

UNITED STATES PATENT OFFICE.

FRANK B. WILDMAN, OF NORRISTOWN, PENNSYLVANIA.

DIAL-CAP FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 514,609, dated February 13, 1894.

Application filed July 15, 1893. Serial No. 480,580. (No model.)

To all whom it may concern:

Be it known that I, FRANK B. WILDMAN, of Norristown, Montgomery county, State of Pennsylvania, have invented an Improvement in Dial-Caps for Knitting-Machines, of which the following is a specification.

My invention relates to knitting machines, and consists of certain improvements which are fully set forth in the following specification and are shown in the accompanying drawings which form a part thereof.

More particularly this invention relates to the dial cap of the knitting machine and consists of certain improvements in the construction thereof whereby a portion or section of the cam may be removed or opened out to expose the horizontal needles so that their operation may be observed and bent or broken needles may be removed and replaced.

My improvements may be applied to a single or multifeed machine and to an automatic as well as to a plain knitting machine.

It is also immaterial to the invention whether it be applied to a rotary cap with stationary needle dial or a stationary cap with rotary needle dial.

I shall now refer to the accompanying drawings for the purpose of particularly describing my improvements.

Figure 1 is a plan view of a dial cap embodying my improvements. Fig. 2 is an inverted plan view of the same with some of the stitch cams removed. Fig. 3 is a perspective view of the inverted detachable cam carrying plate or section.

In the drawings I have shown the invention as applied to a four feed plain knitting machine.

A is the dial cap provided with the usual cams *a*, *b*, *c*, *d*, *a* being the center cam, *b* the outer stationary guard cam, *c* the tuck portion of the cam, and *d* the stitch cam. These cams may be formed in the usual manner and act to direct the needles in the ordinary way.

D are the thread carriers.

Instead of securing the cams or cam sections directly to the body of the cap A as is now done, I connect a part of the cams or a cam section to a movable or detachable plate or piece G adapted for attachment to the body of the cap A so that the cam or cam section

so carried by the plate or piece G may be removed or opened out to expose the needles. By securing a section of the outer cams to the removable plate or piece G it may be easily removed without disturbing the needles.

As it is particularly desirable to expose the needles at the point or points where they operate upon the threads, I prefer to make the stitch cam or cams removable, and in the drawings I have shown the stitch cams *d* connected with the removable or detachable plates or sections G. By removing or opening out any one of those plates or sections G the needles will be exposed at the stitch cam and their operation may there be observed.

The cap A may be provided upon its periphery with suitable recesses or apertures *g* to receive the plates or sections G with their cam sections. The plates or sections G may be fastened to the body of the cap A in any convenient manner. In the drawings I have shown the cap A provided adjacent to its outer edge in the opening *g* with a countersunk notch *e* which is adapted to receive a pin or screw *f* carried by the cam section, and the plate G resting upon the upper face of the cap A over the opening *g* and secured by a screw *h* extending through a notch or slot *i* in the plate. I prefer this construction as the pin or screw *f* fitting in the notch *e* forms a pivot or fulcrum upon which the plate or section G may be moved for the purpose of adjusting the cam *d* with reference to the central cam portion, the screw and slot connection *h*, *i* permitting the adjustment. While I prefer this form of connection for the purposes specified it is apparent that any other convenient form of connection may be employed.

I do not limit myself to the minor details of construction shown as they may be varied without departing from my invention.

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

1. A dial cap for a knitting machine provided with detachable cam carrying sections.

2. A dial cap for a knitting machine having its periphery provided with a notched portion, a plate or section removably attached at said notched portion and a section of needle cam carried by said removable plate or section.

3. A dial cap for a knitting machine provided with center and outer stationary cams, and a detachable plate or section carrying a removable portion of the outer cam.

- 5 4. A dial cap for a knitting machine having a notched periphery, and a detachable cam section located adjacent to the periphery and detachably connected with the body of the cap at the notch, whereby the cam section may be detached to expose the needles
10 through the notch of the cap.

5. A dial cap for a knitting machine having a peripheral notch *g*, and a movable section *G* provided with a section of the needle cam fitted to the notch *g*.

In testimony of which invention I have hereunto set my hand.

FRANK B. WILDMAN.

Witnesses:

WILLIAM F. POTTER,
HENRY I. FOX.