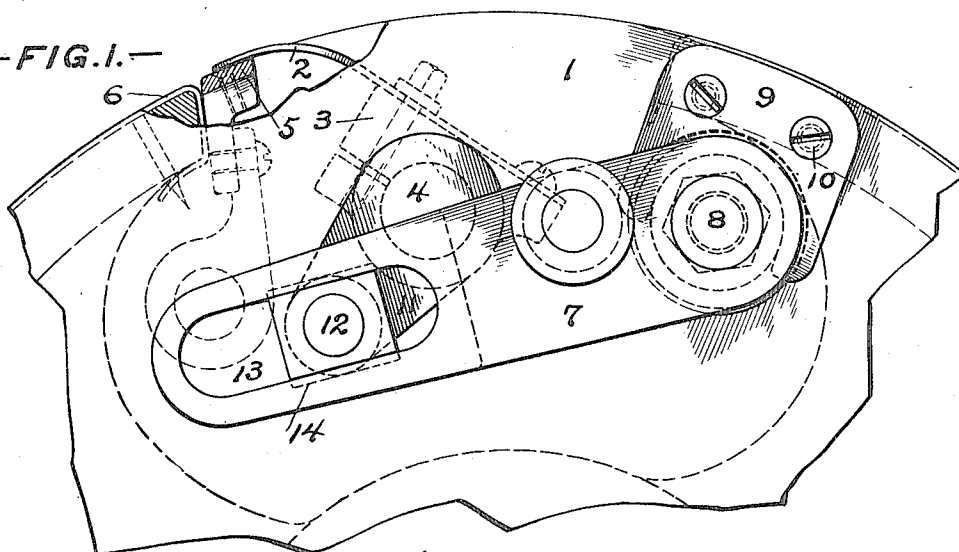


W. B. STORY.
GRIPPER MECHANISM FOR PRINTING AND SIMILAR MACHINES.
APPLICATION FILED MAY 11, 1911.

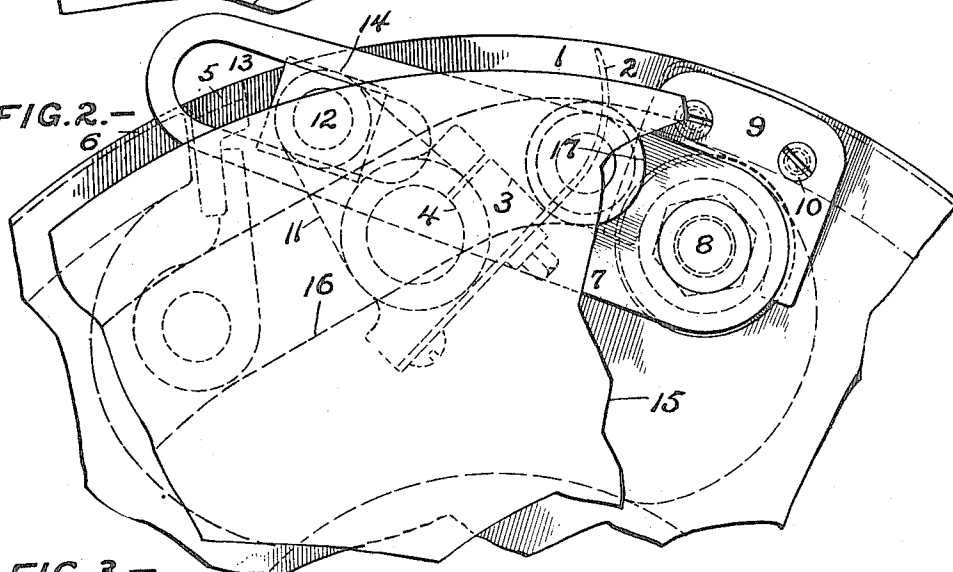
Patented Jan. 5, 1915.

1,123,619.

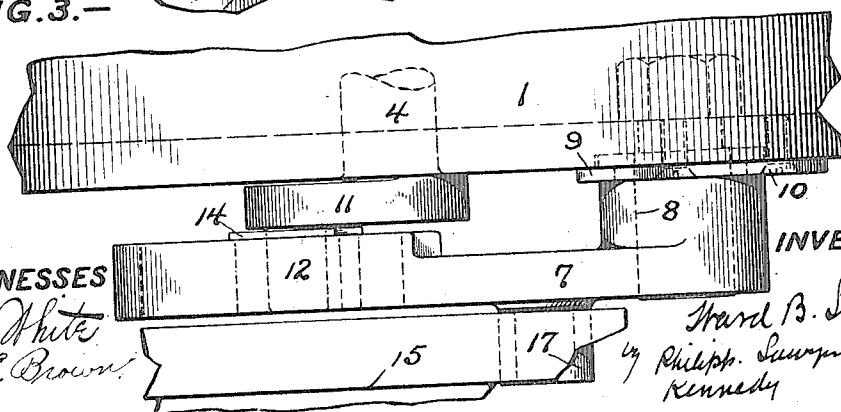
—FIG. 1.—



—FIG. 2.—



—FIG. 3.—



WITNESSES

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UNITED STATES PATENT OFFICE.

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GRIPPER MECHANISM FOR PRINTING AND SIMILAR MACHINES.

1,123,619.

Specification of Letters Patent.

Patented Jan. 5, 1915.

Application filed May 11, 1911. Serial No. 626,415.

To all whom it may concern:

Be it known that I, WARD B. STORY, a citizen of the United States, residing at New York, county of Kings, and State of New York, have invented certain new and useful Improvements in Gripper Mechanisms for Printing and Similar Machines, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to improvements in gripper mechanisms for printing and similar machines.

The invention has for its object to produce a gripper mechanism which shall be readily and easily operated, shall be simple in construction, and in which the grippers are positively maintained in their open and closed position, and in which wear on the operating parts is decreased.

With this and other objects not specifically referred to in view, the invention consists in certain constructions, and in certain parts, improvements and combinations as will be hereinafter fully described and then specifically pointed out.

Referring to the drawings, Figure 1 illustrates a gripper construction embodying the invention, the grippers being shown in closed position. Fig. 2 is a view similar to Fig. 1, the grippers being shown in open position. Fig. 3 is a plan view.

Referring to the drawings which illustrate one embodiment of the invention, 1 indicates a part of a sheet carrier such, for instance, as a cylinder. The grippers may consist of the ordinary gripper fingers, indicated at 2, these fingers being secured by a clamp 3 to a gripper carrying rock-shaft 4 mounted in the cylinder. The grippers close against an abutment 5 which, as usual in such constructions, is arranged to secure the end of the blanket, indicated at 6. Constructions embodying the invention will include an actuating arm or lever, such a lever being illustrated and marked 7. This lever is pivoted on a stud 8 carried on a bracket 9 secured to the cylinder by screws 10, or in any other suitable manner. In the preferred construction as shown, furthermore, this actuating arm or lever is positioned so as to lie in a secant line with respect to the surface of the carrier, as shown in Figs 1 and 2, this position of the

arm permitting it to be moved about a pivot 55 with a rotary or oscillating movement.

In constructions embodying the invention the gripper carrying rock-shaft will be provided with an arm and this arm will be connected to the actuating arm by a pin 60 and slot connection. In the particular construction illustrated, the arm on the gripper shaft is marked 11. This arm carries a pin 12 which projects into a slot 13 formed in the actuating arm 7. In the best constructions embodying the invention, the pin 12 will be provided with a rectangular wear block, as 14. The actuating arm may be operated by any suitable means, as, for instance, a cam. In the best constructions embodying the invention, this cam will be a closed cam secured to any suitable stationary part of the machine, such, for instance, as the frame in which the sheet carrier is mounted, such a cam being indicated at 15, the cam groove being shown in dotted lines at 16. The actuating arm carries a roll, as 17 which coöperates with the cam as the sheet carrier rotates. With this construction, after the grippers have seized the paper, they are locked for movement together with the actuator arm through the medium of the cam slot 16 which prevents any movement of the roll 17 and arm 7 until, during the rotary movement of the carrier, the time for the release of the grippers arrives. During this period the actuating arm cannot be moved on its pivot in either direction, and is locked in gripping position.

It will be seen that the construction is positive in its operation and it avoids the use of springs, and, furthermore, is readily adapted to the use therewith of a cam which is easy in its action. The construction further holds the gripper fingers positively in their closed position, thus avoiding shock or vibration which tends either to loosen the sheet or destroy its register.

Changes and variations may be made in the construction by which the invention claimed is carried into effect. The invention claimed, therefore, is not to be confined to the particular construction herein described and illustrated in the accompanying drawings.

What is claimed is:—

1. In a gripper mechanism, the combina-

tion with a sheet carrier, of a gripper carrying rock-shaft mounted therein, an operating arm on the shaft, an actuating arm located in a secant line with relation to the sheet carrier, a pin and slot connection between the arms, and means for operating the actuating arm.

2. In a gripper mechanism, the combination with a sheet carrier, of a gripper carrying rock-shaft mounted therein, an operating arm on the shaft, an actuating arm pivoted eccentrically with relation to the sheet carrier, a pin and slot connection between the arms, and means for rocking the actuating arm.

3. In a gripper mechanism, the combination with a sheet carrier, of a gripper carrying rock-shaft mounted therein, an operating arm on the shaft, a pin on the operating arm, a slotted actuating arm pivoted upon the sheet carrier, and means for rocking the actuating arm.

4. In a gripper mechanism, the combination with a sheet carrier, of a gripper carrying rock-shaft mounted therein, an operating arm on the shaft, a pin extending from the arm, a slotted actuating arm pivoted upon the sheet carrier, a wear block on the pin engaging the slot in the actuating arm, and means for rocking the actuating arm.

5. In a gripper mechanism, the combination with a sheet carrier, of a gripper carrying rock-shaft mounted therein, an actuating arm pivoted upon the carrier, a slot in the arm, an operating arm on the rock-shaft, a pin on the arm, a rectangular wear block on the pin, and a cam for operating the actuating arm.

6. In a gripper mechanism, the combination with a sheet carrier, of a gripper carrying rock-shaft mounted therein, an operating arm on the shaft, an actuating arm pivoted to the sheet carrier, a pin and slot connection between the arms, and means for rocking the actuating arm.

7. In a gripper mechanism, the combination with a sheet carrier, of a gripper carrying rock-shaft mounted therein, an operating arm on the shaft, an actuating arm, and a pin and slot connection between the arms, and non-resilient means for rocking the actuating arm and holding it in its different positions.

8. In a gripper mechanism, the combination with a sheet carrier, of a gripper carrying rock-shaft mounted therein, an operating arm on the shaft, an actuating arm, and a pin and slot connection between the arms, and means for operating the actuating arm and locking it in the position to which it may be moved.

9. In a gripper mechanism, the combination with a sheet carrier adapted to rotate in a single direction, of a gripper carrying rock-shaft mounted therein, an operating arm on the shaft, an actuating arm, and a pin and slot connection between the arms, and means for rocking the actuating arm.

10. In a gripper mechanism, the combination with a sheet carrier adapted to rotate in a single direction, of a gripper carrying rock-shaft mounted therein, an operating arm on the shaft, a pivoted actuating arm, a pin and slot connection between the arms, and means for rocking the actuating arm.

In testimony whereof, I have hereunto set my hand, in the presence of two subscribing witnesses.

WARD B. STORY.

Witnesses:

RICHARD KELLY,
JOHN M. W. JORDAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."