

C. ALLARDICE.
KNITTING-BURR.

No. 172,597

Patented Jan. 25, 1876.

Fig 1

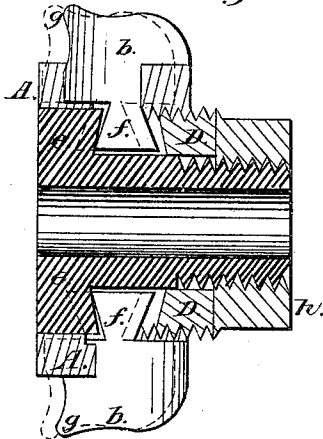


Fig 2

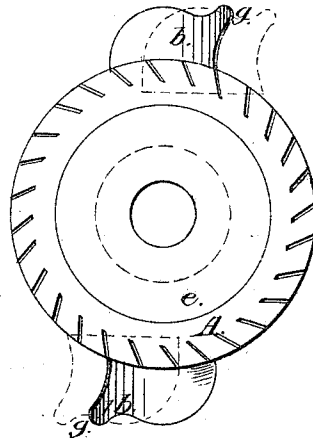


Fig 3

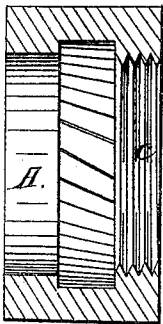


Fig 4

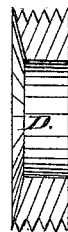
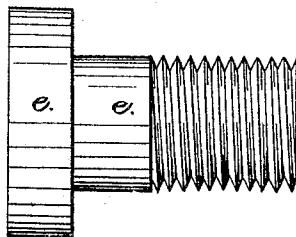


Fig 5



Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES ALLARDICE, OF COHOES, NEW YORK.

IMPROVEMENT IN KNITTING-BURRS.

Specification forming part of Letters Patent No. **172,597**, dated January 25, 1876; application filed August 11, 1875.

To all whom it may concern:

Be it known that I, CHARLES ALLARDICE, of Cohoes, in the county of Albany and State of New York, have invented a Knitting-Burr, of which the following is a specification:

The object of my invention is to make sinkers, wings, or blades of knitting-burrs radially adjustable—that is to say, to increase or diminish the diameter of the burr by projecting the said wings outward in an oblique tangential course with respect to the hub in which said wings are held, and withdrawing the wings longitudinally in the same oblique course in order to diminish the diameter. This invention relates to that class of burrs whose wings or sinkers are removable or detachable. By this means various grades of goods may be knit with the same burrs and cylinders without the necessity of changing the gage of the needles in the same—as, for example, in making a close-knit goods with a certain gage of the needles on the cylinder. If it is desired to change to a loose stitch, or when it is desired to use a coarser yarn, it is only necessary to increase the diameter of my knitting-burr, which is quickly accomplished, when the desired object is attained. Another object is also secured by the use of my invention, and is, briefly, this: The needles of the cylinder become, after a time, pressed inward from well-known causes, rendering the circumferential pitch much less, while the burr, as ordinarily constructed, remains of the same diameter, which occasions the breaking of needles by the burr overreaching. When the kern or projecting portion of the sinkers or wings shall have become much worn by friction in sinking or raising the loops the sinkers or wings are pushed out slightly, in the manner heretofore indicated, to compensate for the deficiency of diameter.

To enable those skilled in the art to fully understand and construct the same I will proceed to describe it as follows:

Figure 1 is a longitudinal central sectional view of my invention. Fig. 2 is a plan view of the face of the hub and clamp-bolt, showing two of the sinker-wings, and in dotted lines the manner in which the diameter of the burr is increased. Fig. 3 is a central sectional view of the hub which holds the wings

or sinkers, with interior screw-thread to receive the screw-adjusting ring represented in Fig. 4, which bears against one edge of the dovetail projections of the sinkers. Fig. 5 is a side view of the clamp-bolt.

A represents the hub, having oblique radial tangential slots for the reception of the wings or sinkers in its periphery, as is well known. Said hub has an annular shallow groove turned or formed centrally on its interior surface, of such a depth as to open into the slots formed for the wings, as is well known, but of sufficient width to enable the dovetail projections of the sinkers *b b* to be carried forward or backward in their respective slots the required distance. I also form a screw-thread, *c*, within the hub *A* for the reception of the adjusting screw-ring *D*, (shown in Figs. 1 and 4,) in sections, which presses against the one edge of the dovetail projections of the sinkers, while a bolt, *e*, as heretofore employed, presses against the opposite sides of the dovetail projections *f f*. The ring *D* has a hole formed through its center, so as to closely fit the clamp-bolt *e*, while the thread on its periphery also nicely fits the corresponding one, *c*, within the hub *A*, in order to hold all the parts truly and concentrically in position. That face of the screw-ring *D* which comes in contact with the dovetail projections is made necessarily dishing to correspond with and hold the same in position in conjunction with the bolt *e*, as shown in Fig. 1. Figs. 1 and 2 exhibit the wings drawn inward to make the smallest diameter of the burr, while the dotted lines, representing the wings or sinkers in the same figures, show that the burr is greatly enlarged by projecting the said wings forward in their slots or seats in an oblique tangential course. This is effected by means of the screw-ring *D*, which is screwed farther into the hub *A*, as will be readily understood by reference to the drawings, Figs. 1 and 2. The kern or projecting portion *g* represents the forward ends of the wings or sinkers.

It will be seen that the clamping device is made to move longitudinally to the axis of motion of the burr, and held in any required position by means of the screw-ring *D* and clamp-bolt *e*, with the nut *h*, heretofore used,

thus securing the requisite diametrical adjustability.

I claim—

The combination of the hub A, provided with oblique radial tangential slots and interior screw-thread *c*, with the screw-ring D, sinker-wings *b*, having dovetail projections *f*,

and the clamp-bolt *e*, as and for the purpose described.

CHARLES ALLARDICE.

Witnesses:

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JOHN B. DOYLE.