

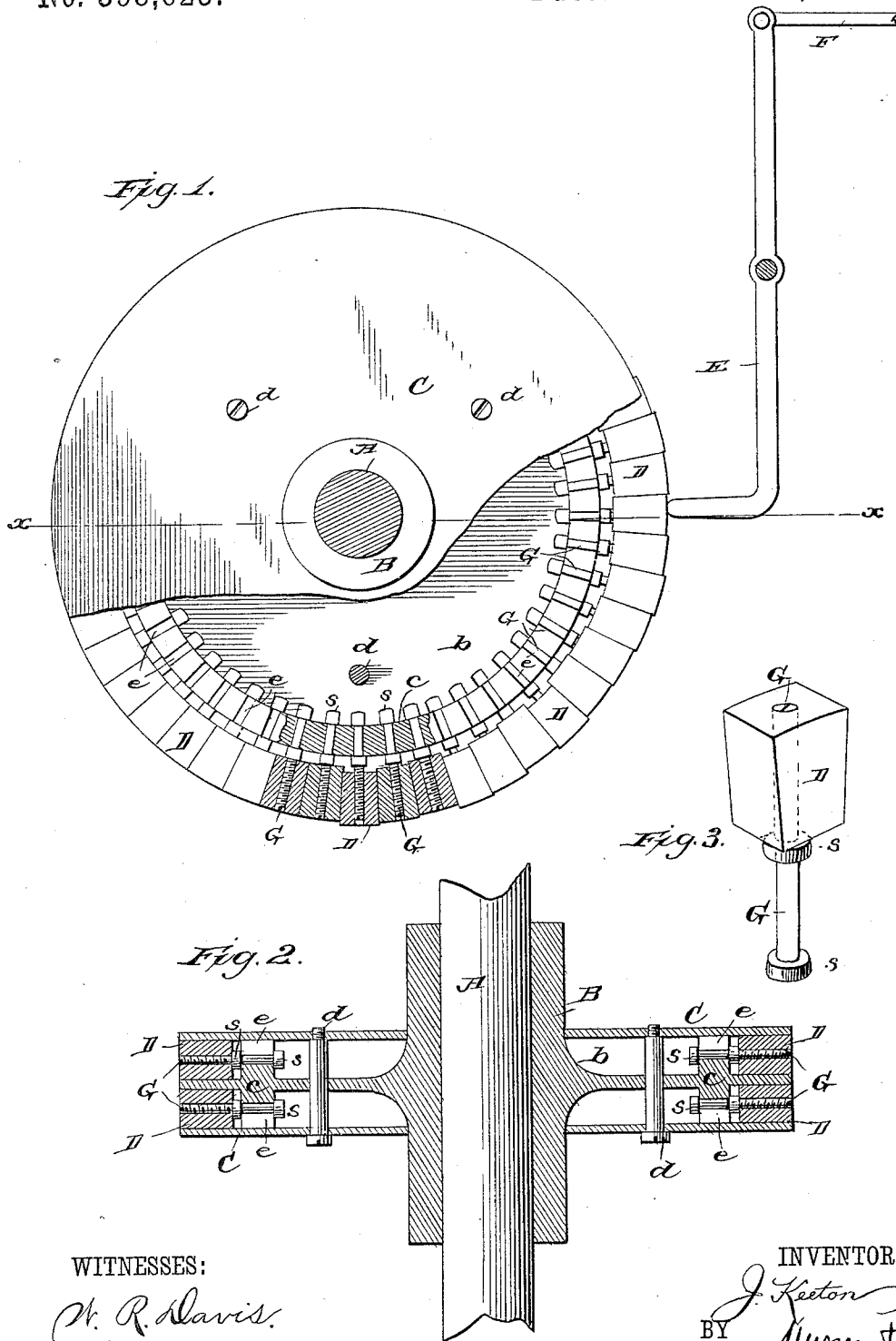
(No Model.)

J. KEETON.

PATTERN WHEEL FOR WARP KNITTING MACHINES.

No. 398,623.

Patented Feb. 26, 1889.



WITNESSES:

W. R. Davis.
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UNITED STATES PATENT OFFICE.

JAMES KEETON, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO
JOB WELLING, OF SAME PLACE.

PATTERN-WHEEL FOR WARP-KNITTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 398,623, dated February 26, 1889.

March 22, 1888. Serial No. 268,125. (No model.)

To all whom it may concern:

Be it known that I, JAMES KEETON, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Pattern-Wheels for Warp-Knitting Machines, of which the following is a full, clear, and exact description.

This invention relates to pattern-wheels of warp-machines used in making gloves, mitts, and other like articles or fabrics. Ordinarily the pattern-wheel in such machines, which operates, through the intervention of a lever, the guide-bar that carries the guides in which the warp-threads to be worked pass, has its circumferential or acting surface made up of a series of fixed or non-adjustable projections or depressions that set in or out, according to the pattern to be produced or fabric to be worked. When a change in the pattern or fabric to be produced is required to be made, then it is usual either to top off in the lathe the acting-surface of the wheel and afterward to file down the blocks which are required to have a depressed position upon said acting-surface, or else to separately attach, by screws or otherwise, additional or re-enforcing pieces upon the blocks, which are required to occupy a projecting position upon the acting-surface in order that the wheel when rotated will give the necessary shifting movements to the guide-bar which carries the guides, and so cause the warp-threads passing through the guides to be correspondingly shifted to produce a given pattern or fabric. Such alterations of the pattern-wheel take considerable time and labor and are necessarily expensive. To obviate this, the blocks of the pattern-wheel have been made adjustable, and so that they may be independently set in or out relatively to the center of the wheel; and my invention consists in a novel construction, arrangement, and combination of parts for such purpose, substantially as hereinafter described, and pointed out in the claims, and whereby facility is afforded for adjusting the blocks from their exterior or acting faces, capable of being set independently in or out relatively to the center of the wheel, so as to change the pattern as required; and the invention further consists in a special construction of such wheel and of

the means used for holding and adjusting the blocks.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a partly-broken and partly-sectional plan view of a pattern-wheel for warp-machines embodying my invention, also showing the lever and portion of the guide-bar operated by the pattern-wheel. Fig. 2 is a transverse section upon the line *xx* in Fig. 1 of the same; and Fig. 3 is a view in perspective, upon a larger scale, of one of the blocks and of a screw-bolt used for holding and adjusting it, detached.

The wheel, which is carried, as usual, by an upright rotatable spindle, *A*, is composed in part of a hub, *B*, with attached web *b* and rim *c*. Opposite side or face plates, *C C*, arranged to project beyond the rim *c*, are secured in position by means of screws *d*, passing through them and through the web *b*, whereby said face-plates are removable when required to take out or replace any of the blocks *D*, and for the convenience of inserting said blocks and their means of adjustment when first putting the wheel together.

The segmental blocks *D*, which form the acting-surface of the wheel to operate the usual lever, *E*, that gives motion to the guide-bar *F*, that carries the guides through which the warp-threads pass, are fitted to slide radially relatively to the center of the wheel between the face-plates *C C* and the web *b* of the wheel, whereby said blocks may be independently set in or out to vary the pattern, as required. To thus adjust the blocks *D* and to hold them to their places when adjusted, they are each fitted with a swiveled screw-bolt, *G*, arranged to pass through them and through slots *e* in the rim *c* of the wheel. Said screw-bolts are each constructed with double heads or shoulders *s s* at a suitable distance apart to receive the rim *c* of the wheel in between them, and have a screw-thread on their outer end portions which pass through the blocks, with a nick in their front ends for turning the bolts, by screw-driver or otherwise, to adjust the several or any of the blocks in or out, as required, ac-

according to the irregularity of the acting-surface of the wheel needed to produce the fabric or vary the pattern, as required.

5 The object of the slots *e* in the rim is to provide for fitting the double-headed swiveled screw-bolts *G*, with their attached blocks, to their place and for removing the same, if necessary, the face-plates *C* being first removed.

10 It is designed in setting the wheel to start at a given diameter, which may be the usual one of such wheels, and then to form the necessary irregularities on its acting-surface by extending or adjusting and setting out the blocks, as required.

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

20 1. The combination, with the hub, the web, and the rim, of a series of radially-adjustable blocks forming the working-face of the wheel and having central longitudinal threaded apertures, and screw-bolts swiveled at their inner ends in the said rim and extending through the said apertures to the outer or working
25 faces of the blocks to receive a screw-driver, substantially as set forth.

30 2. The combination, with the hub, web, and rim having slots *e* opening through the outer edge of the rim and the removable face-plate covering said slots, of the radially-extending

screw-bolts swiveled at their inner ends in said slots and removable laterally out of the same, and the radially-adjustable segmental blocks having longitudinal threaded apertures, through which the said bolts pass to the
35 working-faces thereof and there adapted to receive a screw-driver, substantially as set forth.

40 3. The combination, with the hub, the web, and the rim at opposite sides of the web near its periphery and having slots *e* open at its edges, of the screw-bolts having nicks at their outer ends and two shoulders, *s s*, at their inner ends at opposite sides of the rim, the portions of the bolts between the shoulders passing
45 radially through the slots, the radially-adjustable segmental blocks *D* at opposite sides of the web beyond the rim and having longitudinal threaded apertures, through which the threaded portions of the bolts pass to the work-
50 ing-faces of the blocks, the removable face-plates *C* at opposite sides of the web closing the slots in the rim and extending alongside of the blocks, and the screws *d*, securing said plates in position, substantially as set forth.
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JAMES KEETON.

Witnesses:

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