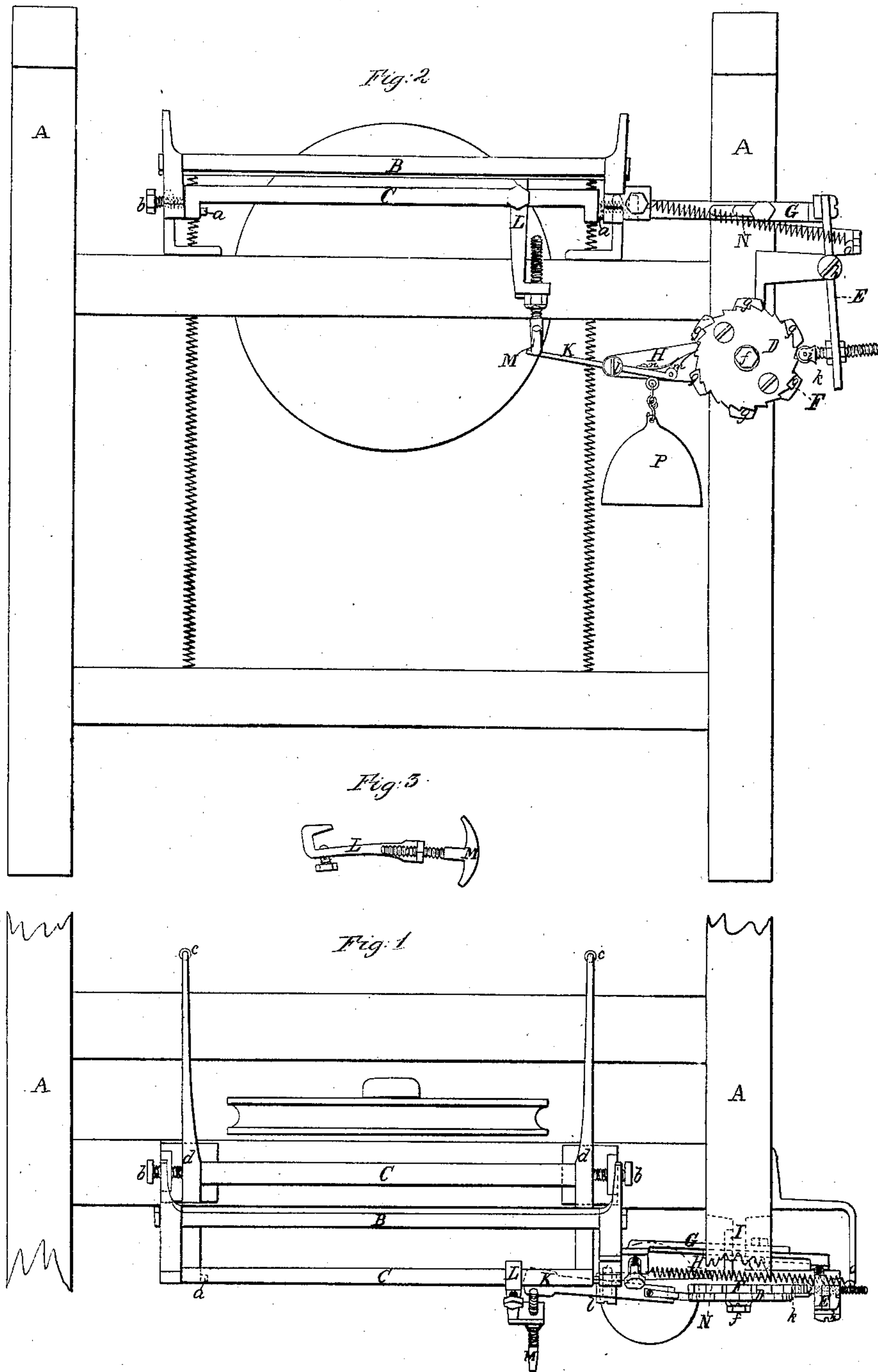


B. Wainwright.
Straight Knitting Mach.

N^o 64,579.

Patented Mar. 5, 1867.



Witnesses:

Samuel C. Pepp.
Geo. H. Andrews.

Inventor:
Benjamin Wainwright
by his attorney
R. H. Loring

United States Patent Office.

BENJAMIN WAINWRIGHT, OF EAST BOSTON, MASSACHUSETTS.

Letters Patent No. 62,579, dated March 5, 1867.

IMPROVEMENT IN RIB-KNITTING LOOMS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL PERSONS TO WHOM THESE PRESENTS SHALL COME:

Be it known that I, BENJAMIN WAINWRIGHT, of East Boston, in the county of Suffolk, and State of Massachusetts, have made a new and useful invention, having reference to Rib-Knitting Looms; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view; and

Figure 2, a front elevation of a knitting loom rib-needle frame, and my mechanism applied thereto for the purpose of imparting to it lateral movements, to cause the production of what is termed "shogged work," or serpentine ribs in the fabric.

Heretofore the "shogged work" or serpentine ribs were performed or produced by the attendant on the loom, who, in order to effect this result, had to lay hold of and move the rib-needle frame laterally of the loom, first in one direction, and afterward in the opposite one. These operations required his constant attention during that of knitting a ribbed fabric. He could produce the plain rib without any such movement of the frame. The purpose of my invention is to effect by mechanism the necessary lateral movements of the rib-needle frame to cause the waved or serpentine rib or "shogged work" to be performed or made, and thus to relieve the operator of the loom from all necessity of moving the rib-needle frame laterally, or otherwise than he would in making plain ribbed work.

In the drawings, A denotes a portion of the frame of a knitting loom. B is the rib-needle frame, which is supported by and so as to be capable of turning on pins *a a*, projecting from a horizontal vibratory or rocker-frame or carrier C, which, in turn, is supported by pivots *b b*, and has depressing springs *c c* applied to its arms *d d*. The rib-needle frame B is to slide laterally as well as to turn on the pins *a a*. The mechanism for effecting the lateral motions of the frame B may be thus described: D is a ratchet, supported on a stationary centre-pin, *f*, and having a series of cams, *g g g*, or a cammed wheel, F, applied to one side of it, and so as to project from it as represented. E is a lever, which is supported on a stationary fulcrum, *h*, and sustains, by means of an adjustable carrier, *i*, fixed to its lower arm, a small wheel or roller, *k*, to act against the periphery of the cam-wheel F. The upper arm of the lever E is connected with the frame B by means of a connection-rod G, which is to be so jointed or applied to both the lever and frame as to allow of the usual turning or vibratory and up-and-down movements of the said frame, without, in the meanwhile, causing any movement of the lever. An arm, H, projects from the bracket I, by which the ratchet centre-pin is supported, and serves to sustain the fulcrum *l* of a lever, K, which has jointed to its shorter arm a small pawl, *m*, to operate the ratchet, there being fixed to the lever a spring, *n*, to bear the pawl up to the ratchet. From the rocker-frame C an arm, L, extends downward, and carries an adjustable T-piece, M, (formed as shown in side view in fig. 3,) which extends directly over the longer arm of the pawl-lever K. When a workman moves the rocker-frame C, with the needle-frame B, downward, he will cause the T-piece to be forced down upon the lever K, so as to move it, and cause it, by means of the pawl, to produce a slight rotary motion of the ratchet. A helical spring, N, has one end fixed to the frame B, and the other to an arm, O, extended from the loom frame, the whole being as represented. Furthermore, a weight, P, is suspended from the shorter arm of the lever K, and serves to produce what may be termed counter-movements of the said lever. From the above it will be seen that the intermittent rotary movements of the ratchet are dependent on the vertical movements of the carrier C, and that the cams *g g* of the cam-wheel F are to operate against the roller *k*, in order to effect, by means of the lever E, and the connection-rod G, lateral movements in one direction of the frame B, its lateral movements in the opposite direction being effected by the spring N.

What I claim as my invention, is—

The combination, substantially as described, for effecting the endwise movements of the needle-frame B, such combination consisting mainly of the ratchet D, its series of cams *g g g*, or cammed wheel F, the lever K, and its pawl *m*, the lever E, the connection-rod G, the spring N, the weight P, and the arm L, and its T-piece M, the whole being applied to the frame B, its carrier C, and the loom-frame A, substantially in manner and so as to operate as and for the purpose specified.

BENJAMIN WAINWRIGHT.

Witnesses:

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