

(No Model.)

P. F. COX.

TEST PLATE CLEANER FOR TYPE DISTRIBUTING MACHINES.

No. 591,073.

Patented Oct. 5, 1897.

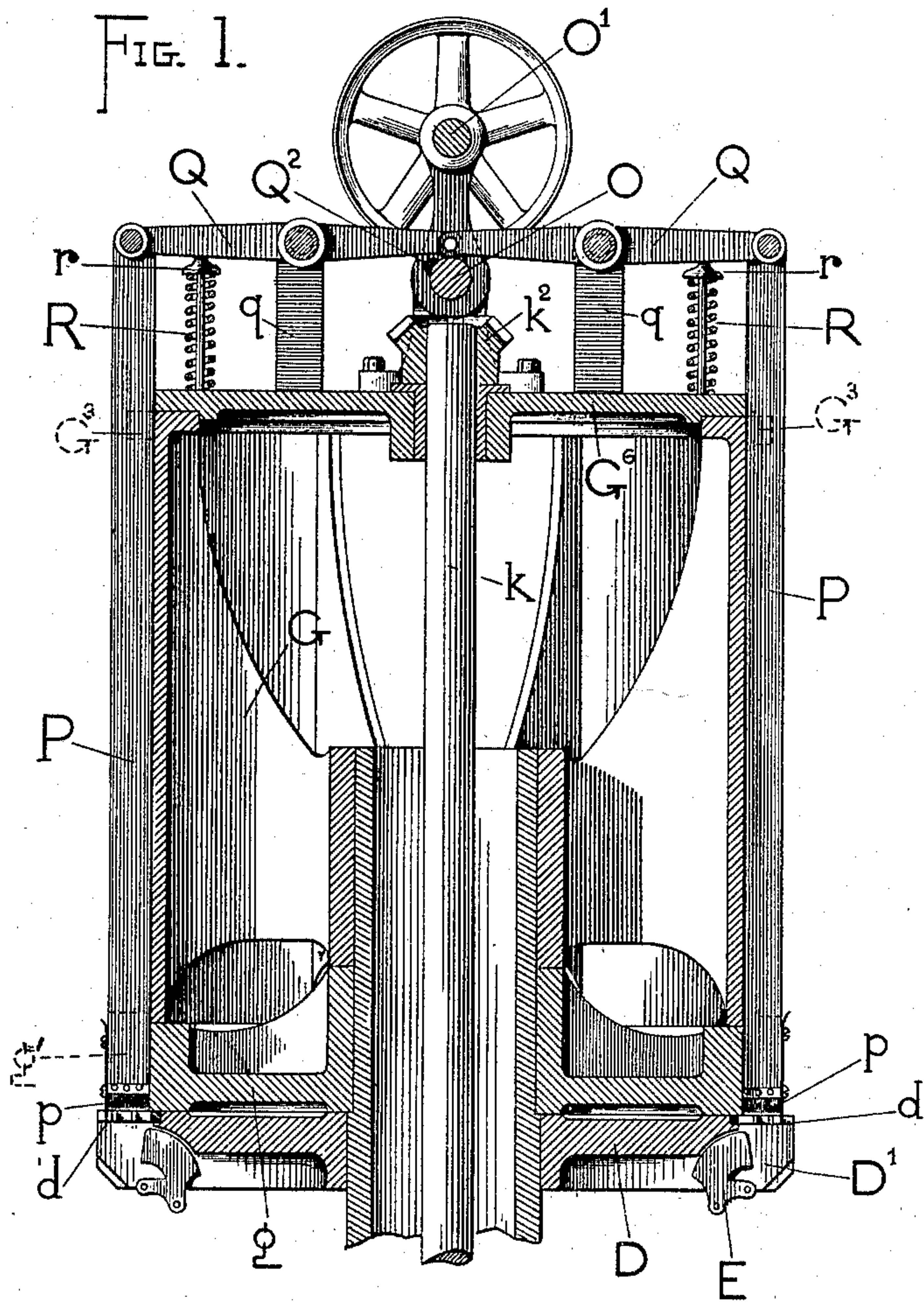
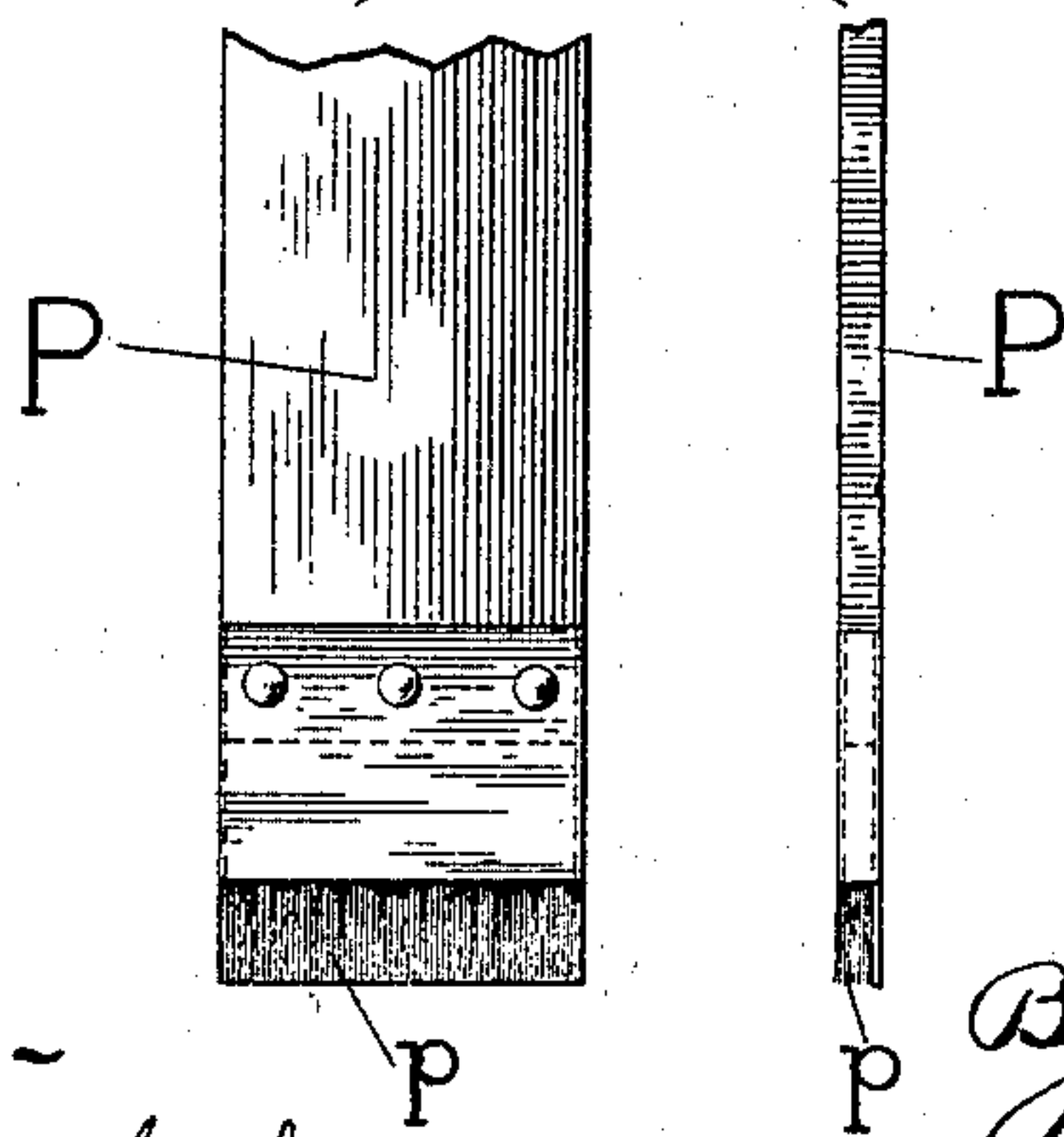


FIG. 2.



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# UNITED STATES PATENT OFFICE.

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## TEST-PLATE CLEANER FOR TYPE-DISTRIBUTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 591,073, dated October 5, 1897.

Application filed February 13, 1897. Serial No. 623,256. (No model.)

*To all whom it may concern:*

Be it known that I, PAUL FLEMMING COX, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Test-Plate Cleaners for Type-Distributing Machines; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is an improvement in type-distributing machines; and it consists in a novel mechanism for cleaning the test-plates of the machine, designed to operate automatically and continuously during the operation of the distributor and applicable especially to the type-distributing machines shown in my Letters Patent Nos. 550,553 and 550,555, dated November 26, 1895, and the later improvements shown in subsequent Letters Patent.

The invention therefore consists in the novel construction and combination of parts hereinafter claimed, and a simple and effective form thereof is illustrated in the accompanying drawings and hereinafter described.

In said drawings, Figure 1 is a vertical central section through the type-reservoir and test-plates of my improved type-distributing machine, showing the test-plate-cleaning mechanisms attached thereto. Fig. 2 represents enlarged front and edge views of the test-plate brushes or rubbers.

In using type-distributing machines much trouble is eventually caused by dust, dirt, ink, &c., accumulating in the channels and clogging the test-plates and slots so that the type will not pass therethrough freely, and the cleaning of the test-plates by hand is a laborious operation and necessitates the stoppage of the machine. My invention keeps the test-plates continually clean and can operate during the operation of the machine, so that no cessation of its work is caused by the cleaning of the test-plates.

I have illustrated the cleaning devices applied to one of my own patented type-distributing machines, in which the cylindrical casting *g* has a series of vertical undistributed-type-holding channels *g'* in its periphery and is stationary over a rotary disk *D*, which carries

a series of test-plates *d* and is rotated so as to successively register each test-plate with every type-channel *g'* in the casting *g*. Over the casting *g* is a larger casting *G*, also stationary and provided with suitable undistributed-type holders or channels registering with and forming continuations of the channels of casting *g*. Above casting *G* is a top plate which supports brackets carrying the driving and counter shafts *O O'* of the machine. For convenience the shaft *O'* is journaled above shaft *O* instead of at one side thereof, so as to allow ample room for the operating-levers *Q* of the test-plate-cleaning devices to be adjusted and operate.

A detailed description of the construction and operation of the type-distributing machine is unnecessary, as my aforesaid patents fully describe a machine to which the device is adapted and because I do not limit the use of the cleaner to any particular form of machine.

The test-plate cleaner consists of one or more vertically-reciprocating slides *P*, which occupy one or more of the undistributed-type channels of the machine and project above the upper ends thereof and are provided on their lower ends with scrapers, rubbers, or brushes *p* of any suitable construction, which will effectively clean the test-plates and slots when pushed therepast.

The slides *P* are pivotally connected at their upper ends to the outer ends of levers *Q*, fulcrumed on studs *q* on top of plate *G*<sup>6</sup>, and the inner ends of levers *Q* overlie the shaft *O*, which is provided with a quick-cam or cam-rib *Q*<sup>3</sup>, so that at regular intervals the levers *Q* are rocked quickly, so as to depress slides *P* and force brushes *p* thereon quickly into slots *D'* through or past test-plates *d*, cleansing the latter thoroughly. The slides are depressed only momentarily, and when the disk *D* has stopped with its slots *D'* and test-plates in register with the holders, as before described. The slides and brushes are instantly raised by means of springs *R*, interposed between plate *G*<sup>6</sup> and the outer arms of levers *Q*, and guided by pins *r*, as shown. Thus each test-plate is cleaned one or more times, according to the number of slides *P* employed for each revolution of disk *D*, and is effective-



tually kept from fouling. One or two slides P will be ample for an ordinary-sized machine.

I do not confine myself to the precise construction herein shown nor to an automatically-operating test-plate cleaner, (by which I mean a cleaner which operates only during the operation of the machine,) since obviously the device could be easily made separable from the machine and applied thereto only when the test-plates become clogged, thereby allowing the channels occupied by the slides to be meantime used for undistributed type, like the others.

Having thus described my invention, what I therefore claim as new, and desire to secure by Letters Patent thereon, is—

1. The combination with a type-distributing machine, of means substantially as described for cleaning the test-plates while the machine is in operation, all substantially as and for the purpose described.

2. The combination with the reservoir, and test-plates of a type-distributing machine, of means substantially as described for automatically cleaning one or more test-plates of the machine when and while the type-channels of the reservoir and test-plate are in register, during the operation of the machine, all substantially as and for the purpose described.

3. A device for cleaning test-plates of type-distributing machines, consisting of a test-plate-cleaning device adapted to be slipped into a type-channel of the machine, and means for reciprocating said test-plate-cleaning de-

vice past the test-plate, when the test-plate registers with the channel, for the purpose and substantially as described.

4. The combination with the undistributed-type reservoir and the test-plate disk of a type-distributing machine; of one or more test-plate-cleaning rubbers or brushes in one or more of the type-channels of the reservoir, and means for reciprocating said rubbers or brushes past the test-plates so as to clean them when the type-channels and test-plates are in register, all substantially as and for the purpose described.

5. The combination with the undistributed-type reservoir, and the test-plate disk below the reservoir, and means for moving one of said parts in relation to the other so as to cause the test-plates to successively register with the type-channels of the reservoir; of one or more vertically-movable slides in one or more of the type-channels, provided with test-plate-cleaning rubbers or brushes on their lower ends; oscillating levers connected to the upper ends of said slides, and a cam and springs for oscillating said levers when the test-plates and type-channels are in register, all substantially as and for the purpose described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

PAUL FLEMMING COX.

Witnesses:

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