

(No Model.)

D. HURLEY.
PRESSER STAND FOR KNITTING MACHINES.

No. 577,620.

Patented Feb. 23, 1897.

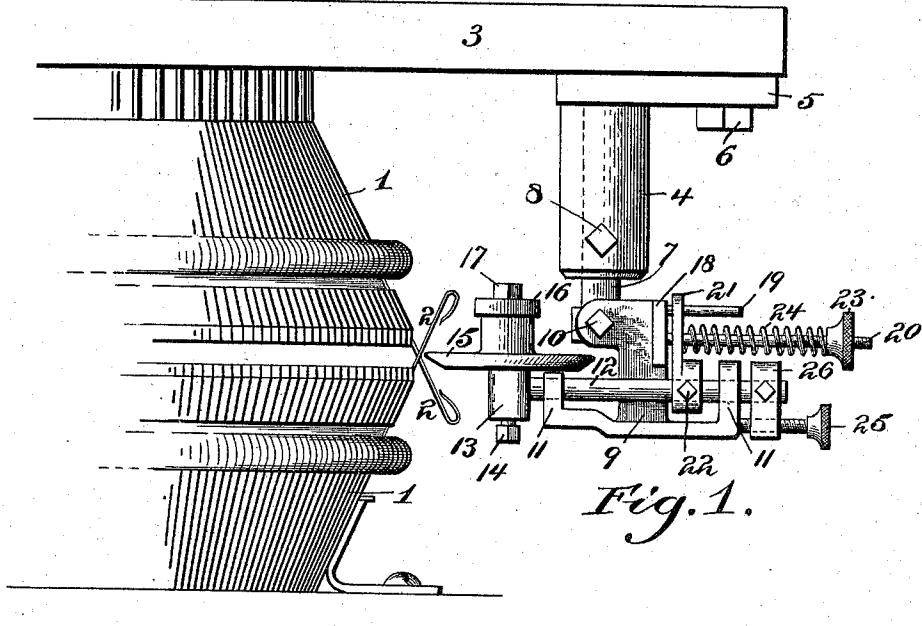


Fig. 1.

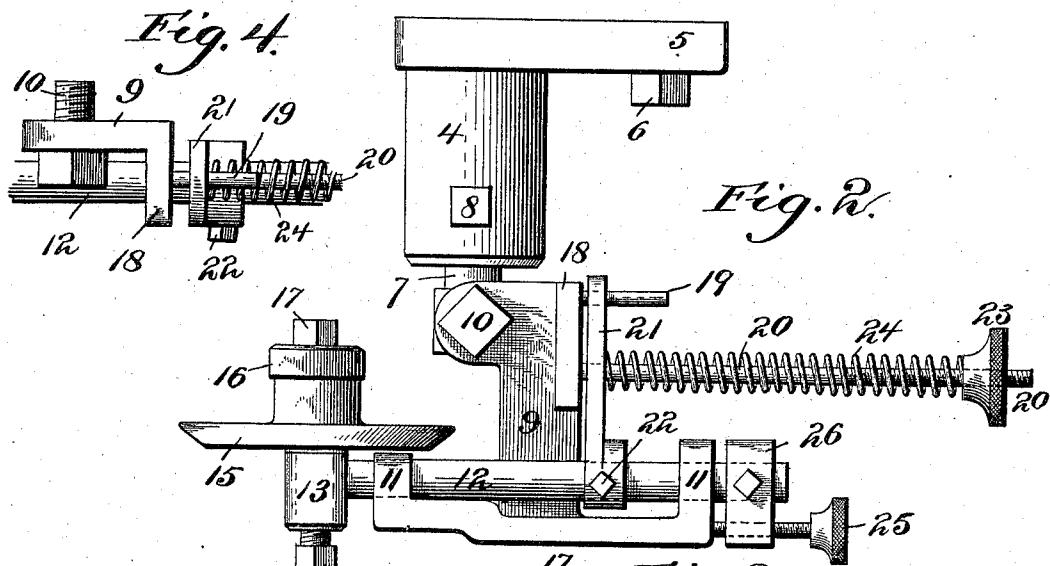


Fig. 2.

Witnesses:

J. B. McGivern.
J. H. Griffis.

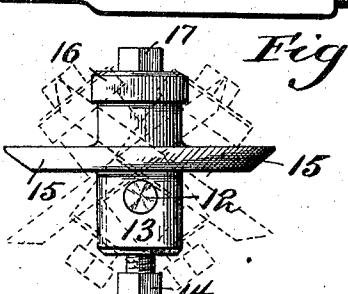


Fig. 3.

Inventor

Daniel Hurley
By
M. A. Peck
His Attorney

UNITED STATES PATENT OFFICE.

DANIEL HURLEY, OF BENNINGTON, VERMONT, ASSIGNOR TO CHARLES COOPER, OF SAME PLACE.

PRESSER-STAND FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 577,620, dated February 23, 1897.

Application filed February 28, 1896. Serial No. 581,141. (No model.)

To all whom it may concern:

Be it known that I, DANIEL HURLEY, a citizen of the United States, residing at Bennington, in the county of Bennington and State of Vermont, have invented certain new and useful Improvements in Presser-Stands for Knitting-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to supports for presser-disks for knitting-machine needles, and has for its object to so construct and combine the several parts of the support that the presser-disk will be adjustable in every direction relative to the needles and also be very sensitive to the action of its spring. The function of the presser-disk is to press down the barbs of the needles to allow them to cast off the old loops and pull the new loops through them. When the needles commence to move up, there are two series of stitches or loops on them, and it is when the point of the barb in its upward movement arrives midway between the two loops on the needles that the presser-disk engages the barb and presses it down, thereby permitting the needle to cast off the old loop and draw the new one through it. This point of engagement will differ with stitches of different lengths, and hence it is necessary to adjust the presser-disk at different angles to cause it to engage the barbs at the proper time.

Referring to the drawings, Figure 1 is an elevation of a portion of a knitting-machine, showing the needle-cylinders with my invention attached thereto. Fig. 2 is a side elevation of my improvement detached and on an enlarged scale. Fig. 3 is a front view of the presser-disk and part of its support, showing in dotted lines positions to which the disk can be adjusted; and Fig. 4 is a top view of a casting which supports the presser.

Similar reference-numerals indicate corresponding parts in each figure of the drawings. 1 represents the upper and lower needle-

50 cylinders, and 2 the needles.

3 is the ring or bed-plate, which supports the upper needle-cylinder.

4 is a depending tube provided with a lateral arm 5, which is secured to the ring 3 by a bolt 6. A rod 7 fits within the tube 4 and is capable of rotary and longitudinal movement therein, so that it may be adjusted as desired, and a set-screw 8 passes through the tube 4 and engages the rod 7 to lock the two together. The lower end of the rod 7 is flattened, and to it an inverted-T-shaped casting 9 is secured by a screw 10.

The horizontal arms of the casting 9 are formed with bearings 11, in which the sliding rod 12 is supported to have free longitudinal movement. On the forward end of the rod 12 a post 13 is pivotally mounted and may be held thereon in any desired position by the set-screw 14, which passes up through the end of the post 13 and engages the rod 12. The post 13 serves as a journal for the presser-disk 15, which is held thereon by the collar 16 and screw 17, but which is free to have rotary movement at all times.

18 is a lug extending laterally from the casting 9, and from this lug projects the short guide-pin 19 and the long guide-pin 20. An arm 21 is attached to the rod 12 by a set-screw 22, and its upper portion is provided with openings through which the guide-pins 19 and 20 pass. The outer end of the guide-pin 20 is threaded, and on it a thumb-nut 23 is screwed. Between the nut 23 and arm 21 a coiled spring 24 surrounds the pin 20, and the tendency of this spring is to force the arm 21, and with it the rod 12 and disk 15, toward the needles. This movement is, however, regulated and restricted by the thumb-screw 25, which passes through a lug 26, secured to the rod 12, and engages one of the bearings 11 on the casting 9.

From the foregoing description it will be seen that by loosening the set-screw 14 the disk can be turned at an angle in either direction on the rod 12, as indicated in dotted lines in Fig. 3; also, that by loosening the screw 10 the casting 9, and with it the disk 15, can be adjusted at any desired angle relative to the rod 7, and thereby move the point of contact between the disk and the needles either upwardly or downwardly, as may be

desired. It will also be seen that the disk is very sensitive to the action of the spring 24, as practically all the friction to be overcome is that between the sliding rod 12 and the 5 bearings 11. The spring 24, being on a separate rod and not inclosed, is free to expand and contract without any friction whatever, and as the sliding rod 12 is also exposed it can be easily kept free from matter that might 10 tend to obstruct its movement. This is a great improvement over the ordinary construction of these devices, in which the sliding rod which carries the disk is surrounded with a coil-spring and the rod and spring are 15 inclosed by a sleeve.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination in a knitting-machine, 20 of a support attached thereto and provided with bearings, a sliding rod supported in said bearings with means for regulating and restricting its movements, a presser-disk carried by the sliding rod, a fixed rod extending 25 from the support, an arm connected to the sliding rod and fitting loosely over the fixed rod, an adjustable stop on the end of the fixed rod, and a spring between the said stop and arm, substantially as and for the purpose set 30 forth.

2. The combination in a knitting-machine, 35 of a presser-disk and a support therefor consisting of a tube screwed to the frame of the

machine, a rod adjustably secured in the tube, 40 a casting pivotally connected to the said rod and provided with bearings, a sliding rod supported in said bearings, a post carrying the presser-disk adjustably pivoted on the sliding rod, a fixed rod extending from the casting, a stop on the end of the fixed rod, an arm 45 connected to the sliding rod and fitting loosely over the fixed rod, and a spring between the said stop and arm, substantially as and for the purpose set forth.

3. The combination in a knitting-machine, 45 of a presser-disk and a support therefor consisting of a tube secured to the frame of the machine, a rod adjustably secured in the tube, 50 a casting pivotally connected to the said rod and provided with bearings, a sliding rod supported in said bearings, a fixed rod extending from the casting, a stop on the end of said rod, an arm connected to the sliding rod and fitting loosely over the fixed rod, a spring between the said stop and arm, a device to adjust and limit the movement of the sliding rod in its bearings, and a post carrying the presser-disk adjustably pivoted on the sliding rod, 55 substantially as and for the purpose set forth.

In testimony whereof I affix my signature 60 in presence of two witnesses.

DANIEL HURLEY.

Witnesses:

JAMES HAYES,
CHARLES S. KEHOE.