(No Model.)

S. VICKERS & A. WESTON.

CAM FOR KNITTING MACHINES.

No. 246,843. Patented Sept. 6, 1881.

FIG. 1.

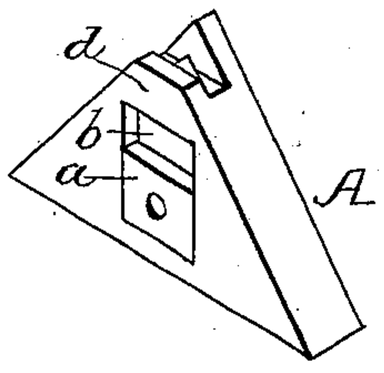


FIG. 2.

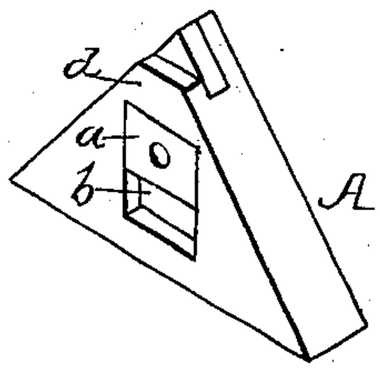


FIG. 3.

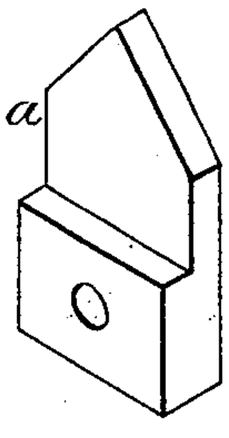


FIG. 4.

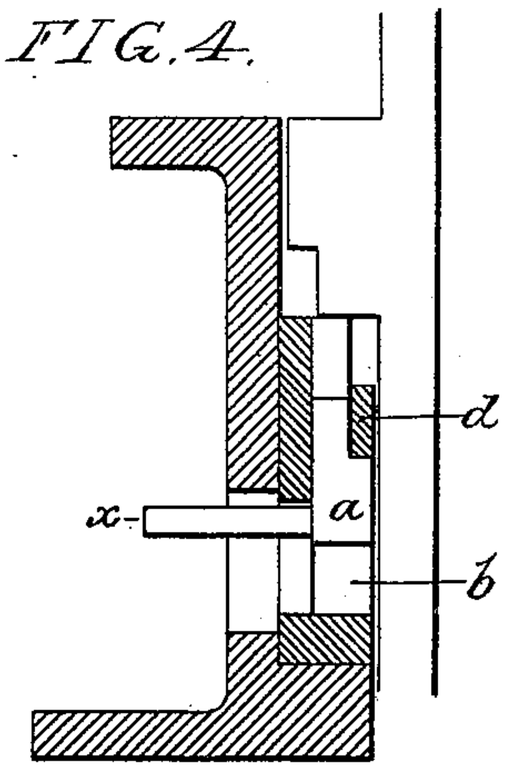


FIG. 5.

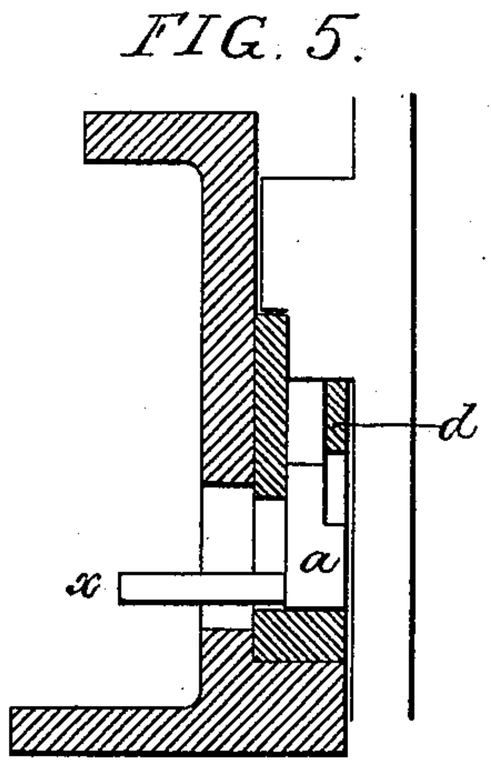
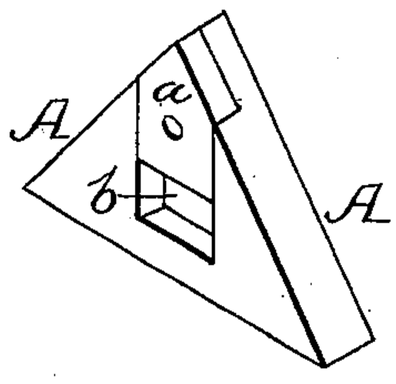


FIG. 6.



Witnesses.
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Harry Smith

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and
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by their attorneys.
Howson and Sons,

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

SAMUEL VICKERS AND ALFRED WESTON, OF PHILADELPHIA, PA.

CAM FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 246,843, dated September 6, 1881.

Application filed March 14, 1881. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL VICKERS and ALFRED WESTON, citizens of the United States, residing in Philadelphia, Pennsylvania, have invented an Improvement in Cams for Knitting-Machines, of which the following is a specification.

Our invention relates to a certain improvement in that class of knitting-machine cams having adjustable portions, whereby the cam may be caused to operate the needles in such a manner as to produce either plain or tuck work, as desired, the main objects of our invention being to add to the strength and insure the accuracy of a cam of this character, and to present a flush uninterrupted surface for the jacks to bear against. This object we attain in the manner which we will now proceed to describe, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a cam made according to our invention and adapted for the production of tuck-work; Fig. 2, a perspective view, showing the cam adapted for the production of plain work; Fig. 3, a detached view of part of one of the cams; Figs. 4 and 5, sectional views of part of the head of a knitting-machine with our improved cam, and Fig. 6 a view of a cam which has been used.

Our invention relates to that class of cams, such as shown in Fig. 6, in which a portion of the nose of the cam is formed on a block, *a*, adapted to a vertical slot, *b*, in the face of the cam A, and capable of being moved vertically therein, so that its point may act upon the recessed projections on the jacks of the tuck-needles, as in Fig. 4, when plain work is to be produced, or may be depressed so as to fail to act on said projections, as in Fig. 5, when it is desired to produce tuck-work. The objection to the cam shown in Fig. 6, however, is that the block *a* is not guided and held to its work with sufficient firmness and rigidity; and it is the object of our invention to overcome this defect—an object which we attain by providing the cam A with a bridge-piece, *d*, which extends across the upper part of the slot *b*, and serves to confine the block *a* in position in said slot.

As shown in the drawings, the bridge-piece *d* forms part of the cam, and the upper end of the block *a* is recessed, as in Fig. 3, for the reception of said bridge-piece, which thus acts as a stop for the block on the upward movement of the latter and insures the proper coincidence of the nose of the block with the inclined faces of the cam.

The cam might be constructed in such a manner, however, that the bridge-piece could be secured to the inner face of the same, instead of forming part of the said cam; but the latter construction is preferred.

The block *a* may be elevated and depressed by hand, or, when intricate patterns are to be produced, by a pattern chain, wheel, or block acting on a projecting finger, *x*.

The cams shown in the drawings are adapted to act upon bottom tuck-jacks—that is to say, jacks the projections of which are recessed at the bottom; but the cam is adapted to act upon top tuck-jacks by simply reversing it.

The bridge *d*, in addition to its duty of guiding the block *a*, is flush with the face of the cam, which thus presents a continuous surface for the jacks and prevents the joints from interfering with the said jacks, as in the ordinary cam, Fig. 6. It is this bridge which distinguishes this feature of our invention from the cam shown in the English Patent No. 623 of 1863, which, like the ordinary cam, has no bridge.

We claim as our invention—

1. A knitting-machine cam having a slot, *b*, a movable block, *a*, adapted to said slot, and a bridge, *d*, the face of which is flush with that of the cam, thus forming a continuous bearing for the jack-stems, as set forth.

2. A knitting-machine cam having a slot, *b*, and a bridge-piece, *d*, in combination with the movable block *a*, adapted to the slot and recessed at the upper end for adaptation to the bridge-piece, as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

SAMUEL VICKERS.
ALFRED WESTON.

Witnesses:
NATHANIEL ROSS,
HARRY SMITH.