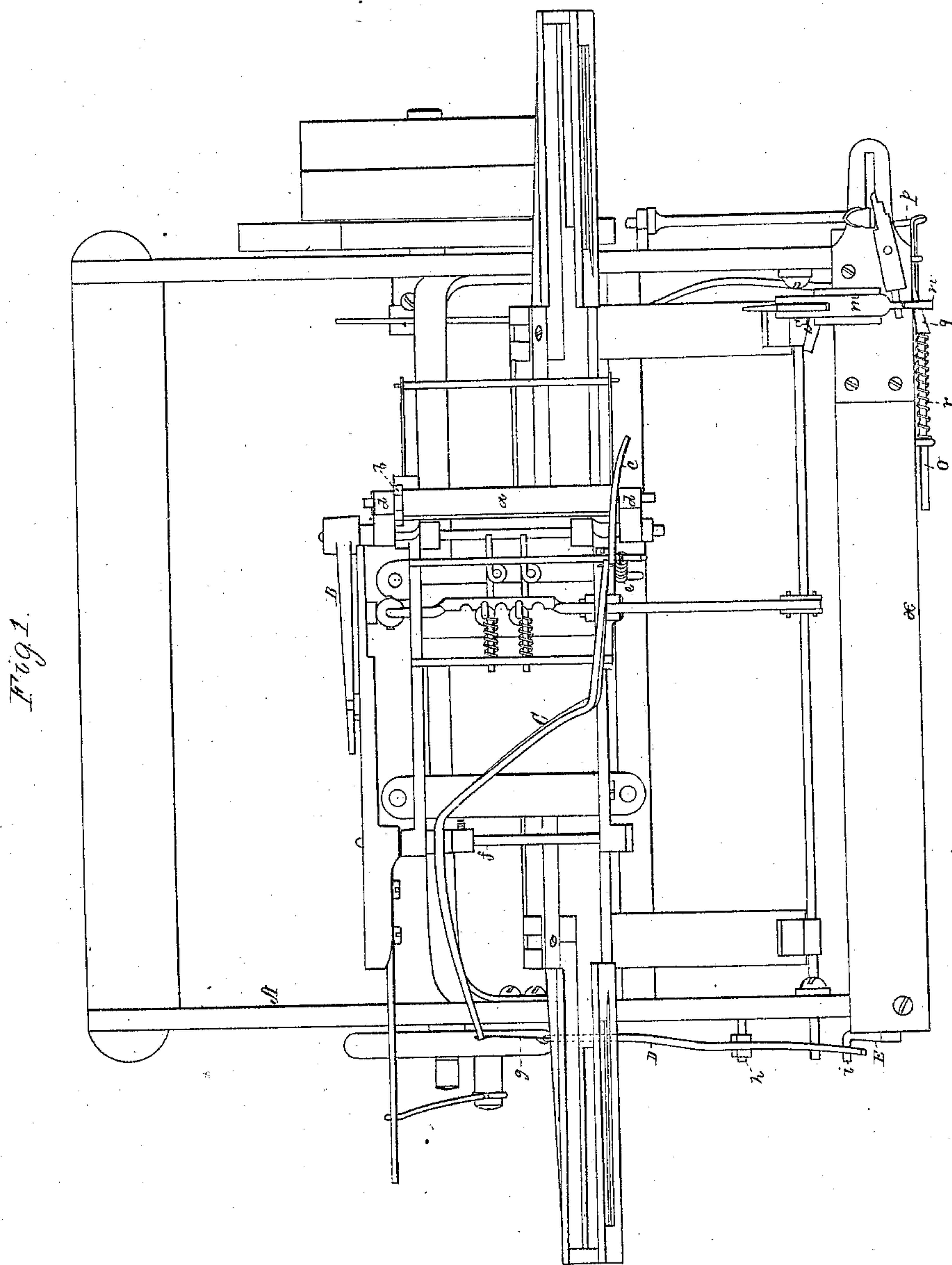


A. J. WOODMAN.

Improvement in Loom-Stop Actuating Mechanisms.

No. 128,772.

Patented July 9, 1872.



Witnesses.

S. V. Raper.

L. W. Möller.

Andrew J. Woodman.

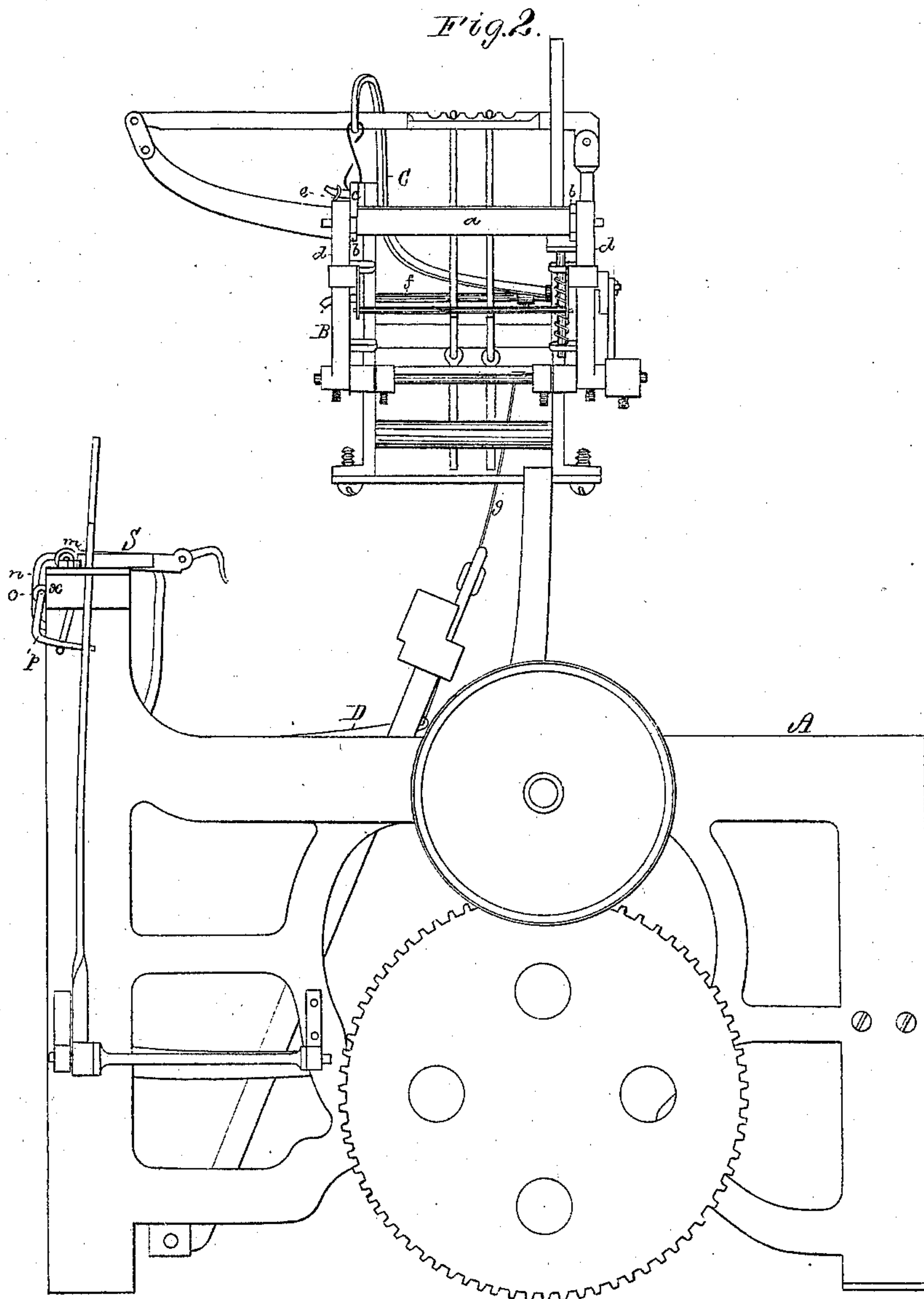
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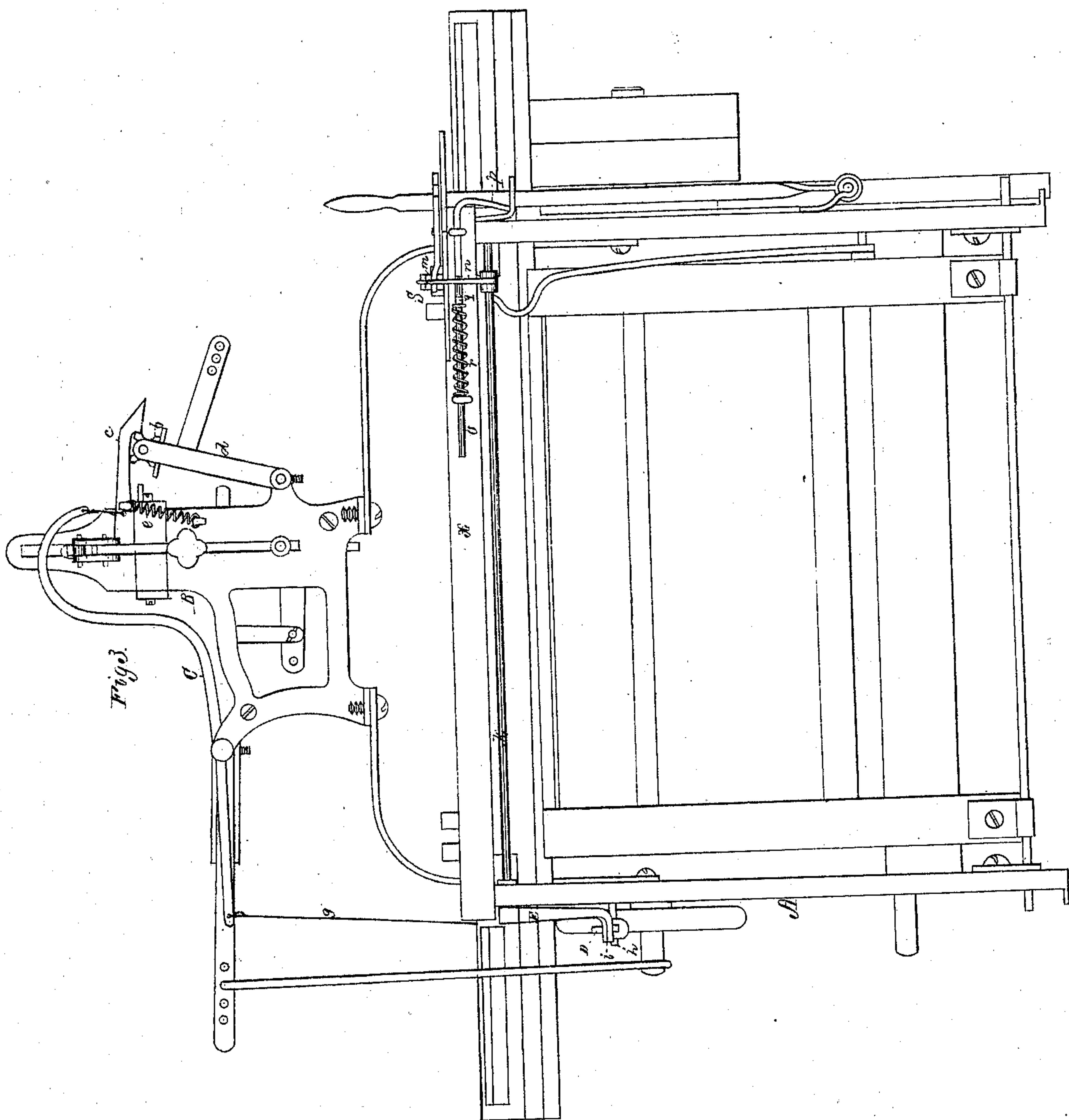
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UNITED STATES PATENT OFFICE.

ANDREW J. WOODMAN, OF INDIAN ORCHARD, (SPRINGFIELD,) MASS.

IMPROVEMENT IN LOOM-STOP-ACTUATING MECHANISMS.

Specification forming part of Letters Patent No. 128,772, dated July 9, 1872.

To all persons to whom these presents may come:

Be it known that I, ANDREW J. WOODMAN, of Indian Orchard, of the city of Springfield, of the State of Massachusetts, have invented a new and useful Improvement in Jacquard or Fancy Looms; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a top view, Fig. 2 an end elevation, and Fig. 3 a rear elevation, of a loom-frame with the ordinary stop-motion, harness-motion or operative mechanism, and the harness stop-motion or mechanism, to be hereinafter described.

Under ordinary circumstances, when the filling-thread of a shuttle breaks and the loom stop-motion is put in operation, the lay, owing to momentum generated in the working parts, will continue to make one or more beats before it will stop. The harnesses will change every time a beat of the lay takes place, thereby producing one or more extra movements of them, which, before the loom can be again started, require a proper adjustment of the harness mechanism in order that the pattern may not be irregularly woven. My invention saves all such extra movements of the harnesses, and also all the labor and time required to effect the due readjustment of the parts.

I have combined with the fancy loom or its ordinary stop-motion and harness-operative mechanism, a mechanism by which the draw-pawl of the pattern-prism of the harness mechanism is raised and held out of action upon the ratchet or gear of the prism simultaneously with or immediately after either a breakage or a running out of the filling.

In the drawing, A denotes the loom-frame; S, the stop-motion; and B, a harness-operative mechanism of the usual kind, the pattern-prism of the latter being shown at *a*, as provided with its operative gear *b* and draw-pawl *c*. The prism is supported by, so as to be capable of revolving in, a vibratory frame, *d*, and the draw-pawl is held down upon the prism-gear by a spring shown at *e*, all being common and well understood by weavers. In carrying out my invention, I arrange over the draw-pawl and connect with it in manner as

shown a bent lever, C, to turn on a rod, *f*, as a fulcrum, the shorter arm of such lever being connected with the longer arm of another lever, D, by a rod, *g*, pivoted to the two. The lever D, arranged on one end of the loom-frame in manner as shown, turns freely on a fulcrum, *h*, extended from such frame. The shorter arm of the lever D is over a stud, *i*, making part of or projecting from an arm, E, fixed on one end of the rocker-shaft *k* of the operative lever, by which the "take-up mechanism" is stopped by the stop-motion. The other arm of the said operative lever is shown at *n*. The arm *n* is that immediately in rear of the filling-fork slide or carrier *m* (of the stop-motion) which, when driven backward, produces a rearward movement of the arm *n*, and consequently causes the shaft *k* to turn in its bearings. When such takes place, the arm E will actuate the lever D, whereby the lever C will be operated so as to raise the draw-pawl *c* and hold it up in a manner to prevent it from acting upon the pattern-prism gear while it may be in movement with its carrier or frame.

In connection with the parts above described, I employ a slide, *o*, arranged at the back of the breast-beam *x*, and between it and the aforesaid arm *n*, all being as shown. From the said slide an arm, *p*, is projected between the shipper and the next adjacent end of the loom-frame; and there is on the slide and in front of the arm *n* an inclined plane or cam, *q*, all being as represented. A helical spring, *r*, enveloping the slide, serves to move it in a direction toward that end of the loom at which the shipper is placed. On the shipper being forced out of its holding-notch and moved so as to effect the stoppage of the loom, the slide *o* will be advanced by its spring, and, as a consequence, the inclined plane or cam *q* will be moved against the arm *n*, and will hold it back, thereby causing the draw-pawl of the pattern-prism to be held up during such time as may be necessary. When the shipper is next moved back to its holding-notch the draw-pawl will fall back to place ready to operate the pattern-former.

I claim—

1. The combination, with the "stop-motion" and the "harness-operative mechanism," of a

fancy loom mechanism, substantially as described, for raising the draw-pawl of the pattern-prism and retaining it out of action with the operative gear of such prism under circumstances as set forth, such mechanism consisting of the levers C D, arm E, rock-shaft *h*, arm *n*, and slide *o*, with its operative spring *r*, inclined plane or cam *q*, and bent arm *p*, all being arranged and applied substantially in manner, and to operate as explained and represented.

2. I also claim the combination of the said

levers C D, arm E, rock-shaft *h*, arm *n*, slide *o*, spring *r*, cam *q*, and arm *p*, all being arranged and connected, substantially as described, and for application to the "stop-motion" and harness-operative mechanisms of a fancy loom, as and being for the object as set forth.

ANDREW J. WOODMAN.

Witnesses:

R. H. EDDY,
S. N. PIPER.