W. A. LORENZ & C. D. HUGHES.

DISTRIBUTER TYPE-CARRIERS.

No. 194,524. Patented Aug. 28, 1877.

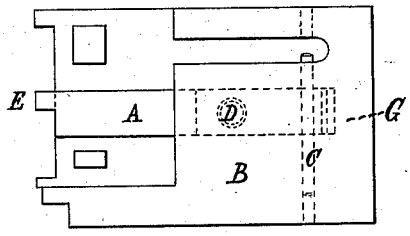

Fig. I.

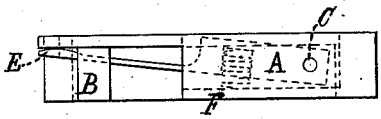

Fig. II.

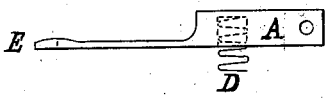

Fig. III.

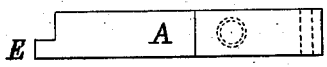

Fig. IV.

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by
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UNITED STATES PATENT OFFICE.

WILLIAM A. LORENZ AND CHARLES D. HUGHES, OF BROOKLYN, NEW YORK, ASSIGNORS TO SAMUEL W. GREEN, OF SAME PLACE.

IMPROVEMENT IN DISTRIBUTER TYPE-CARRIERS.

Specification forming part of Letters Patent No. **194,524**, dated August 28, 1877; application filed January 29, 1877.

To all whom it may concern:

Be it known that we, WILLIAM A. LORENZ and CHARLES D. HUGHES, both of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Distributer Type-Carriers, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

This invention relates to an improvement in type-carriers. The office of these carriers, in the various type-distributing machines in which they are used, is to seize and hold a type till it is removed therefrom by an ejector.

In the machine invented by C. W. Dickinson and W. A. Lorenz, to the carriers of which this improvement is particularly applicable, the type-carriers are moved, step by step, along a way, resting at each step; and while at rest, subjected to the contact of feelers against the exposed edges of the type in the carriers. These feelers select each its own type from the carriers as they successively pass, and the carriers must rest at each step in the proper position with reference to the feelers; and any variation to the left or right may endanger the proper working of the feelers. The carriers are forced along the way, side against side, by pressure applied at one end of the row, the thickness of the carriers determining the place at which they stop or rest after each step or impulse of the machine. Obviously, if these carriers, or any of them, diminish in width by use, to that extent they will fail to correspond with the feelers. The type is held against the side of these carriers by means of a clutch pivoted at the rear end of the carrier, and held against the type when in the carrier, and against the frame of the carrier, in the absence of a type, by means of a spring, which spring must have sufficient tension to hold the type firmly in position, must be as enduring as possible, and must likewise have all the attainable scope.

In the carriers heretofore used the clutch has been held against the type by a flat spring running longitudinally along the carrier. As that spring must hold any thickness of type used in the distributer, it must necessarily be made of considerable width and thickness, and its fast end has to be let into and secured in the rear end of the carrier, thus materially lessening the bearing-surface of the carrier. Difficulty has attended the use of this form of spring, both from its liability to fracture, and more especially from the tendency of the carriers in use to become thinner under constant pressure, chiefly from the lack of sufficient bearing-surface. It is evident, when a flat spring is used bearing against the outer surface of the clutch, that the side of the carrier must be left open to allow the fastening of the end of the spring to the carrier, and also to allow of the passage of the spring through the side of the frame, so as to obtain the greatest arc of vibration of the clutch with the least width of the carrier.

By this invention a carrier can be constructed with a clutch narrower and thicker than before, and with a thicker point, while at the same time the carrier is left with a greater bearing-surface. These advantages are obtained by the use of a spiral spring acting upon the clutch, and from the new construction of the carrier, as will be seen from the drawing.

Figure I is a general view of our invention applied to a carrier, without the ejector. Fig. II is a top view of the same, showing more perfectly the position of the spiral spring. Figs. III and IV are views of the clutch and spiral spring.

B is the body or frame of the carrier, having the clutch A swinging upon the pivot C. This clutch is acted upon by the spiral spring D, which is let into a recess in the clutch A, and which causes a continuous pressure of its end or finger E against the side of the carrier or the type when in position.

By the use of this spiral spring, as thus shown, the cutting away of the carrier side, which was formerly necessary to allow the fastening and passage of the flat spring, is avoided, and, at the same time, a cheaper, surer, and better wearing article is made. The side at G of the carrier B, opposite the rear end of the clutch A, which was formerly necessarily open to admit and secure the fast end of the flat spring, is now left solid, so that our invention leaves nearly twice the bearing-

surface to the carrier which was before possible.

The spiral spring D is let into a recess in the clutch, which we mark F. The outer end of the spring D bears against the frame of the carrier, and its inner end bears against the bottom of the recess F in the clutch A. This spring has, therefore, two opposing bearing-points, which arrangement allows of the closure of the side of the frame.

What we claim as our invention is—

The combination of the carrier-frame B, the vibrating-clutch A, the recess F, and spiral spring D, by means of which greater scope of spring and increased bearing-surface of the side of the carrier are obtained, substantially as described.

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