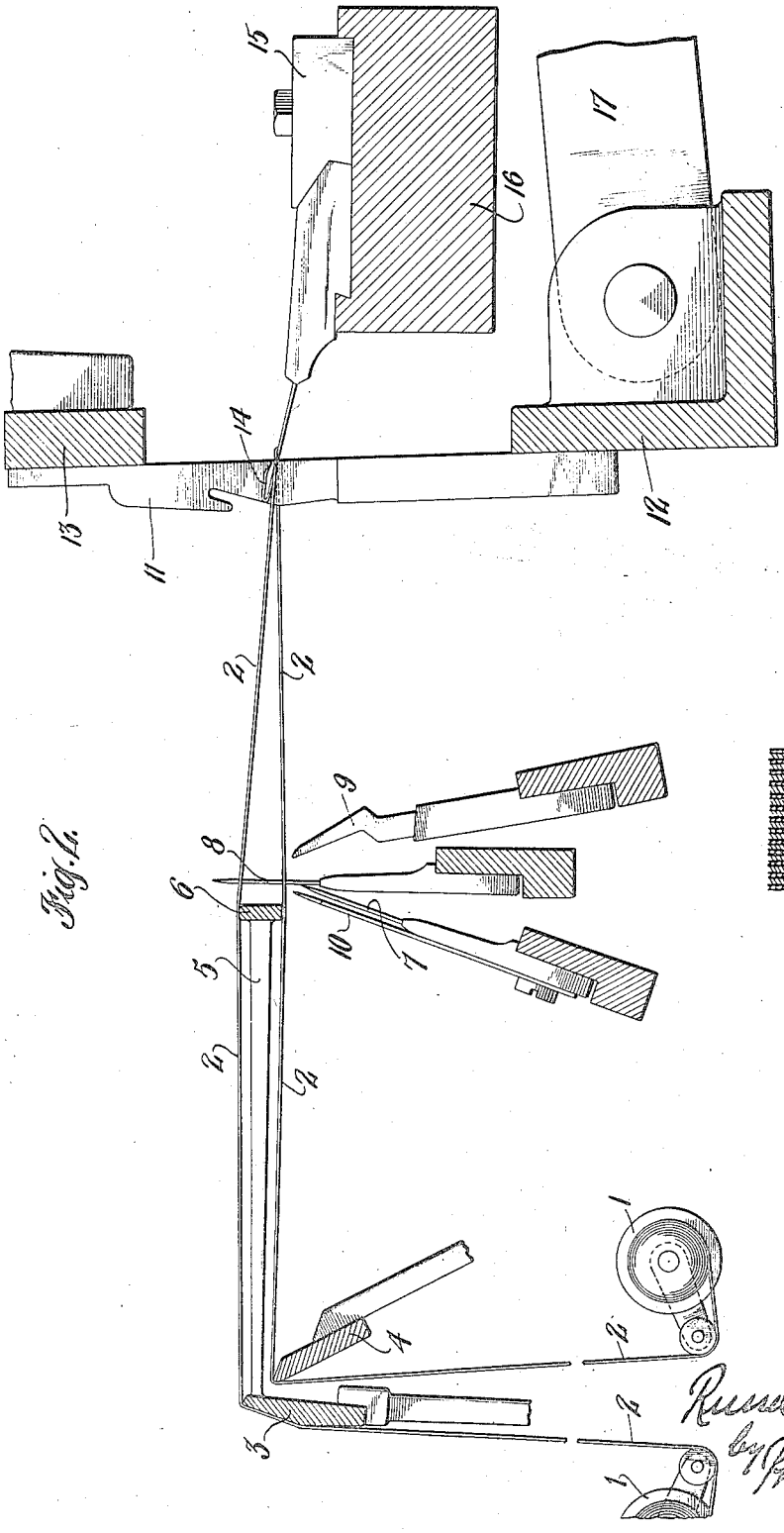


Fig. 2.

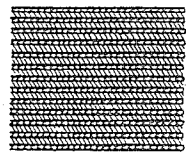


Fig. 1.

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2 SHEETS-SHEET 2

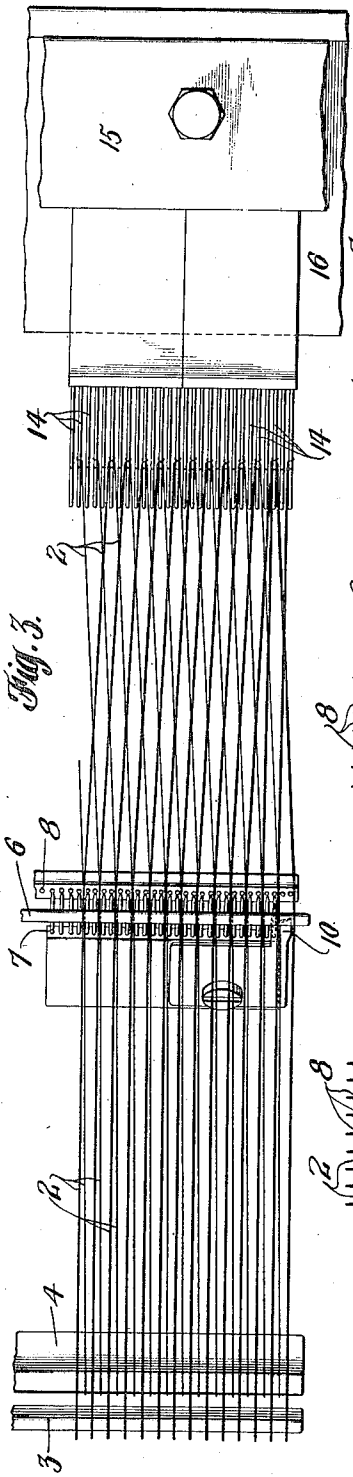


Fig. 3.

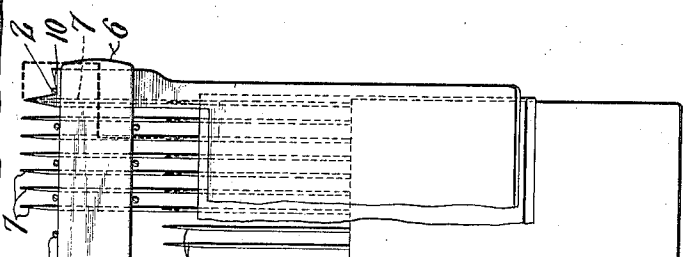


Fig. 6.

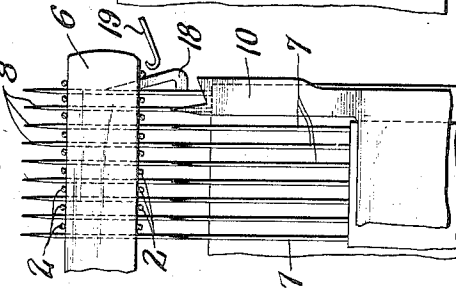


Fig. 8.

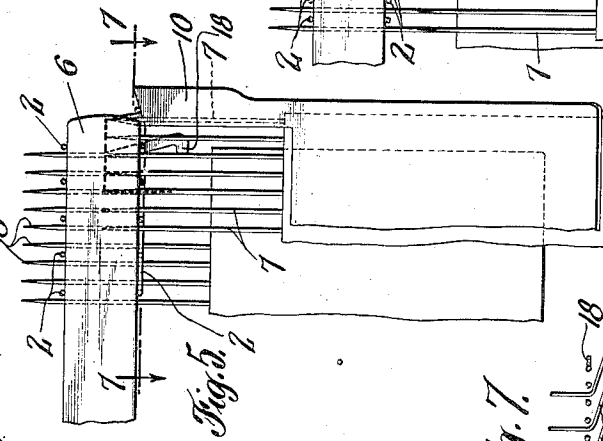


Fig. 5.

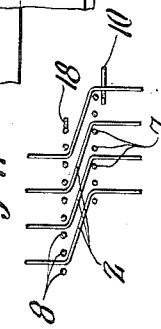


Fig. 7.

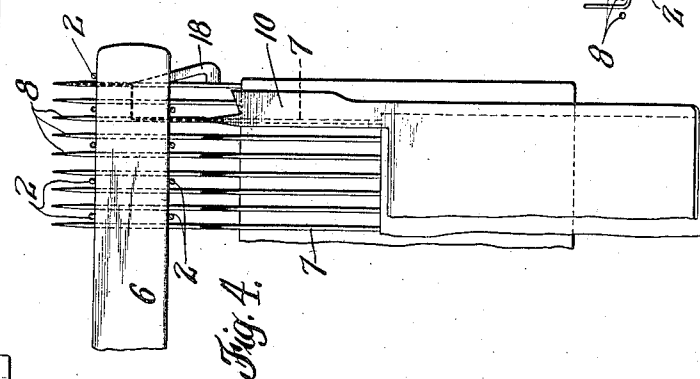


Fig. 4.

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Patented Dec. 26, 1922. 1,439,999

UNITED STATES PATENT OFFICE.

RUSSELL K. BOADWEE, OF BROOKLYN, NEW YORK, ASSIGNOR TO JULIUS KAYSER & CO., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

WARP-KNITTING MACHINE.

Application filed February 28, 1922. Serial No. 539,992.

To all whom it may concern:

Be it known that I, RUSSELL K. BOADWEE, a citizen of the United States, and a resident at No. 232 Taaffe Place, in the borough of Brooklyn, city and State of New York, have invented a new and useful Improvement in Warp-Knitting Machines, and the new fabric so produced.

Those who are familiar with the manufacture of so-called Milanese fabric on the warp knitting machine, know that two threads each coming from its appropriate bobbin are adjusted by the thread adjusting points so that they may be "picked up" by the so-called "broad point" and "thrown" as it is called upon each of the needles throughout the entire gang of needles so that when manipulated by the looper they will be looped, two at a time, and interlocked to form the Milanese warp knitted fabric.

I have discovered that if the devices constituting the thread manipulating parts of the machines be utilized under an altogether new arrangement, never before contemplated so far as I am aware, that remarkable and unexpected results follow, i. e., that instead of every needle in the gang of needles being supplied with two threads that every alternate needle will be skipped so that half only of the needles will be supplied each with two threads, the intermediate needles being left absolutely bare of all thread.

The result of this peculiar adjustment and operation of the machine is that an extremely sheer and handsome fabric is produced which has moreover longitudinally running rib-like lines somewhat more pronounced than those present in the ordinary Milanese fabric and spaced further apart.

It will thus be seen that by my invention or discovery the well known Milanese warp knitted machine which has always produced the standard product may by the simple and easily effected readjustment of the parts which I am about to describe be made to operate in a manner never before contemplated and to produce a new, sheer and handsome fabric, and yet be easily and quickly returned again to its original adjustment should the knitter so desire.

In the drawings—

Figure 1 illustrates, greatly enlarged, a small section of my new fabric.

Figure 2 illustrates an elevation, partly in section, of the parts of the machine which are more particularly involved in the invention.

Figure 3 illustrates a plan view of the parts shown in Figure 2 showing also the position assumed by the threads.

Figures 4, 5 and 6 illustrate elevations of the initial, the intermediate and the final positions respectively and the movements of the broad point.

Figure 7 illustrates a plan view, taken on the line 7, 7 of Figure 5 and looking in the direction of the arrows.

Figure 8 illustrates the old or usual arrangement of the parts for the purpose of comparison.

1, 1 are the bobbins, 2 the threads proceeding from the bobbins, 3 the top tier bar, 4, the bottom tier bar, 5 the bracket attached to the top tier bar to support the divider 6, 7 the front or traverse bar points, 8 the back bar points, 9 the pick up, 10 the broad point, 11 the sinker, 12 the lower sinker bar, 13 the upper sinker bar, 14, the needles, 15 the needle clamps, 16 the needle bar, 17 the sinker operating link which coacts with a suiable cam or eccentric not shown, 18 and 19 (see Figures 4, 5, 7 and 8) are respectively the usual bayonet point and hook which have no function when the machine is adjusted to produce my new fabric but the bayonet point 18 may be left in place so that should it be desired to produce the regular or old form of fabric, the machine may be returned to its original adjustment and then that part will be in place ready for operation, but the hook should be removed for the production of my fabric.

To produce my new fabric the following changes are made in the machine and in its adjustment. The broad point 10, instead of being as usual at the extreme right of the gang of points plus a distance equal to the space separating the points; is moved to the left into a position where it will be in front of the first traverse bar point 7. Also the threading of the machine is changed that is to say, instead of the first thread, on the lower side of the divider 6, being next to the bayonet point as shown in Figure 8, it is located between the second and third of the back bar points 8 as shown in Figure 4; also all the remaining threads below the divider are located in the alternate spaces between the points instead of in the space between adjoining points. Also the threads on the

upper side of the divider 6 are similarly located in the alternate spaces between the back bar points 8, leaving the intermediate spaces bare of thread as shown in Figure 4.

From the foregoing it will be seen that in the operation of the machine in its new adjustment as above described, the broad point 10 will make the traverse shown in Figures 4, 5, and 6 respectively, and will transfer the threads successively from below to above the divider 6, and that the well-known angular position of the threads will then follow in the usual and well-known manner. Particular attention is called to the fact that in my new arrangement of the machine the broad point alone effects the transfer of the threads from below to above the divider, whereas in the usual arrangement and adjustment of the machine the hook 19 also was a necessary part.

The new product produced by me as aforesaid is remarkable for its beauty and suitability for many uses particularly for women's underclothing and fine sheer summer waists and frocks.

It will be obvious to those who are familiar with the construction and operation of the so-called Milanese warp knitting machine that certain departures from that which I have illustrated and described may be resorted to and still the essentials of my invention or discovery be utilized, I, therefore, do not limit myself in the above respects.

I claim—

A warp knitting machine comprising a series of needles, a series of traverse bar points, a series of back bar points having threads located only in the alternate spaces between said points, and a broad point located in front of the first traverse bar point, whereby two threads are supplied to every alternate needle and the intermediate needles are free from threads.

RUSSELL K. BOADWEE.