

(No Model.)

H. H. SKEVINGTON & W. L. WHITEHEAD.

SINKER TOP FOR HOSIERY KNITTING MACHINES.

No. 606,094.

Patented June 21, 1898.

Fig. 1.

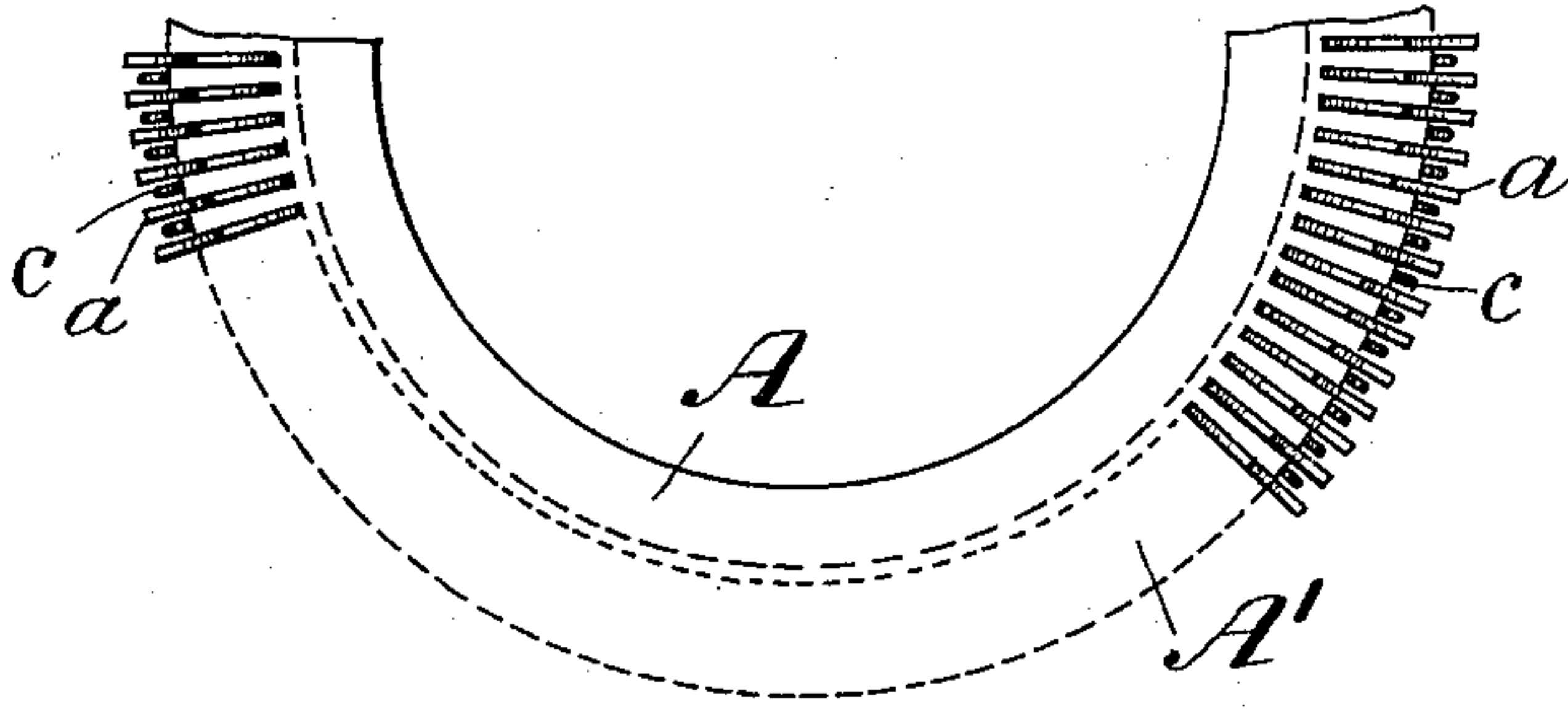
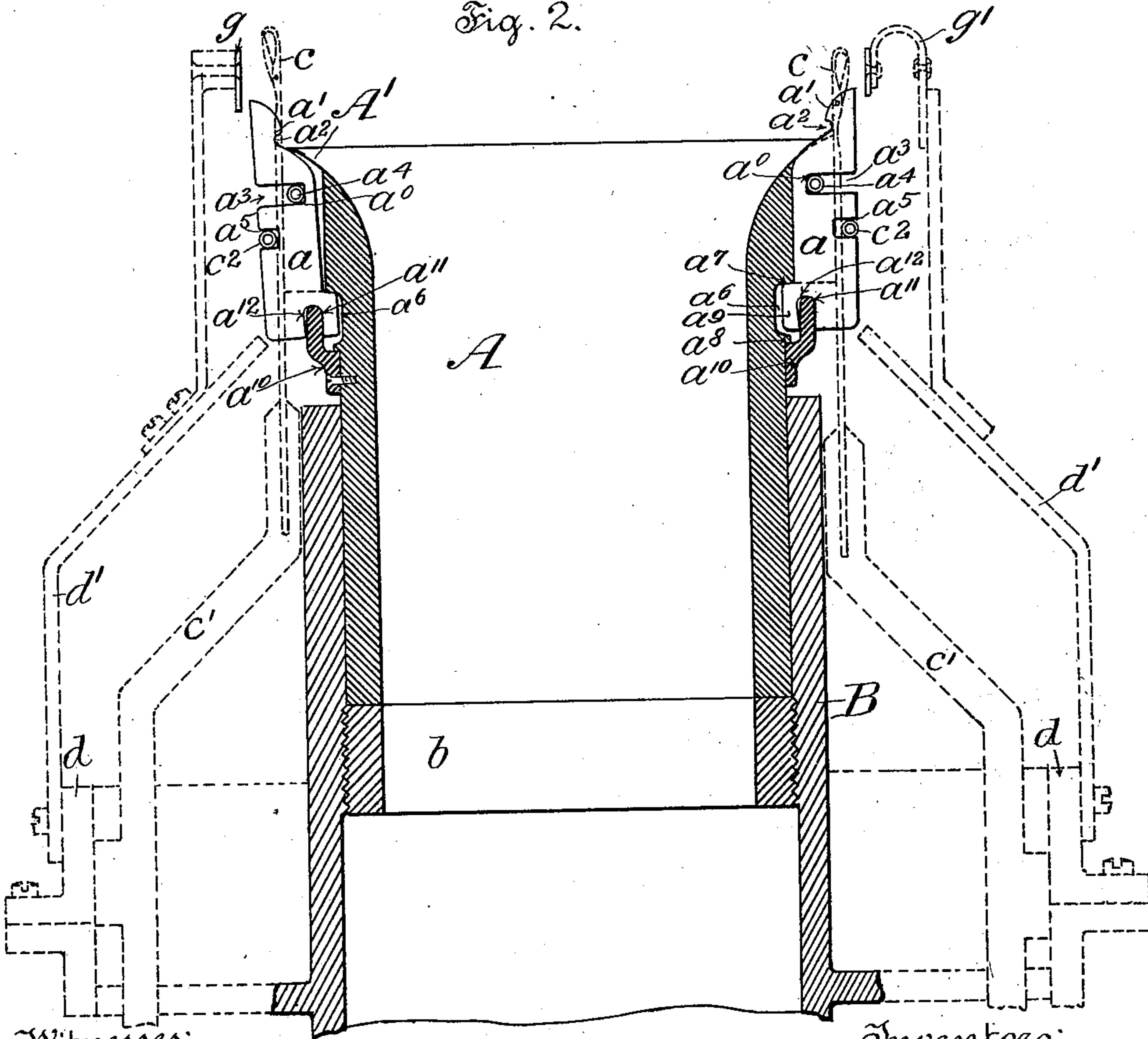


Fig. 2.



Witnesses:

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Inventors:

Henry S. Skevington and
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att'y.

UNITED STATES PATENT OFFICE.

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SINKER-TOP FOR HOSIERY-KNITTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 606,094, dated June 21, 1898.

Application filed July 19, 1897. Serial No. 645,193. (No model.)

To all whom it may concern:

Be it known that we, HENRY H. SKEVINGTON and WILLIAM L. WHITEHEAD, citizens of the United States, residing in the city and county of Philadelphia, in the State of Pennsylvania, have invented new and useful Improvements in Sinker-Tops for Hosiery-Knitting Machines, of which the following is a specification.

Our improvements have for their object, first, to permit of positive movement of the individual spring-actuated sinkers; secondly, to so arrange the latter that access may be had to the needles located between them without disturbing any of the individual sinkers, and, thirdly, to prevent the sinkers from moving in an upward direction.

Our improvements consist of a sinker-top held within a needle-cylinder, individual sinkers located between the needles and movable outwardly of the sinker-top, said sinkers supported on an annular flange of the sinker-top and provided with notches, which allow only of a certain outward movement of the top ends of the sinkers, a recess in the sinkers, and a corresponding annular recess in the sinker-top for a spiral spring to hold the said sinkers under tension and toward the center of the sinker-top.

The improvements further consist of the arrangement of the needles outside of the sinker-retaining spring by which any or all needles may be removed without disturbing the sinker or sinker-top; and our invention further consists of the improvements herein-after more fully described, and pointed out in the claims.

Our invention will be more fully understood when taken in connection with the drawings, in which—

Figure 1 is a top view of half a sinker-top, showing the sinkers and needles in position; and Fig. 2 is a vertical central section of the sinker-top, indicating in dotted lines the needles and needle and cam cylinders.

Referring now to the drawings for a further description of our invention, A is the sinker-top, supported on the adjustable ring b of the needle-cylinder B.

c are the needles, held by jacks c', operated and guided in any suitable manner.

d is the cam-cylinder for operating the needles c, and d' is a cover for the needle-operating parts.

The sinker-top A is slotted at its upper diametrically-extended part A' to receive the sinkers a, which latter have the usual form of top end a', with notch a². Below the top end a' is provided a notch a³ to receive a coiled annular spring a⁴ to maintain the sinkers a in normal position, and in the outside of the sinker-top A is provided the annular groove a⁵ to contain the said spring a⁴ in such a manner that when any of the sinkers move outwardly to admit a loop over the needles c the latter are not disturbed or moved by such movement of the sinkers. Below the slot a³ of the sinkers a is another slot or notch a⁵ to permit a similar coiled annular spring c² to hold the needles c in proper position and against the outer face of the diametrically-extended part A' of the sinker-top A. These needles c are located between each two sinkers a, as shown in Fig. 1, and are held and guided by the jacks c', as before stated.

Below the diametrically-extended part A' of the sinker-top A is cut a groove a⁶, forming two annular shoulders a⁷ and a⁸, for a purpose to be explained. The sinkers a are further provided with an offset portion a⁹, which bears with its upper edge against the shoulder a⁷, Fig. 2, to prevent an upward movement of the said sinkers a. Against the shoulder a⁸ is fitted and held an annular flange a¹⁰, having an annular ridge a¹¹, on which the individual sinkers are supported and allowed to rock. In the lower end of the sinkers a are provided wedge-shaped slots a¹², fitting over the ridge a¹¹ and permitting the top end of each sinker a to move outwardly only a certain distance, for the purpose that if a stitch is drawn by a needle c the sinker a is permitted to let the loop of such stitch pass the upper ends of the sinker, no matter how thick the yarn or thread is for the goods to be produced or whether irregular yarn is fed by the thread-guides g or g'. It is of importance and it is our principal feature that the sinkers should be yielding to a certain extent only to allow yarn possessed with lumps to be worked just the same as the best yarn of uniform thickness now manufactured and

without cutting irregular yarn or yarn of a poor quality, and, further, the sinkers *a* should have no more outward movement than necessary to allow the yarn to pass portion *a'* of the sinkers, so as to avoid the thread-guides *g* or *g'*, which must be arranged in close proximity to the sinkers and needles, as will be fully understood by those skilled in the art to which our invention pertains.

10 To remove one or more sinkers *a*, the top *A* is removed from the cylinder *B* and the annular flange *a*¹⁰ loosened and moved downward, after which any or all sinkers may be removed.

15 Having thus described the nature and objects of our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a knitting-machine the combination with a needle-cylinder and sinker-top of sinkers, an annular flange on the said top, a wedge-shaped notch in the bottom of each sinker fitting over the said flange, and allowing the top end of the sinker to move a certain distance outwardly, and means for holding the upper ends of the sinkers toward the center of the needle-cylinder, substantially as and for the purposes set forth.

2. In a knitting-machine the combination with a needle-cylinder and sinker-top, of sinkers, an annular flange on the said top, a groove in the lower end of each sinker to fit over the said flange and allowing the top end of the sinker to move a certain distance outwardly, a shoulder on said sinker-top, a projection on each sinker abutting said shoulder to prevent the sinker from moving upwardly and means for holding the upper ends of the sinkers toward the center of the needle-cylinder, substantially as and for the purposes set forth.

3. In a knitting-machine, the combination with a needle-cylinder and sinker-top, of sinkers, an annular flange on the said top, a groove in the lower end of each sinker to fit over the said flange and allowing the top end of the sinker to move a certain distance outwardly, a shoulder on said sinker-top, a projection on each sinker abutting said shoulder to prevent the sinkers from moving upwardly an annular groove in the sinker-top, a groove or notch in each of the sinkers corresponding with the said groove of the top and a coiled annular spring located in said groove substantially as and for the purposes set forth.

4. In a knitting-machine, the combination with a needle-cylinder and sinker-top, of a diametrically-extended portion at the top of the sinker-top, slots in said extended portion, sinkers located in said slots, an annular flange removably held against a shoulder of the sinker-top, a groove in the lower end of each sinker, to fit over the said flange, and allowing the top end of the sinker to move a certain distance outwardly, a shoulder on said sinker-top, a projection on each sinker abutting said shoulder to prevent the sinkers from moving upwardly, an annular groove in the sinker-top, a notch in each of the sinkers corresponding with the said groove of the top, and a coiled annular spring located in said groove, substantially as and for the purposes set forth.

5. In a knitting-machine, the combination with needles, a needle-cylinder and means for operating the said needles, of a sinker-top mounted inside the needle-cylinder and having an extended portion at the top, slots in said portion, sinkers located in said slots, an annular flange on said top for supporting the said sinkers and allowing the top ends of the sinkers to move a certain distance outwardly and means for normally maintaining the top ends of the sinkers toward the center of the machine, substantially as and for the purposes set forth.

6. In a knitting-machine, the combination with a needle-cylinder and sinker-top of an extension on said top, slots therein, sinkers located in said slots, an annular flange on said top for supporting the said sinkers and allowing the top ends thereof to move a certain distance outwardly, means to prevent the sinkers from moving upwardly and means for normally maintaining the top ends of the sinkers toward the center of the machine, substantially as and for the purposes set forth.

In witness whereof we have hereunto set our hands in the presence of two subscribing witnesses.

HENRY H. SKEVINGTON.
WILLIAM L. WHITEHEAD.

Witnesses:

HERMANN BORMANN,
HARRY J. FRANZ.