

(No Model.)

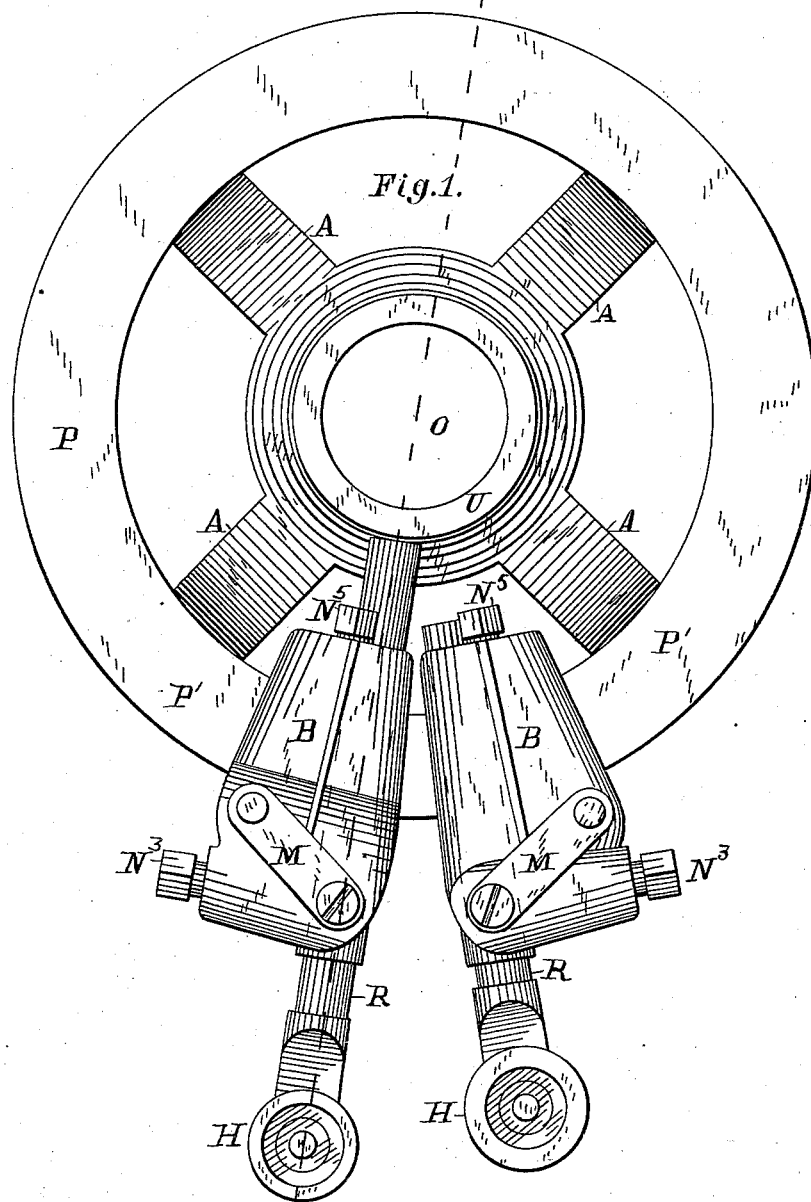
4 Sheets—Sheet 1.

A. & I. TOMPKINS.

MECHANISM FOR SUPPORTING AND ADJUSTING THE BURR HOLDERS
OF KNITTING MACHINES.

No. 307,152.

Patented Oct. 28, 1884.



Witnesses:

P.C. Ricketts
Charles S. Brintnall

Inventor:

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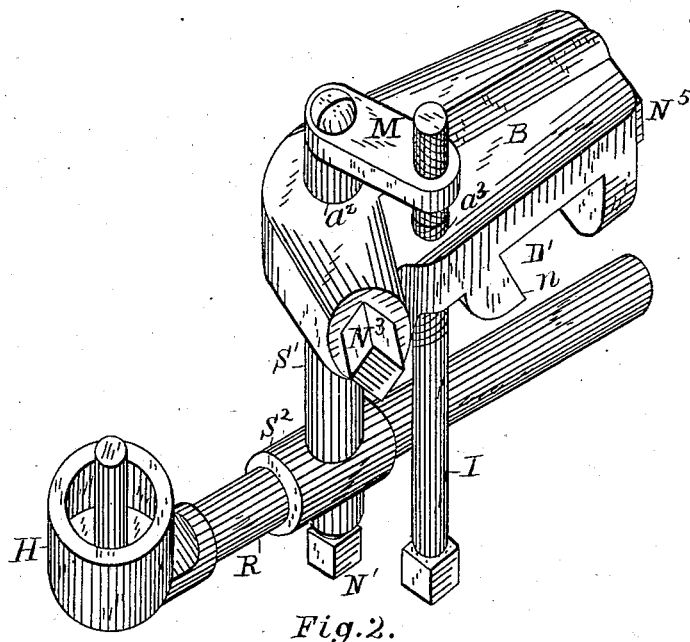


Fig. 2.

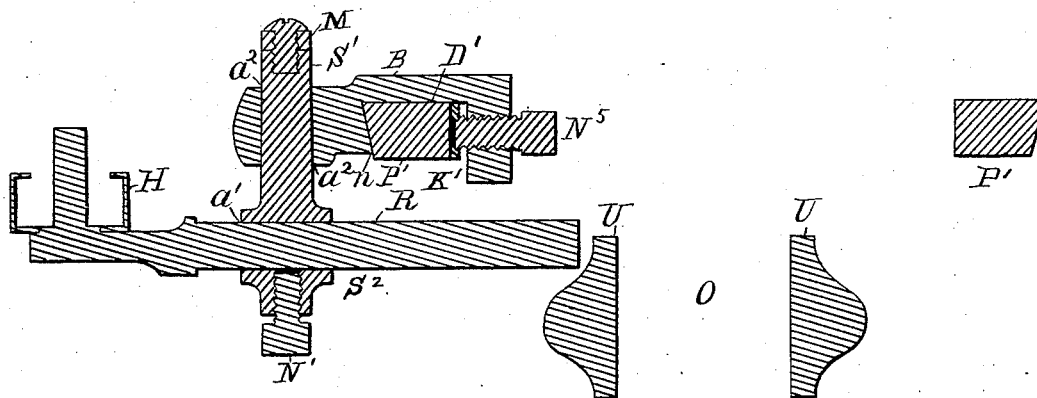


Fig. 3.

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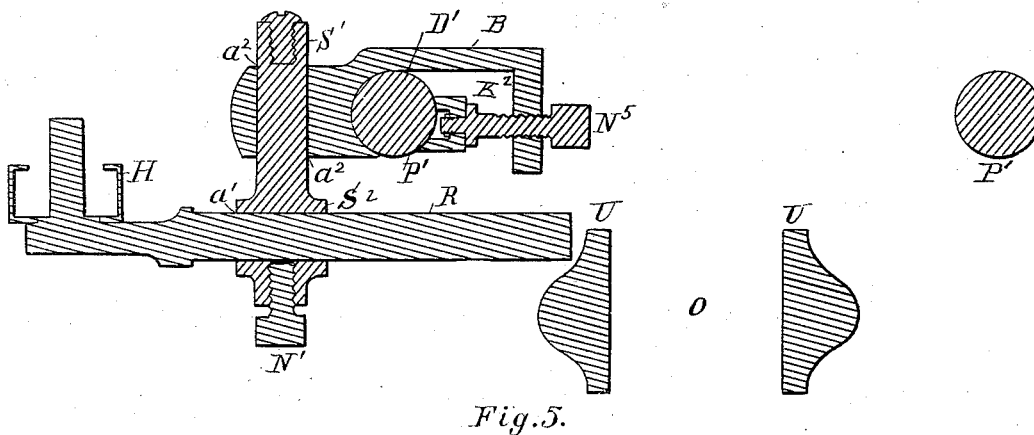
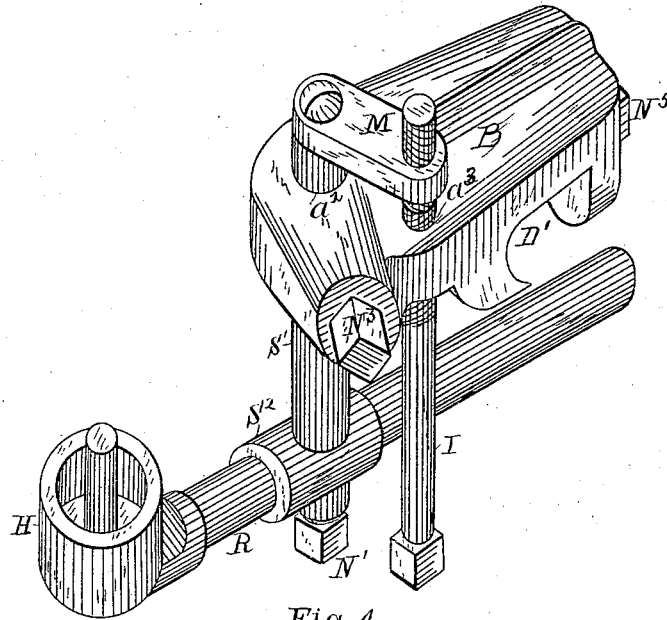
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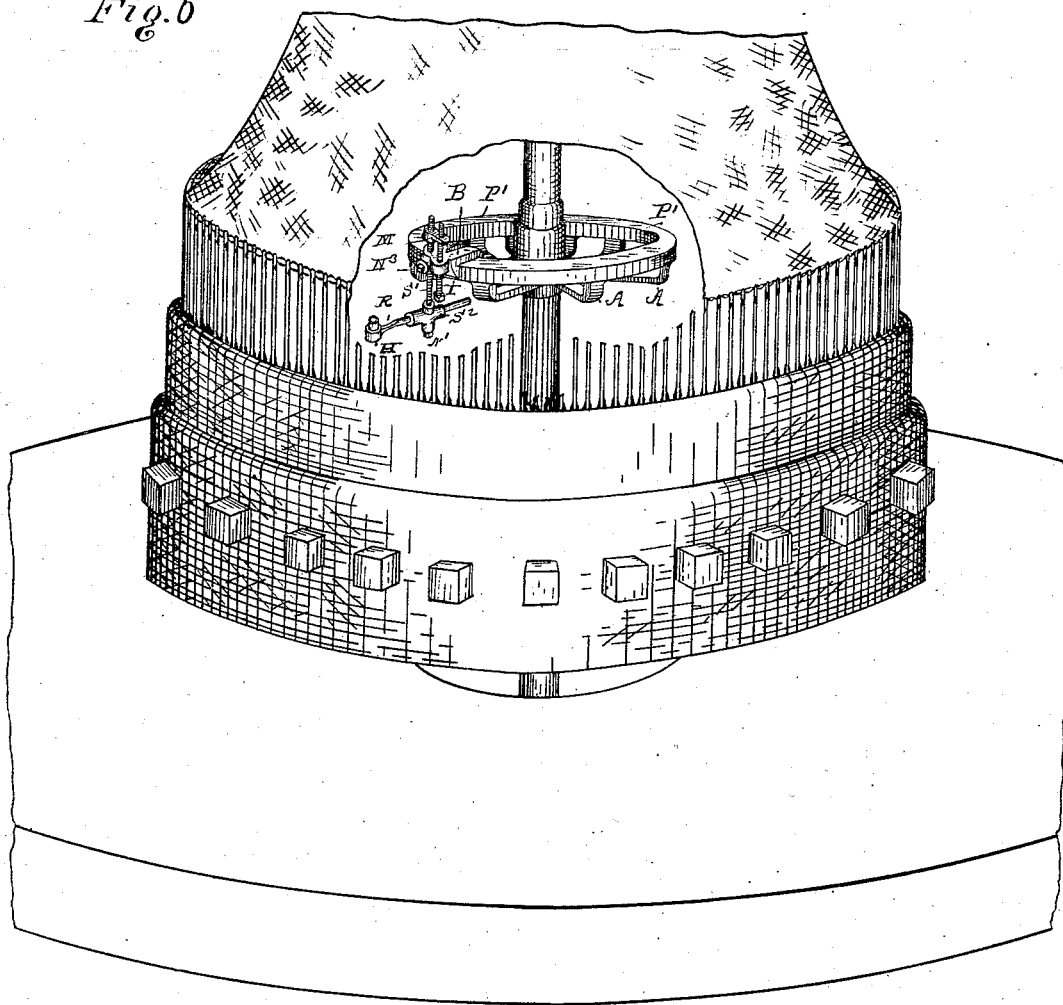
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Fig. 6



Witnesses

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UNITED STATES PATENT OFFICE.

ALBERT TOMPKINS AND IRA TOMPKINS, OF TROY, NEW YORK.

MECHANISM FOR SUPPORTING AND ADJUSTING THE BURR-HOLDERS OF KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 307,152, dated October 28, 1884.

Application filed June 25, 1883. (No model.)

To all whom it may concern:

Be it known that we, ALBERT TOMPKINS and IRA TOMPKINS, of the city of Troy, county of Rensselaer, and State of New York, have jointly invented a new and useful Improvement in Mechanism for Supporting and Adjusting the Burr-Holders of Knitting-Machines, of which the following is a specification.

Our invention relates to means for adjustably attaching burr-holders of a rotary knitting-machine to the bottom ring-plate; and our invention consists in the novel construction and combination of parts hereinafter described, and as specifically pointed out in the claim.

In knitting-machines of the kind to which our improvements are applicable the brackets heretofore used, and on which the pivotal horizontal and vertical adjustment of the burr-holders was produced, were made permanent as a part of or as offsets from the plate-ring, or were secured thereto, and consequently they had a fixed and arbitrary point from which and on which the adjustments were had. As a sequence the pivotal adjustment for each burr-holder was obtained from one center, while the vertical and horizontal adjustments for each holder could be operated but from one radial point with reference to the plate-ring. The most delicate and accurate adjustment being required in devices of this kind, our invention increases the facilities for obtaining it, as will subsequently appear herein, and our invention furnishes a prompt and convenient means for attaching and detaching the brackets on which the burr adjustments are made to increase or diminish the number of burrs used.

In the accompanying drawings, forming a part of this specification, there are shown six figures illustrating our invention and the parts of a rotary knitting-machine with which it connects, with the same designation of parts by letter reference used in all the illustrations.

Figure 1 shows a top view of the bottom plate-ring of a rotary knitting-machine with two of our adjustable brackets attached to the bottom ring and an adjustable burr-holder attached to each of the brackets. Fig. 2 illustrates in perspective one of the adjust-

able brackets and attached adjustable burr-holder, with the parts shown as detached from the plate-ring of the machine. Fig. 3 shows a longitudinal vertical section taken centrally through the plate-ring of the machine, the vertical stud passing through the brackets, also through the horizontal arm which supports the burr-holder, and through the latter. Fig. 4 is a perspective of a modification of our invention. Fig. 5 illustrates a central longitudinal vertical section taken through one of the brackets, the vertical stud-arm, and burr-holder, as shown in Fig. 2, but with the bottom ring rounded instead of flat, and the bracket formed with a curved recess to receive the ring, and the set-screw provided with a curved block to engage with the ring to hold the bracket in place, the same being a modification of our invention as relating to the adjustable bracket. Fig. 6 is a perspective view of a part of a rotary knitting-machine having a part of the needles and fabric broken away to show the position of the shaft and the bottom ring to which our improved bracket is attached.

These several parts of the mechanism thus illustrated are designated by letter reference and their function explained as follows:

The letter H indicates the burr-holder, and R a horizontal arm or bar, to the outer end of which the burr-holder attaches.

The letter S' designates a stud, which has arranged on its lower end the sleeve S², for the horizontal passage of the rod, arm, or bar R at a', and N' indicates a set-screw in the bottom of said sleeve, constructed to engage with the arm or bar, and to thus secure it within the sleeve when horizontally adjusted.

The letters B indicate the brackets, of which any number that can be put on the plate-ring may be used, and D' designates a recess, that is horizontally curved and made in the bottom of the brackets to receive the ring-plate of the knitting-machine.

The letter D' in Figs. 4 and 5 indicates a modified form of recess, that is made to curve horizontally, with curved or rounded-out vertical surfaces to receive the bottom ring when the latter is rounded, as indicated in Fig. 5.

The letter P' indicates the bottom ring of the machine, adapted to fit into the recesses D'.

The letter N^o designates a set-screw arranged

in the bracket, and adapted to engage with the ring to hold the bracket in place when adjusted at K', and as shown at Fig. 5. This set-screw is constructed with a curved block, K², on its inner end, that engages with the ring and performs the same office.

The letters A A designate upward-curved arms, that connect the hub U with the ring on which the brackets are placed, and O indicates the passage-way made in the hub for the vertical shaft of the machine.

The letter a² designates a vertical passage-way made in the bracket B for the vertical and pivotal movement of the stud S', so that with the stud thus placed and guided it and the attached arm R and burr-holder H can be moved around on the plate-ring of a knitting-machine.

The letter I designates a vertically-arranged set-screw, one part of which is threaded into each of the brackets, as indicated at a³, and at its upper end reversely threaded into one end of the link-plate M, pivotally secured on top of the stud S', so that by means of the set-screw I the said stud, attached arm R, and burr-holder H may be moved upward and downward for vertical adjustment, and held in place, when adjusted, by means of the set-screw N³, which secures its pivotal adjustment as well.

By means of the modification shown in Fig. 5, in which the bottom ring of the knitting-machine is made round in its annular sectional measurement as well as in its circumferential form, and the recess in the under surface of the

bracket and the engaging set-screw block are made coincidently concave to fit the convexity of the ring, the bracket is made pivotally as well as radially adjustable thereon.

The plate-ring P' is retained in the usual position below the needles of the knitting-machine, and it is constructed with the usual central hub and opening, O, for the passage of the vertical shaft of the machine. Thus placed, the brackets are made adjustable on the ring by means of the recesses formed in them to receive the ring, can be moved around thereon, and be secured in any desired position. They can be taken off or put on, and the number employed increased or decreased at will.

Having described our invention, what we claim is—

In combination with the ring-plate P', the bracket B, formed with the recess D', and provided with the set-screws N³, N³, and I, the stud S', adjustably connected with the set-screw I by the top plate, M, and provided with the sleeve S², and the arm R, provided with the holder H, substantially as and for the purpose set forth.

Signed at Troy, New York, this 15th day of June, 1883, in the presence of the two witnesses whose names are hereto annexed and by them written.

ALBERT TOMPKINS.
IRA TOMPKINS.

Witnesses:

ANDREW SIMS,
CHARLES S. BRINTNALL.