

L. K. JOHNSON.

CARRIER FOR TYPE DISTRIBUTING MACHINES.

No. 535,111.

Patented Mar. 5, 1895.

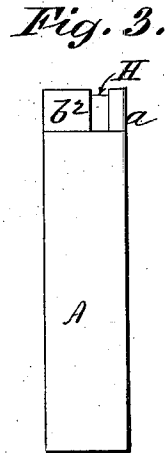
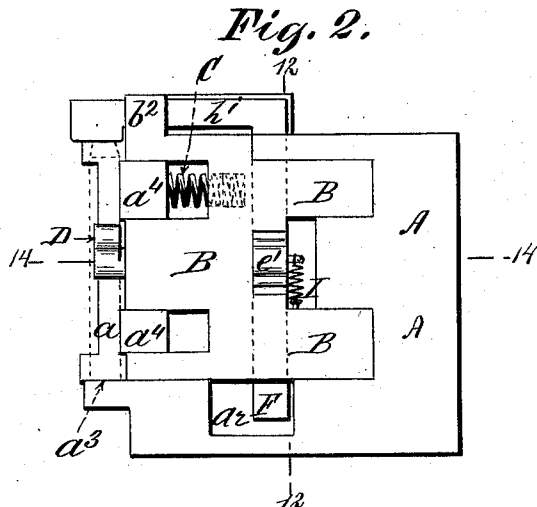
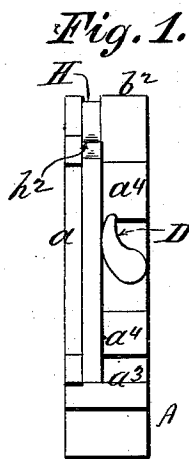


Fig. 4.

Fig. 5.

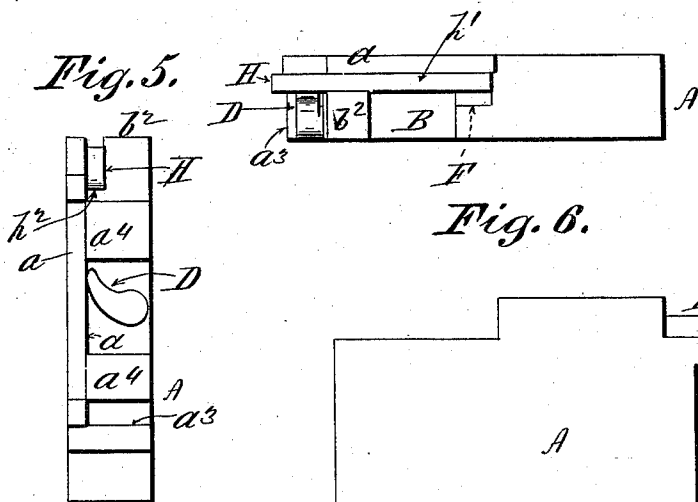
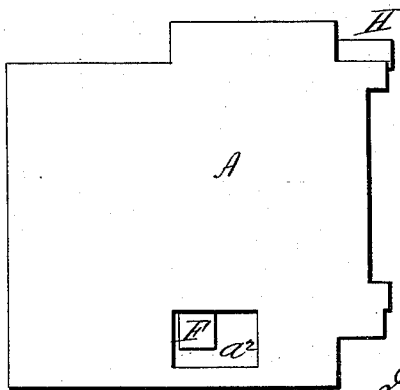


Fig. 6.



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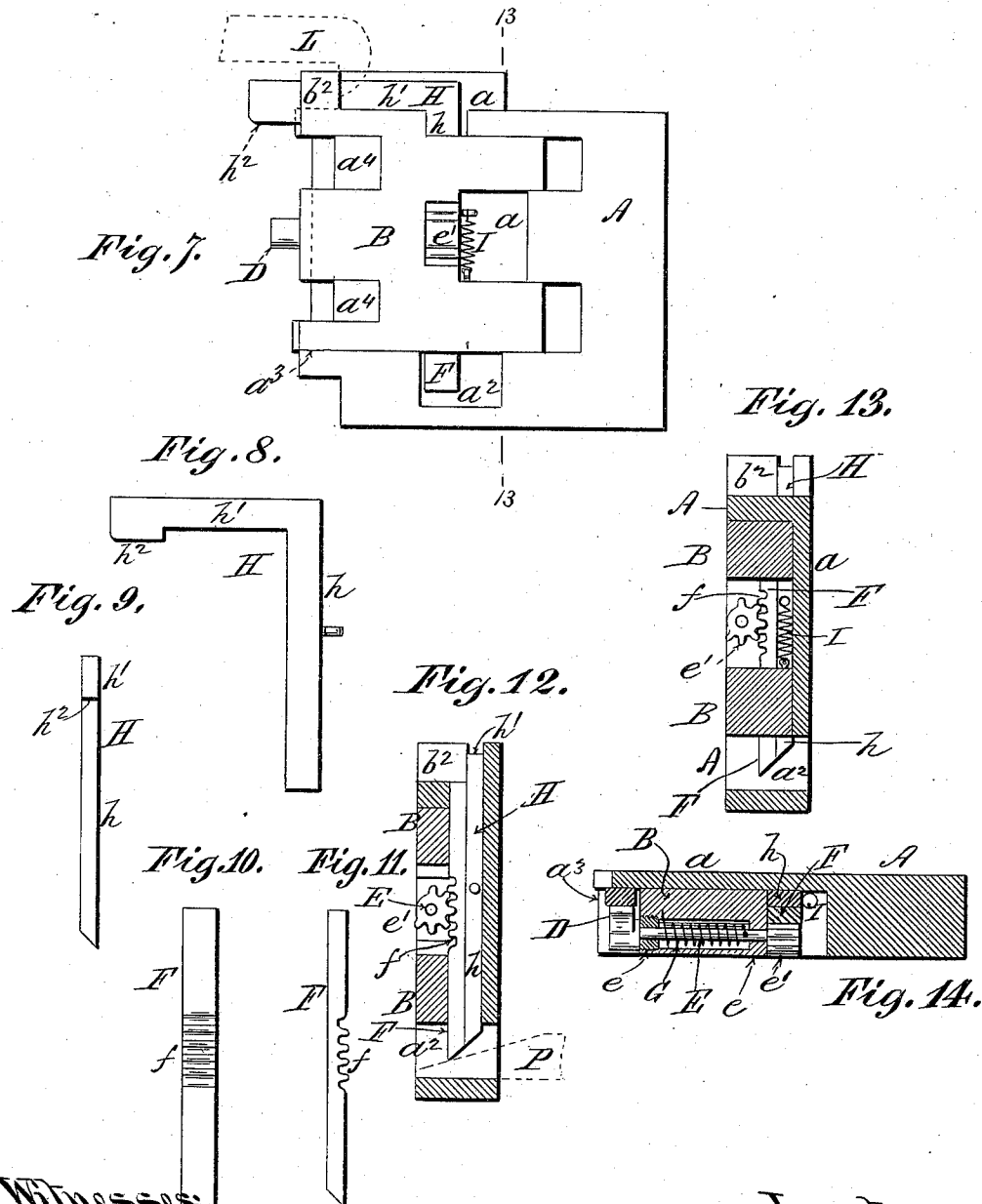
By his Attorney

George William Smith

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Fig. 15.

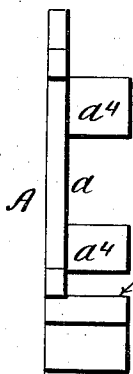


Fig. 16.

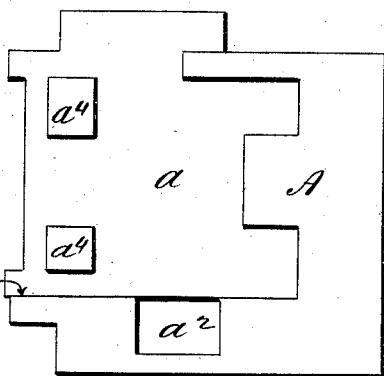


Fig. 17.

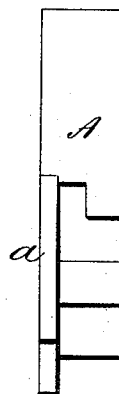


Fig. 18.

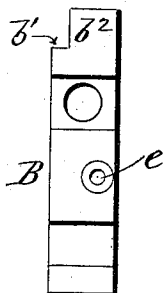


Fig. 19.

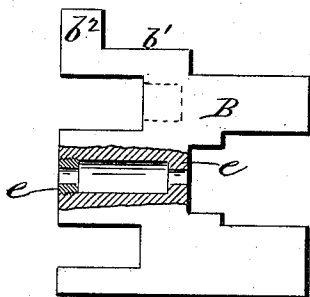


Fig. 20.

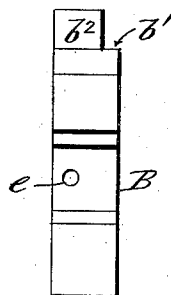


Fig. 21.

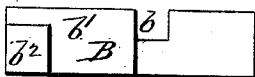
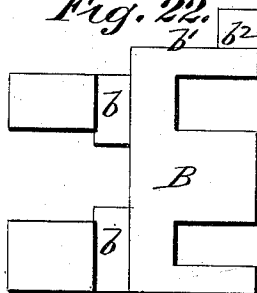


Fig. 22.



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UNITED STATES PATENT OFFICE.

LOUIS K. JOHNSON, OF BROOKLYN, NEW YORK.

CARRIER FOR TYPE-DISTRIBUTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 535,111, dated March 5, 1895.

Application filed October 18, 1894. Serial No. 526,237. (No model.)

To all whom it may concern:

Be it known that I, LOUIS K. JOHNSON, a citizen of the United States, residing in the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Carriers for Type-Distributing Machines, 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 type carriers which receive, hold, and convey the type until removed by suitable type selecting mechanism, of the class set forth in my Patent No. 224,721, dated July 19, 1881.

In the practical operation of type distributing mechanism employing the carrier referred to it has proven extremely difficult to prevent the type rising in the carrier, owing to the jar of the machinery, the type being held in the carrier by means of a spring so that they are very apt to rise in the carrier during the successive impulses which the latter receives in its journey through the machine.

My improvement is designed to afford positive means on the carrier itself whereby the type shall be prevented from rising and shall be held firmly in the carrier with their feet resting against the frame.

An important feature of my invention consists in so constructing and arranging the type holding devices that the latter act automatically not only to grasp and hold the type as distributed into the carrier but also to positively eject the type into their proper channels. The types have heretofore been held in their holders by a spring clutch, acting laterally against the broad side of the type, but this has not prevented their working upward so that their nicks have not been presented squarely to the feelers, preventing ejection at the proper channel and throwing them into pi at the end of the line.

The first feature of my invention consists in the use of a side clamp for the type which tends constantly to press the type downward against the floor of the carrier as well as laterally against the side wall of the latter.

The second feature of the invention con-

sists in a spring clamp which presses down upon the face of the type and prevents the possibility of displacement longitudinally under the jar of the machine, holding the type so that the nicks therein are properly presented to the feelers.

Both features of construction act in conjunction to effect the desired result; that is, a positive downward thrust is imparted to the type to insure its entrance into the proper channel when the ejector is drawn forward by the drop hook controlled by the feeling mechanism. The two clamps herein described may however be used independently of each other and in combination with other means for holding the type in the carrier.

In the accompanying drawings, Figure 1, is a front elevation of my improved carrier with a type in position, the scale being enlarged, as it is in all the figures, to more clearly illustrate the invention. Fig. 2, is an elevation of the right hand side of the carrier, the type being shown in dotted lines. Fig. 3, is a rear view of the carrier; Fig. 4, a top view of the same; Fig. 5, a front view of the carrier without the type; Fig. 6, an elevation of the left hand side of the carrier; Fig. 7, an elevation of the right hand side of the carrier showing the ejector drawn forward by the drop hook which is indicated by dotted lines. Fig. 8, is a side view of the face clamp; Fig. 9, a front view thereof. Fig. 10, is a side view of the rack bar by which the spindle of the side clamp is rotated to raise or open the clamp to admit the type. Fig. 11, is an edge view of the same. Fig. 12, is a vertical section upon plane of line 12, 12, Fig. 2; Fig. 13, a sectional view upon plane of line 13, 13, Fig. 7; Fig. 14, a sectional elevation upon plane of line 14, 14, Fig. 2. Fig. 15, is a front view of the carrier body, without the ejector; Fig. 16, a side elevation; and Fig. 17, a top view thereof. Fig. 18, is a front view of the ejector. Fig. 19, is a side view of the ejector partially in section; to show the chamber, &c., for the spindle of the side clamp. Fig. 20, is a rear view of the carrier; Fig. 21, a top view, and Fig. 22, an elevation of the left hand side of the ejector.

In general construction and arrangement the body of the carrier A, and the ejector B, are the same as shown in the patent hereinbefore referred to, and in common use in distributors of this class. A spring C, tends constantly to hold the ejector B, backward into its retracted position in the frame A. The side clamp D, consists of a cam shaped arm or whipper mounted upon the front end of the spindle E, resting in the bearings *e, e*, to the inner end of which spindle is connected a toothed segment *e'*, which engages with the teeth *f*, in the vertical rack F. A coil spring G, encircles the spindle E, being secured thereto at one extremity and to the ejector at the other extremity so that it tends constantly to rotate the spindle from right to left.

The rack F, rests against vertical member *h*, of the face clamp H, both the rack F, and said vertical member *h*, occupying the grooves *b, b*, formed in the left hand side of the ejector B. They are retained in these grooves *b, b*, by the left hand side wall *a*, of the carrier frame A. A horizontal member *h'*, connects the face bearing *h*², with the vertical member *h*, of the face clamp H. A spring I, secured to the vertical member *h*, at one extremity and to the carrier at the other tends constantly to draw the clamp H, downward until its vertical member *h'*, rests upon the shoulder *b'*, of the carrier B.

It is obvious that the arrangement of the springs G and I, may be varied if desired without departing from the spirit of my invention.

In practical operation, when the carrier succeeds to the position at which the types are fed to the carriers a tapered plunger P, projects into the recess *a*², extending through the lower portion of the carrier body A, forcing upward both the rack F, and the vertical member *h*, of the top clamp H. As a result the rack, acting through the segment *e'*, causes the spindle E, to make a partial rotation, throwing the side clamp arm D, to the right, away from the left hand side wall *a*, of the carrier frame A. The face *h*², of the clamp H, is also elevated sufficiently to permit of the feeding of the type into position with its heel resting upon the floor *a*³, and its rearedge against the shoulders *a*⁴, forming part of the carrier body A. As the plunger P, recedes from the passage *a*², in the holder A, the spring I, draws the bearing surface *h*², down against the face of the type, while the spring G, acting through the spindle E, presses the arm D, against the side of the type and forces the latter against the front end of the side wall *a*, of the carrier body A. With the parts in this position the carrier is advanced intermittently step by step until it comes opposite the feeling mechanism, in which the feelers coincide in position with the nicks in the type, when the drop hook L, falls behind the shoulder *b*², on the top of the ejector and the latter is drawn forward against the resist-

ance of a spring C. As the ejector B, forces the type forward the face clamp H, and the side clamp D, still exert their pressure against it so that as the type clears the front edge of the side wall *a*, and the floor *a*³, it is forced downward by the clamp H, and laterally toward the left by the clamp D, and positively thrown into the appropriate channel the mouth of which opens mainly on the left hand side of the carrier.

It will be noticed that the two clamps are independent in their action so that one cannot interfere with or retard the action of the other. The partial rotation of the side clamp D, upon its spindle tends to throw the type down as well as out laterally, and in this action it is supplemented by the face clamp which not only insures the proper alignment of the type while in the carrier but also imparts a downward thrust to the type as its heel clears the floor *a*³.

In the old style of type carrier the types were apt to stick and hang to the carrier owing to the presence of electrotpe wax, ink, &c., interfering with their proper presentation to the feeling mechanism and also retarding or preventing their ejection from the carrier. In my improved carrier this is impossible.

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

1. A type carrier provided with a side clamp for the type together with means for partially rotating the said side clamp substantially in the manner and for the purpose described.

2. A type carrier provided with a side clamp for the type, said clamp being attached to a spindle which tends constantly to rotate the clamp arm downward by reason of spring pressure, substantially in the manner and for the purpose described.

3. A type carrier provided with a side clamp consisting of a radial arm attached to a spindle, said spindle pressed continuously in one direction by a spring and formed with a toothed segment, and a rack for rotating said toothed segment, spindle, and clamp arm against the resistance of a spring, substantially in the manner and for the purpose described.

4. A type carrier provided with a clamp for the face of the type against which it is held by spring pressure, substantially in the manner and for the purpose described.

5. In a type carrier the combination of a face clamp for holding the type down by an elastic pressure, and a side clamp together with means for partially rotating the same, substantially in the manner and for the purpose described.

6. The combination of the ejector B, formed with the grooves *b*, the carrier body A, and the side wall *a*, and the clamp H, having the bearing *h*², horizontal member *h'*, and vertical member *h*, and spring I, by which it is secured to the ejector B.

7. The combination of the carrier frame A, ejector B, formed with the bearings *e, e*, spindle E, having the lateral clamp arm D, and toothed segment *e'*, spring G, attached to the
5 spindle at one extremity and to the ejector B, at the other, and the rack F, for rotating the spindle against the resistance of the spring G, substantially in the manner and for the purpose described.

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Witnesses:

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