

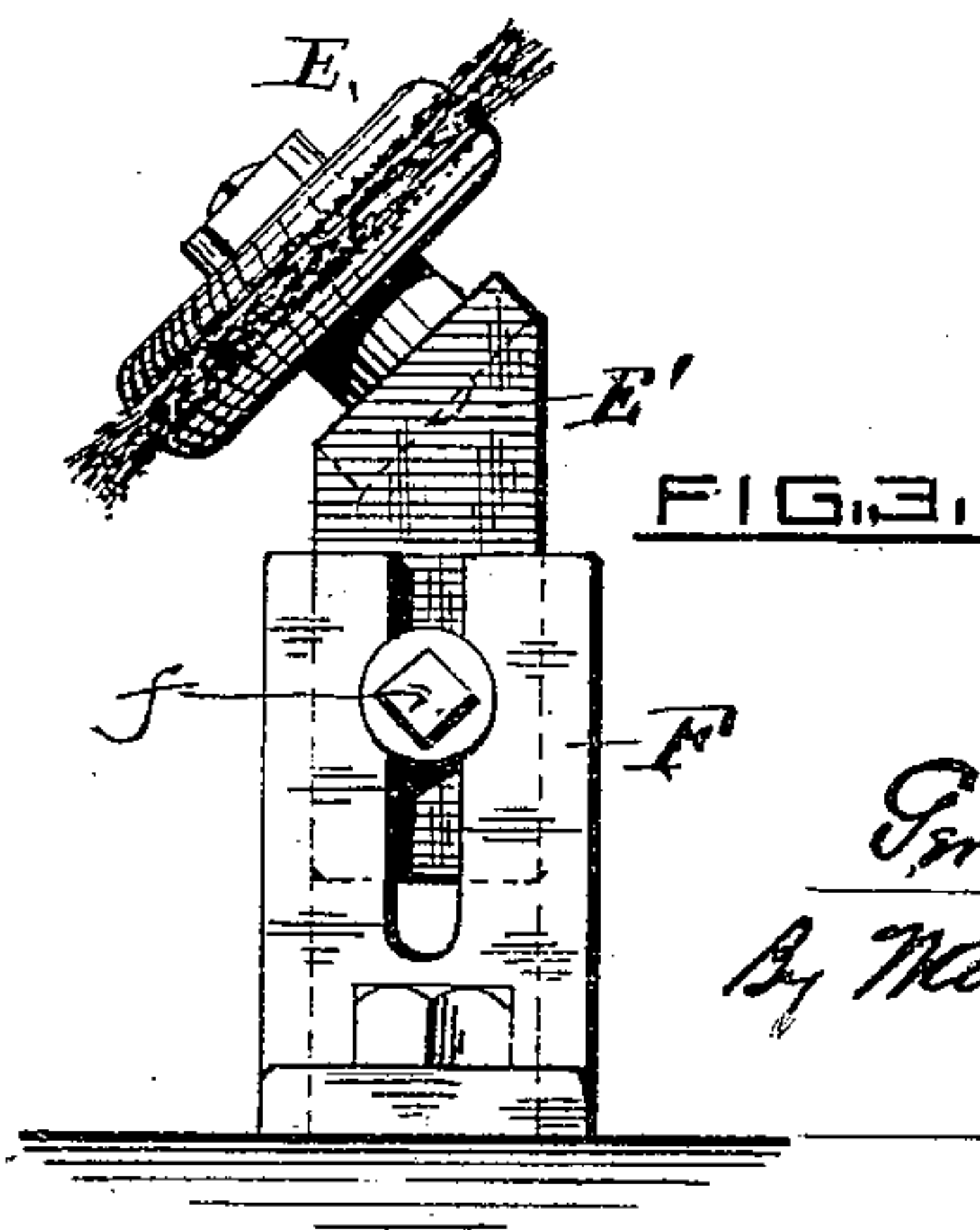
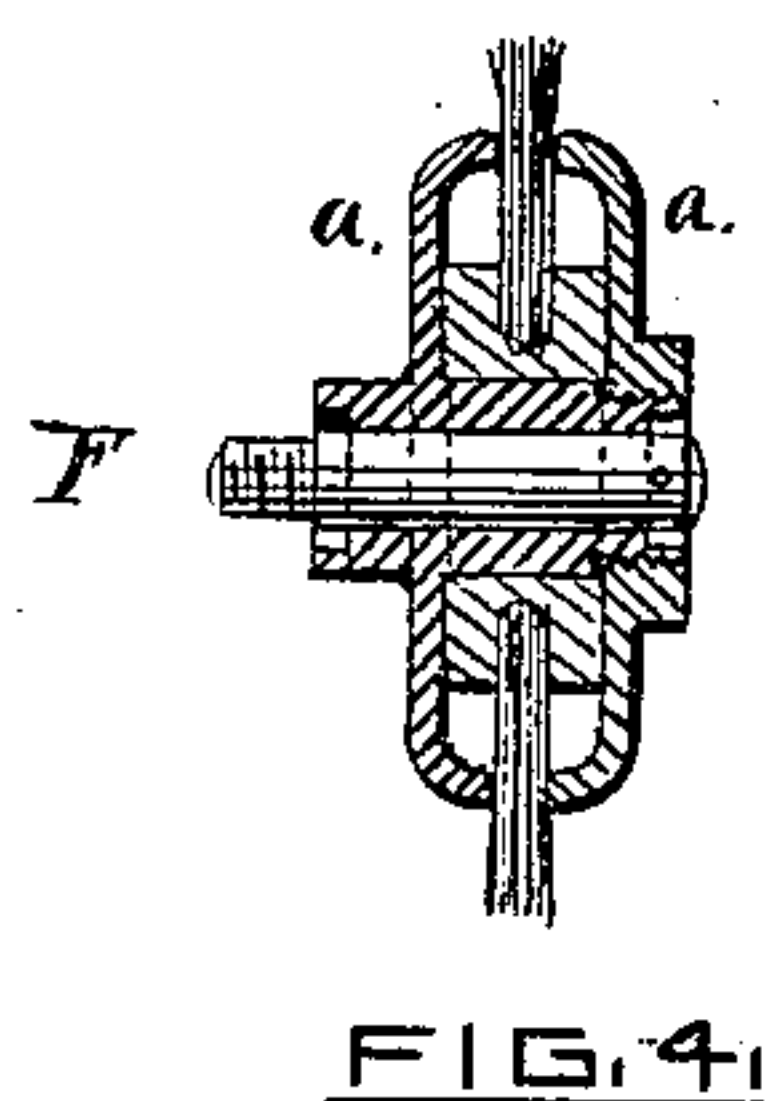
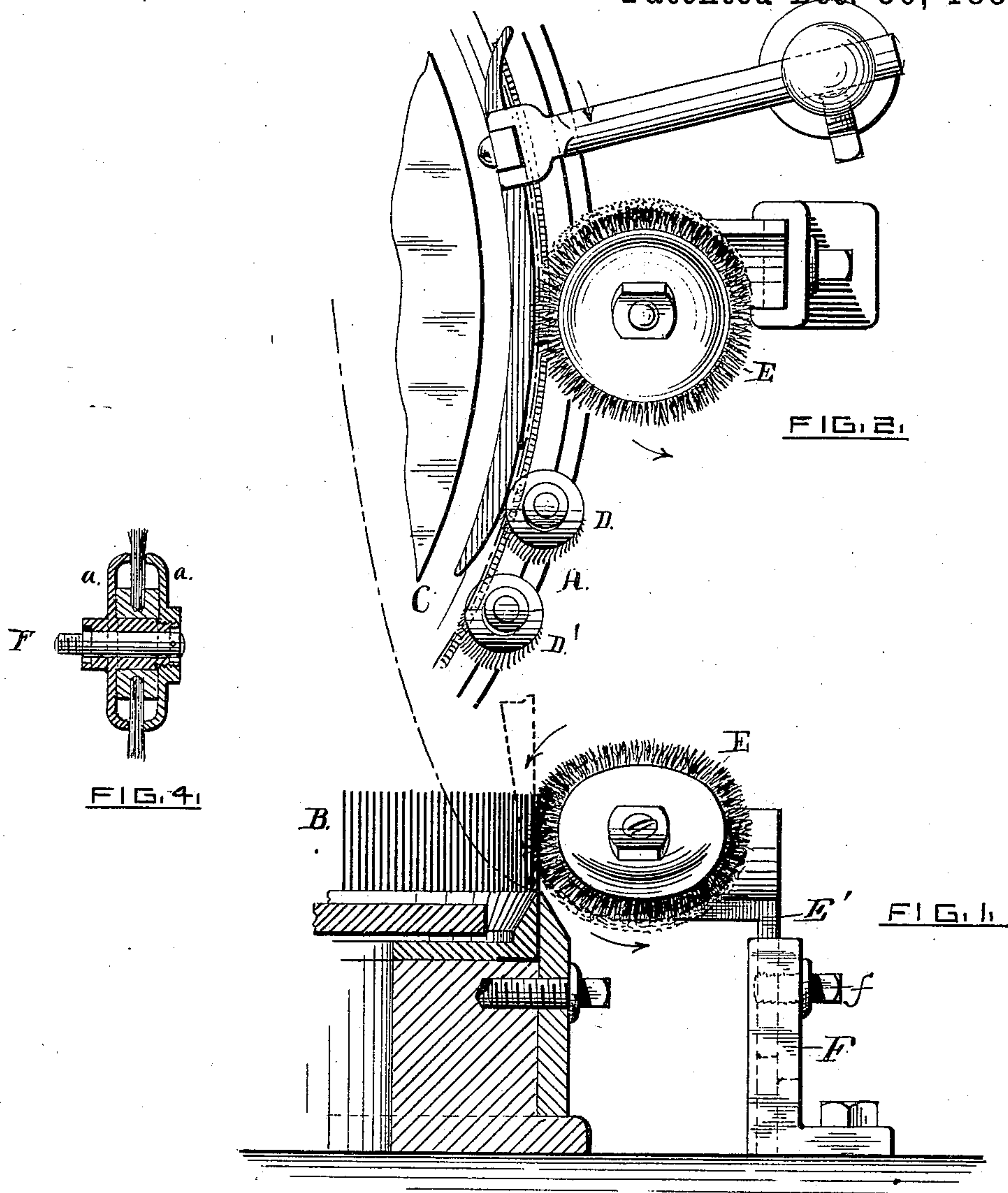
(No Model.)

G. COOPER.

CLEARING WHEEL FOR KNITTING MACHINES.

No. 309,820.

Patented Dec. 30, 1884.



WITNESSES.

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CLEARING-WHEEL FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 309,820, dated December 30, 1884.

Application filed February 9, 1884. (No model.)

To all whom it may concern:

Be it known that I, GERALD COOPER, of Pawtucket, in the State of Rhode Island, have made certain new and useful Improvements in
5 Clearing-Wheels for Knitting-Machines, of which the following is a specification, reference being had to the accompanying drawings, which form part of this specification, and in which—

10 Figure 1 is a side elevation of a portion of a knitting-machine, partly in section, showing my clearing-wheel applied. Fig. 2 is a plan view of the same with my clearing-wheel applied. Fig. 3 is an elevation of my clearing-
15 wheel and the support therefor detached from the machine. Fig. 4 is a sectional view of said clearing-wheel.

The needles of knitting-machines are apt to gather refuse, which will be wound round
20 them and remain on them as the knitting-head is rotated, unless some means are adopted for removing the same, and this refuse is most liable to gather near the tops of the needles, as the yarn or other material being knitted
25 comes into contact with the top portion of the needle most frequently.

The object of my invention is to provide for clearing the needles of a knitting-machine of specks, slivers, thick places, extra threads, or
30 bunches in the yarn (all of which may be comprised under the general head of refuse) during the operation of the machine; and it consists in the device for that purpose, hereinafter described and claimed.

35 In the knitting-machines now in use thick places, extra threads, and bunches often remain in the needles or so near the top thereof as to be caught and cause the needles to be broken by the stitch or loop wheels, or the
40 quality of the goods to be seriously impaired.

In the drawings, A is the frame of the machine; B, the needles; C, the "push-back;" D, the loop-wheel, and D' the sinker or divid-
ing wheel.

45 Before the loop-wheel D, I locate a clearing-wheel, E, which is supported upon a suitable standard, E', and for convenience is made adjustable by being placed in a slotted support, F, and provided with a set-screw *f*. By being
50 thus supported the clearing-wheel E can be made to operate higher or lower upon the needles. The portion of the wheel E which

made of steel, brass, or other metallic wire, bristles, tampico, or any other desired mate- 55
rial suitable for the purpose.

The wheel E, (shown in the drawings,) which I deem best suited to the purpose, has an outer rim of bristles, designed to operate upon and between the needles, and is set at an angle to 60
the needles, as shown in Figs. 1, 2, and 3. The angle at which the wheel is set is about forty-five degrees, more or less, so that its rotation will cause the bristles to engage the needles at the top and pass through and down 65
between them, leaving them at the bottom. It will be readily seen that such passage of the bristles between the needles will remove all foreign substances, or at least carry them to the bottom of the needles, where they can do 70
no harm to the loop and other wheels, and will leave the loop-wheel D to act without hinderance or obstruction.

The clearing-wheel E, as shown in Fig. 4, is composed of a circular brush of bristles, placed 75
upon a suitable arbor or bearing, F, and confined laterally between two slightly-concaved metallic disks, *a a*, the interior edges of which are flat.

The construction of the wheel as described 8
gives to the wheel a stiffness which results in a positive action by the bristles or wires upon the needles, and at the same time permits their free separation necessary to their free passage
between the needles. 85

I so construct the bearing that when the wires or bristles become bent after running one way for a considerable time the brush may be reversed and run in the opposite direction.

The clearing-wheel E is equally useful in 90
making stockinette, Jersey, or other goods where it is necessary to carry to the bottom of the needles a filling or backing thread beyond the action of the stitch or loop wheel.

What I claim as my invention is— 95

The combination, with the push-back C, needles B, and support therefor, of the clearing-wheel E, having bristles or other elastic material on its circumference, and set at an oblique angle to the needles, substantially as 100
and for the purpose set forth.

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Witnesses:

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