No. 702,621. Patented June 17, 1902.

J. BREAKEY.

TYPE DISTRIBUTING APPARATUS.

(Application filed Oct. 31, 1901.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

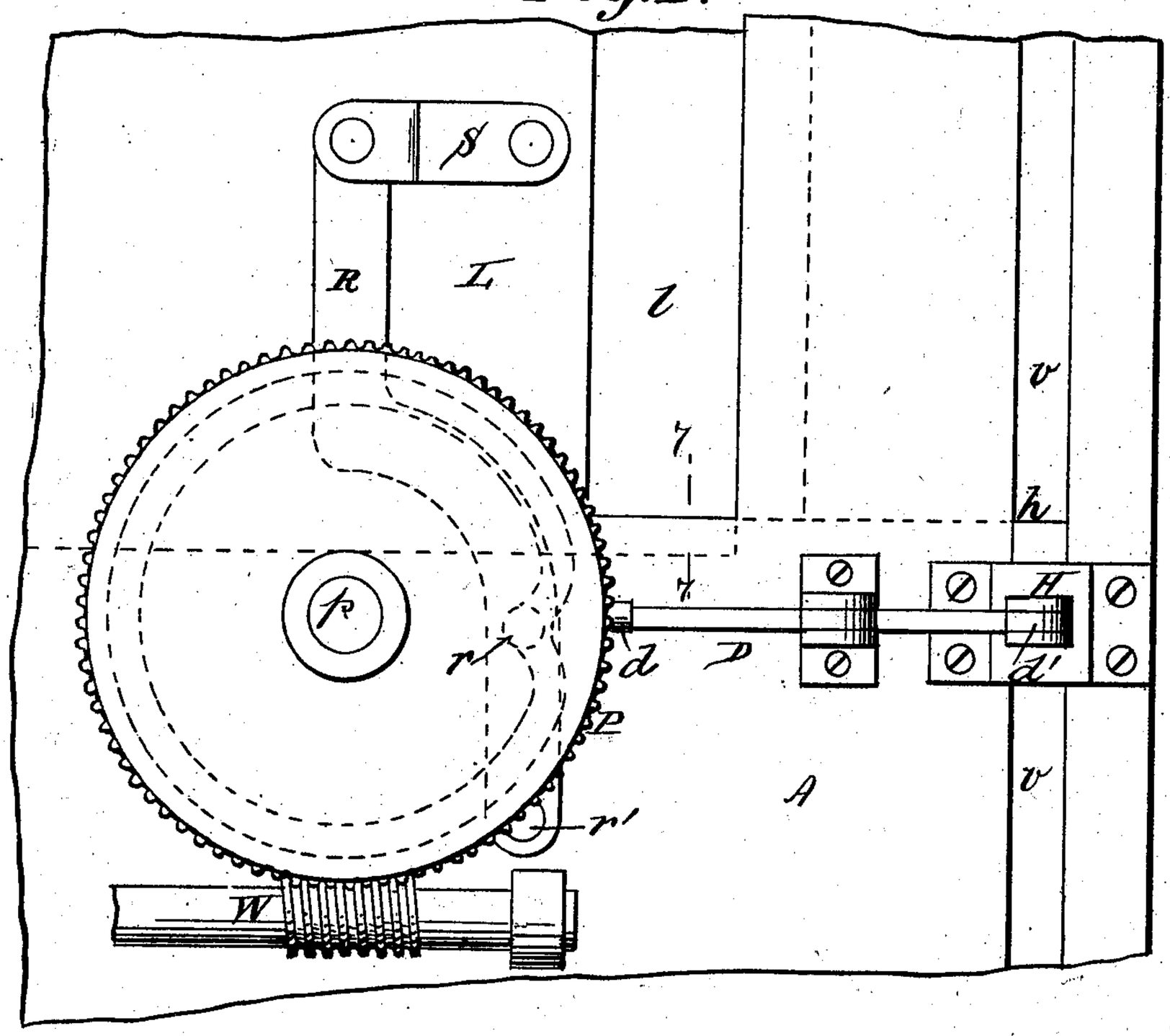


Fig. 2.

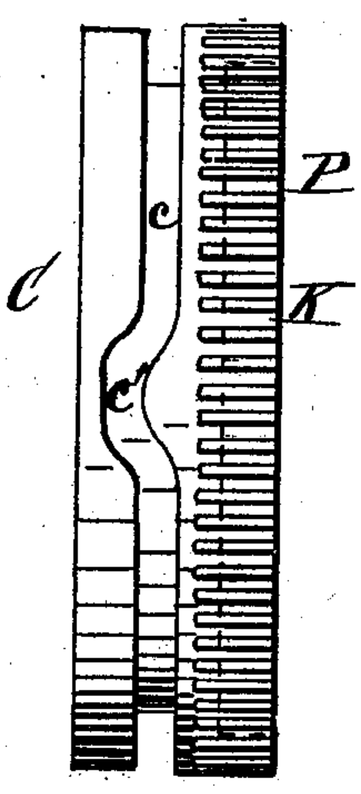
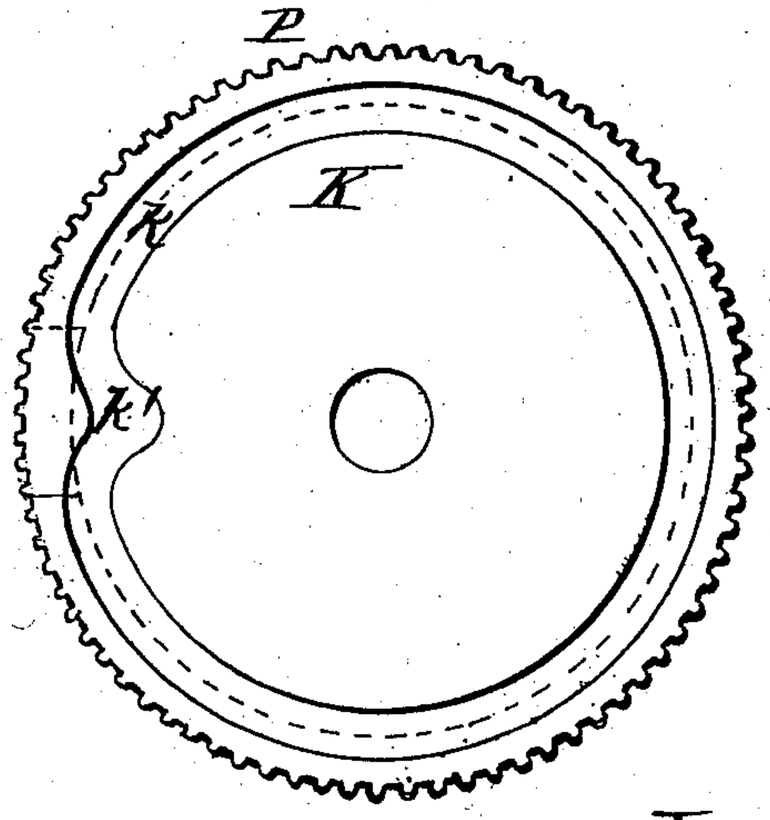


Fig. 3.



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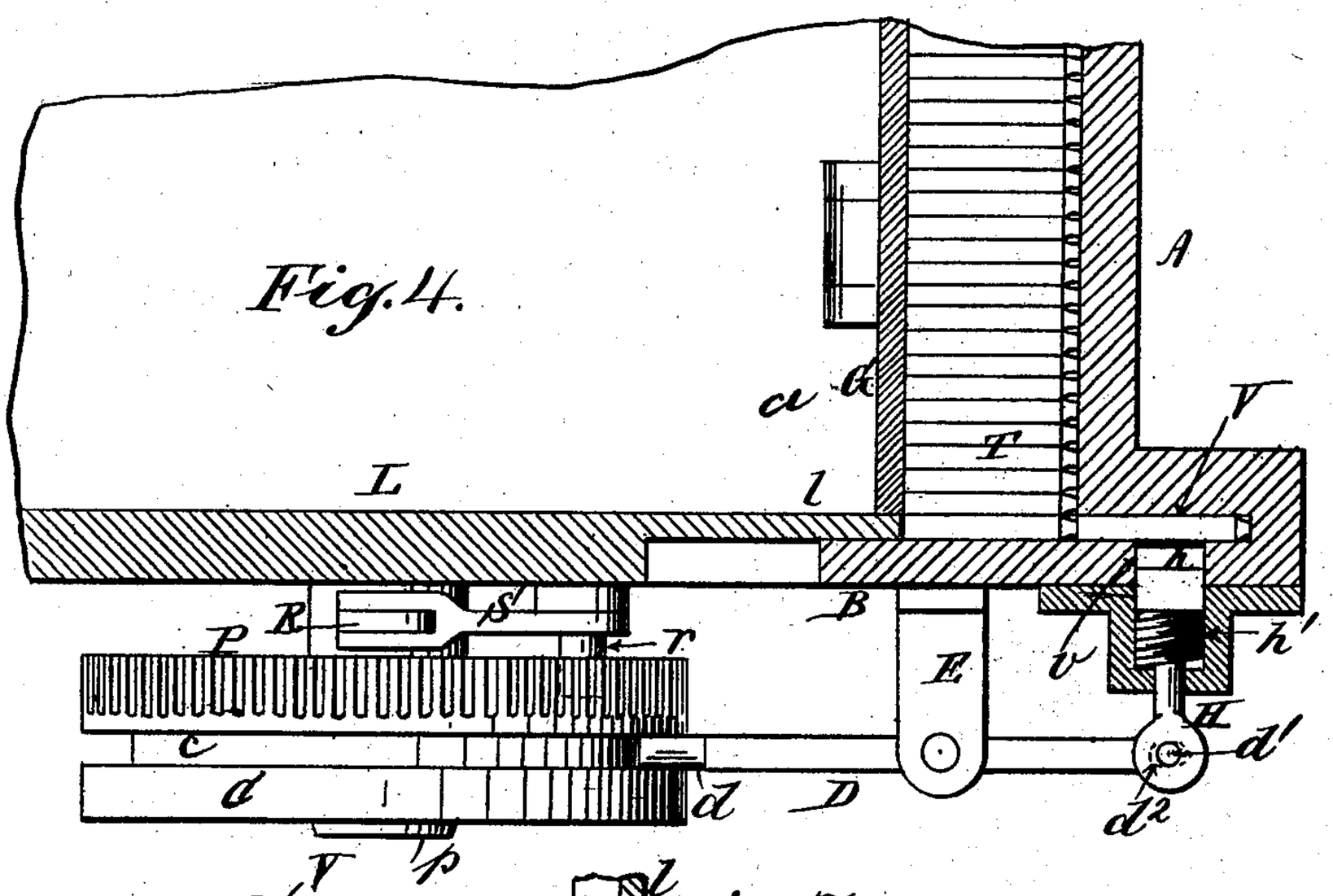
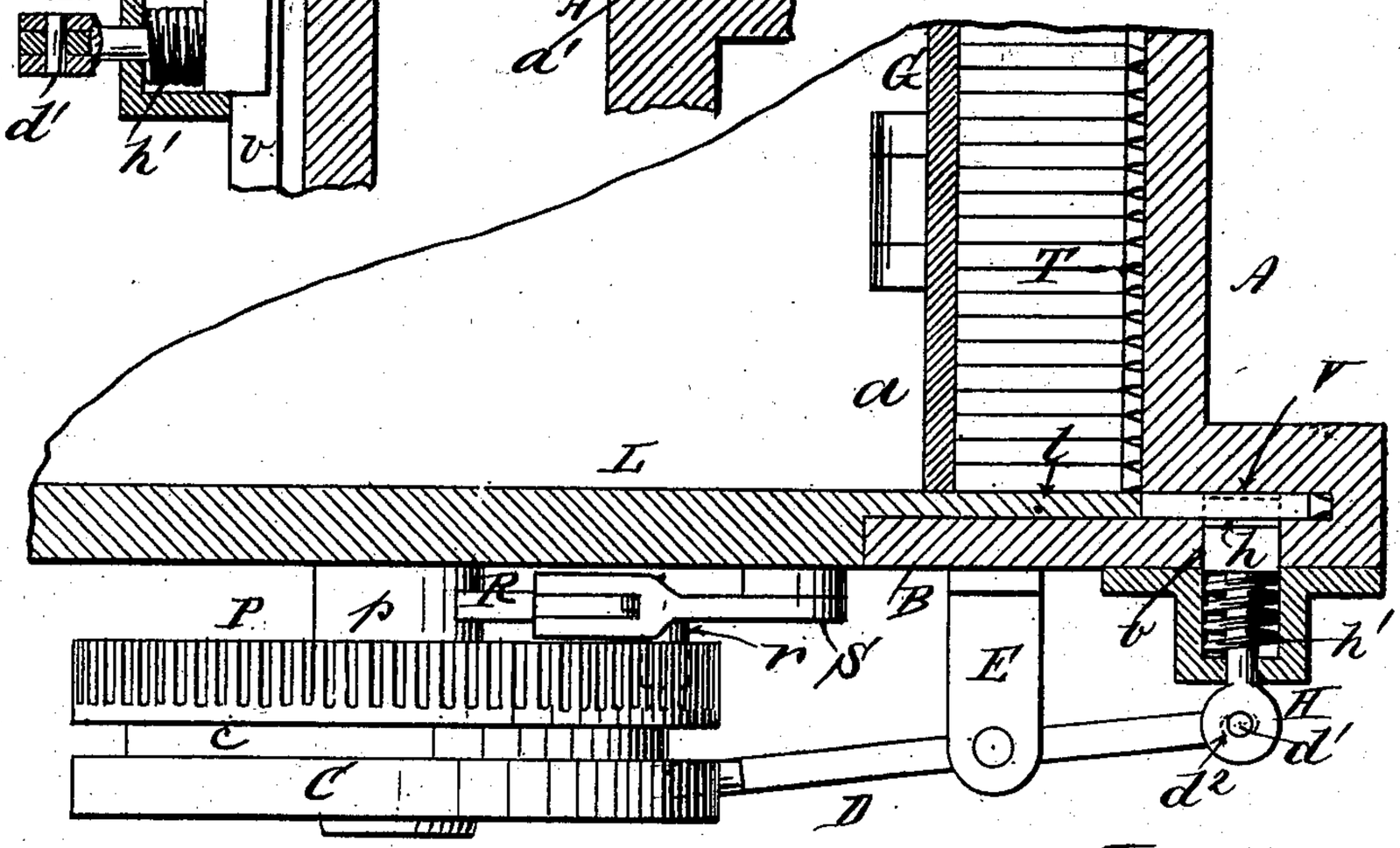


Fig. 4.

Fig. 6.

Fig. 7.

Fig. 5.



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UNITED STATES PATENT OFFICE.

JAMES BREAKEY, OF BROOKLYN, NEW YORK.

TYPE-DISTRIBUTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 702,621, dated June 17, 1902.

Application filed October 31, 1901. Serial No. 80,716. (No model.)

To all whom it may concern:

Be it known that I, JAMES BREAKEY, a citizen of the United States, residing in the city of New York, borough of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Type-Distributing Apparatus, of which the following is a specification sufficient to enable others skilled in the art to which the invention appertains to make and use the same.

My improvements relate to the class of type-distributing apparatus known as the "Alden;" and it consists in the special construction and arrangement of parts hereinafter described and claimed specifically, whereby the lines of the page of type are successively forwarded into the distributing-channel to be conducted to the feelers and transferring devices.

This invention is an improvement upon the structure disclosed in concurrent application No. 73,269, filed August 26, 1901, and is designed to obviate an objection to said prior structure, in which the lines of type forwarded into the distributer-channel are apt to tilt over and lose their proper alinement horizontally if the preceding line of type has receded much below the floor of the galley.

My invention consists in means employed for affording a temporary support to the line of type being forwarded until the line is completely within the distributer-channel, as hereinafter set forth.

In the accompanying drawings, Figure 1 is a front elevation of that portion of the distributing apparatus to which my improved device is applied. Fig. 2 is an edge view of the cam and gear used; Fig. 3, a view of the inner side of the same. Fig. 4 is a sectional elevation upon a horizontal plane showing the type-line forwarder and the temporary line-support retracted. Fig. 5 is a similar view showing the type-line forwarder and the temporary type-line support advanced. Fig. 6 is a vertical sectional detail showing the temporary line-support; Fig. 7, a sectional detail on plane of line 7 7, Fig. 1.

In the drawings, A represents the stationary framework of the distributer, in which is formed the vertical type-channel V, into which the types are introduced and by which they are conducted to the usual type feeling and distributing mechanism. The framework A is formed with the vertical slot *v* to give access to and expose the types within the channel V.

The type to be fed to the channel V are supported either directly upon the shelf *a* of the frame A or upon the galley G, pivotally connected to the said shelf *a*. Adjoining the vertical slot *v* is the abutment B, against which the types T in the galley G are advanced by any well-known mechanical expedient. The lines of type as they rest respectively against the abutment B are forwarded automatically and periodically into the distributer-channel V by the line-forwarder L. This line-forwarder L is formed with the vertical tongue *l* and is supported upon the frame A by any convenient means.

In the drawings the tongue L′ is formed on the under side of the line-forwarder L and fits into the horizontal groove *a*′, by which means the alinement of the forwarder L is maintained.

An intermittent reciprocatory movement is imparted to the line-forwarder L by means of the cam K, acting upon the stud *r* of the rocker-arm R, which is pivotally connected to the frame A at *r*′, and the upper end of which rocker is pivotally connected with the line-forwarder by means of a link S. The groove *k* of the cam K is concentric for the greater portion of its extent, there being only one eccentric portion *k*′, by which the stud *r* is thrown back to rock the lever R and retract the line-forwarder L into the position shown in Figs. 1 and 4, so as to admit of the advance of a fresh line of type against the abutment B, the return of the stud *r* to the concentric portion of the groove acting to throw the line-pusher into its normal position and to thereby transfer the line of type into the distributer-channel V.

The cam K is formed directly in the inner face of the cog-wheel P, mounted and rotating upon the stud *p*, projecting from the face of the frame A. The cog-wheel P is rotated continuously by a worm W.

Attached to or forming a part of the cog-wheel P is the peripheral cam C, formed with the cam-groove *c*, having the operative lateral deviation *c*′. In this groove *c* rests the inner end *d* of the rock-lever D, pivotally support-

ed upon the bracket E or any stationary portion of the apparatus. To the opposite end d' of the lever D is pivotally connected the spring-plunger H, carrying the type-support h, the end d' of the lever D being formed with the slot d^2 to accommodate the motion between the parts. This temporary type-floor h may obviously be formed and operated in various ways without departing from the spirit and intent of my invention, which consists, essentially, in projecting a temporary type-support into the vertical distributer-channel V simultaneously with the advance of the type-forwarder L, so that the lower end of the advancing line of type is afforded horizontal support until said line is entirely within the vertical channel V, when the temporary support is withdrawn and the line of type allowed to descend upon the upper end of the preceding line of type. As shown in the accompanying drawings, the type-support h is thrust into the channel by a spring h' whenever the end d of the lever D enters the lateral projection c' of the peripheral cam C. By thus supporting the advancing line of type horizontally and entirely within the vertical channel V, I avoid all tendency of the types to tip or tilt over as they leave the floor of the galley, and thereby insure perfect alinement and their registration with the type-feeling mechanism.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a device for forwarding lines of type, the combination of the vertical type-channel V, the abutment B, the reciprocating line-forwarder L, the rotatable wheel P, the driving-worm W, cam K, the rocker R, the link S, and means for temporarily supporting a line of type while it is being forwarded into the said vertical type-channel V, substantially in the manner and for the purpose set forth.

2. In a device for forwarding lines of type, the combination of the vertical type-channel V, the abutment B, the reciprocating line-forwarder L, the rotatable wheel P, the driving-worm W, the cam K, the rocker R, link S, the peripheral cam C, formed with the type-support h, the whole arranged and operating substantially in the manner and for the purpose described.

3. In a device for forwarding lines of type, the combination of the vertical type-channel V, the abutment B, the reciprocating line-forwarder L, the rotatable wheel P, the driving-worm W, the cam K, the rocker R, link S, the peripheral cam C, formed with the grooves c, c', the lever D, and the spring-plunger H, formed with the type-support h, the whole arranged and operating substantially in the manner set forth.

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Witnesses:
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