

(No Model.)

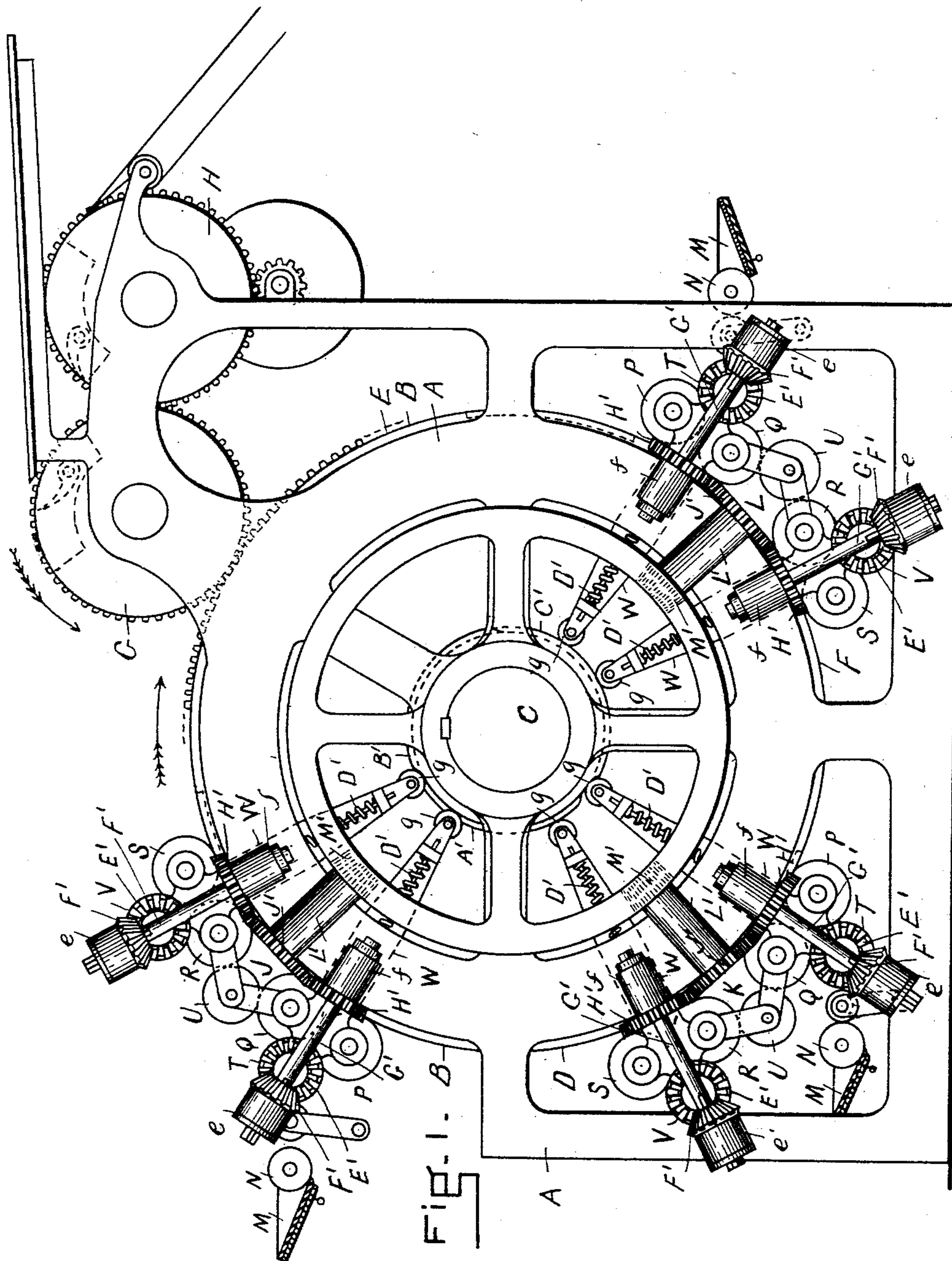
3 Sheets—Sheet 1.

W. C. WENDTÉ.

INKING APPARATUS FOR PRINTING PRESSES.

No. 520,346.

Patented May 22, 1894.



WITNESSES

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INVENTOR

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(No Model.)

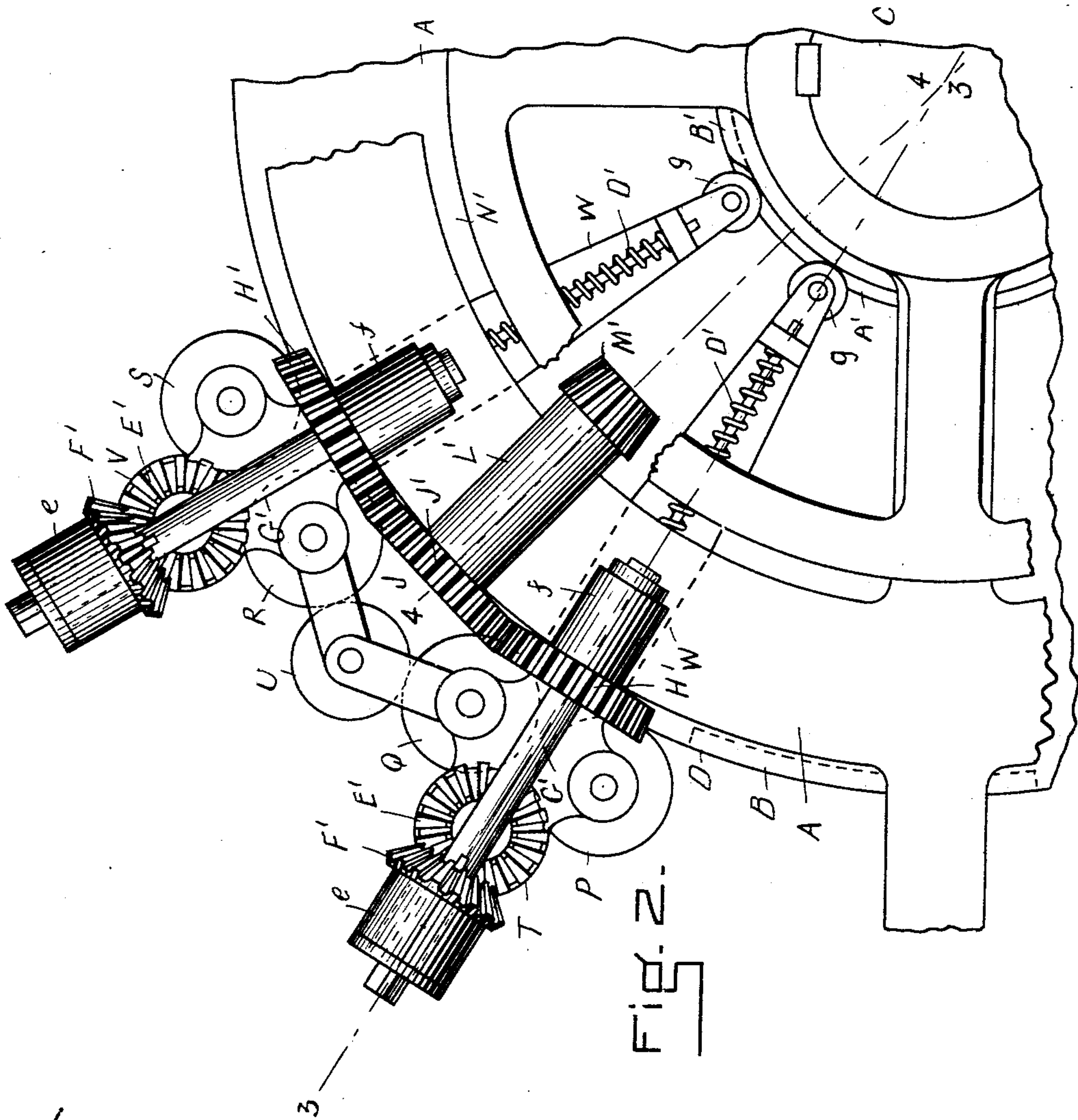
3 Sheets—Sheet 2.

W. C. WENDTÉ.

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No. 520,346.

Patented May 22, 1894.



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(No Model.)

3 Sheets—Sheet 3.

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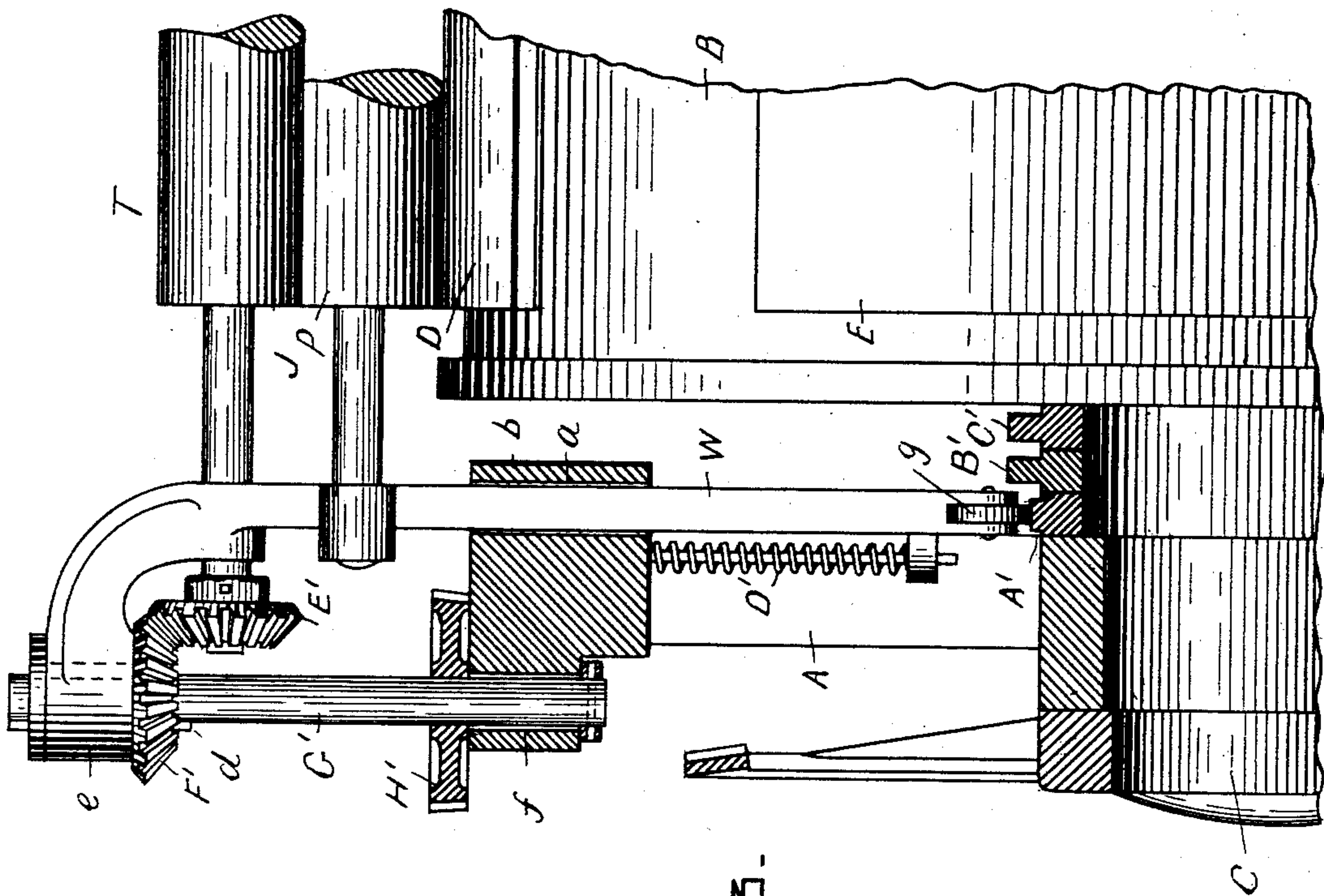


FIG. 3.

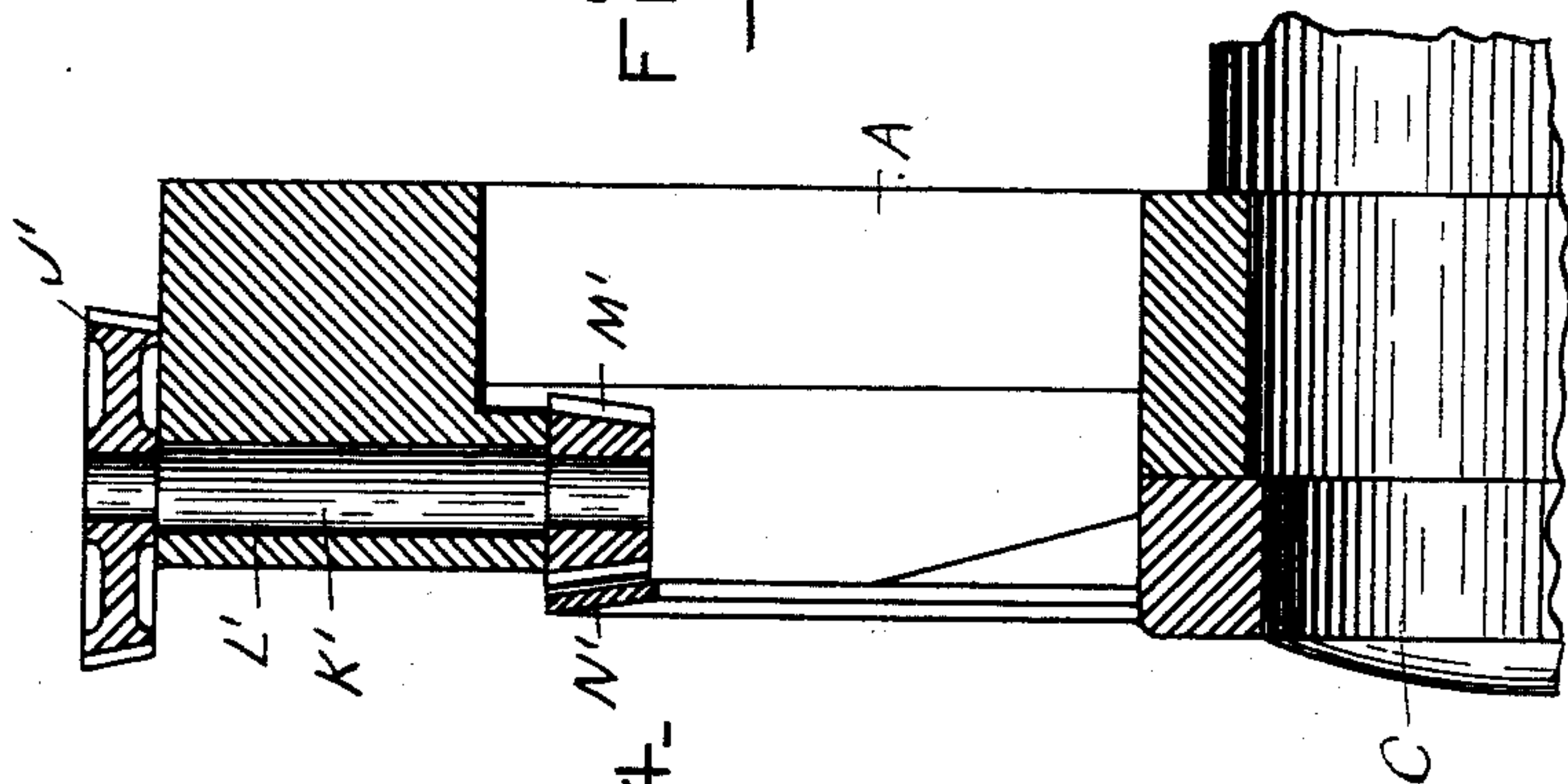


FIG. 4.

WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM C. WENDTÉ, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO WILLIAM
H. FORBES, OF SAME PLACE.

INKING APPARATUS FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 520,346, dated May 22, 1894.

Application filed July 24, 1893. Serial No. 481,315. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. WENDTÉ, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Inking Apparatus for Printing-Presses, of which the following is a full, clear, and exact description.

This invention relates particularly to rotary presses for printing in two or more colors, and generally to all presses in which the inking rollers after rolling a form are raised to allow other forms or surfaces to pass freely thereunder; and the invention consists in a certain construction and arrangement of parts in a rotary printing press for accomplishing rotation of the inking rollers, at all times, during the operation of the press, whether they are engaged in inking forms or are raised above them, all substantially as hereinafter fully described, reference being had to the accompanying sheets of drawings, in which is illustrated this invention in connection with a rotary press of a known type for printing in three colors, in which—

Figure 1 is a general view of such press in side elevation. Fig. 2 is a detail side view of one set of inking rollers and their operating parts shown in Fig. 1. Fig. 3 is a detail cross section on line 3—3 Fig. 2; and Fig. 4 is a detail cross section on line 4—4 Fig. 2. Figs. 2, 3 and 4 are enlarged.

In the drawings A represents a framework supporting the various parts of the press at one end or side only, there being a similar frame at the other end as usual.

B is a cylinder on the shaft C carrying the printing surfaces or forms, D, E and F.

G is the impression cylinder and H the delivery cylinder with tapes, &c.

It is not deemed necessary to particularly describe the impression and delivery cylinders and their attached parts, as they do not constitute a part of this invention, and their construction and action are well understood.

Each form D, E, F, has its own set J, K, and L, respectively of inking rollers, which supply ink to that form only, and are raised from contact with the other two forms as they pass under it. The sets are duplicates in all respects, therefore the description of one will answer for all, they being lettered alike. The

ink fountains M and ductors N are as usual, and do not need particular description herein, and no means are shown for the customary endwise motion of the distributing rollers. There are four inking rollers P, Q, R, S, and distributing rollers T, U, V, in each set, and preferably, as shown, each set is driven by gearing at two points, so that one V of the distributing or rider rollers and two R, S, of the form rollers constitute a sub-set. The other rider U, is only for conveying the ink from one sub-set to the other. The riders T, V, drive the form rollers P, Q, R, S, by friction or surface contact as shown, but they can be driven by gearing if desired. The three rollers in each sub-set are each journaled at each end in a radially sliding frame or bar W which moves in and out in a guide-way *a*, of the portion *b*, of the frame A. The bars W, extend toward the shaft C, of the form cylinder and bear by their inner ends on cams A', B', C', on the said shaft, which cams, one for each form respectively, are arranged as is usual in such presses to control the movement of the inking rollers to and from their forms, so that each set of rollers will ink only the form to which it belongs, and will rise to prevent inking of the other forms. In this instance the cams raise the bars W and the spring D' on each bar connected thereto and to the frame force it down. There are like cams on the other side of the press, not shown which operate like bars in a like manner for controlling the movement of the other ends of the inking and distributing rollers for the same purpose. One end of each distributing roller T, V, in the sub-sets is prolonged beyond its bearing in the bar, as shown in Fig. 3, more particularly, and a bevel gear E' is fixed to it. This gear meshes with another bevel gear F' which latter is a sleeve gear fitting and sliding longitudinally on the upper or outer end of a radial shaft G' and obliged to turn therewith by the spline *d*. The sleeve gear F' turns freely in the bearing *e*, which is a part of the bar W. The radial shaft G' is journaled near its lower or inner end in a bearing *f*, which is part of the frame A, and has a gear H' fixed on the shaft, which gear meshes with a gear J' fixed on the end of a radial shaft K' journaled in bearings L'

on the frame A, and has a pinion M' fixed on its lower end which meshes with a large gear N' fixed on the end of the form cylinder shaft C. Thus is described how the continuous motion of the inking and distributing rollers is effected by this device.

The use of this invention will result, in that ink applied to any one of the inking or distributing rollers of a set, will be continuously "broken up," and as the form rollers have at all times a surface speed which is the same as that of their respective forms they will, when brought down into contact with the latter, ink them smoothly and evenly without any slurring. The inner end of each radial frame or bar has a friction wheel g which bears upon the cam to reduce friction.

The cams in lieu of being attached to the cylinder shaft, can be on the end of the cylinder itself, or on any suitable part of the machine. Also the radial shafts on the frame or bars can be operated from the movement of the form cylinder shaft by any suitable arrangement of gearing; also the gear F' can be fixed to the shaft G' and the gear H' connected by a spline as desired.

In lieu of having the upper bevel gear F' slide on the radial shaft, it can be rigidly secured thereto and the shaft arranged to slide instead, in which case the lower gear H' should be so secured to the main frame as to allow for the necessary sliding movement of said radial shaft for it to rise and fall with the sliding frame or bar.

Having thus described my invention, what I claim is—

1. In combination, a form cylinder, inking rollers for said cylinder, mechanism for raising the inking rollers from contact with a

cylinder form, a radial shaft, bearing for said shaft, a sliding gear on said radial shaft, a distributing roller, a bevel gear on the end of the distributing roller for engagement with said radial shaft gear, another gear on said radial shaft, another radial shaft, and a gear on said latter radial shaft engaging with gear on the former radial shaft.

2. In combination, a form cylinder, inking rollers for said cylinder, a radial shaft, bearing for said shaft, a sliding gear on said radial shaft, a distributing roller, a bevel gear on the end of the distributing roller for engagement with said radial shaft gear, another gear on said radial shaft, another radial shaft, and a gear on said latter radial shaft engaging with gear on the former radial shaft.

3. In combination, a form cylinder, inking rollers for said cylinder, a radial shaft, bearing for said shaft, a sliding gear on said radial shaft, a distributing roller, a bevel gear on the end of the distributing roller for engagement with said radial shaft gear, another gear on said radial shaft, another radial shaft, and a gear on said latter radial shaft engaging with gear on the former radial shaft, a frame or bar to which the inking and distributing rollers and sliding gear are attached arranged to slide back and forth in a suitable guideway and a cam on the form cylinder shaft for operation on said frame or bar.

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

WILLIAM C. WENDTÉ.

Witnesses:

EDWIN W. BROWN,
LEONA C. ARNO.