(No Model.)

A. H. BROTHERS.

NEEDLE PRESSER FOR KNITTING MACHINES.

No. 325,815. Patented Sept. 8, 1885.

Fig. 1.

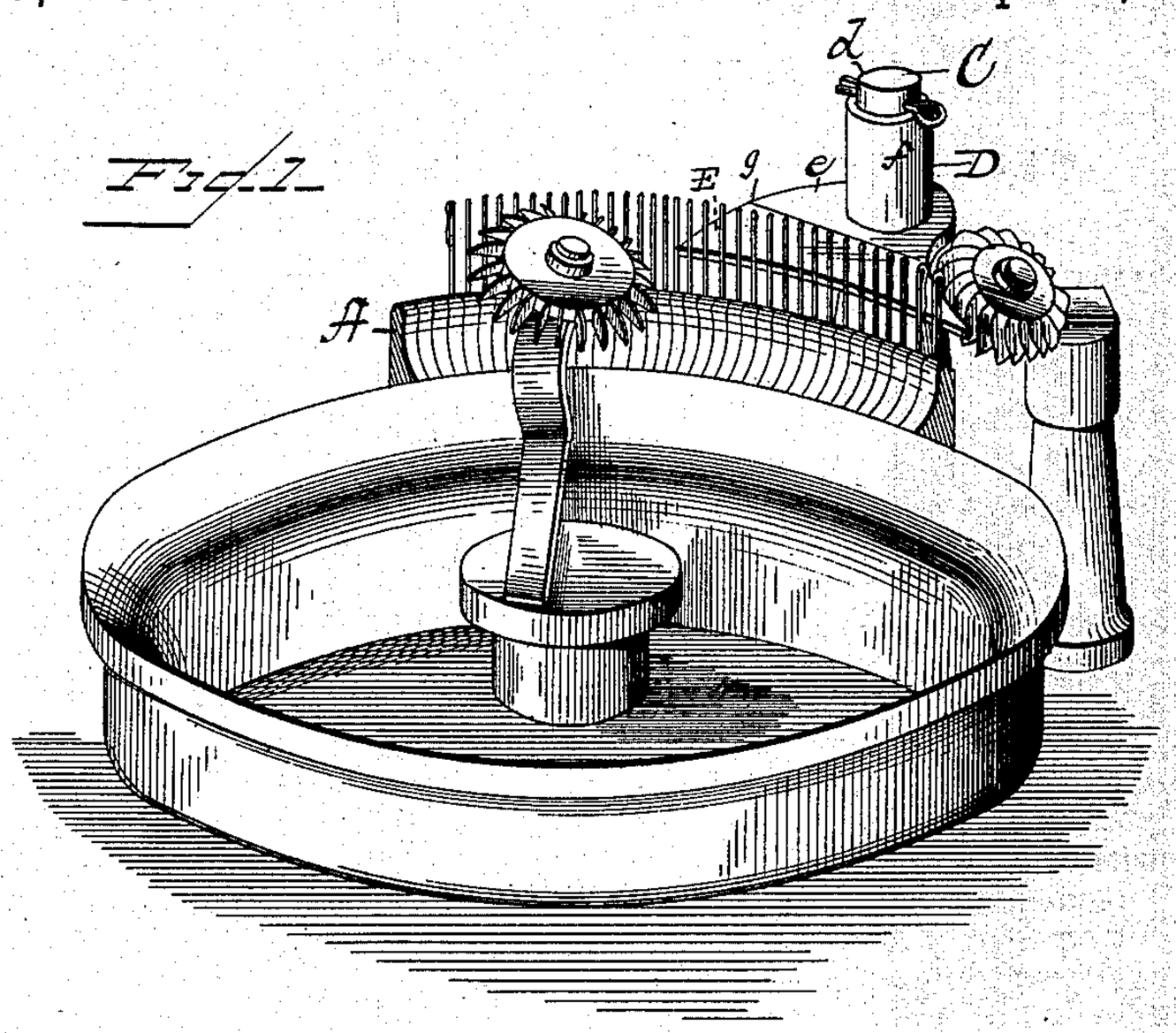


Fig. 3.

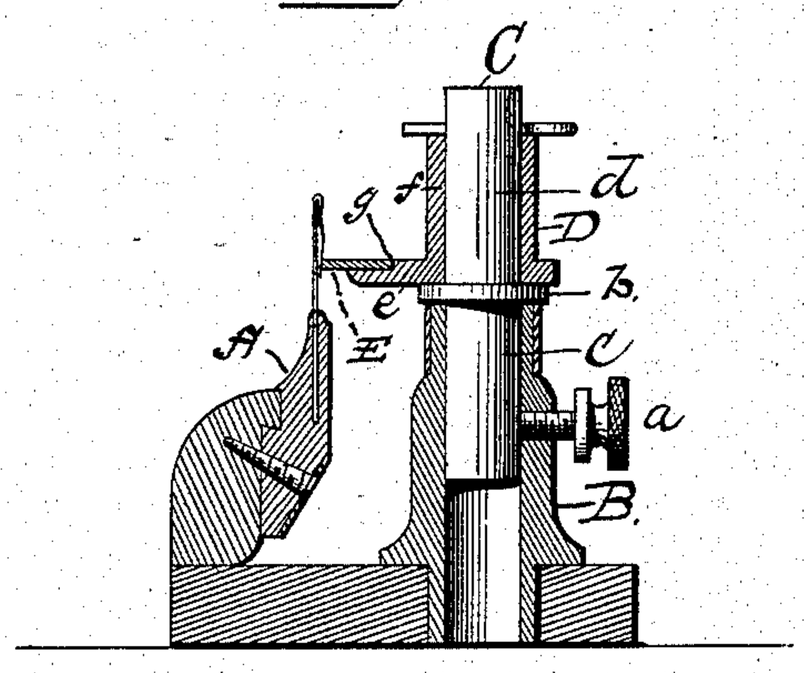
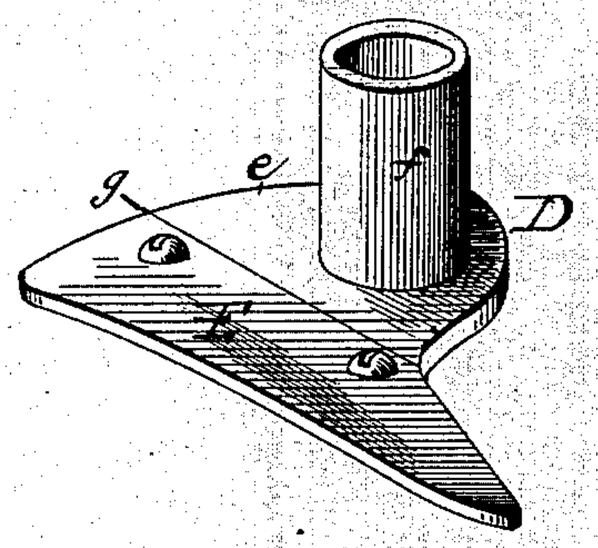


Fig. 2.



WITNESSES

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NEEDLE-PRESSER FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 325,815, dated September 8, 1885.

Application filed July 30, 1884. (No model.)

To all whom it may concern:

Be it known that I, ALPHONSO H. BROTHERS, a citizen of the United States of America, residing at Naugatuck, in the county of New Haven, in the State of Connecticut, have invented certain new and useful Improvements in Needle-Pressers for Knitting-Machines, of which the following is a specification.

My invention has relation to pressers for circular-knitting machines, and is especially adapted to that class of knitting-machines equipped with what are known as "spring" or "barbed" needles.

My invention is fully described hereinafter, and the novelty specifically pointed out in the claims hereto.

In the accompanying drawings, forming a part of this specification, and illustrative of my improvements, Figure 1 is a perspective view of a portion of a spring-needle-cylinder knitting-machine, showing the device arranged in operative position. Fig. 2 is a perspective view of the presser, and Fig. 3 is a vertical central sectional view of the device and connections.

The letter A designates a section of needles secured to a rotary needle-cylinder of a circular-knitting machine.

The letter B designates the presser-post, which consists of a hollow standard formed on or fixed to the bottom plate sustaining the presser, and is provided with a set-screw, *a*.

The letter C designates a removable standard formed with a circular collar, *b*, about midway of its length, the lower part, *c*, being made to fit the bore of the presser-post B, and the upper part, *d*, is made to fit the bore of the sleeve of the presser. The collar *b* may be set on the rim of the top of the hollow presser-post, and its upper surface serves as a seat for the presser. The top of the removable standard C is perforated, as shown, to admit the insertion of a key-bolt, whereby the presser is secured against vertical displacement.

The letter D designates the presser, formed with a plate, *e*, which extends inward toward the needles, and is provided with a vertical sleeve, *f*, the bore of which accurately fits the upper arm of the removable standard. The upper face of the presser-plate for a distance from its edge is cut down, forming a shouldered seat, *g*, and this part is provided with screw-threaded holes, as shown, the object being to provide a seat for the removable presser-plate or facing E, which is secured on the seat by screws or bolts, with its needle-impressing edge flush with or projecting beyond the inner edge of the base-plate. The impacting or impressing edge of the facing-plate C is formed concave to set against the barbs of the needles, and the curvature is made very slightly eccentric to the circle of the face-line of the needles, so that the pressure shall gradually increase from the point of contact to the point of discharge.

The facing-plate E is made of rawhide, leatheroid, celluloid, or vulcanized rubber, or like material of sufficient consistency and wearing quality to meet the strain and wear to which the part may be subjected, the object being to provide a presser which will take and hold a lubricant and at the same time effect the end without presenting such rigidity as to wear the needles away. The facing-plate being made detachable, it may be replaced when worn without other expense or trouble than the cost of the new facing and the adjustment of it to its seat.

The presser is arranged on the post or standard, as hereinbefore mentioned, with the concave edge arranged to press against the needles with increasing force from the point at which they are first engaged until they pass from contact with it, the effect being to hold the yarn under the beards from the time it is placed there by the loop-wheel and insuring perfect uniformity in the length of the stitches.

The parts are set in operative combination by placing the removable standard in the presser-post and then slipping the sleeve of the presser over the extended part of the standard and securing it by the key through the hole in the top of the standard. The vertical adjustment is fixed by means of the set-screw in the presser-post, and the presser automatically adjusts itself to the face of the needles and in the manner stated by means of being pivotally disposed upon the removable standard, and having its impressing-edge formed to give gradually-increasing pressure, as heretofore stated.

I am aware that a metallic presser having a concave elongated needle-impressing edge has heretofore been made and that a detachable glass presser has been patented. I am also aware that a rotary presser has been made consisting of a ring of rawhide or similar material secured between metallic disks, with the edge of the rawhide ring projecting beyond the edges of the disks, and arranged with its edge approaching a vertical direction.

My improvements consist in the substitution of a detachable unpliant non-metallic presser, having the quality of taking up and holding a lubricant, and of a novel conformation, being concaved on its impressing-edge eccentric to the circle of the face-line of the needles, and arranged in relation thereto to impress the needles with increasing force from the point of engagement to the point of discharge.

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

1. The combination of the needle-cylinder, needles, the presser-post, and the removable standard, with the horizontal base-plate formed with a vertical sleeve to fit over the removable standard, and the unpliant non-metallic and absorbent presser-plate horizontally secured on the base-plate with its needle-impressing edge projected beyond the inner edge of the base-plate and slightly concaved eccentric to the circle of the face-line of the needles to impress the needles with increasing pressure from the point of engagement to the point of discharge, substantially as described.

2. In combination, the presser-post B, the removable standard C, formed with an annular collar, *b*, the presser D, formed with the vertical sleeve *f* and horizontal plate *e*, having a seat, G, and the unpliant, non-metallic, and absorbent presser-plate E, secured to the horizontal plate, substantially as described.

3. In combination, the presser-post B, the removable standard C, the presser D, formed with a vertical sleeve, *f*, and horizontal plate *e*, and the presser-plate secured on the horizontal plate, substantially as described.

In testimony whereof I have hereunto subscribed my name in the presence of two attesting witnesses.

ALPHONSO H. BROTHERS.

Attest:

H. C. BALDWIN,

JAMES E. SWEENEY.