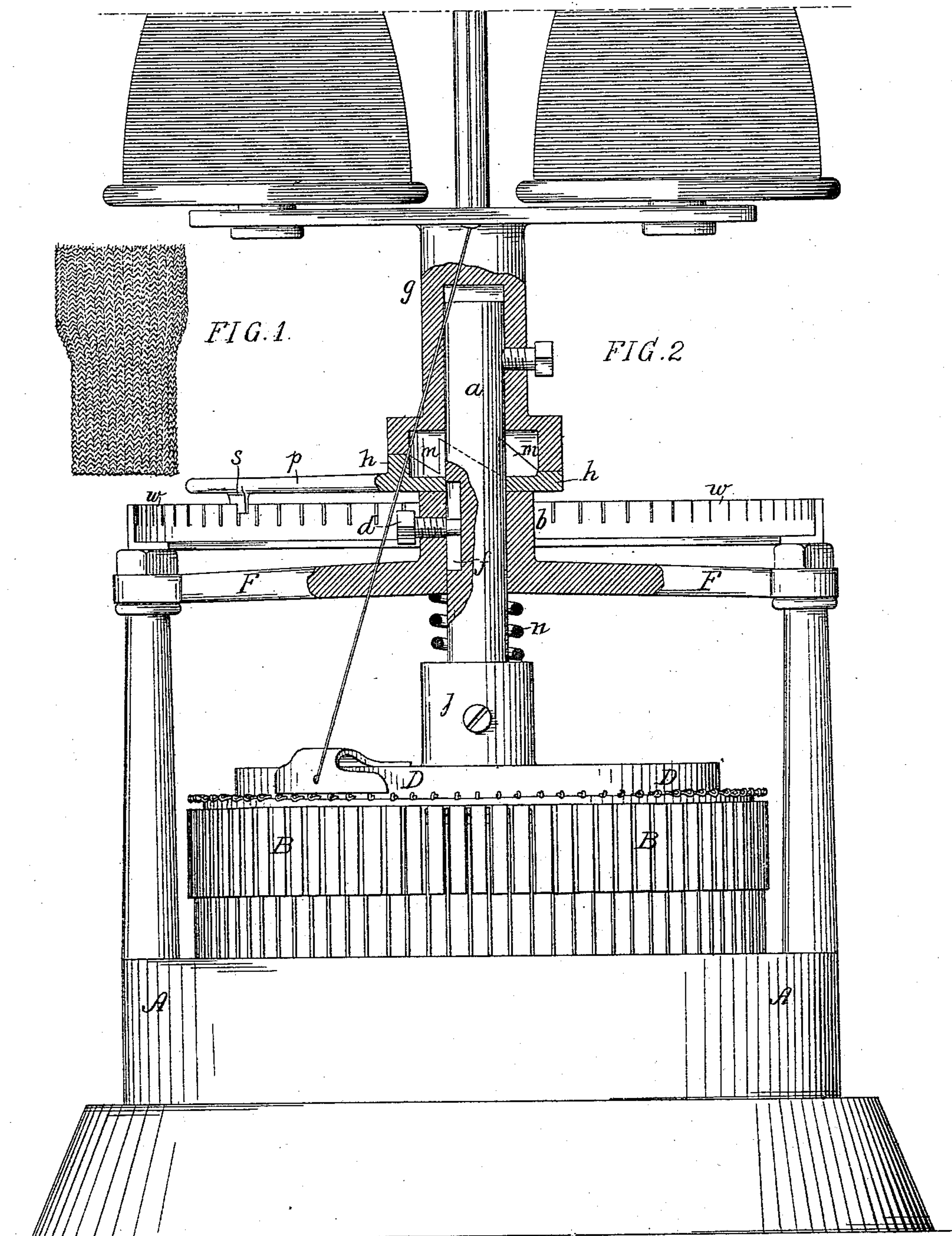


(No Model.)

G. LINDLEY, Jr.
KNITTING MACHINE.

No. 277,299.

Patented May 8, 1883.



WITNESSES:
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UNITED STATES PATENT OFFICE.

GEORGE LINDLEY, JR., OF PHILADELPHIA, PENNSYLVANIA.

KNITTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 277,299, dated May 8, 1883.

Application filed August 28, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE LINDLEY, Jr., a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Knitting-Machines, of which the following is a specification.

My invention consists in a certain improvement in that class of circular-knitting machines which are intended for the production of ribbed fabric, and in which a cylinder having guides for vertically-moving needles is combined with a disk or plate having guides for horizontally-acting needles, the object of my improvement being to provide for the ready and accurate adjustment of said horizontal plate, so as to regulate the character of the loops produced.

In the accompanying drawings, Figure 1 is a view of a piece of fabric, showing the different character of the stitches therein; and Fig. 2, a side view, partly in section, of sufficient of a knitting-machine to illustrate my invention.

In Fig. 2, A represents part of the rotating frame of the machine; B, the fixed cylinder carrying the vertical needles, and D the fixed plate carrying the horizontal needles, both sets of needles being actuated by suitable cams as the frame A revolves, thereby producing a ribbed fabric—such, for instance, as that of which the sleeves of Cardigan jackets are commonly made.

In most machines of this class the character of the fabric produced depends upon the position of the plate D vertically in respect to the upper edge of the cylinder B. Thus the further the plate D is above the edge of the cylinder B the larger will be the loops of the fabric and the more open the fabric, and the closer the plate is to the upper edge of the cylinder the smaller will be the loops and the closer the fabric. The same result is attained in other machines by adjusting the cams which operate the needles; but my invention has no reference to machines of this class; but is limited to machines of the character above described and such as illustrated in the drawings.

In operating a machine of this character it is usual to knit a long tube of fabric having at intervals portions, *x*, knitted more closely

than the rest of the tube, *y*, this long tube being afterward cut into pieces of a length suitable for jacket-sleeves, the closely-knitted portions *x* of the tube being so spaced as to form the cuffs of the sleeves. It becomes of importance, therefore, to provide some means whereby the horizontal plate D can be readily raised and lowered, and this result I accomplish in the following manner: The plate D is hung, as usual, to the lower end of a spindle, *a*, which can be adjusted vertically in a bearing, *b*, forming part of a cross-bar, F, of the frame, the spindle being caused to turn with the frame by means of a set-screw, *d*, the end of which is adapted to a slot, *f*, in the spindle. The plate D, however, is prevented from turning with the spindle by the engagement of internal lugs on the said plate with similar lugs on the fixed cylinder B, as usual in machines of this class.

Secured to the upper end of the spindle is a sleeve, *g*, between the lower end of which and the bearing *b* is confined a ring, *h*, and on the latter are formed teeth *m*, inclined on one edge and abrupt on the other, the lower end of the sleeve *g* having teeth corresponding with those of the ring, and being maintained in contact therewith at all times, partly by the weight of the plate D and its attachments, and partly by the pressure of a spring, *n*, interposed between the cross-bar F and a sleeve, *j*, on the cam-ring, which operates the needles of the plate D, this ring being secured to the spindle *a*.

The ring *h* has an arm, *p*, a tongue, *s*, on which is adapted to enter notches in a segmental plate, *w*, on the frame A, so as to retain the ring in any position to which it has been adjusted. The movement of this arm *p* in one direction or the other is all that is necessary to raise or lower the plate D, the extent of movement imparted to the plate being regulated as accurately as may be desired.

The construction shown is simple, and can be readily applied to ordinary double-rib frames as now made.

I claim as my invention—

1. The combination of the needle-cylinder B and needle-plate D with the frame A F, having bearing *b*, with set-screw *d*, the spindle

a, adapted to the bearing, and having a slot, *f*, the sleeve *g*, secured to the spindle and having teeth *m*, and the ring *h*, likewise toothed, and interposed between the bearing *b* and sleeve *g*, as set forth.

2. The combination of the needle-cylinder B and needle-plate D, the frame A F, with its bearing *b* and set-screw *d*, the spindle *a*, having a slot, *f*, the sleeve *g*, ring *h*, cam-ring with its collar *j*, and the spring *n*, as set forth.

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

GEORGE LINDLEY, JR.

Witnesses:

HARRY DRURY,
HARRY SMITH.