

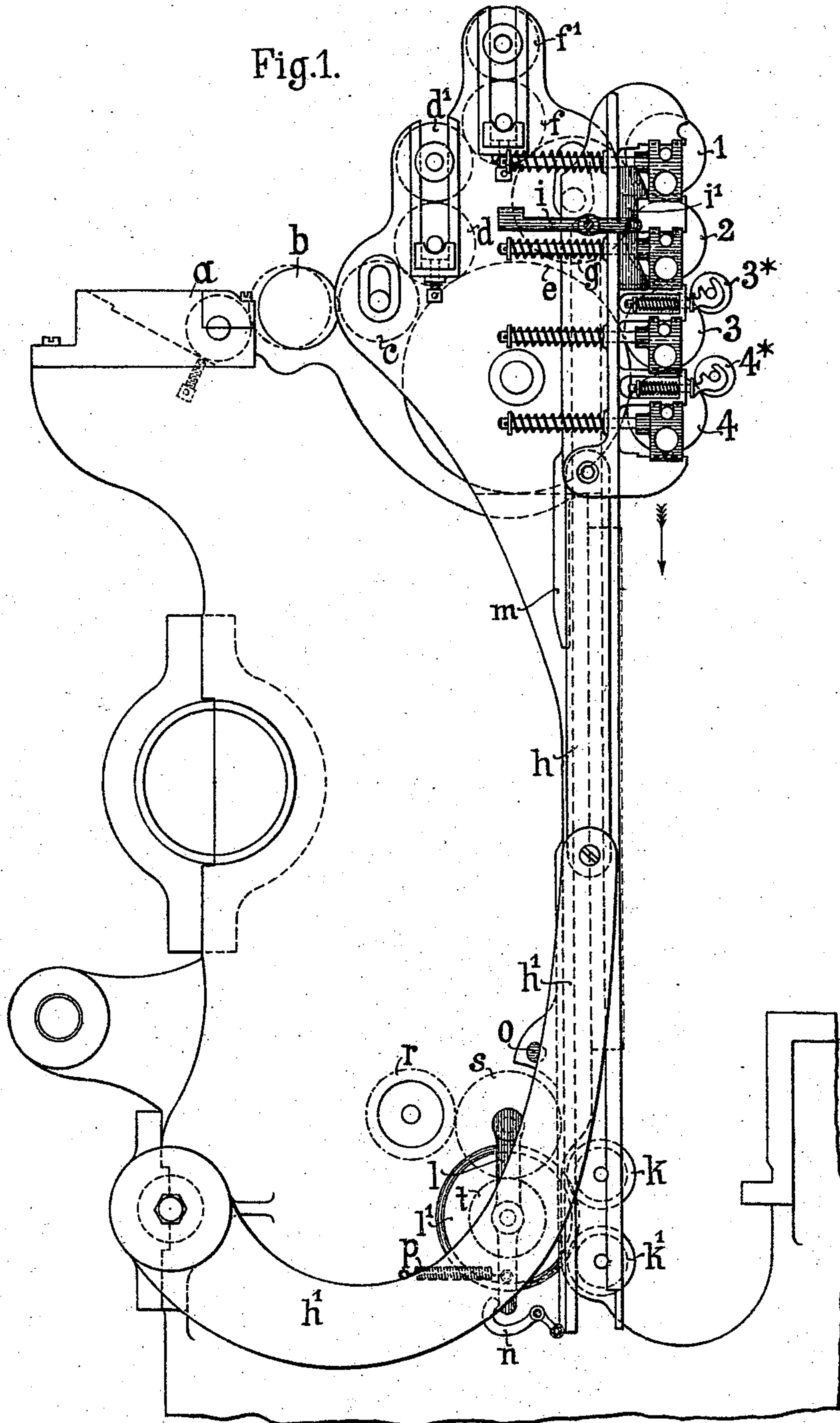
(No Model.)

4 Sheets—Sheet 1.

M. ROCKSTROH.  
PLATEN PRINTING PRESS.

No. 549,659.

Patented Nov. 12, 1895.



Witnesses:-  
Jacob Haynes  
George Barry Jr.

Inventor:-  
Max Rockstroh  
by attorneys  
Pronk & Seward

(No Model.)

4 Sheets—Sheet 2.

M. ROCKSTROH.  
PLATEN PRINTING PRESS.

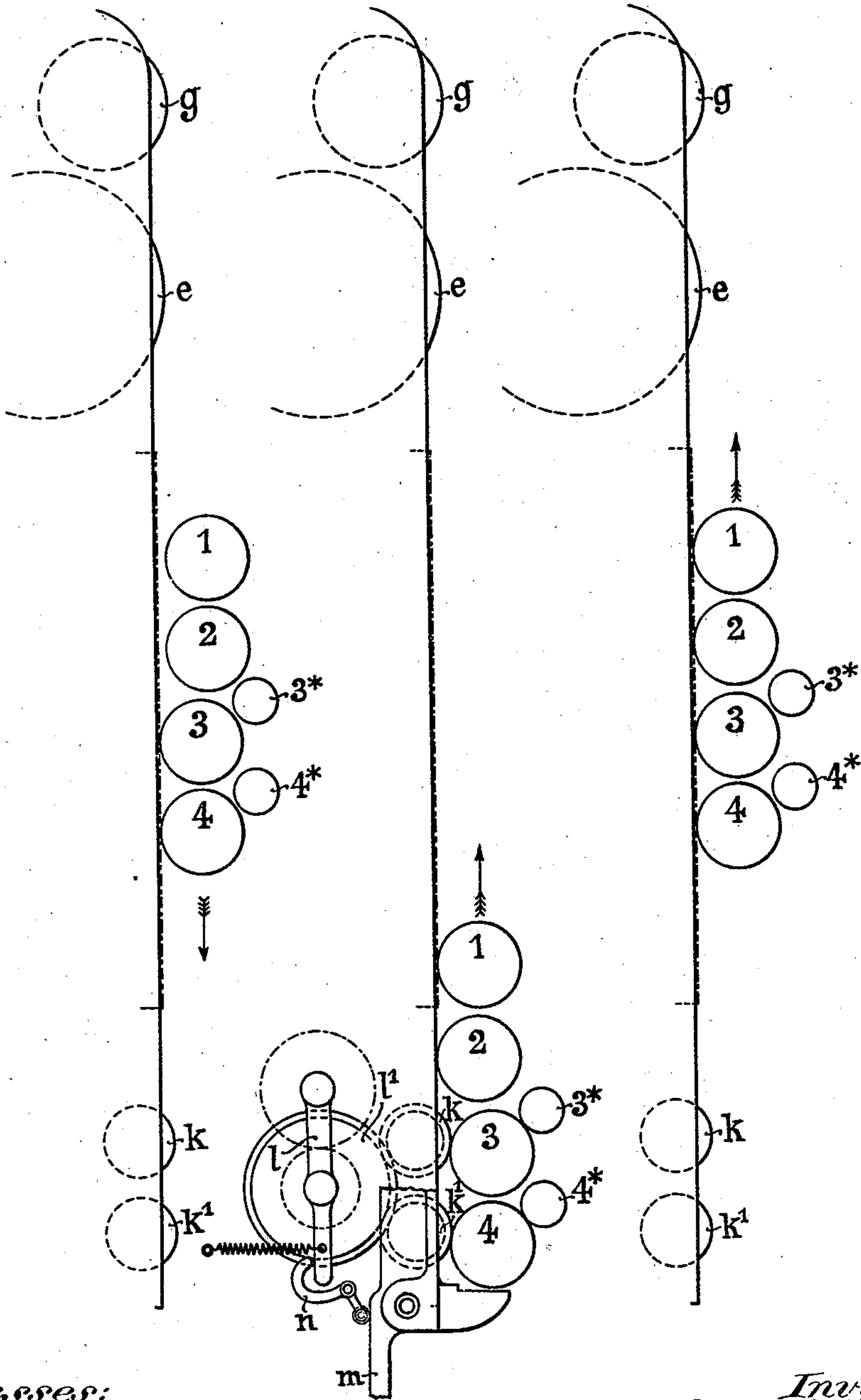
No. 549,659.

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Fig.2.

Fig.3.

Fig.4.



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(No Model.)

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M. ROCKSTROH.  
PLATEN PRINTING PRESS.

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Patented Nov. 12, 1895

Fig. 3a

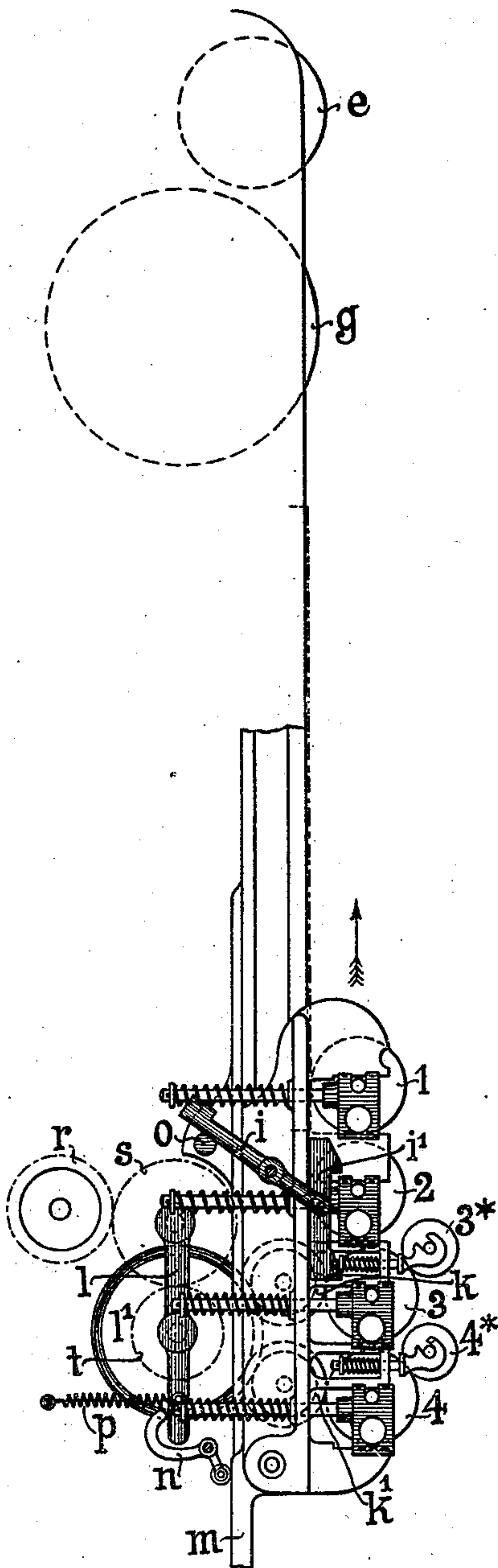
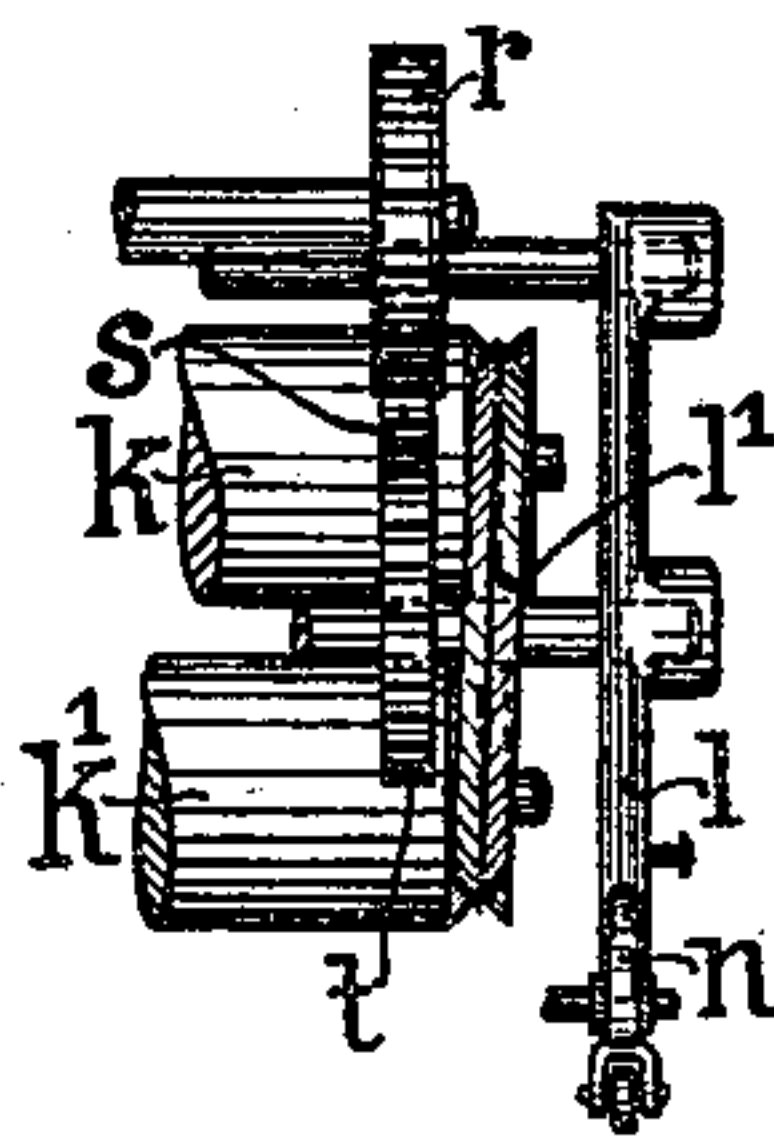


Fig. 3b



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(No Model.)

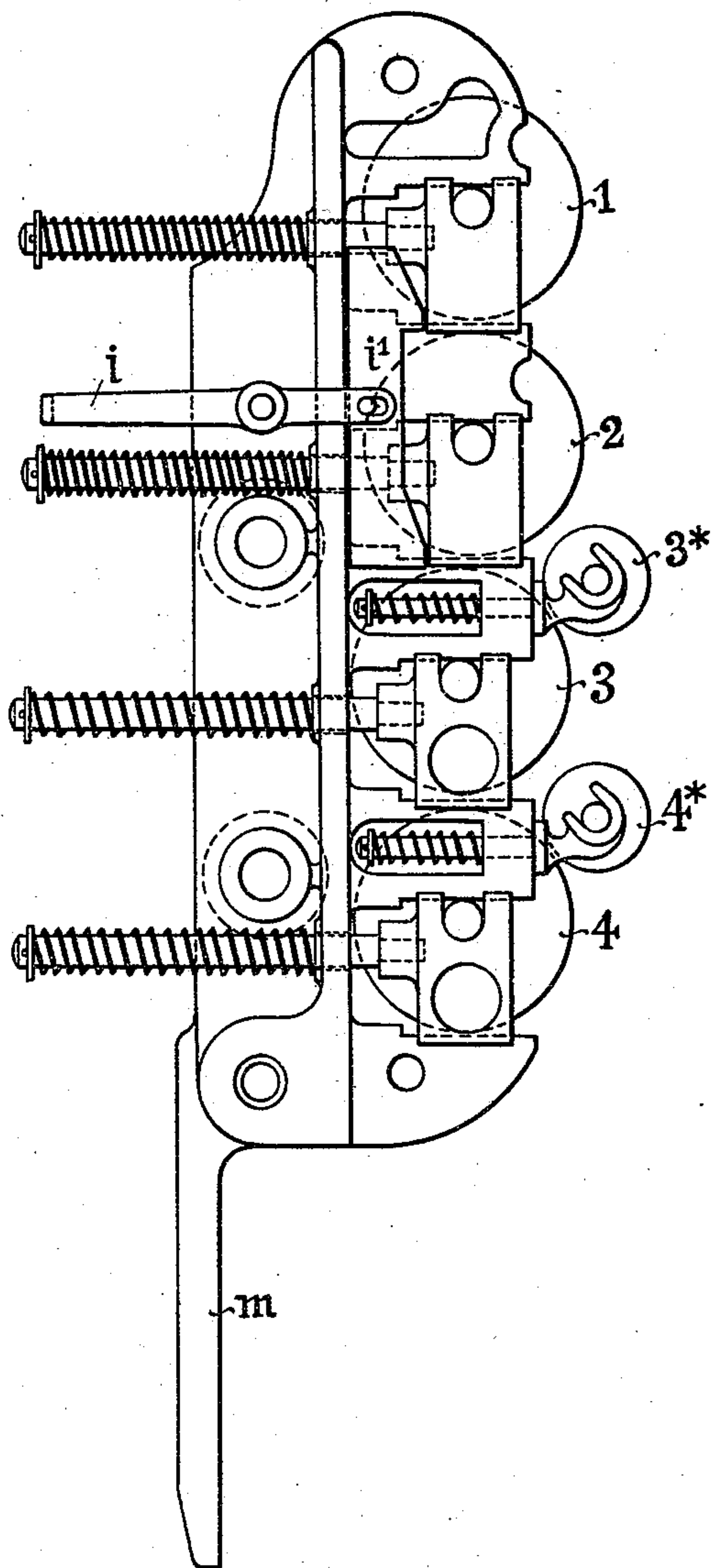
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M. ROCKSTROH.  
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Patented Nov. 12, 1895.

Fig.5.



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# UNITED STATES PATENT OFFICE.

MAX ROCKSTROH, OF PLAUEN, GERMANY.

## PLATEN PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 549,659, dated November 12, 1895.

Application filed March 23, 1895. Serial No. 542,909. (No model.)

*To all whom it may concern:*

Be it known that I, MAX ROCKSTROH, of Plauen, near Dresden, in the Empire of Germany, have invented certain new and useful Improvements Relating to Platen Printing-Presses, of which the following is a specification.

The present invention relates to new means for inking the form-inking rollers in platen printing-presses. The said rollers are inked while in a position above the form and are also inked while below the form, so that a more perfect inking of the form is effected thereby.

The inking of the rollers above and below the form may be applied to all the rollers or only to a part of the rollers.

The disadvantages which have been experienced in the inking apparatus commonly used in platen printing-presses, particularly in fine work, consisting in the formation of stripes in the inking, or by insufficient covering, are obviated by this invention in such a complete manner as to render the inking in platen printing-presses as perfect as that in cylinder printing-presses.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it with reference to the accompanying drawings, which illustrate the application of the improvement in connection with two of the form-inking rollers of a platen printing-press.

Figure 1 represents a side elevation of so much of the press as is necessary to explain the present invention. Figs. 2, 3, and 4 are diagrams showing various positions of the rollers during the inking operation. Fig. 3<sup>a</sup> is a side view of the inking apparatus corresponding with the diagram, Fig. 3. Fig. 3<sup>b</sup> is a front view of some details of the apparatus, corresponding with Fig. 3<sup>a</sup>. Fig. 5 represents a side elevation of the roller-carrying frame or carriage on a larger scale.

The feed-roller *b* takes up the ink from the ink-trough *a* and transfers it first to a small roller *c*, which transfers the ink to a distributing or working-up roller *d*. The ink is by means of the counter-roller *d'*, bearing upon the said roller *d*, well distributed or worked up on the latter and by it transferred to the large transferring or inking roller *e*. The

counter-roller *d'* also at the same time transfers ink to a distributing-roller *f*, which transfers the ink, which is well worked up by means of the pressure-roller *f'*, resting on the said distributing-roller, to the small inking-roller *g*.

The small inking-roller *g*, when the roller frame or carriage is in the position shown in Fig. 1, transfers its ink to the form-inking rollers 1 and 2, while the large inking-roller *e* transfers ink to the form-inking rollers 3 and 4.

The form-inking rollers 1 2 3 4 are supported on the roller-carriage in the usual manner (shown in Fig. 5) in spring-bearings, so that when the said rollers run up on the inking-rollers *e g* they are brought by the spring-action into intimate contact with the same for the purpose of receiving ink therefrom. In the same manner during the to-and-fro movement of the roller-carriage the spring action serves as usual to bring all or a part of the rollers into intimate contact with the type form, so as to ink the latter.

Above the lower form-inking rollers 3 and 4 there are on the roller-carriage ductors 3\* and 4\*, which constitute important features of my invention. These ductors are mounted in spring-bearings in such a manner that they come into intimate contact with the form-inking rollers only when the latter are raised and the ductors 3\* and 4\* are impregnated with ink by the rotary motion imparted to them. This position is shown in Fig. 1. If now the roller-carriage, which is moved up and down, as usual, by means of rods *h* and rocking arms *h'*, be drawn downward, the conductors 3\* and 4\* will, in consequence of their limited inward movement, be moved out of contact with the form-inking rollers 3 and 4, so that the ductors cannot now transfer the ink they have taken up to the form-inking rollers. The form-inking rollers 3 and 4 now move over the type and ink the same, while the form-inking rollers 1 and 2 are kept raised away from the type by an automatic locking device. This position is shown in Fig. 2.

The locking device is represented as consisting (see Figs. 1, 3<sup>a</sup>, and 5) of a bolt *i'* on each side of the roller-carriage, the said bolts being fitted to slide up and down in the side of the said carriage and each having two



beveled noses, which, as shown in Figs. 1 and 3<sup>a</sup>, are situated in rear of the spring-bearings of the form-inking rollers 1 and 2. These locking-bolts *i'* are each furnished on one side with a laterally-projecting pin, which engages in a slot in the shorter arm of one of two levers *i*, which are pivoted by fulcrum-pins to the roller-frame and the longer arms of which are heavy enough to raise the locking-bolts *i'* to the position shown in Fig. 1, in which their beveled noses are directly behind the bearings of the form-inking rollers 1 and 2. In this position the said bolts *i'* hold the said rollers 1 and 2 out of contact with the type-form during the downward movement of the roller carriage and until, as the said downward movement is being completed, the locking-bolts *i'* are freed by the levers *i* striking against stationary stops *o* on the sides of the machine-frame, as shown in Fig. 3<sup>a</sup>, and so pushing the locking-bolts downward to such position that they will cease to support the bearings of the inking-rollers 1 2, and that the said rollers by the action of the bearing-springs are drawn inward toward the form, so that when the roller-carriage returns upward the said rollers 1 2 will pass in contact with and ink the form. Just before the roller-carriage reaches its lower position it also carries the form-inking rollers 3 and 4 on two distributing-rollers *k k'*, which are arranged in bearings on the press-framing below the type-form and which so project that they bring the said rollers 3 and 4 again into intimate contact with the ductors 3\* and 4\*.

As the roller-frame completes its upward movement by which it causes the rollers 3 and 4 to ink the type form the said rollers by running onto the rollers *e* and *g* are again drawn outward or lifted off. During this lifting off the weight of the longer arms of the levers *i* comes into action and brings the bolts *i'* back to the locking position shown in Fig. 1, in which they hold the rollers 1 2 off the form during their following downward movement.

The distributing-rollers *k k'*, above described, have a periodical peripheral or rotary motion and also a longitudinal motion imparted to them by means of a friction-disk *l'*, (see Figs. 3<sup>a</sup> and 3<sup>b</sup>,) the arbor of which has a swinging bearing in a hanger *l*, which is suspended at its upper end from a fixed pivot on which a spur-gear *s* is set loosely. The said friction-disk has fast to it, for the purpose of driving it, a spur gear *r*, which gears with and derives motion from the said gear *s*, which gears with a gear *t*, which is driven constantly in any suitable manner by the gearing of the press. The friction-disk *l'*, which has a V-shaped edge and engages in V-grooves in the ends of the rollers *k k'*, and the said disk being set obliquely on its arbor, serves not only to produce the rotary movement of the rollers *k* and *k'*, but also the longitudinal movement thereof; but except during the completion of every downward movement of the

roller-carriage the disk *l'* is held out of engagement from the grooves in the rollers by means of a spring *p*, which connects the hanger *l* with some fixed part of the press-framing, the said spring holding back the hanger against the turned-up rear end of a small lever *n*. (See Figs 3<sup>a</sup> and 3<sup>b</sup>.) Just as the roller-frame is completing its downward movement a projection *m* on the roller-frame comes into operation on a roller on the lower end of the said lever *n* and so presses back that end of the said lever as to make its upper end press forward the hanger *l* and bring the friction-disk into engagement with the rollers *k k'*. As soon as the projection *m* near the beginning of the return of the roller-frame upward passes clear of the roller of the lever *n* the spring *p* pulls back the friction-disk and the movement of the rollers *k k'* ceases.

It may be understood from the foregoing description that during the downward movement of the roller-carriage the form is inked by the rollers 3 and 4, while the rollers 1 and 2 and the ductors 3\* 4\* remain out of action, as shown in Fig. 4, and during the upward movement of the carriage the form is inked by all four of the rollers 1 2 3 4. Thus in the arrangement illustrated, six rollers ink the form with fresh ink—that is to say, two rollers while the roller-carriage moves down and four rollers when the carriage moves back.

The number of the form-inking rollers and ductors may obviously be selected quite according to desire; also, the number of the working-up or distributing rollers arranged below the type-form may be made to correspond with the number of form-inking rollers; also, the form-inking rollers below the type-form, instead of being provided with ink by the said ductors, may be provided with fresh ink by a special inking apparatus arranged below.

What I claim as my invention is—

1. The combination with the form bed in a platen printing press, of rollers for supplying and distributing ink arranged respectively above and below the form bed, a carriage having an upward and downward movement in front of the form bed, two or more form inking rollers on said carriage and an automatic locking device for locking one or more of the form inking rollers out of contact with the form on the bed during the movement of the latter in one direction, substantially as herein described.

2. The combination with the form bed in a platen printing press, of ink supplying rollers above the bed, ink distributing rollers below the form bed, a carriage having an upward and downward movement in front of the form bed, form inking rollers on said carriage, driving mechanism for imparting a periodical movement to said distributing rollers, automatic means of disengaging said driving mechanism from the latter rollers, and a projection on said carriage for producing the engagement of said driving mechanism during



part of the descent of said carriage, substantially as herein described.

3. The combination with the form bed in a platen printing press, of rollers for supplying  
5 and distributing ink arranged respectively above and below the form bed, a carriage having an upward and downward movement in front of the form bed, form inking rollers on said form bed, and ductors on said carriage against which the form inking rollers  
10 are pressed by said distributing rollers during the latter part of the downward movement of the bed, substantially as and for the purpose herein described.

15 4. The combination with the form bed in a platen printing press, of rollers for supplying and distributing ink arranged above the form bed, a carriage having an upward and downward movement in front of the form bed,  
20 form inking rollers on said carriage and

springs for holding said rollers against a form on said bed, ductors on said carriage for operating on certain of the said inking rollers, an automatic locking device for locking others of the form inking rollers out of contact  
25 with the bed during the downward movement of the roller carriage, and ink distributing rollers arranged below the bed and serving to hold the form inking rollers into contact with their ductors and to distribute ink  
30 thereon while the roller carriage is near its lowest position, substantially as herein described.

In testimony that I claim the foregoing as my invention I have signed my name in  
35 presence of two subscribing witnesses.

MAX ROCKSTROH.

Witnesses:

GEORG RICHTER,

WILHELM WIESENHÜTTER.