

(No Model.)

H. J. GRISWOLD.

DEVICE FOR TRANSFERRING KNITTED FABRICS.

No. 472,874.

Patented Apr. 12, 1892.

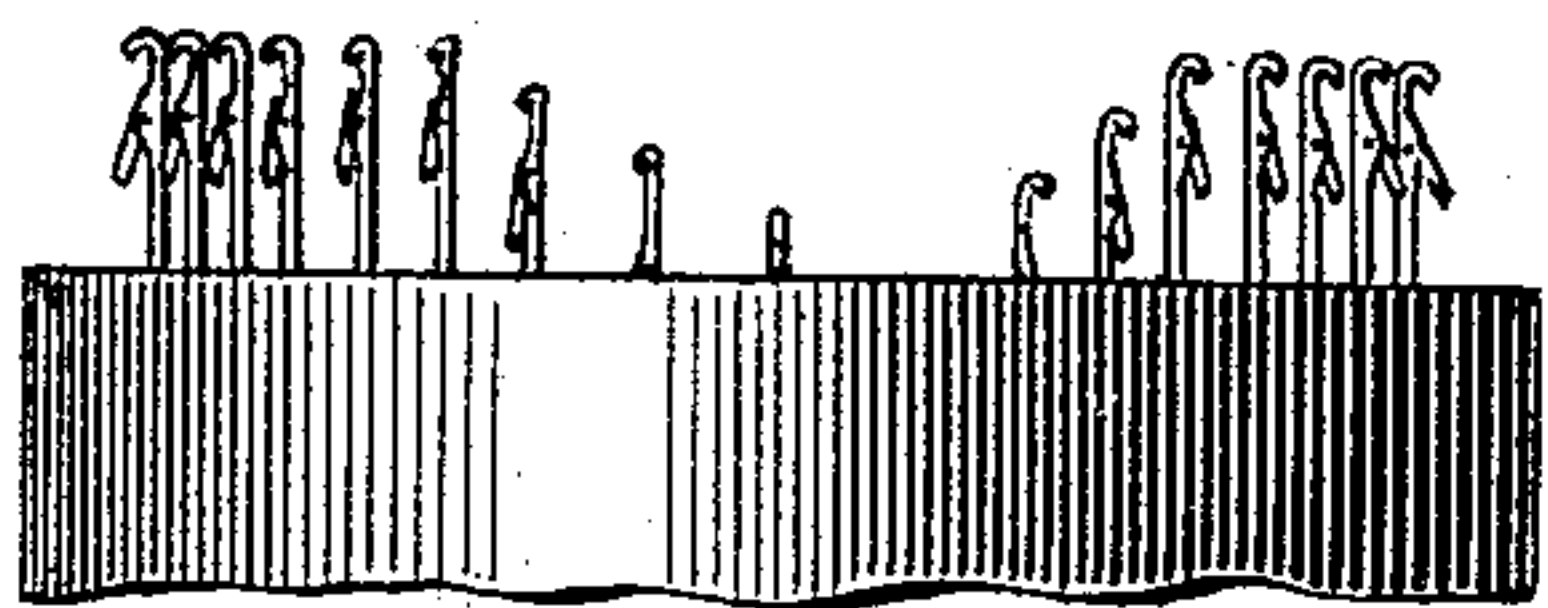
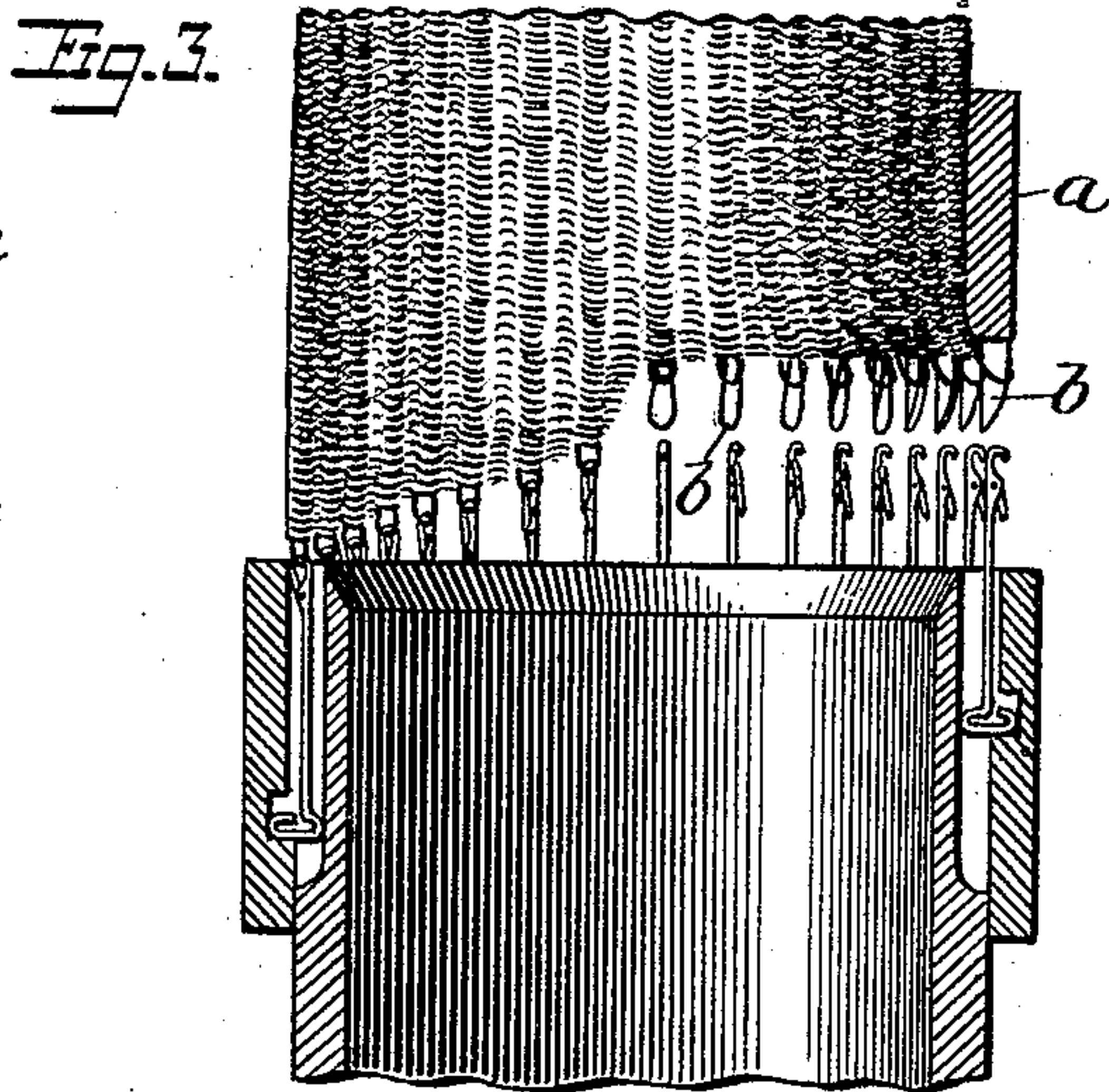
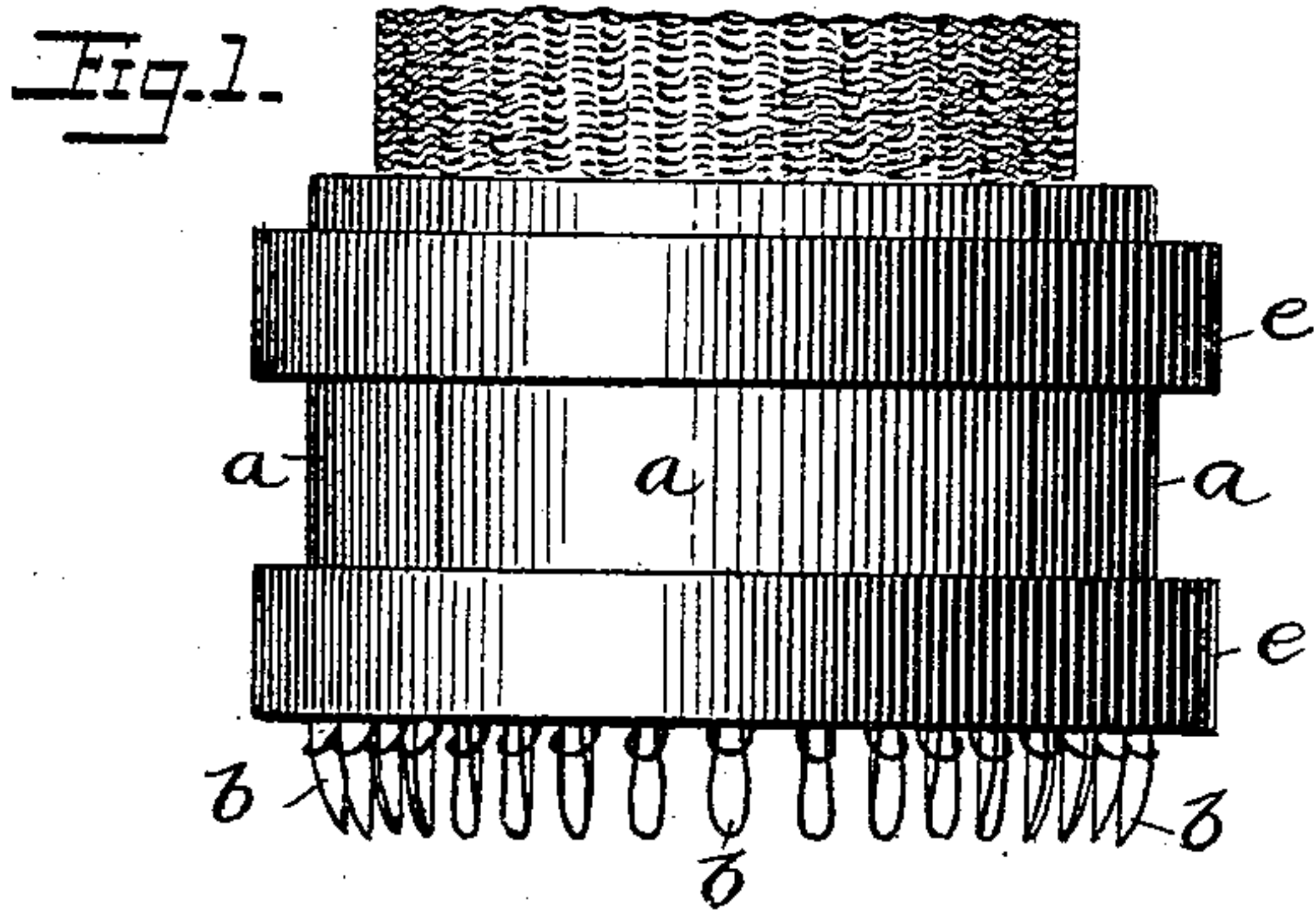


Fig. 2.

Fig. 4.

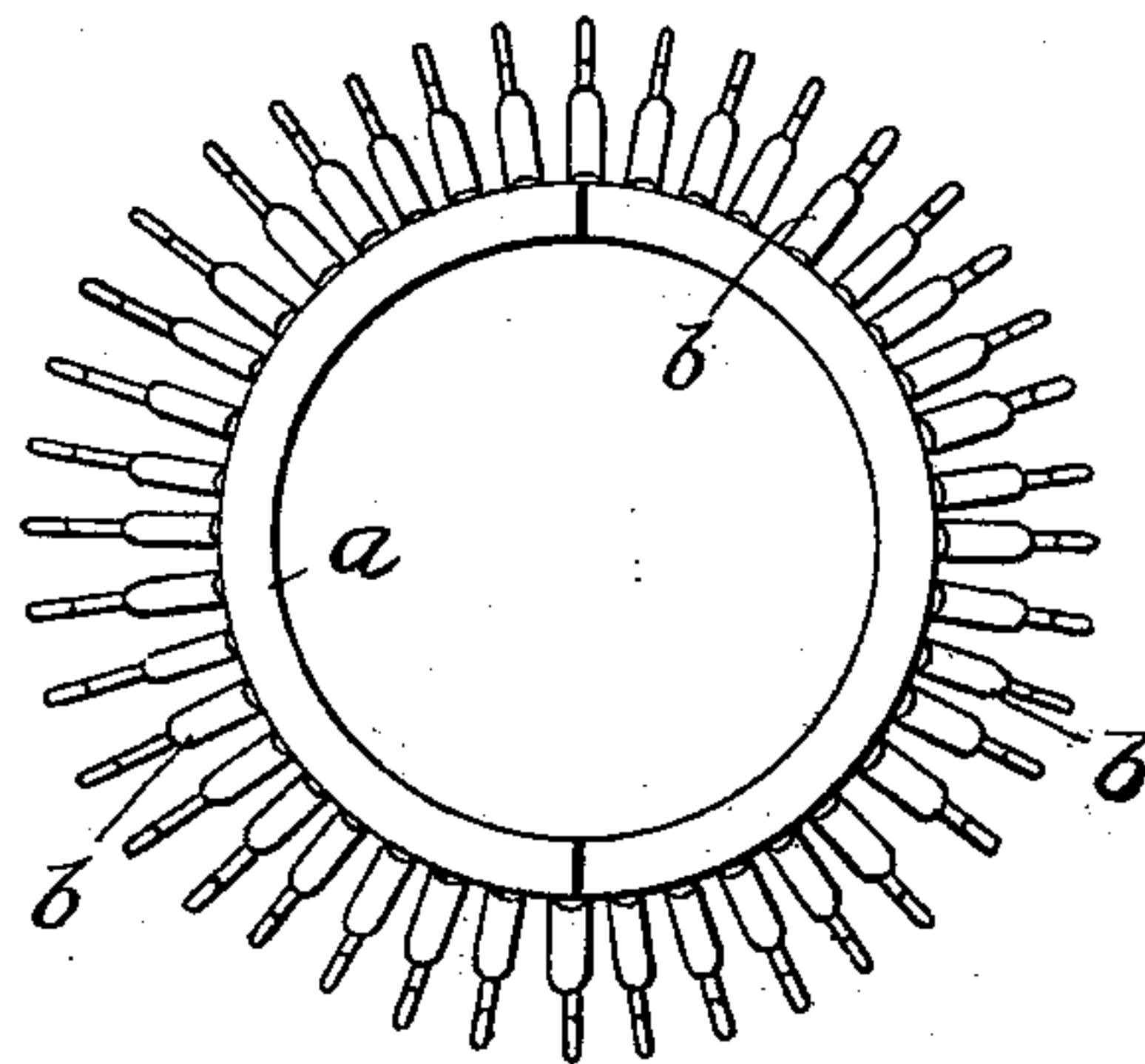
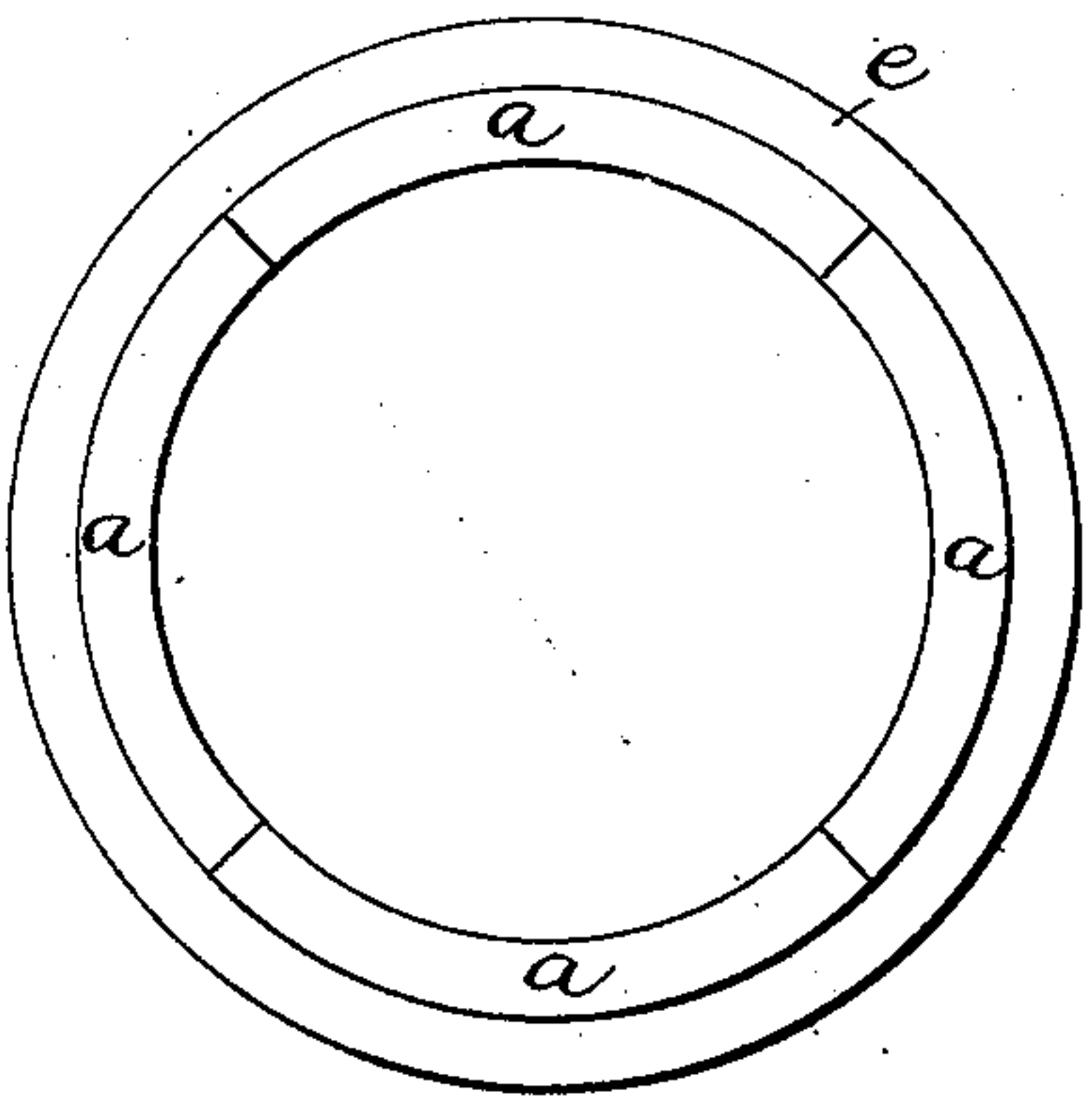
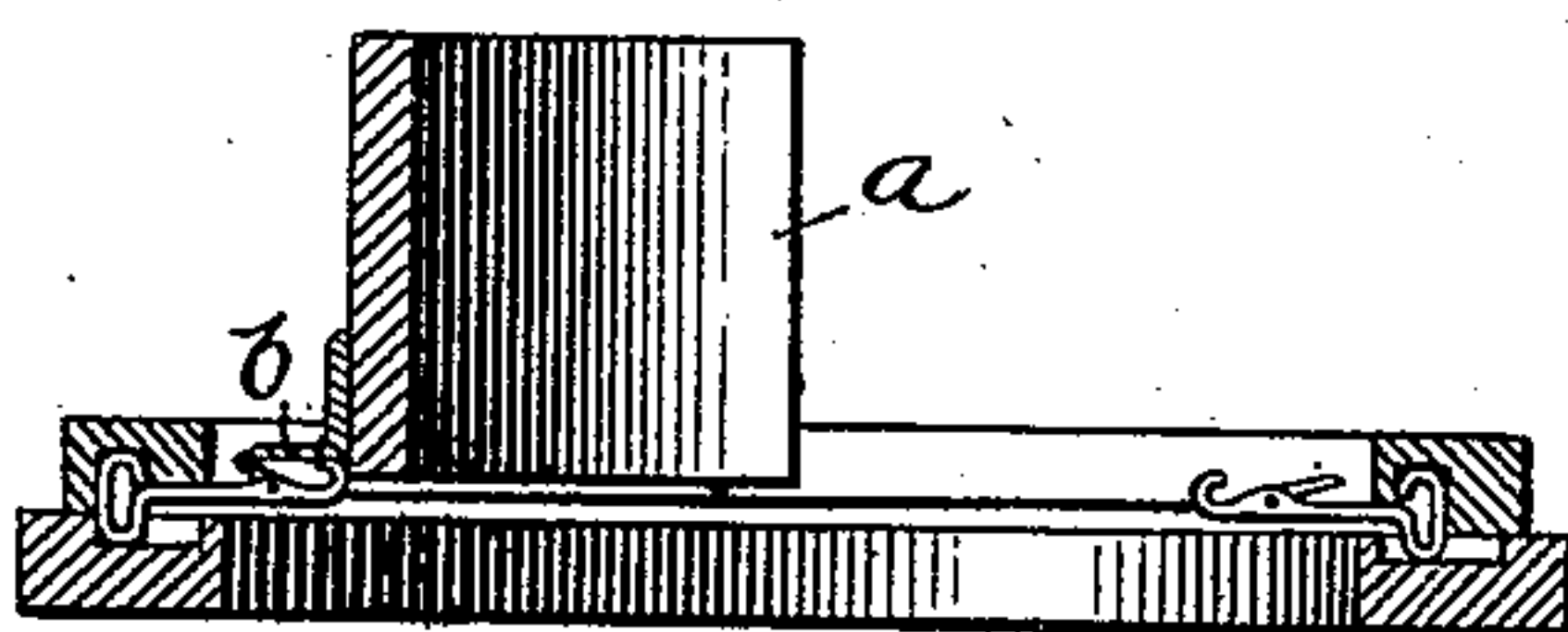


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

HENRY J. GRISWOLD, OF MADISON, CONNECTICUT.

DEVICE FOR TRANSFERRING KNITTED FABRICS.

SPECIFICATION forming part of Letters Patent No. 472,874, dated April 12, 1892.

Application filed July 15, 1890. Serial No. 358,793. (No model.) Patented in England April 5, 1886, No. 4,712.

To all whom it may concern:

Be it known that I, HENRY J. GRISWOLD, a citizen of the United States, residing at Madison, Connecticut, have invented certain new and useful Improvements in Devices for Transferring Knitted Fabrics, (for which a patent was granted in Great Britain, No. 4,712, dated April 5, 1886,) of which the following is a specification.

For the purpose of transferring the ribbed tops or cuffs of articles of wearing-apparel to the needles of the circular-knitting machines by which the web constituting the bodies of the articles is formed it has been common heretofore to make use of a transferring device consisting of a short hollow cylinder provided with a series of parallel quills at one end adapted to be placed upon the needles of the machine in such manner that each quill covers the hook of one of the needles, so that the loops may be all run simultaneously from all the quills onto the needles covered thereby. In the device thus constructed the quills are all fixed in relation to each other, and in using the same it is necessary to elevate all of the needles to the same extent, so that all of the loops may be simultaneously transferred from the device to the needles. This elevation of all of the needles to the same extent necessitates a peculiar and complicated construction of the machine.

In order to avoid the necessity of using a machine of special construction or of altering the same or the use of special attachments, and in order to transfer ribbed or other knitted work to machines of ordinary construction, I make use of the transferring device herein-after described and illustrated in the accompanying drawings, in which—

Figure 1 is a side view of my improved transferring device, showing the same in position above the circular portion of a knitting-machine. Fig. 2 is a plan of the transfer device. Fig. 3 is a central sectional view, half of the transferrer having been removed and its stitches transferred to the machine-needles. Fig. 4 is a plan of the transferrer as applied to a dial knitting-machine or one in which the needle-bed is a flat ring with the grooves cut radially in its top; and Fig. 5 is

a central vertical sectional view of the same, one-half of the transferrer having been removed.

As my device is intended to be used with circular-knitting machines constructed in the usual manner and provided with the usual or any suitable arrangement of cams for throwing the needles up and down in succession, it is not necessary to illustrate said machines other than to show the arrangement of needles therein in order that the manner of applying the improved transferrer thereto may be understood.

The said device consists of two or more segmental blocks or sections *a*, adapted to be held or clamped together side by side, which sections together form a cylinder and support a series of quills *b*, equal in number to the number of needles in the machine to which the work is to be transferred. The quills *b* are constructed in the ordinary manner to receive and hold the loops of the knit work and to receive the hook end of the needles onto which the loops are to be transferred, and any suitable means may be employed for connecting the sections together, so that the quills thereof will be parallel to each other with their points upon the same plane. Thus, as shown in Figs. 1 and 2, which illustrate the device for use in connection with a circular-knitting machine, the sections *a* are segments which together constitute a hollow cylinder, and these segments are temporarily held together by two rings *c*.

The process by which a ribbed top or cuff is transferred to the knitter is as follows: The parts of the transfer device having been clamped together, the ribbed top already knitted upon another machine is placed upon the quills of the transferring device in the usual manner. All of the needles of the knitting-machine being brought to a position in one plane, except those which are depressed below the top of the cylinder by the usual cams, the transferrer with the work thereon is brought above the needles of the machine in the position shown in Fig. 1, and is then moved downward until the hook of each needle above the top of the cylinder or inside the ring of the dial is covered by a quill, the nee-

dles which have been withdrawn all occupying a position within the limits of one of the sections or segments. The loops of the work are then pushed from the transferrer onto those needles which are actually covered by the quills, and the clamping-ring is removed, and the sections from which the work has been transferred are also removed, while the section above the withdrawn needles is retained in place, still holding a portion of the loops of work upon the quills. The operating-cams of the knitting-machine are then moved to project the needles, which were withdrawn into position again, so that they may all be covered by the quills of the remaining section of the transfer device and the remaining loops of the work transferred to these needles. The remaining segment is then removed, leaving the ribbed top or cuff transferred to the needles of the machine in position to be knitted to the plain web thereafter formed.

Without limiting myself to the precise con-

struction and arrangement of parts shown, I claim—

1. A transferring device for use in connection with knitting-machines, consisting of a series of separable segmental blocks or sections carrying a series of parallel quills and means for clamping the same detachably together, substantially as set forth.

2. The combination, in a transferring device for knitting-machines, of a series of segments *a*, constituting a hollow cylinder and carrying a series of quills and means for clamping the segments together, substantially as and for the purpose set forth.

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

HENRY J. GRISWOLD

Witnesses:

MARY FIELD MUNSON,
HENRY B. WILCOX.