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G. S. CONGER & C. PEARCE.

CUT-OUT MECHANISM FOR ELECTRICALLY OPERATED MACHINES.

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Fig. 2.

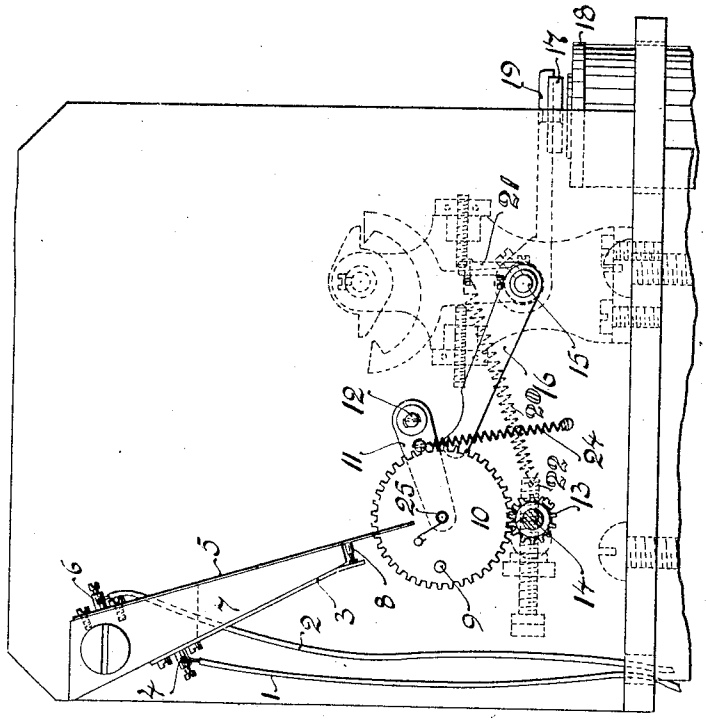
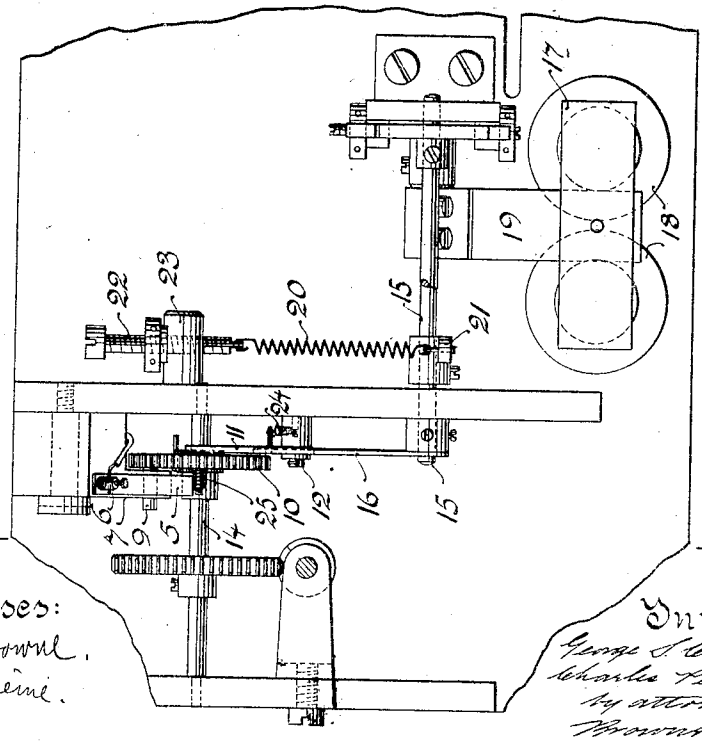


Fig. 1.



Witnesses:
Michael Browne.
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George S. Conger
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UNITED STATES PATENT OFFICE.

GEORGE S. CONGER AND CHARLES PEARCE, OF NEW YORK, N. Y., ASSIGNORS TO ELTYPIC MANUFACTURING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF WEST VIRGINIA.

CUT-OUT MECHANISM FOR ELECTRICALLY-OPERATED MACHINES.

No. 889,358. Specification of Letters Patent. Patented June 2, 1908.

Application filed December 27, 1906. Serial No. 349,630.

To all whom it may concern:

Be it known that we, GEORGE S. CONGER and CHARLES PEARCE, citizens of the United States, and residents, respectively, of the borough of Brooklyn, in the city and State of New York, and of the borough of Manhattan, in the city and State of New York, have invented a new and useful Improvement in Cut-Out Mechanism for Electrically-Operated Machines, of which the following is a specification.

Our invention relates to cut-out for electrically operated machines with the object in view of providing a simple and effective cut-out for stopping the waste of electric current when the machine is for any reason temporarily out of use.

We have chosen to illustrate our invention, a practical embodiment of it as applied to a printing telegraph machine, although the invention is not limited in its use to that particular machine.

In the accompanying drawings, Figure 1 is a partial top plan view of a machine embodying our invention, and Fig. 2 is a vertical transverse section in the plane of the line A—A of Fig. 1.

The parts of the conductor by which the electric current is supplied to operate the machine and which are interrupted by separable contact pieces are denoted by 1 and 2; the part 1 being electrically connected with the contact piece 3 at 4 and the part 2 with the contact piece 5 at 6. The pieces 3 and 5 are supported by an insulating block 7 located between them and the piece 5 which is a spring piece has a normal contact with the piece 3 by means of a post 8 fixed to the piece 5 and resting against the piece 3.

The circuit will be broken and the machine stopped whenever the piece 5 is sprung away from the piece 3, and such movement of the piece 5 to break the circuit is effected by a pin 9 set in the face of a spur wheel 10 mounted in suitable bearings in a swinging arm 11 pivoted at 12.

The spur wheel 10, by the swinging of the arm 11, may be placed into and removed from the pinion 13, which is carried by a shaft 14, which is continuously rotating during the operation of the machine, in the present instance, by the current through the contact pieces 3 and 5. A rock shaft 15 carries an arm 16, the free end of which engages the under side of the arm 11 which carries the spur wheel 10. The shaft 15 is rocked in the direction to lift the arm 16 and hence the arm 11 and spur wheel 10, by the armature 17 of an electro-magnet 18, the said armature being attached to a bar 19 fixed on the shaft 15. The shaft 15 and hence the arm 16 is rocked in the opposite direction, to lower the arm 11 and hence the spur wheel 10, by means of a spring 20 connected at one end to an arm 21 fixed to the shaft 15 and at its opposite end to a screw 22 set in a post 23 on the main frame for adjusting the tension of the spring. The arm 11 is drawn downward or in a direction to hold the spur wheel 10 in engagement with the pinion 13, by a spring 24. The spur wheel 10 is under spring tension by means of a spring 25, tending to rotate it in a direction opposed to that in which it is driven by the pinion 13.

In operation, so long as the electro-magnet 18 is being energized, either continuously or at frequent intervals as is common in printing news, the wheel 10 will not advance, or will make short advances only which will be offset by the retrograde movements of the wheel under the action of its spring 25 whenever the wheel 10 is momentarily released from the pinion 13, but, when the electromagnet 18 is allowed to rest for any considerable length of time, as during pauses between news items, the wheel 10 will continue its progressive movement until the pin 9 engages the free end of the contact piece 5 and draws it out of contact with the piece 3, thereby breaking the circuit and stopping the operation of the machine.

As soon as the electromagnet 18 is again energized, the wheel 10 will be lifted out of engagement with the pinion 13, and the pin 9 will be rocked back out of engagement with the piece 5 by the retrograde rotary movement of the wheel 10 under its spring 25, and the machine will be again set in motion.

What we claim is:—

1. Cut-out mechanism for maintaining the machine actuating current during short intervals in the use of the machine and for stopping the said current during long intervals comprising a movable contact piece for making and breaking circuit, a rotary wheel movable through space for operating

the contact piece, means for rotating the said wheel and means for moving the said wheel through space.

2. Cut-out mechanism for maintaining the machine actuating current during short intervals in the use of the machine and for stopping the said current during long intervals comprising a movable contact piece for making and breaking circuit, a rotary wheel for operating the contact piece, a swinging arm forming a support for the wheel, a driving pinion and means for operating the swinging arm to throw the said wheel into and out of engagement with the pinion.

3. Cut-out mechanism for maintaining the machine actuating current during short intervals in the use of the machine and for stopping the said current during long intervals comprising a movable contact piece for making and breaking circuit, a spring actuated rotary wheel for operating the contact piece, a movable wheel support, means for rotating the wheel and means for moving the wheel into and out of engagement with its rotating means.

In testimony, that we claim the foregoing as our invention, we have signed our names in presence of two witnesses, this fourteenth day of December 1906.

GEORGE S. CONGER.
CHARLES PEARCE.

Witnesses:
HENRY THIEME,
FREDK. HAYNES.