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PATENTED AUG. 8, 1905.

H. S. GRABER.

COMBINED ELECTRIC MOTOR, RHEOSTAT, AND BELT TIGHTENER.

APPLICATION FILED DEC. 8, 1904

2 SHEETS—SHEET 1.

Fig. I.

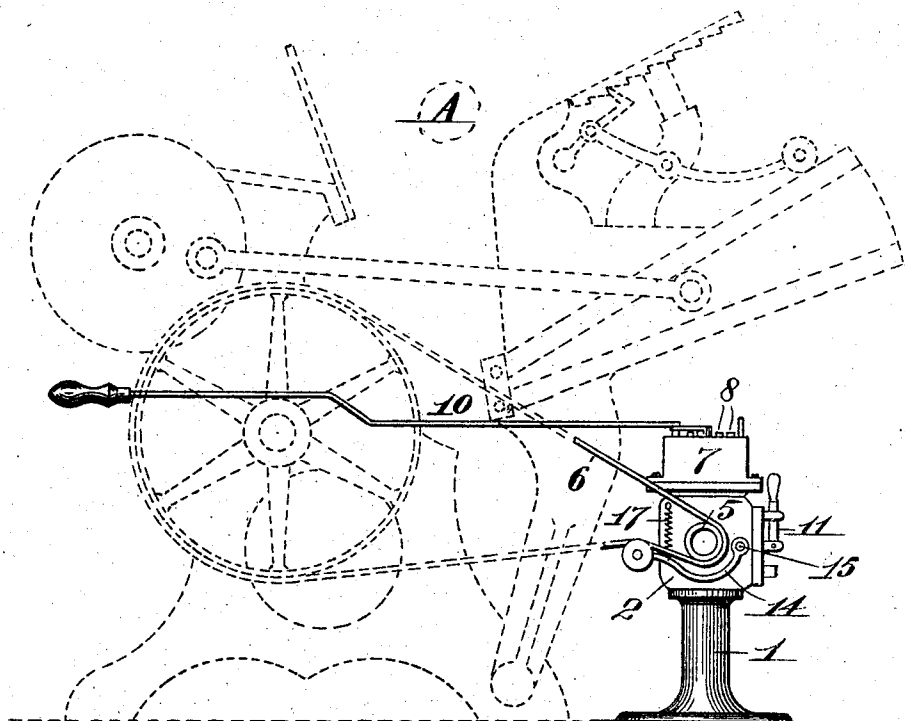
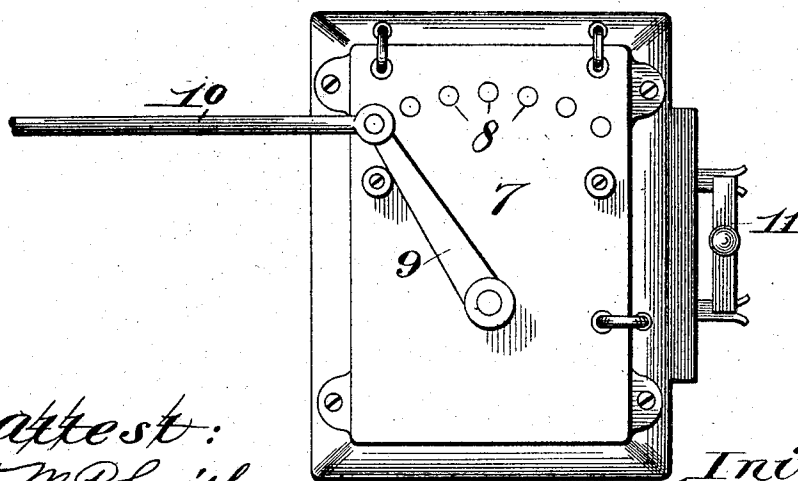


Fig. II.



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2 SHEETS—SHEET 2.

Fig. III.

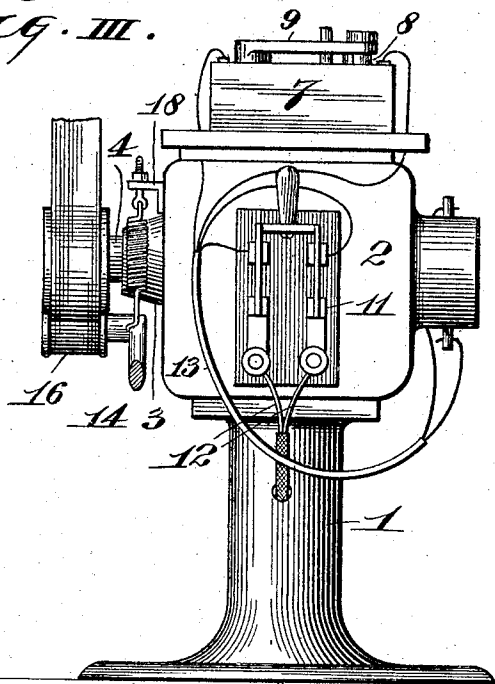


Fig. V.

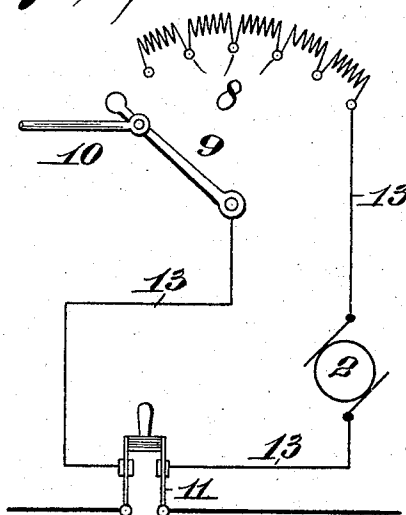
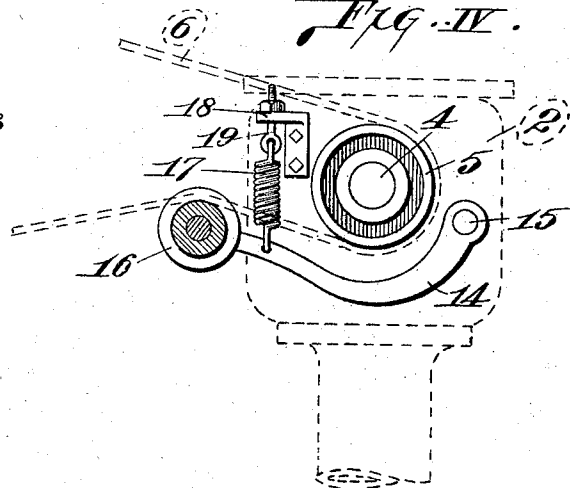


Fig. IV.



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UNITED STATES PATENT OFFICE.

HERMAN S. GRABER, OF ST. LOUIS, MISSOURI.

COMBINED ELECTRIC MOTOR, RHEOSTAT, AND BELT-TIGHTENER.

No. 796,637.

Specification of Letters Patent.

Patented Aug. 8, 1905.

Application filed December 8, 1904. Serial No. 236,063.

To all whom it may concern:

Be it known that I, HERMAN S. GRABER, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in a Combined Electric Motor, Rheostat, and Belt-Tightener, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a combined electric motor, rheostat, and belt-tightener arranged in common with each other, so that they may be operated in harmony and within a minimum space.

I have illustrated my improvement in connection with a printing-press as a means for furnishing power to it; but it is obvious that it may be used for furnishing power to a machine of any other description.

Figure I is a side elevation of my improvement, showing a printing-press in outline. Fig. II is a top view of the rheostat with the motor located beneath it. Fig. III is a rear elevation of my motor, rheostat, and belt-tightener. Fig. IV is a side elevation of the belt-tightener. Fig. V is a diagrammatical view of the motor, rheostat, and motor-switch.

1 designates a hollow pedestal that is intended to be placed in close proximity to the machine in connection with which my improvement is to be used—for instance, a printing-press A. (See Fig. I.)

2 is an electric motor seated on the pedestal 1 and having an armature 3, provided with a shaft 4. On the armature-shaft is a pulley 5, that receives a belt 6.

7 is a rheostat of any common design that is provided with the usual series of contacts 8.

9 is the contact-arm of the rheostat, which is swingingly mounted for movement to either of the series of contacts 8. This arm is adapted to be thrown to and fro to the contacts 8 through the medium of a throw-rod 10, that is pivoted to the arm and leads to the front of the machine with which the motor and rheostat are associated in order that the rheostat may be controlled with the greatest convenience.

11 is a switch mounted upon the motor 2 and through the medium of which the circuit to said motor from the main conducting-wires 12 is controlled. The conducting-wires 12 lead

upwardly through the hollow pedestal 1 and through an opening in the wall of said pedestal, as seen in Fig. III.

13 represents the circuit-wires connecting the switch 11, the motor 2, and the rheostat 7. The arrangement of these wires is diagrammatically illustrated in Fig. V.

14 designates a swinging arm pivoted at 15 to the casing of the motor 2 (see Figs. I and IV) and extending forwardly beneath the armature-shaft 4. This arm carries at its free end a belt-tightener roller 16, that is disposed beneath the belt 6.

17 is a contractile spring by which the swinging arm 14 is upheld, the said spring being connected at its lower end to said arm and being suspended from a bracket 18, secured to the motor-casing and in which is seated the eyebolt 19, that serves as a hanger for the swinging arm 14.

In the practical use of my improvement the motor 2 is placed in operation when the switch 11 is moved into closed condition and thereafter the rheostat associated with the motor may be readily and conveniently controlled from the front of the machine that is supplied with power by the motor by shifting the throw-rod 10 to and fro without the operator of the machine leaving his post or working position. The belt-tightener being associated with the motor serves to maintain the driving-belt of the machine constantly in a taut condition.

While I have shown the throw-rod 10, by which the rheostat contact-arm is manipulated, as pivoted to said contact-arm, I wish it understood that I do not limit myself to so connecting these parts for the operation of the contact-arm. The contact-arm, for instance, may be connected to the throw-arm by gearing of any suitable description, such as bevel-pinions.

I claim as my invention—

1. An article of the character described comprising a pedestal, a motor surmounting said pedestal, and a belt-tightener consisting of an arm pivoted to said motor, a roller journaled to said arm, and a spring sustaining said arm, substantially as set forth.

2. An article of the character described comprising a pedestal, a motor surmounting said pedestal, a rheostat surmounting said motor, and a belt-tightener consisting of an arm pivoted at one end to said motor, a roller

journaled to the free end of said arm, and a spring supporting the free end of said arm, substantially as set forth.

3. An article of the character described comprising a pedestal, a motor surmounting said pedestal, a rheostat surmounting said motor, a switch mounted upon said motor, and a belt-tightener consisting of an arm piv-

oted at one end to said motor, a roller journaled to the free end of said arm, and a spring supporting the free end of said arm, substantially as set forth.

HERMAN S. GRABER.

In presence of—

NELLIE V. ALEXANDER,
E. S. KNIGHT.