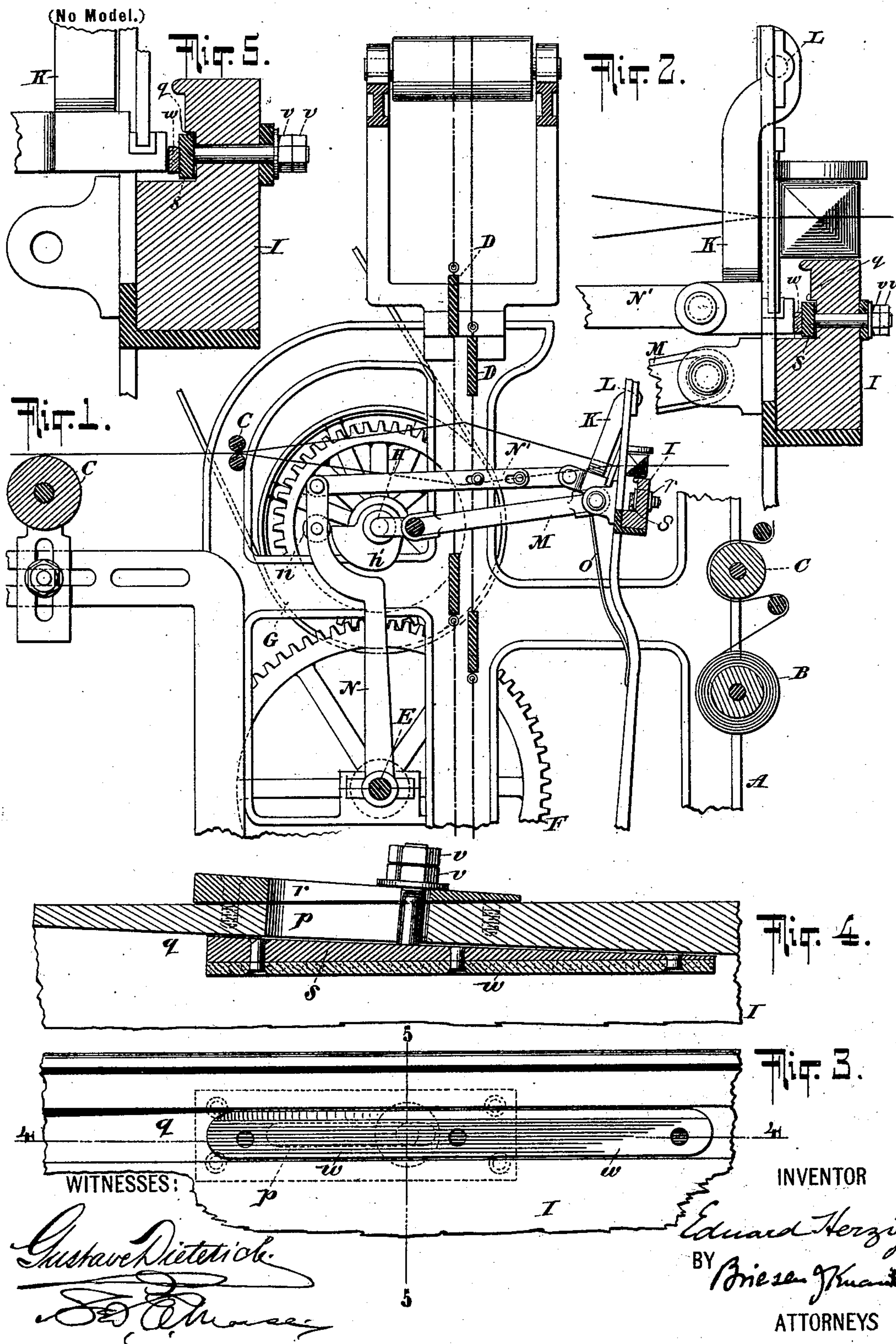


Patented Sept. 30, 1902.

LOOSE REED MOTION FOR LOOMS.

(Application filed Feb. 21, 1901.)



UNITED STATES PATENT OFFICE.

EDUARD HERZIG, OF UNION HILL, NEW JERSEY.

LOOSE-REED MOTION FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 710,192, dated September 30, 1902.

Application filed February 21, 1901. Serial No. 48,262. (No model.)

To all whom it may concern:

Be it known that I, EDUARD HERZIG, a citizen of the United States, residing at Union Hill, Hudson county, State of New Jersey, have invented certain new and useful Improvements in Loose-Reed Motions for Looms, of which the following is a specification.

My invention relates to looms, and has for its principal object to improve the construction of that class of looms forming the subject-matter of United States Letters Patent No. 623,604, granted to me April 25, 1899.

By my present invention I produce a loom of the auxiliary reed-movement type wherein the shock due to the impact of the reed-frame upon the supporting-batten is obviated. This shock has been extremely racking to looms of this character and has caused them to rapidly deteriorate.

In the accompanying drawings I have shown a loom embodying my invention.

In the drawings, Figure 1 is a sectional side elevation of the loom. Fig. 2 is a sectional elevation of the batten on a larger scale. Fig. 3 is a broken-away face view of a portion of the supporting-batten, showing the cushion for receiving the impact of the reed-frame. Fig. 4 is a section on line 4 4 of Fig. 3; and Fig. 5 is a section on line 5 5 of Fig. 3, showing also the reed-frame.

Referring to the drawings for a fuller description of the invention, A is the frame of the loom, which may be provided with any usual take-up rollers B, guide and tension rollers C, &c., and heddles D.

E is the main or driving shaft of the loom, which is shown as provided with a gear-wheel F, meshing with a gear-wheel G on a crank-shaft H, which crank-shaft moves the batten, as will be hereinafter fully set forth.

I is the batten, which is preferably pivoted at its lower end below the shed and provided with a movable reed K, preferably pivoted at its upper end L to the upper end of the batten. At or near each end the batten I is preferably provided with a slot *p* and a recess *q*. The rear wall of the recess is inclined with respect to the plane of the batten, as shown in Fig. 4, and the rear face of the batten is provided with a slotted wedge *r*. A wedge-shaped metallic base *s* slides in the recess *q* of the batten and is provided with a

bolt which extends through the batten and is set by lock-nuts *v v*. The base *s* is faced with a strip *w* of firm elastic material, such as leather, to receive the impact of the reed. The batten may be swung by any desired means, preferably by means of a pitman M, pivotally connected to the batten at one end and to a crank on the crank-shaft H. A lever N is preferably secured loosely upon the shaft E and extends upward and is provided with a roller or ball *n*, adapted to be operated upon by a cam *h'* on the crank-shaft H. This cam *h'* is formed with an abrupt "drop" between its highest portion and a lower portion. The lever N is preferably connected to the reed K at or near the lower end of the said reed by a draft connection comprising a pitman or link N' for drawing upon the reed, which link is pivoted at one end to the actuating-lever N and at the other end to the reed. The link N' is shown as a two-part link adjustable in length by means of a set-screw and slot connection.

O is an actuating-spring for throwing the reed forward to give the beat-up motion.

It will be understood that the drawings are illustrations only, and two or more cranks, cams, links, and pitmen may be employed.

The operation of the device shown is as follows: The crank on the shaft H imparts to the swinging batten I the usual positive forward-and-backward motion. The reed, however, in its entirety does not fully partake of the forward motion of the batten, but as the batten moves forward is retracted by the cam *h'*, which swings the reed on its pivot L. When the crank is on a dead-center and the batten is in its farthest forward or normal beating-up position, the ball or roller *n* rolls or drops off the high portion of the cam onto a lower portion thereof and the reed is snapped sharply forward by the spring O, which has been put under tension by the retraction of the reed. This forward motion of the reed beats up the thread. As the lower end of the reeds come against the check *w* its impact will be deadened and the shock on the machine minimized. By means of the bolt and lock-nut construction the check may be adjusted in the direction of its length, and as the surface of the recess *q* is inclined to the normal plane of the batten the surface of the

check *w* will thereby be adjusted laterally in planes parallel to the plane of the batten.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a loom, the combination of a batten, a reed carried by the batten and movable with respect thereto, means for imparting an auxiliary beat-up motion to the reed, a yielding check interposed between reed and batten, and means for adjusting the said check both laterally and longitudinally of the batten.

2. In a loom, the combination of a batten, a reed carried by the batten and movable with respect thereto, means for imparting an auxiliary beat-up motion to the reed, and an adjustable yielding check device of a general wedge shape interposed between the reed and batten.

3. In a loom, the combination of a batten, a reed carried by the batten and movable with respect thereto, and means for moving the reed, the meeting faces of the reed and batten being substantially parallel, and a yielding check of a general wedge shape adjustably secured to the batten, the said batten being cut away on a line inclined to its plane, and being provided with a wedge *r*, whereby the check may be adjusted laterally, and at

the same time maintain its parallelism with the face of the reed.

4. In a loom, the combination of a batten, a reed movably carried by the batten, a check for limiting the movement of the reed relatively to the batten, said check being adjustable transversely of the movement of the reed, and means for operating the reed and the batten.

5. In a loom, the combination of a batten, a reed movable relatively to the batten, one of said parts having an inclined surface on the side facing the other part, a substantially wedge-shaped check adjustable on said inclined surface, and means for operating the reed and batten.

6. In a loom, the combination of a batten, a reed movable relatively to the batten, one of said parts having an inclined surface on the side facing the other part, a substantially wedge-shaped check adjustable on said inclined surface, a wedge engaging the opposite surface of the part having the inclined surface, and a securing connection from the check to the wedge.

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Witnesses:

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