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CONSTRUCTION OF RECIPROCATING BEDS FOR CYLINDER PRINTING PRESSES.  
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935,550.

Patented Sept. 28, 1909.

Fig. 1.

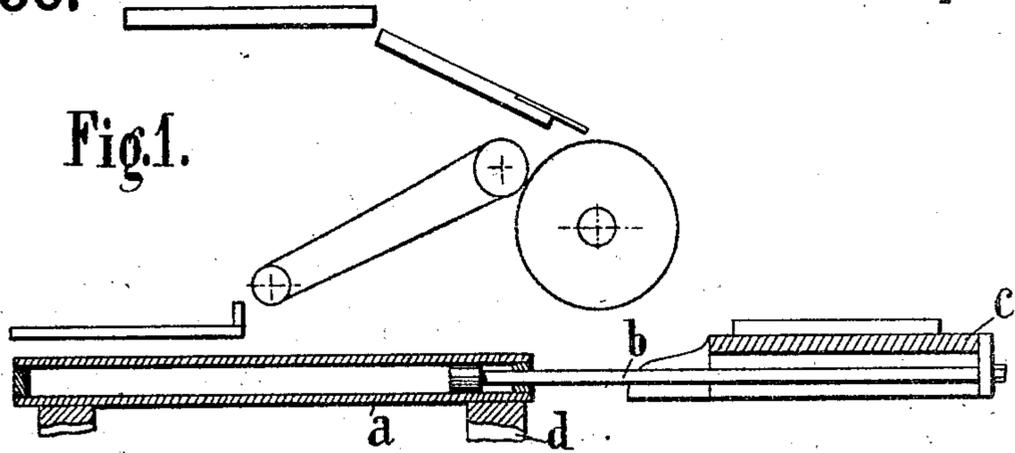


Fig. 2.

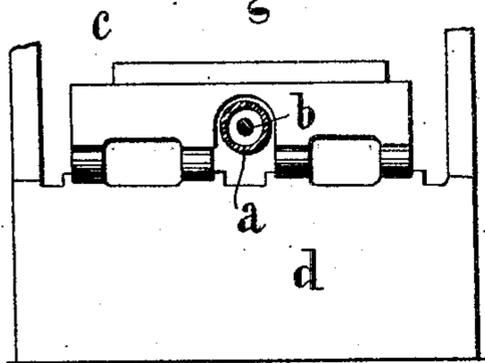


Fig. 3.

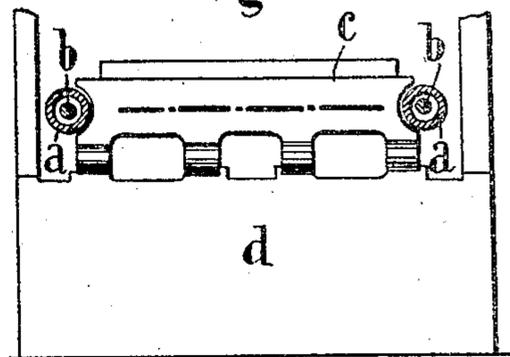


Fig. 4.

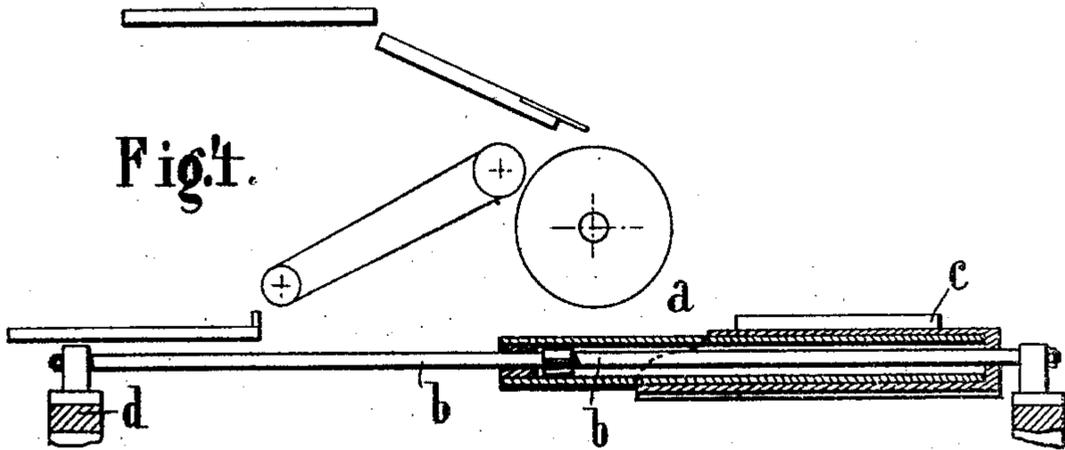
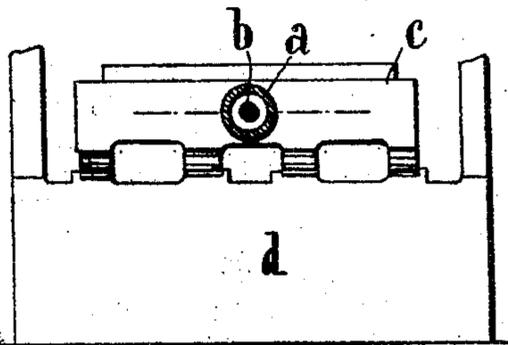


Fig. 5.



Witnesses.

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# UNITED STATES PATENT OFFICE.

MAX ROCKSTROH, OF KLEIN-SEDLITZ, NEAR PIRNA, GERMANY.

CONSTRUCTION OF RECIPROCATING BEDS FOR CYLINDER PRINTING-PRESSES.

935,550.

Specification of Letters Patent. Patented Sept. 28, 1909.

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*To all whom it may concern:*

Be it known that I, MAX ROCKSTROH, director, citizen of the Kingdom of Saxony, residing at Klein-Sedlitz, near Pirna, Saxony, Germany, have invented certain new and useful Improvements in the Construction of Reciprocating Beds for Cylinder Printing-Presses, of which the following is a specification.

The means heretofore employed in cylinder printing presses for insuring the production of a clear impression have consisted in so constructing and arranging the bed by a great body and proper disposition of metal and substantial stiffening pieces as to prevent as far as possible the warping of the reciprocating printing surface or form during the operation of printing. The demands made on the capacity of printing presses of the type in question have, however, been so considerably increased that the expedients above mentioned are no longer adequate, the further development of capacity in the press being consequently impeded in consequence of the fact that the printing plate is during its movement subjected to shocks due on the one hand to the points of attachment of the actuating mechanism and on the other hand to the sliding guides which do not coincide with the center of gravity of the printing form or lie in the same plane therewith. In consequence, however, of the energy imparted to the moving masses, of the moments of inertia of these masses, in a press constructed in the manner heretofore usual, there are liable to occur at each acceleration or retardation of the motion of the printing form and especially at each reversal of the direction of its motion, moments of inertia that tend to tilt the printing form to one side or to lift it off its guides, and consequently injuriously to affect the quality of the impression. Now for the purpose of overcoming the defects about referred to, the point or points at which the power acts is arranged either accurately in the plane through the center of gravity of the printing plate or at all events as closely coincident with this plane as is consistent with the constructional requirements before referred to.

The accompanying drawings illustrate various examples of a printing press in ac-

cordance with this invention, the carriage of which is directly driven in the usual manner by means of a motor actuated by compressed air, water under pressure, or other suitable source of power.

Figure 1 is a longitudinal section and Fig. 2 a rear elevation of a press wherein the piston rod *b* of the motor is attached to the bed which carries the printing form *c* while the motor *a* itself is rigidly connected with the bedplate *d*. The bed is recessed in the direction of the axis of the motor by which means the point of attachment of the piston rod which passes through the bed is as nearly as possible caused to coincide with the center of gravity of the bed. By the foregoing arrangement, the operative connection, *i. e.*, piston rod *b* is situated between the two points of resistance, one of said points being the upper surface of the form and the other of the said points being the bearing plane of the bed which carries the form.

Fig. 3 shows in end elevation a modified construction of printing press wherein instead of a single motor centrally arranged there are provided two motors, one on each side of the printing plate. In this instance also the piston rod is connected with the printing plate and the motor with the bedplate.

Figs. 4 and 5 illustrate a third modification of printing press wherein the motor is connected with the printing plate, while the piston rod is rigidly connected with the frame of the press. The printing plate, which is perforated in the plane of the center of gravity, receives the motor cylinder *a* together with which it forms a rigid structure. Instead of a single motor axially arranged in relation to the printing plate, there may be employed a pair of motors, arranged one on each side of the printing plate, in the manner shown in Fig. 3.

Having thus declared the nature of my said invention and in what manner it is to be performed I declare that what I claim is:—

In a cylinder printing press, the combination with a bed plate and a recessed carriage which travels over the bed plate, of a motor including a cylinder and a piston constituting cooperating parts, one of which is

mounted on the bed plate in a plane above its traction or bearing plane and the other of which is disposed in the recess of the carriage and is connected thereto at a point substantially coincident with the center of gravity of the carriage.

In testimony whereof I have hereunto set

my hand in presence of two subscribing witnesses.

MAX ROCKSTROH.

Witnesses:

ULYSSES J. BYWATER.

PAUL ARRAS.