

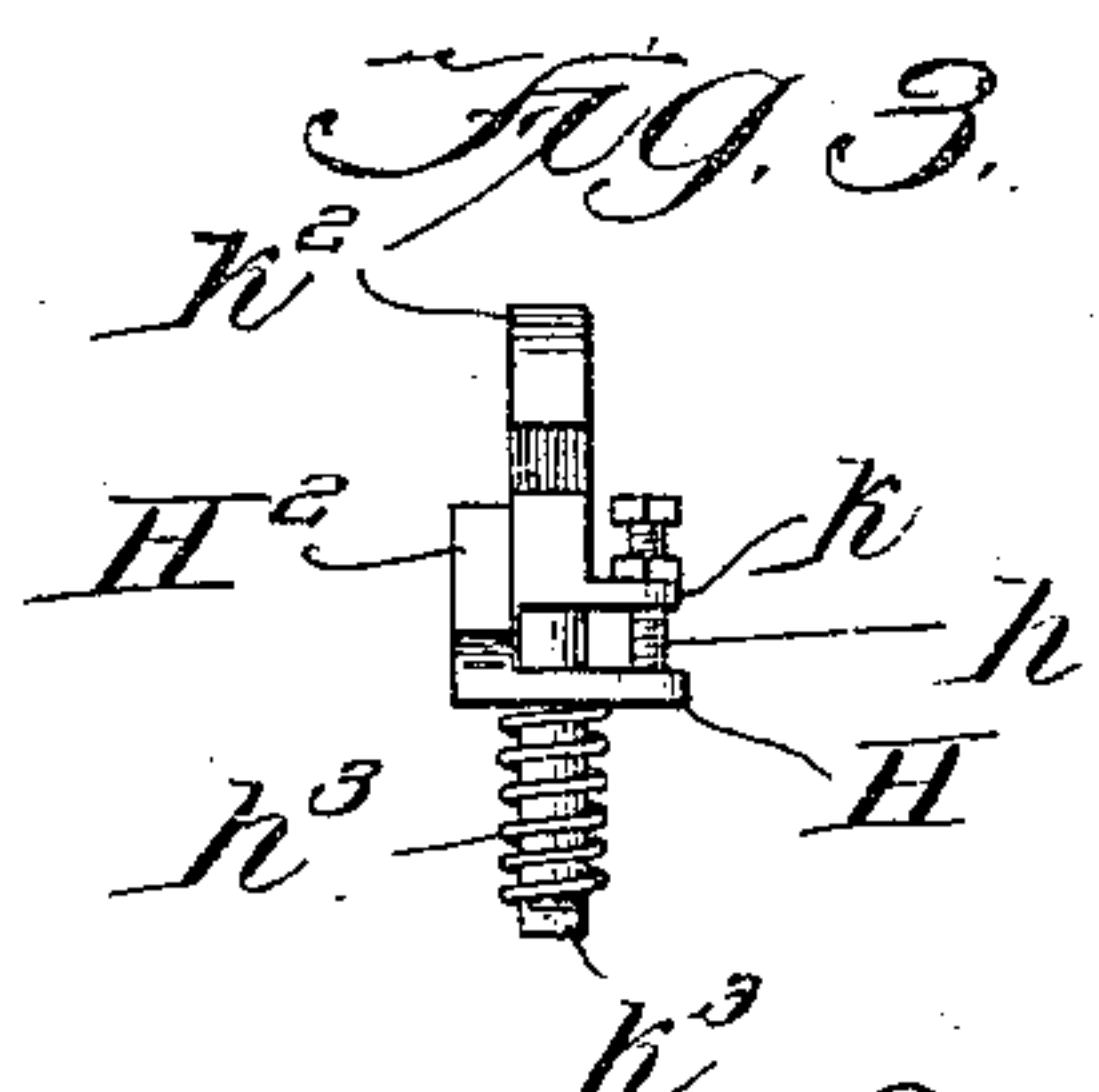
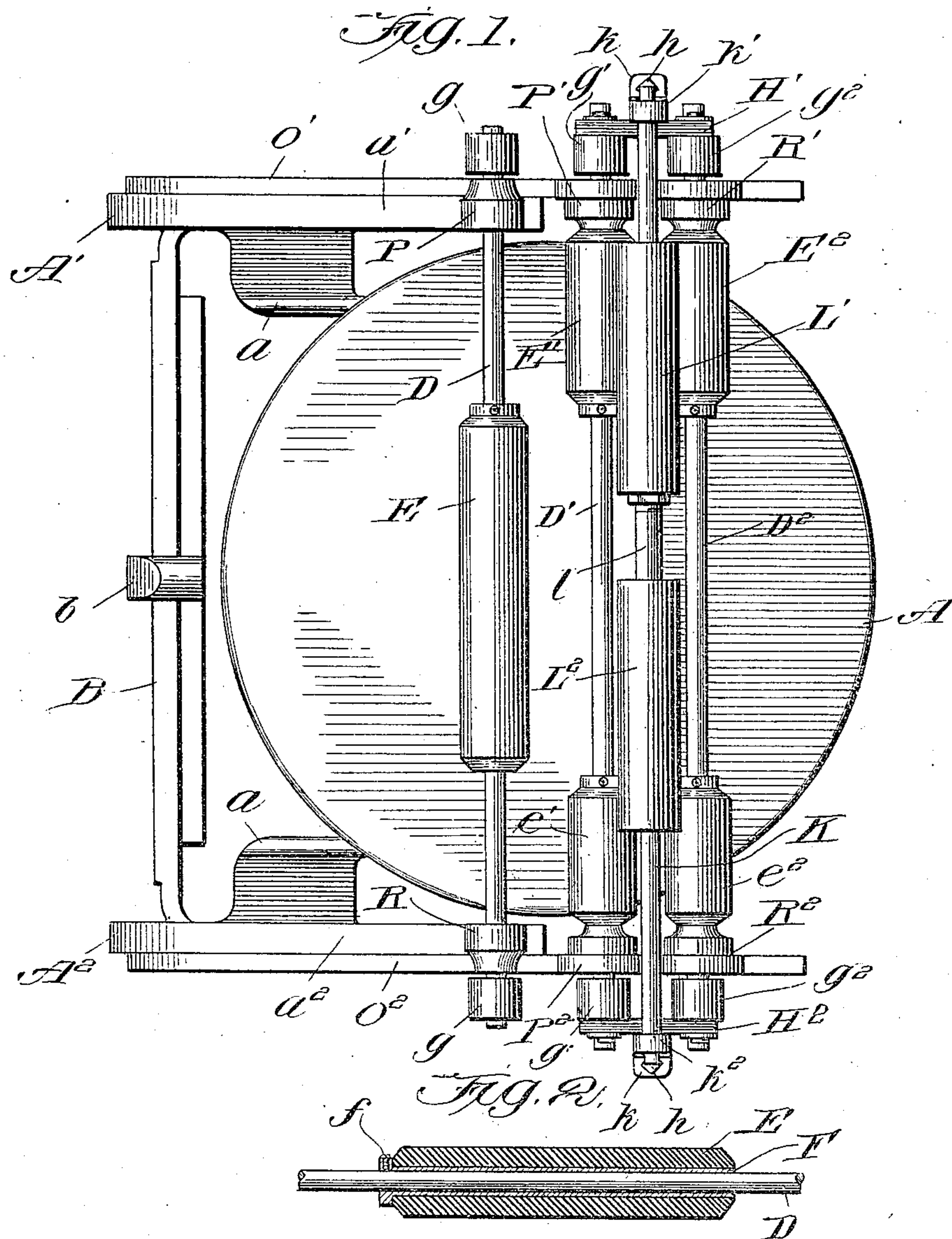
No. 860,576.

PATENTED JULY 16, 1907.

J. H. SCHUSSLER.
ROLLERS FOR PLATEN PRINTING PRESSES.

APPLICATION FILED APR. 21, 1906.

3 SHEETS—SHEET 1.



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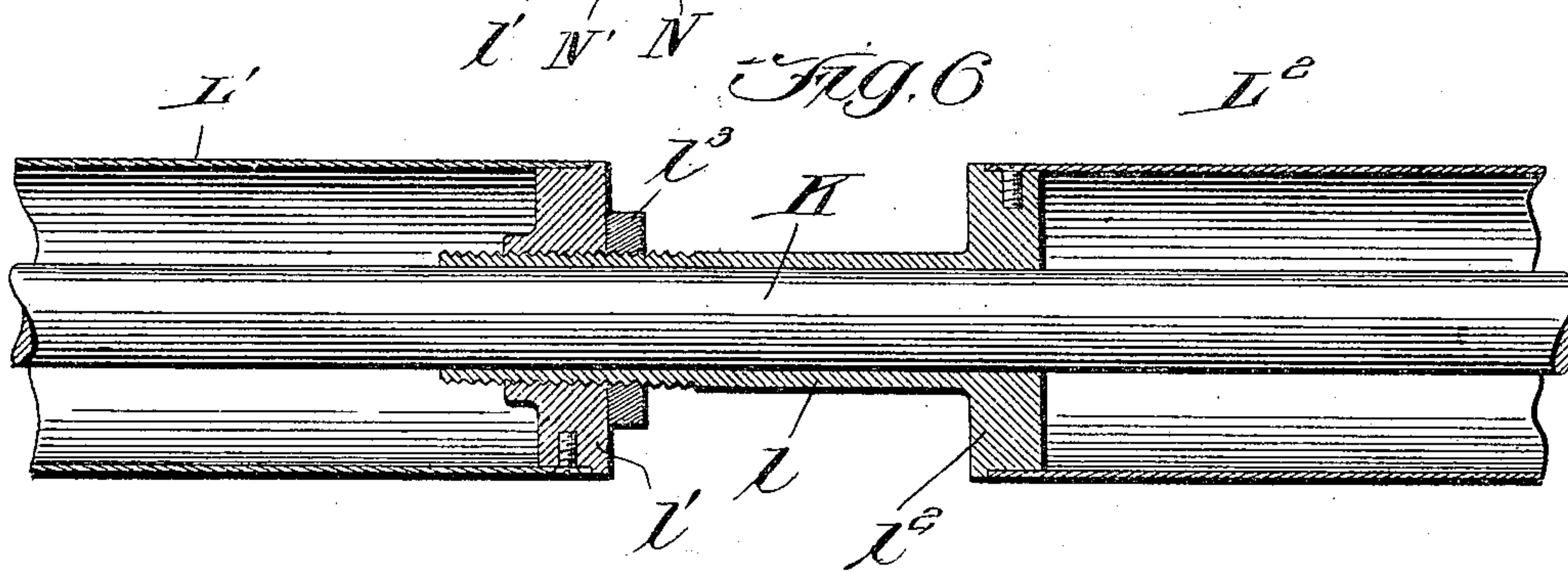
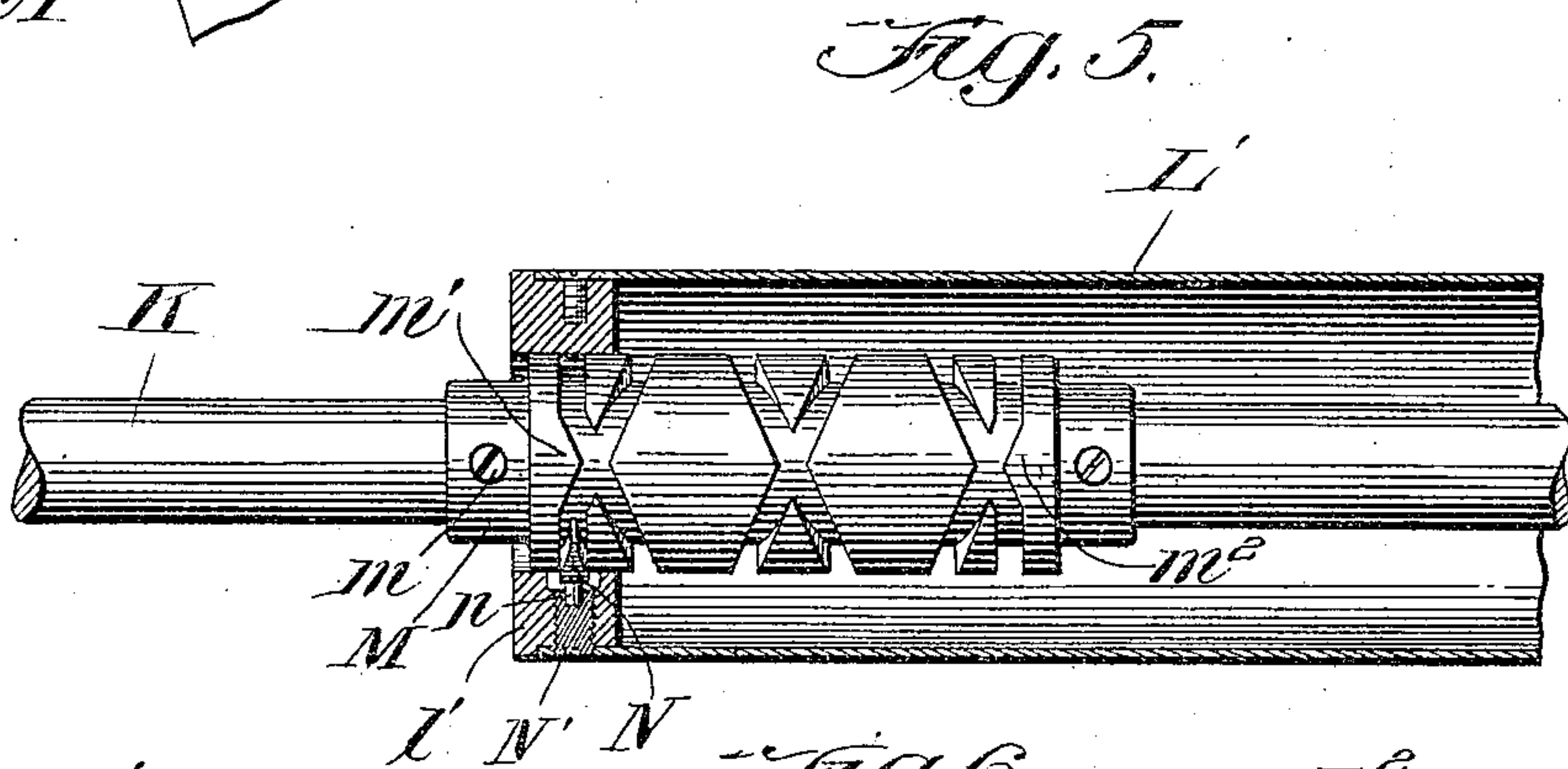
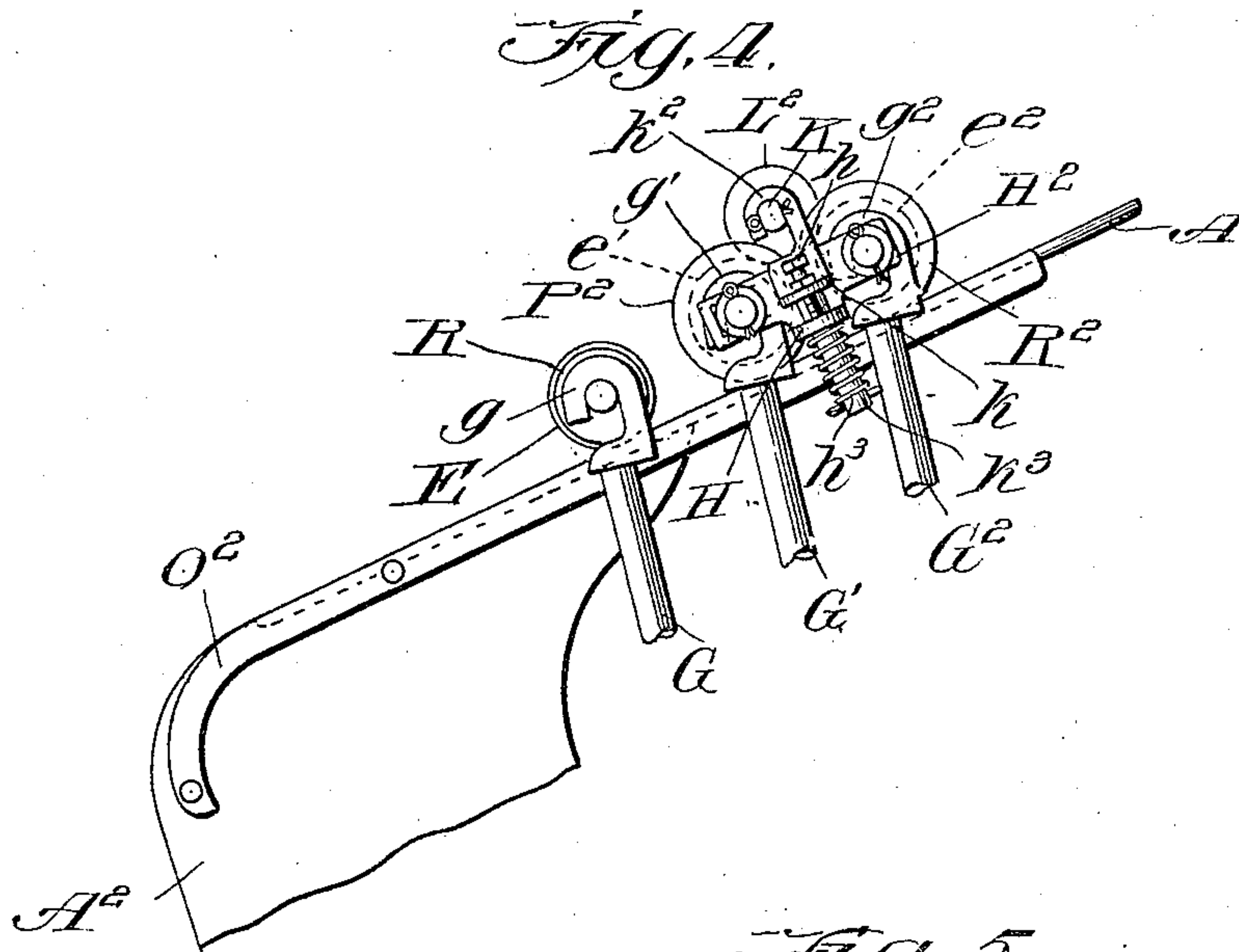
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3 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

JOHN H. SCHUSSLER, OF CHICAGO, ILLINOIS.

ROLLER FOR PLATEN PRINTING-PRESSES.

No. 860,576.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed April 21, 1906. Serial No. 313,003.

To all whom it may concern:

Be it known that I, JOHN H. SCHUSSLER, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Rollers for Platen Printing-Presses, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates in general to printing presses, and more particularly to inking rolls for platen presses.

When platen presses are used to simultaneously print in more than one color of ink, it is necessary that means should be provided for supplying the different inks to the different parts of the form and also to provide ink distributing means in order that ink may be applied evenly and uniformly.

The primary object of my invention is to provide a platen printing press with different inking rolls for supplying different colors of ink to different portions of the form.

A further object of my invention is to provide a platen printing press with a divided vibrating distributing roll, the sections of the roll being relatively adjustable so that their paths of vibration may be distinct when they distribute different inks, and may over-lap when they distribute the same color of ink.

A still further object of my invention is to provide in a platen press inking mechanism which will separately apply different colors of ink to different portions of the form, and which will be comparatively simple in construction, inexpensive in manufacture, and efficient in use.

The embodiment of my invention herein disclosed may be generally described as comprising a plurality of sectional inking rolls, the sections being adapted to apply different colors of ink to different parts of the form, a sectional vibrating distributing roll the sections of which distribute different inks upon different sections of the inking rolls, and means for simultaneously vibrating the two sections of the distributing rolls.

My invention further consists in a divided vibrating distributing roll for platen presses the sections of which may be relatively adjusted so that their paths of vibration will be separate or will over-lap according as they distribute different inks or the same ink.

My invention will be more fully described hereinafter with reference to the accompanying drawings in which,—

Figure 1 is a plan view; Fig. 2 a detail sectional view of an inking roll; Fig. 3 a detail elevational view of one of the journal hooks for the distributing roll shaft; Fig. 4 a side elevational view looking upwardly with respect to Fig. 1 Fig. 5 an enlarged sectional

view through a portion of one section of the distributing roll; Fig. 6 a view showing the continuation of the distributing roll at the right of Fig. 5, and Fig. 7 a plan view of a modification.

Similar reference characters are used to designate the similar parts in the several figures of the drawings.

Referring more particularly to Figs. 1 to 6 inclusive, reference character A indicates a rotary ink supplying disk, such as commonly used on platen presses. Reference characters A' & A² indicate the supporting side frames from which brackets *a, a* project for supporting the inking disk. B designates a bar connecting the side frames and provided with a hook *b* for supporting the chase containing the form. *a'* & *a*² designate the usual tracks which are engaged by trucks on the shafts on the inking rolls as they travel between the form and inking disk. Reference letter D indicates a shaft upon which is supported a composition inking roll E. The ends of the shafts are journaled in hooks *g, g* carried at the upper ends of oscillating rods one of which is indicated at G in Fig. 4. The shaft D is provided with the usual trucks P & R engaging the tracks *a'* *a*². The reference characters D' & D² designate the shafts upon which a pair of divided inking rolls are mounted. The ends of the shafts D' D² are journaled in brackets H' & H² and are supported by hooks *g'* *g*² carried at the upper ends of oscillating rods G' & G². K indicates a shaft upon which is mounted a divided distributing roll. The ends of the shaft K are journaled in hooks *k'* *k*² adjustably mounted upon the brackets H' & H² respectively. The hooks *k'* *k*² are adjustably supported upon the brackets H' & H² so that the pressure with which the distributing roll engages the inking rolls may be regulated. Each of the hooks *k'* *k*² is provided with an ear *k* through which an adjustable screw *h* extends into contact with an ear H on the corresponding bracket H' or H². Each of the hooks is provided with a depending rod *k*³ extending loosely through an opening in the corresponding bracket H. A spring *h*³ surrounds each rod *k*³ and bears at its upper end against the under surface of the bracket H and at its lower end against the cotter pin extending through the rod *k*³. The composition inking roll E is adjustably mounted upon the shaft D by means of the supporting sleeve F through which the shaft D extends. The sleeve F is provided with a hub at one end through which a clamp screw *f* extends into engagement with the rod. Reference characters E' & E² designate the corresponding sections of the inking rolls upon the shafts D' D² while reference characters *e'* & *e*² indicate the other pair of corresponding sections of inking rolls upon such shafts. The sections of inking rolls upon the shafts D' D² are adjustable in the same manner as above explained in connection with the inking roll E. The two sections L' & L² of the distributing roll are adjustably connected in any suitable manner, preferably however by the

means shown in Fig. 6. A sleeve l surrounds the shaft K and is formed integrally with the end l^2 of the section L^2 . The sleeve l is exteriorly screw-threaded and passes through a screw-threaded opening in the end l' of the section L' . l^3 indicates a lock nut on the sleeve l by means of which the two sections may be securely retained in any adjusted positions. Any suitable means may be provided for simultaneously vibrating the two sections of the distributing roll during its travel with the inking rolls, such for instance as that illustrated in my pending application Serial No. 305,212 filed March 10, 1906. Or, if desired, the vibrating means shown in Fig. 5 may be employed comprising a double-threaded sleeve M removably secured upon the shaft K by a clamp screw m . The opening through the end l^4 of the section L' is of a size to surround the sleeve M and is provided with a pivoted crescent N engaging the screw threads in the sleeve. The crescent N is provided with a supporting pin n seated in a recess in the inner end of a removable screw-threaded plug N' . The side frames A' & A^2 are provided with auxiliary tracks o' o^2 respectively upon which travel pairs of trucks P' P^2 and R' , R^2 fixed upon the shafts D' & D^2 of the inking rolls. Through the engagement of the pairs of trucks with the auxiliary tracks the pair of divided inking rolls upon the shafts D' D^2 are elevated above the inking disk.

The operation of the embodiment of my invention above described is as follows: The inking roll E occupies such a position upon the shaft D that it will apply ink to the portion of the form intermediate of the portions which will be supplied with ink by the sections of the pair of divided rolls. The roll E is supplied with ink from the disk A in the usual manner and applies the ink to the portion of the form over which it travels. The sections E' & E^2 of the pair of rolls are supplied with ink from any other source than the disk A, such for instance as a fountain or by means of a palette knife. The other cooperating sections e' e^2 of the pair of inking rolls are in a similar manner provided with still a different ink. The portion of the form over which the sections travel is consequently supplied with an ink different from that supplied by the roll E and by the sections E' E^2 . The auxiliary tracks o' o^2 elevate the shafts D' & D^2 and with them the rolls thereon so that they will not engage the inking disk A, while the roll E will engage such disk and receive ink therefrom. The sections of the distributing roll spread the inks evenly and smoothly over the two pairs of cooperating sections of rolls. The rotation of the shafts D' & D^2 through the engagement of the trucks thereon with the tracks a' a^2 imparts rotary motion to the sections L' L^2 of the distributing roll through their contact with the sections of the inking rolls which they engage. The rotation of the section L' about the shaft K vibrates such section laterally and with it the section L^2 through the engagement of the crescent N with the grooves in the sleeve M. When the crescent N is in the position shown in Fig. 5 the rotation of the section L' of the roll relatively to the sleeve M will bring one point of the crescent into contact with the cam m' and thereby direct the crescent into one of the intersecting grooves so that the sections of the roll will be moved axially upon the shaft in one direction until the crescent

reaches the end of the groove when through engagement with the cam m^2 it will be oscillated so as to engage the other groove and thereby move the sections of the roll axially about the sleeve in an opposite direction. By providing the intersecting grooves in the sleeve a more economical construction results than by making the grooves directly in the shaft. The sleeve may be grooved before being attached to the shaft and then readily placed in the desired position on the shaft and secured thereto by the clamp screws m . The engagement between the sections of the distributing roll and sections of the inking rolls may be adjusted when rendered necessary either by wear or changes in temperature by means of the screws h which serve to limit the movement of the hooks k' k^2 relatively to their supporting brackets H' & H^2 . In other words, the screws h regulate the action of the springs h^3 the tension of which serves to draw the sections of the distributing roll into contact with the sections of the inking rolls. The positions of the inking roll E and sections of rolls upon the shafts D' D^2 may be adjusted so as to travel over different portions of the form thereby rendering it possible to apply the desired colors of ink to predetermined portions of the form.

In Fig. 7 I have illustrated a modified embodiment of my invention adapted for use when two inks only are to be used. In this embodiment of my invention the inking disk A is stationary and is provided with different inks upon the portions engaged by the two sections of the inking rolls. In this embodiment of my invention the auxiliary trucks which engage the tracks o' o^2 are removed as it is not necessary to elevate the inking rolls upon the shafts D' D^2 above the inking disk. The corresponding sections E^5 , E^3 & E^4 on the respective shafts D, D' & D^2 supply one color of ink to the part of the form over which they travel, while the other corresponding sections E^6 , e^3 & e^4 supply a different color of ink from the disk A to the part of the form over which they travel. In the embodiment of my invention shown in Fig. 7 the sections L' & L^2 of the distributing roll vibrate in the manner above described and serve to spread the inks upon the corresponding sections of the roll on the shafts D' D^2 . The sections of the distributing rolls are spaced apart such a distance that their paths of axial travel will not over-lap thereby limiting the travel of each section to separate pairs of sections of the inking rolls. The two colors of ink are consequently prevented from being mixed as would be the case if the paths of travel of the sections of the distributing roll over-lapped.

It is obvious that my improved sectional distributing roll may be used in connection with a pair of undivided or continuous inking rolls in which case the sections of the distributing rolls are so adjusted with respect to each other that their paths of movement will over-lap thereby insuring an even distribution of the ink throughout the entire surfaces of the inking rolls.

From the foregoing description it will be observed that I have invented an improved mechanism for applying different inks to different portions of the form of a platen press comprising sectional inking rolls adjustably mounted so as to travel over the de-

sired portions of the form. It will be further evident that I have invented an improved divided distributing roll the sections of which are vibrated simultaneously and which may have either separate or intersecting paths of axial movement according to whether they are used for distributing different inks or the same ink.

Having now fully described my invention, what I claim as new and desire to secure by Letters Patent is:

10 1. In a platen printing press, the combination with an inking disk, of a plurality of inking rolls adapted to travel over and supply different inks to different parts of the form, means for moving said rolls relatively to the form and the surface of said disk, trucks on said rolls adjacent the ends thereof, tracks on which said trucks travel, auxiliary tracks located at each side of the inking disk, and auxiliary trucks on one of said rolls engaging said auxiliary tracks for elevating said roll out of contact with said disk during its travel relatively thereto.

20 2. In a platen printing press, the combination with an inking disk, of a plurality of inking rolls adapted to travel over and supply different inks to different parts of the form, means for moving said rolls relatively to the form and the surface of said disk, trucks on said rolls adjacent the ends thereof, tracks on which said trucks travel, auxiliary tracks located at each side of the inking disk, auxiliary trucks on one of said rolls engaging said auxiliary tracks for elevating said roll out of contact with said disk during its travel relatively thereto, and means for axially adjusting the relative positions of said rolls.

30 3. In a platen printing press, the combination with an inking disk, of a pair of inking rolls, an auxiliary inking roll, trucks on said rolls, adjacent the ends thereof, tracks on which said trucks travel during the movement of said rolls relatively to the form and inking disk, auxiliary tracks located at each side of the inking disk, and auxiliary trucks on said pair of rolls engaging said auxiliary tracks for elevating said rolls out of contact with said disk during their travel relatively thereto.

40 4. In a platen printing press, the combination with an inking disk, of a pair of inking rolls, an auxiliary inking roll, trucks on said rolls adjacent the ends thereof, tracks on which said trucks travel during the movement of said rolls relatively to the form and inking disk, auxiliary tracks located at each side of the inking disk, auxiliary trucks on said pair of rolls engaging said auxiliary tracks for elevating said rolls out of contact with said disk during their travel relatively thereto, and means for axially adjusting the relative positions of said rolls.

50 5. The combination with a platen printing press, of a pair of divided inking rolls, the sections of said rolls adapted to travel over and apply different inks to different parts of the form, means for relatively adjusting the sections of said rolls, a divided vibrating distributing roll sections of which engage corresponding sections of the inking rolls and means for adjusting the sections of said distributing roll relatively to the sections of said inking rolls.

55 6. The combination with a platen printing press, of a pair of divided inking rolls, an auxiliary inking roll located out of alinement with the sections of said divided

rolls, an inking disk, means for moving said pair of rolls and said auxiliary roll relatively to said disk and to the form; and means for elevating said pair of divided rolls out of contact with said disk.

7. In a platen printing press, the combination with an inking disk, of a pair of divided inking rolls, a divided vibrating distributing roll the sections of which engage corresponding sections of the inking rolls, an auxiliary inking roll located out of alinement with the sections of said divided rolls, said auxiliary inking roll adapted to travel over said disk, and means for elevating said pair of divided rolls out of contact with said disk.

8. In a platen printing press, the combination with an inking disk, of a pair of divided inking rolls, a divided vibrating distributing roll the sections of which engage corresponding sections of the inking rolls, an auxiliary inking roll located out of alinement with the sections of said divided rolls, said auxiliary inking roll adapted to travel over said disk, tracks over which the inking rolls travel, trucks carried by said pair of divided rolls engaging said tracks, whereby said pair of rolls are elevated out of engagement with said disk.

9. In a platen printing press, the combination with a pair of inking rolls, of a divided distributing roll engaging the inking rolls, a shaft upon which said distributing roll is mounted, a sleeve surrounding said shaft intermediate of the sections of said distributing roll, means for adjustably connecting one section of said distributing roll to said sleeve, and means for moving said distributing roll axially during its travel with the inking rolls.

10. In a platen printing press, the combination with a pair of inking rolls, of shafts upon which said rolls are mounted, brackets in which the ends of said shafts are journaled, a distributing roll engaging said inking rolls, a shaft upon which said distributing roll is mounted, hooks in which the ends of said shaft are journaled, means for supporting said hooks upon said brackets, said means comprising springs interposed between the respective hooks and brackets, and means for bodily adjusting said hooks relatively to said brackets to limit the movement of said brackets by the springs, and thereby regulate the contact between the distributing and inking rolls.

11. In a platen printing press, the combination with a pair of inking rolls, of shafts upon which said rolls are mounted, brackets in which the ends of said shafts are journaled, a distributing roll engaging said inking rolls, a shaft upon which said distributing roll is mounted, hooks in which the ends of said shaft are journaled, a laterally projecting lug on each of said hooks, an adjustable screw extending through said lug, a lug on each of said brackets against which the corresponding adjusting screw engages, a rod on each hook, a spring surrounding each rod interposed between a stop thereon and the lug on the corresponding bracket.

In testimony whereof, I sign this specification in the presence of two witnesses.

JOHN H. SCHUSSLER.

Witnesses:

GEO. L. WILKINSON,
C. A. MULLEN.