

(No Model.)

L. BOSI.
KNITTING MACHINE.

No. 516,960.

Patented Mar. 20, 1894.

Fig. 1

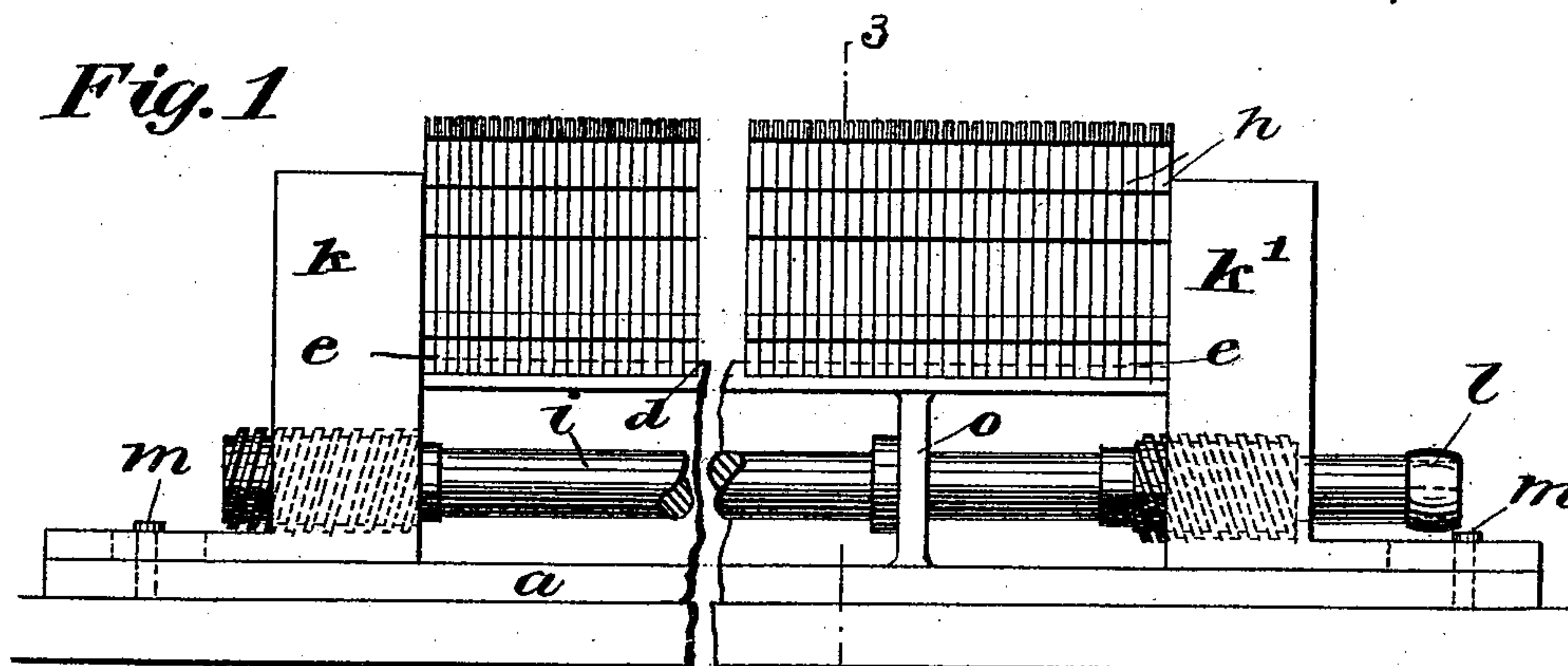


Fig. 2

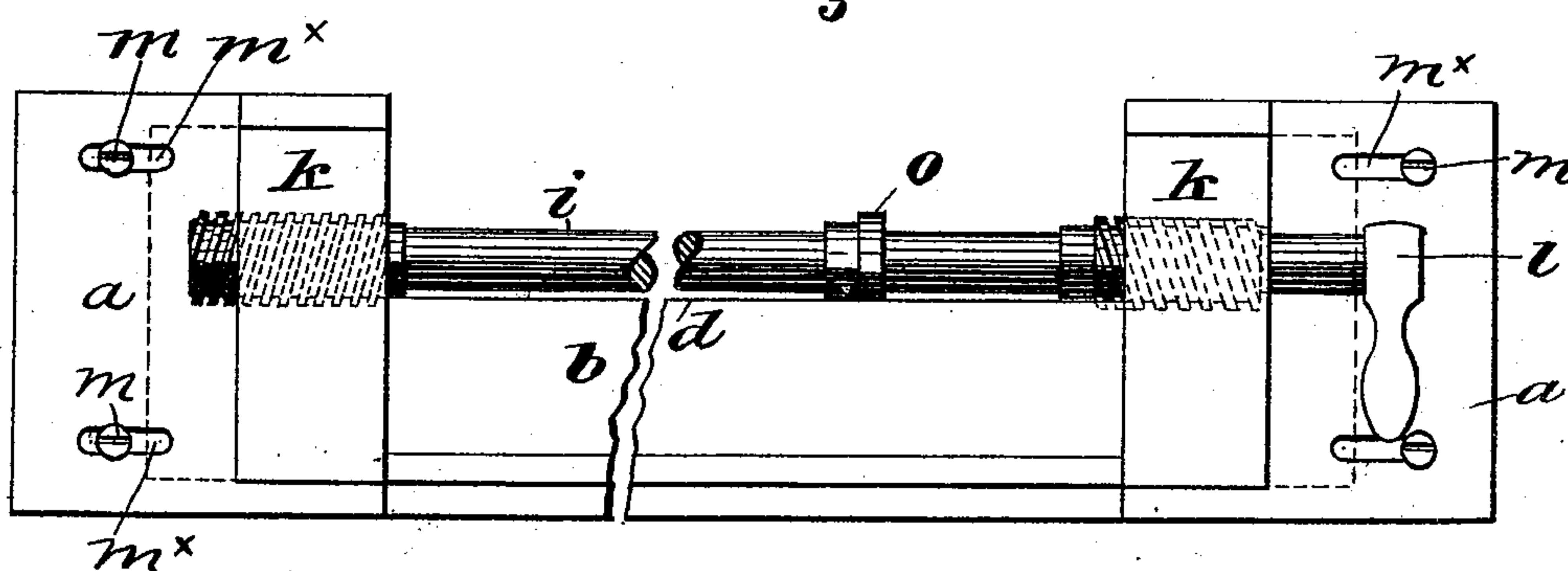


Fig. 4

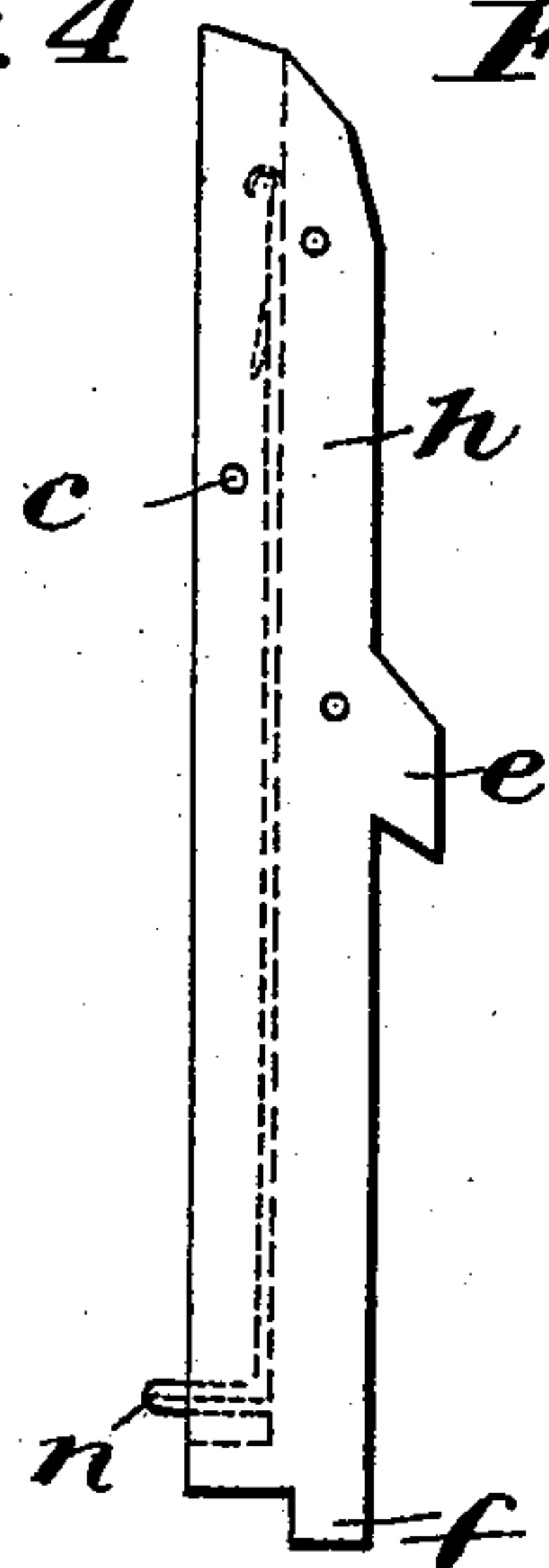


Fig. 5

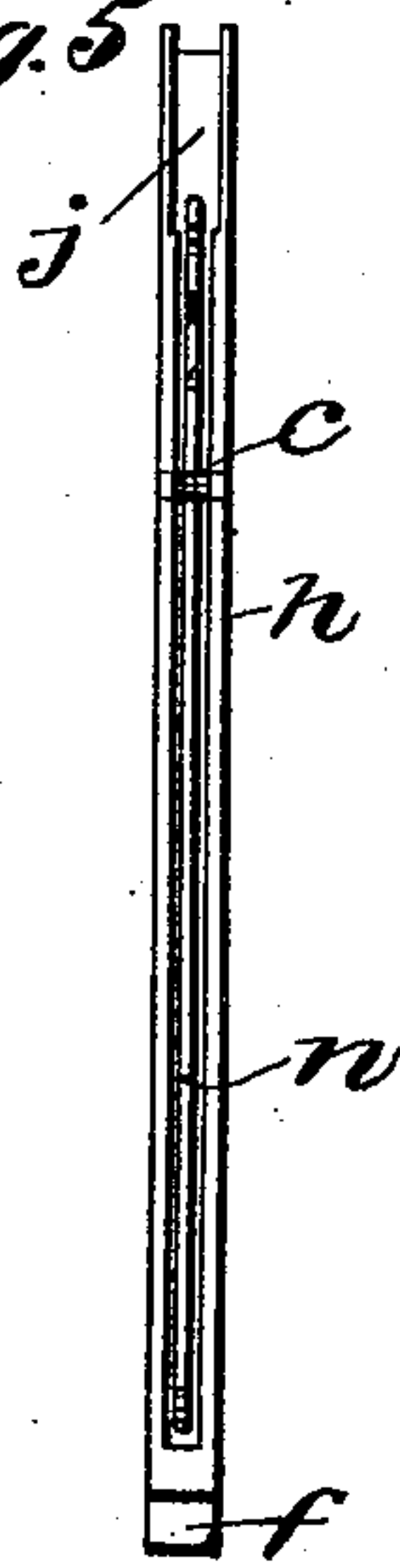
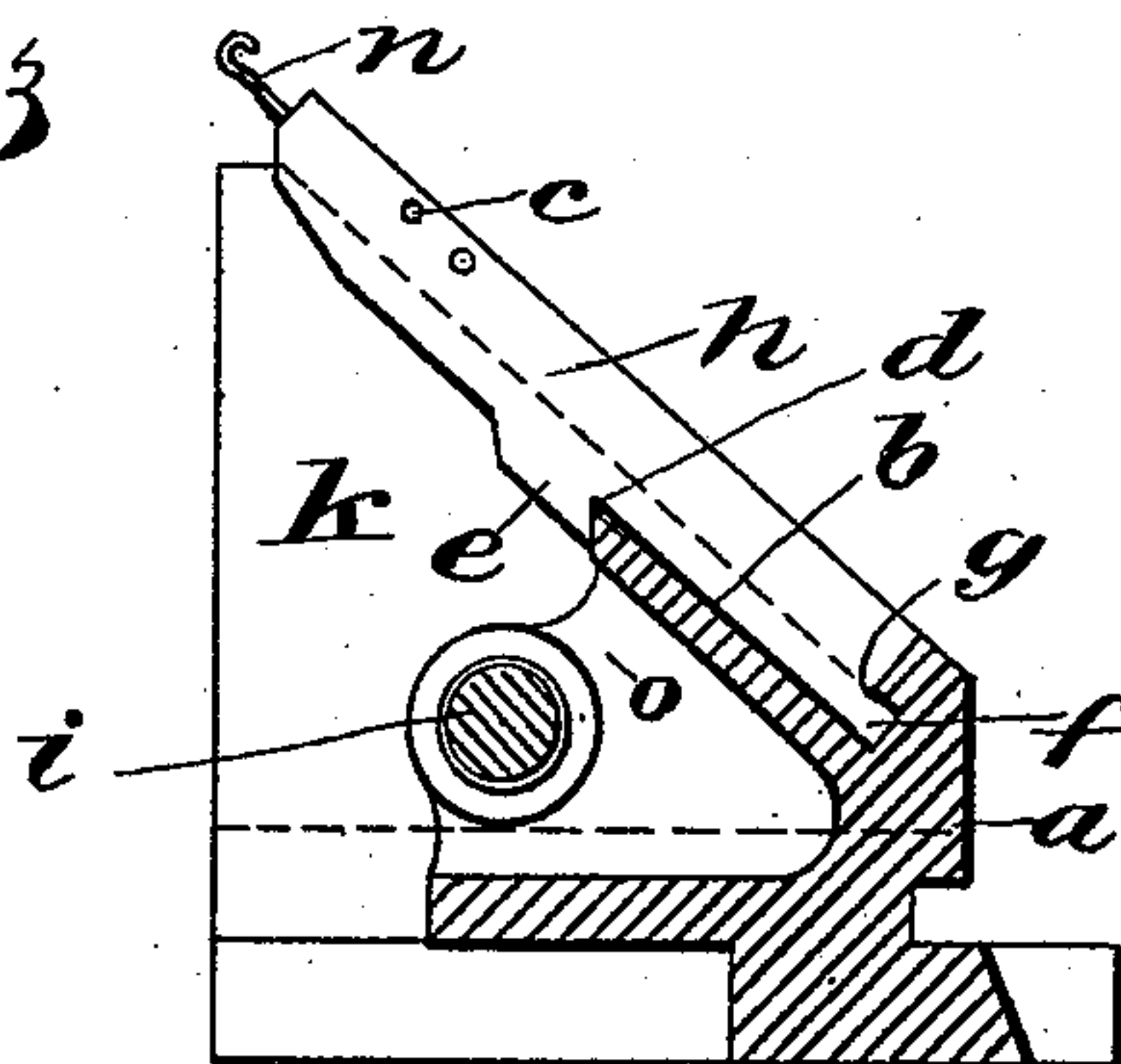


Fig. 3



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UNITED STATES PATENT OFFICE.

LUIGI BOSI, OF TERRICCIOLA, ITALY.

KNITTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 516,960, dated March 20, 1894.

Application filed February 2, 1887. Serial No. 226,327. (No model.) Patented in France November 28, 1883, No. 158,850; in Belgium November 29, 1883, No. 63,379; in Italy November 30, 1883, XXXII,111; in England November 30, 1883, No. 5,590; in Austria-Hungary September 16, 1884, No. 17,424 and No. 41,264; in Germany September 19, 1888, No. 50,283, and in Switzerland October 14, 1889, No. 1,521.

To all whom it may concern:

Be it known that I, LUIGI BOSI, of Terricciola, Italy, have invented an Improvement in Knitting-Machines, (for which I have received Letters Patent in Italy, Vol. 32, No. 111, dated November 30, 1883; in Great Britain, No. 5,590, dated November 30, 1883; in France, No. 158,850, dated November 28, 1883; in Austria-Hungary, No. 17,424 and No. 41,264, dated September 16, 1884; in Belgium, No. 63,379, dated November 29, 1883; in Germany, No. 50,283, dated September 19, 1888, and in Switzerland, No. 1,521, dated October 14, 1889,) of which the following is a specification.

My invention relates to knitting machines and has for its object to provide an improved needle bed and needle holder for such machines, all as will be hereinafter fully set forth.

The novel features of my invention will be carefully defined in the claims.

In the accompanying drawings which serve to illustrate my invention—Figure 1 is a rear view of the needle-bed of a knitting machine showing my improved needle holders in place and Fig. 2 is a plan view of the bed, the needle holders being removed. Fig. 3 is a sectional view along line 3, 3, in Fig. 1, showing the needle holder in place on the bed and Figs. 4 and 5 are, respectively, a side elevation and a face view of my improved needle-holder.

In these views *a* represents the needle bed, which is beveled or inclined along its upper portion *b* and provided with a beveled or angular edge *d* at the upper side of said portion *b* and with a squared longitudinal groove or socket *g* along the base of said portion *b*. The bed is provided at suitable intervals with perforated braces *o* only one of said braces being shown, and at its opposite ends said bed is also provided with set screws *m*, *m* which pass through slots *m*^x in clamps *k*, *k'* arranged at opposite sides of the needle bed, whereby said clamps may be set fast to said bed in any desired position. The respective clamps *k*, *k'* have oppositely screw threaded perforations with which engage the oppositely screw threaded ends of a screw shaft *i* one end of which projects through the per-

foration in one of the clamps and is squared to permit the application of a wrench *l* as seen at the right in Fig. 2, whereby it may be turned. Said shaft also engages the perforations in the braces *o* and is provided with stop collars to prevent longitudinal movement relatively to the needle bed as will be readily understood.

On the beveled portion *b* of the needle bed are arranged the needle holders *h* each of said holders being provided on its under side with a projecting spur *e* the angle of which is such as to fit and be held upon the upper angular edge *d* of the needle bed and each holder is further provided at its lower end with a projecting stud or finger *f* so arranged and of such size as to fit into the base groove *g* of the needle bed. The needle holders are further provided with slots *j* to receive the needles *n* and at their forward ends with elastic or frictional plugs *c* of suitable material, said plugs being inserted through perforations formed transversely above the needles *n* whereby said needles are held in place in the holders and prevented from withdrawal. Thus it will be seen that the needle holders may be arranged transversely upon the bed resting and being held in place thereon by the engagement of spurs *e* and studs *f* with edge *b* and groove *g* respectively, and when a proper arrangement of the said holders on the bed has been effected, the end clamps *k*, *k'* may be brought up so as to firmly clamp the bed and holders together by turning the screw shaft *i*.

When it is desired to withdraw the needle holders for repairs or for rearrangement, it is only necessary to loosen the clamp slightly when any of said holders may be lifted out of place on the bed and replaced by a fresh one or a complete rearrangement may be effected.

Having thus described my invention, I claim—

1. The combination with the needle bed having a recessed upper surface and a wedge shaped upper edge, said bed having at the lower edge of said recess in its upper face an overhanging portion whereby a base groove is formed thereunder, of the needle holders

mounted on said bed, each of said needle holders being provided at its rearend with a rearwardly projecting stud adapted to take into said base groove beneath said overhang-
5 ing portion of the bed and having near its forward end a downwardly projecting portion the rear side of which projects rearwardly at an acute angle from the under side of the needle holder whereby a re-entrant an-
10 gle is formed for the reception of the said wedge-shaped forward edge of the needle bed, substantially as set forth.

2. The combination with the needle holder

having a groove to receive the needle, of the needle arranged in said groove and a fric- 15 tional plug secured at its ends in the walls of the groove and adapted to bear on said needle, substantially as set forth.

In testimony whereof I have herewith signed my name in the presence of two subscribing 20 witnesses.

LUIGI BOSI.

Witnesses:

EMILIO MASI,
ALFONSO TOMER.