

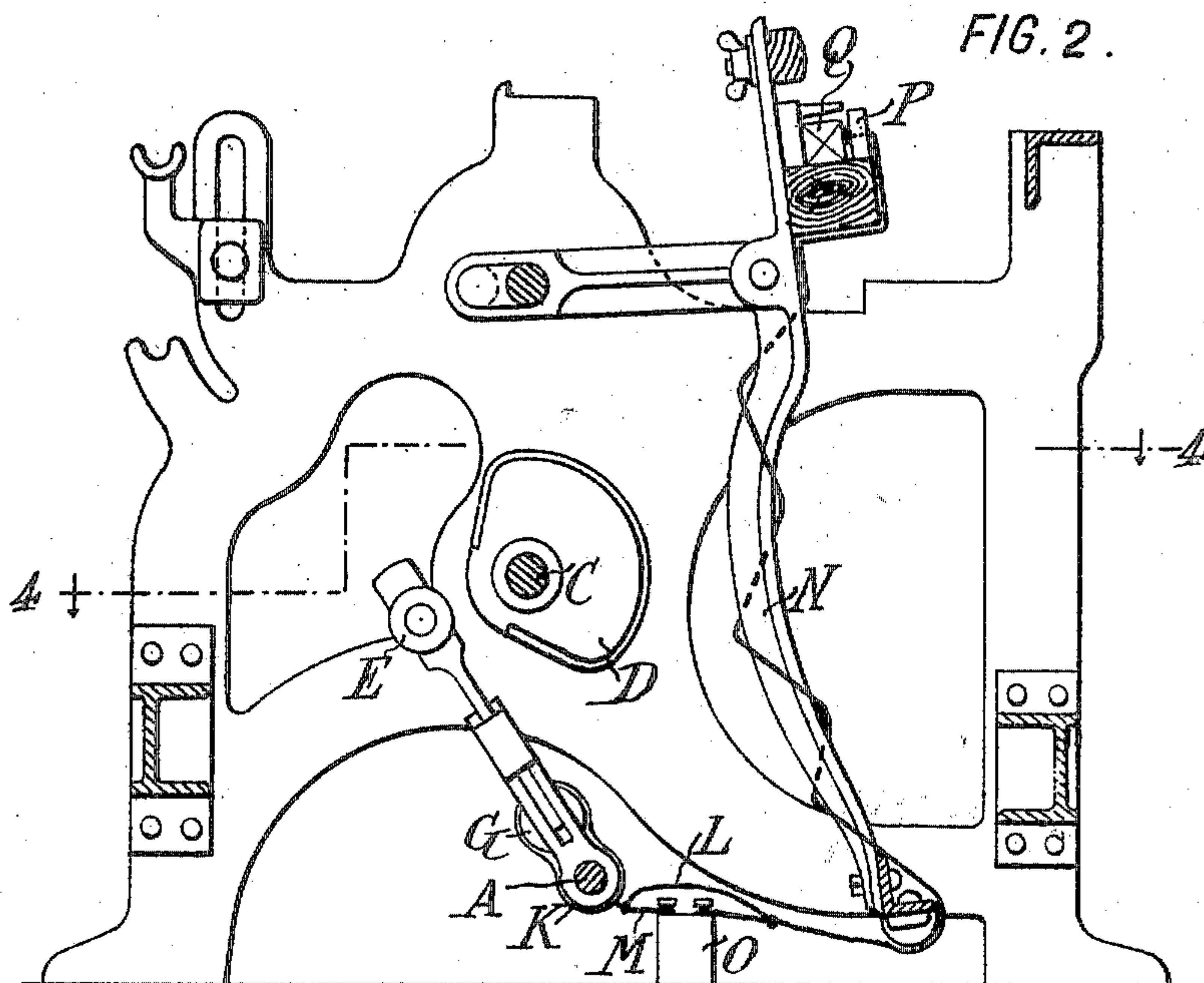
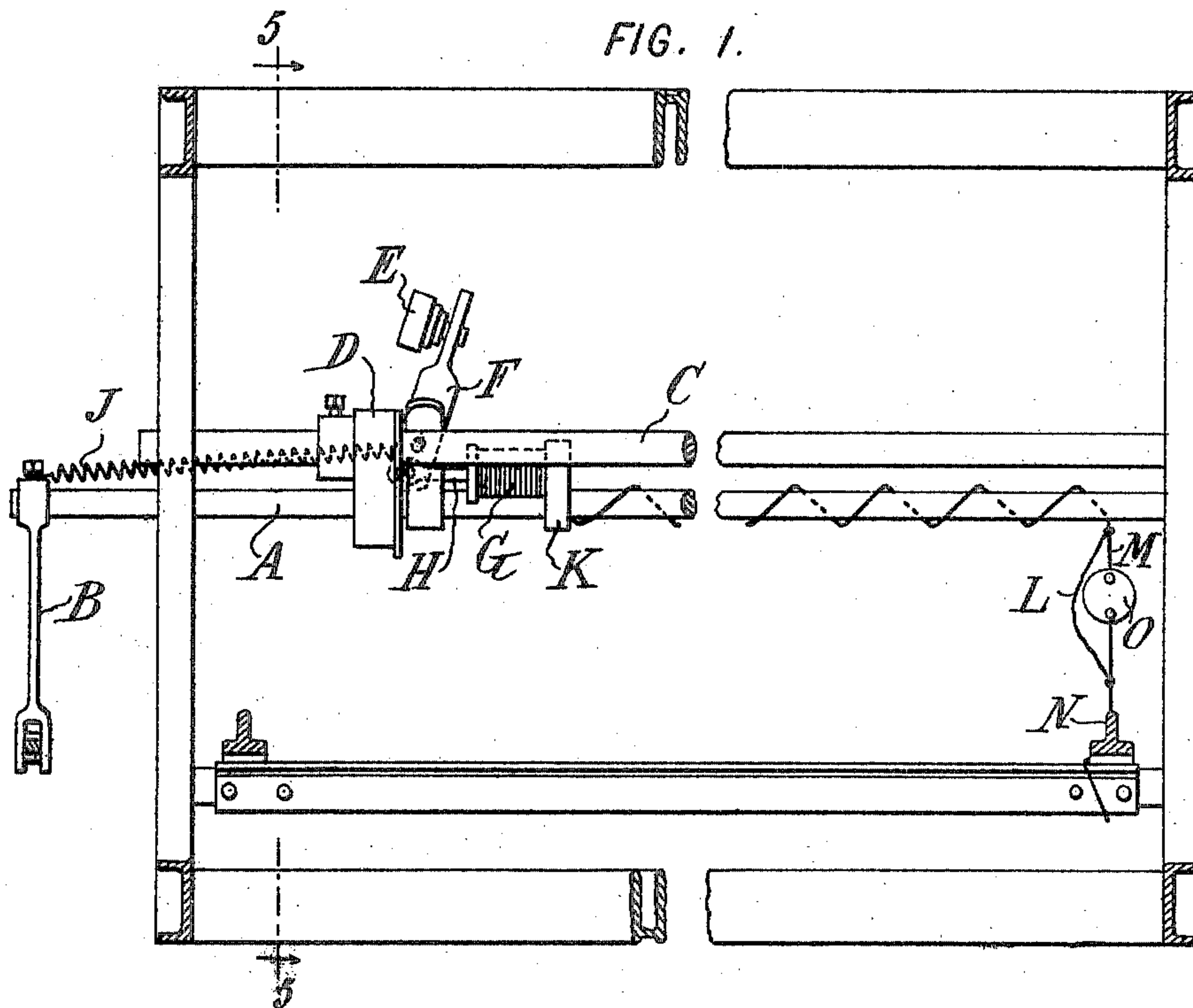
No. 817,237.

PATENTED APR. 10, 1906.

N. FOERSTER.

WEFT REPLENISHING MECHANISM FOR LOOMS.

APPLICATION FILED AUG. 4, 1903.



WITNESSES:
Rene Piquine
J. Wallace

INVENTOR:
Norbert Foerster
 By Attorneys,
Arthur C. Brown & Co.

UNITED STATES PATENT OFFICE.

NORBERT FOERSTER, OF NEW YORK, N. Y.

WEFT-REPLENISHING MECHANISM FOR LOOMS.

No. 817,237.

Specification of Letters Patent.

Patented April 10, 1906.

Original application filed June 5, 1903, Serial No. 160,144, renewed August 29, 1905, Serial No. 276,322. Divided and this application filed August 4, 1903. Serial No. 168,171.

To all whom it may concern:

Be it known that I, NORBERT FOERSTER, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Weft-Replenishing Mechanisms for Looms, of which the following is a specification.

This invention aims to provide an improved mechanism for automatically replenishing the filling or weft in a loom when a shuttle is exhausted.

Various mechanisms for immediately performing the substitution of a new supply of weft or a new-filled shuttle are known; and this invention relates to the means for setting such mechanism in operation at the proper time and is equally applicable to various mechanisms for actively performing the work of replenishing the weft.

The invention provides electric means for the purpose stated which is operated by power from a generator and which does not take its movement from any of the parts of the loom proper, and thus avoids any interference with their proper and regular movement. The apparatus is also quite simple and cheap and capable of ready application to looms already built.

Various other advantages are referred to in detail hereinafter.

Embodiments of the invention are shown in the accompanying drawings.

Figure 1 is a horizontal section on the line 4 4 of Fig. 2, and Fig. 2 is a vertical section on the line 5 5 of Fig. 1.

Referring to the embodiment illustrated, A is a rock-shaft, the motion of which is to be transmitted by means of an arm B to suitable shuttle-changing mechanism on the left-hand side of the machine. A continuously-rotating shaft C carries a cam D, which constitutes a motor device for rocking the shaft A at the proper time. The cam is brought into operative relation with the shaft A by swinging into the path of the cam a roller E on an arm F, carried by the shaft A. The operation of these parts is fully explained in the application of myself and Daniel J. Carey for patent for improvements in filling-replenishing mechanism for looms, Serial No. 161,668, filed June 16, 1903, and in said application there is specifically described a mechanical means for swinging the arm F. According to

this invention it is proposed to use electrical means for this purpose, the light effort required lending itself peculiarly to operation by the current from a moderately-small battery or other generator. Preferably the electric circuit passes, as shown, through an electromagnet of any suitable type, such as a solenoid G, the armature or core H of which is attached to the inner end of the arm F and is pulled against the force of a normally restraining spring J when the current is passed through the circuit. The solenoid may be mounted on a support K of insulating material attached at a suitable point to the shaft A, or it may be mounted on a fixed part of the machine and its core connected by any intermediate means with the arm F. With the construction shown the two wires L and M from the solenoid, being insulated as usual, are run to the end of the shaft A and thence to or approximately to the pivotal point of the sword N of the lay, the battery O or other generator being interposed, as shown, in one of the wires. The two wires run up to the shuttle-box P at the right of the machine.

The shuttle Q is provided with means for connecting the two wires L and M, and thus completing the circuit automatically on exhaustion of the shuttle-thread to a predetermined extent. The parts are of such strength that this operation takes place when there is just about enough thread left for another shoot of the shuttle back to the other side of the loom where it is to be discharged. The shuttle-box terminals are the ends of the wires L and M. Means are then provided in the shuttle for establishing a connection between said box-terminals at the proper moment, and thus completing the circuit.

The means for completing the circuit at the desired moment may be considerably varied, and suitable devices are so well known as not to require detailed illustration here.

The present application is a division of my application, Serial No. 160,144, filed June 5, 1903, renewal filed August 29, 1905, No. 276,322, and the novel devices not claimed in this application are claimed in said prior application.

Though I have described with great particularity of detail certain devices embodying my invention, yet it is to be understood that the invention is not limited to the specific embodiments disclosed. Various modifica-

tions thereof in detail or in the arrangement or combination of the parts may be made by those skilled in the art without departure from the invention.

5 What I claim is—

1. In a weft-replenishing mechanism for looms, in combination a motor device comprising a member carried by a driven shaft, and electrical means for bringing said motor
10 device into operative relation with the complementary parts of the mechanism automatically on exhaustion of the weft to a predetermined extent.

2. In a weft-replenishing mechanism for
15 looms, the combination of a motor device

comprising a member carried by a driven shaft, electrical means for bringing the same into operative relation with the complementary parts of the mechanism, including an electric circuit passing to and from a shuttle- 20 box, and means for completing said circuit automatically on exhaustion of the weft-thread to a predetermined extent.

In witness whereof I have hereunto signed my name in the presence of two subscribing 25 witnesses.

NORBERT FOERSTER.

Witnesses:

DOMINGO A. USINA,
THOMAS F. WALLACE.