

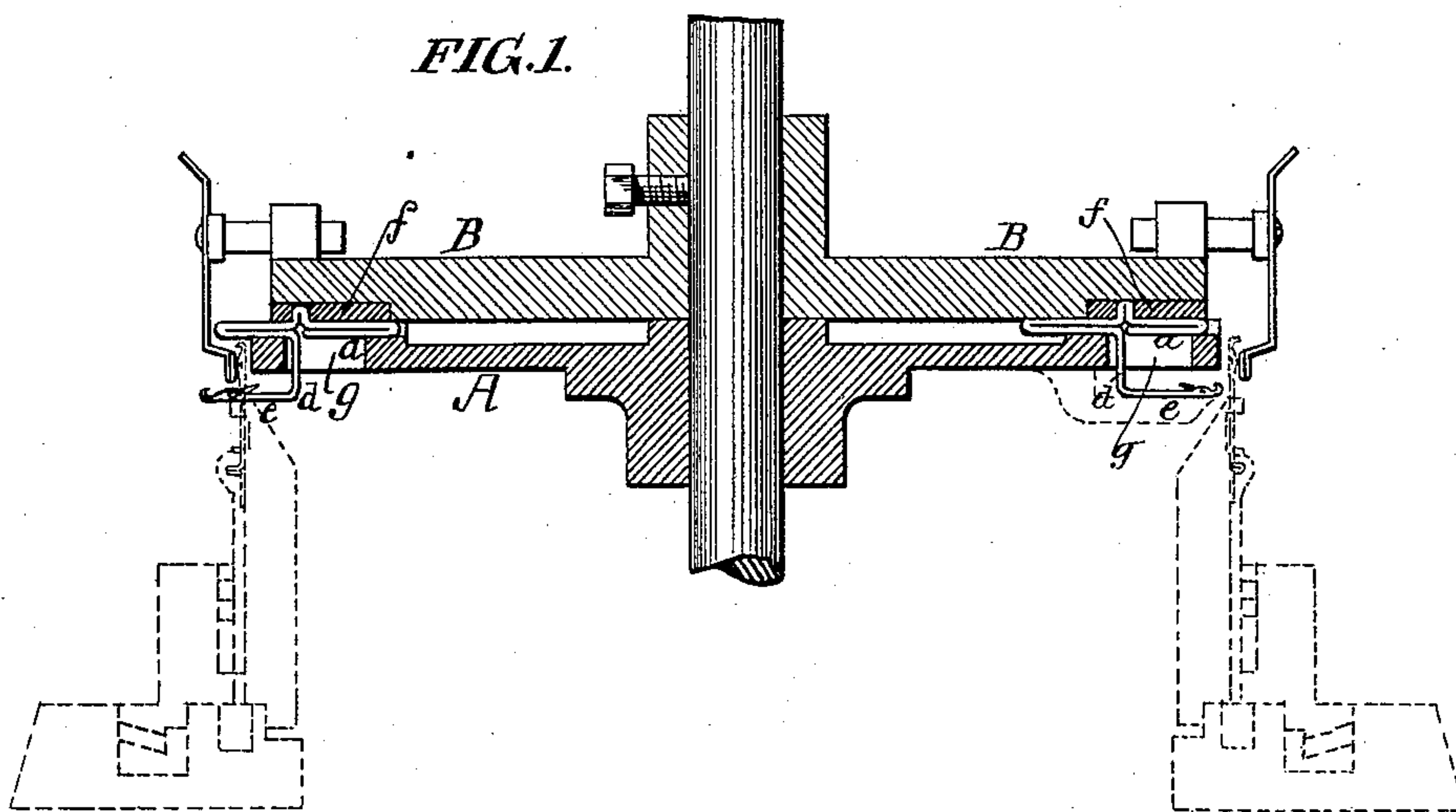
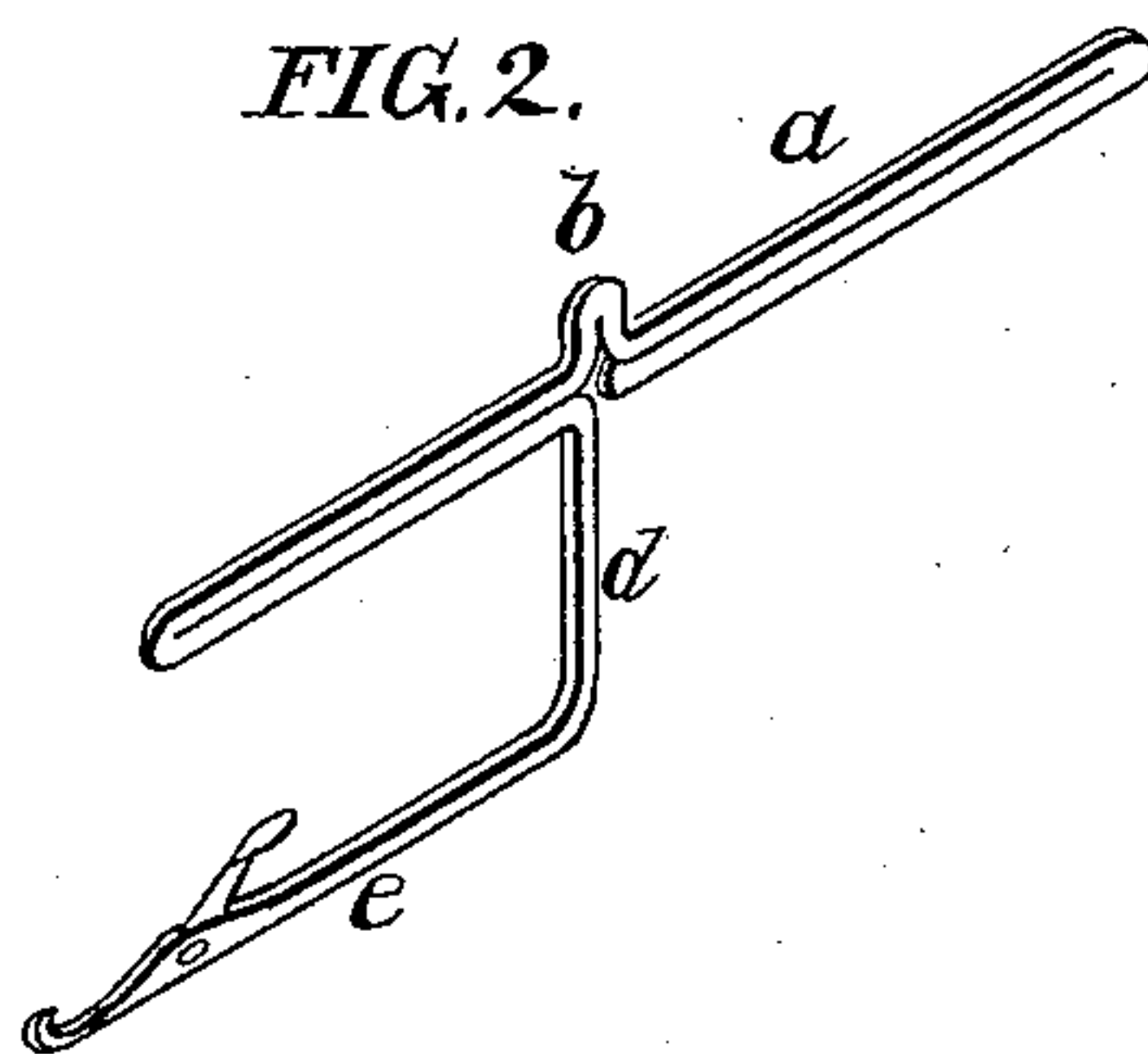
(No Model.)

R. W. SCOTT.

KNITTING MACHINE AND NEEDLE THEREFOR.

No. 407,616.

Patented July 23, 1889.



Witnesses.
John Wilson
John J. Seary.

Inventor:
Robert W. Scott.
by his Attorneys
Howson & Howson

UNITED STATES PATENT OFFICE.

ROBERT W. SCOTT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO LOUIS N. D. WILLIAMS, OF SAME PLACE.

KNITTING-MACHINE AND NEEDLE THEREFOR.

SPECIFICATION forming part of Letters Patent No. 407,616, dated July 23, 1889.

Application filed April 19, 1889. Serial No. 307,765. (No model.)

To all whom it may concern:

Be it known that I, ROBERT W. SCOTT, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented an Improvement in Knitting-Machines and Needles Therefor, of which the following is a specification.

My invention consists of a needle constructed in the peculiar manner set forth hereinafter, and in the combination of such a needle with a specially-constructed dial and cam-plate of a knitting-machine, the object of the invention being to so construct the needle and to so combine it with the dial and cam-plate that the main or thread-receiving shank of the same will be in a measure remote from the guiding or operating shank, so that the oil used for lubricating the latter is not liable to soil the work produced upon the needles.

In the accompanying drawings, Figure 1 represents in section a knitting-machine dial having needles constructed and combined therewith in accordance with my invention, part of the cylinder of the machine being also shown by dotted lines; and Fig. 2 is an enlarged perspective view of one of the needles detached from the dial.

The needle consists of a single piece of wire bent to form a guide-shank *a*, with projecting bit *b*, and having, preferably in line with said bit, a depending arm *d*, terminating in the main or stitch-forming shank *e* of the needle, which has the usual hooked end and pivoted latch; or it may be provided with a beard, instead of the hook and latch, in some cases.

This needle is applied to the dial A of the machine in the manner shown in Fig. 1, the guide-shank *a* of the needle being adapted to one of the radial guide-grooves of said dial, and the bit *b* engaging with the cam *f* of the cam-plate B, above the dial.

The depending arm *d* of the needle passes through a radial slot *g* in the dial, so that the thread-receiving and stitch-forming shank of the needle is below the latter and comparatively remote from the guiding-shank; hence even if the latter is lubricated the oil will not gain access to the hook and

latch of the needle, so as to soil the work which is being produced.

Although I have shown my improved needle as applied to an ordinary dial slotted for the passage of the depending arm of the needle, in order to permit the stitch-forming shank to work free beneath the dial, said needle can be used in connection with the main dial and supplementary guiding-dial of a rib-knitting machine, as set forth in the patent granted to myself and L. N. D. Williams on the 8th day of January, 1889, or in connection with a simple ring or plate serving as a vertical support for the stitch-forming shank of the needle, as shown by dotted lines at the right-hand side of Fig. 1, this plate, however, having no radial guiding devices for the needles.

My improved needle combines the advantages of an extremely fine stitch-forming portion, available for the production of fine-gage work, and a strong and substantial guide-shank which will effectually resist the circumferential thrust of the actuating-cam.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. The within-described needle for knitting-machines, said needle consisting of a wire bent to form a guide-shank with projecting bit, and a depending arm terminating in a stitch-forming shank in a different plane from the guide-shank of the needle, substantially as specified.

2. The combination of the radially grooved and slotted dial and a cam-plate, with needles having stems guided in the radial grooves in said dial, bits for engagement with the cams of the plate, and depending arms passing through the radial slots of the dial and terminating in stitch-forming shanks below said dial and free from contact with any radial guiding devices, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT W. SCOTT.

Witnesses:

GEO. D. STREET,
HARRY SMITH.