4 Sheets—Sheet 1.

D. REYNOLDS.

TYPE-DISTRIBUTING MACHINE.

No. 192,281. Patented June 19, 1877.

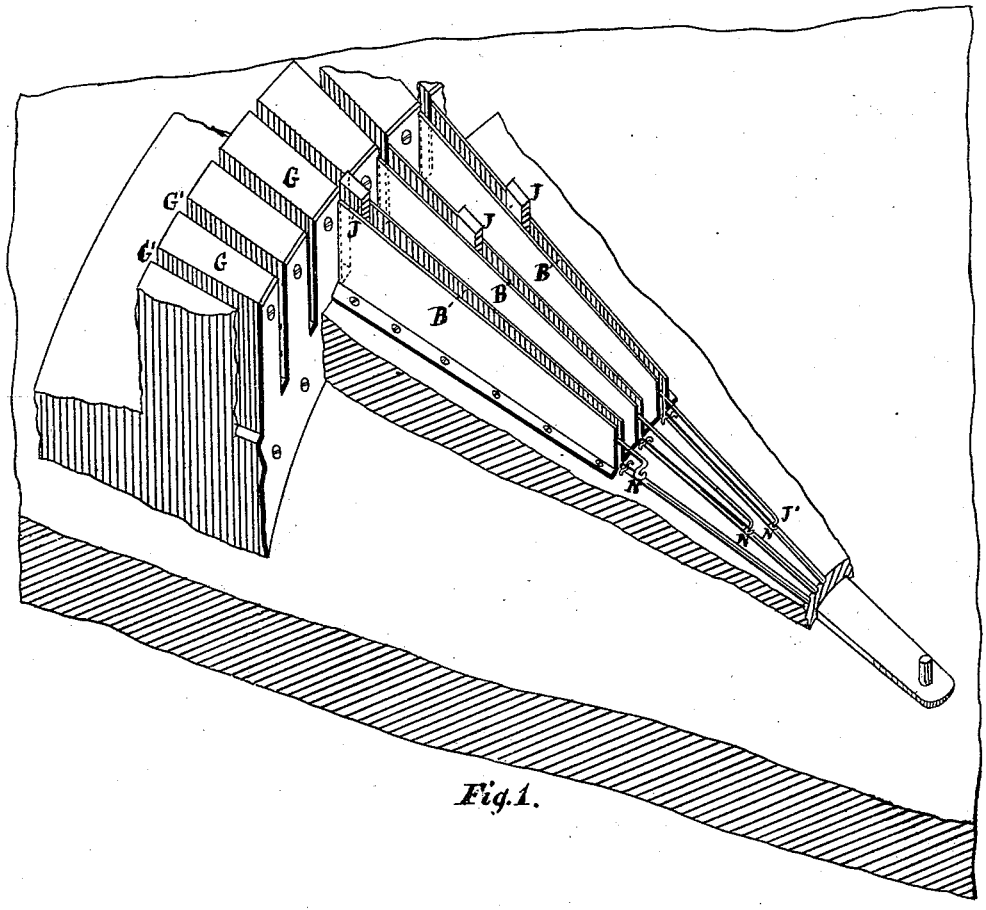

Fig. 1.

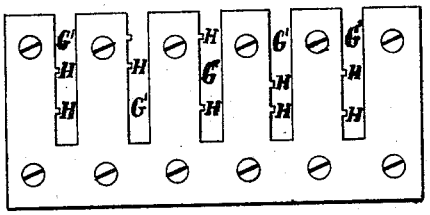

Fig. 2.

Witnesses { Chas. J. Beerwick
Geo. A. Thompson.

Dexter Reynolds.
Inventor.

4 Sheets—Sheet 2.

D. REYNOLDS.

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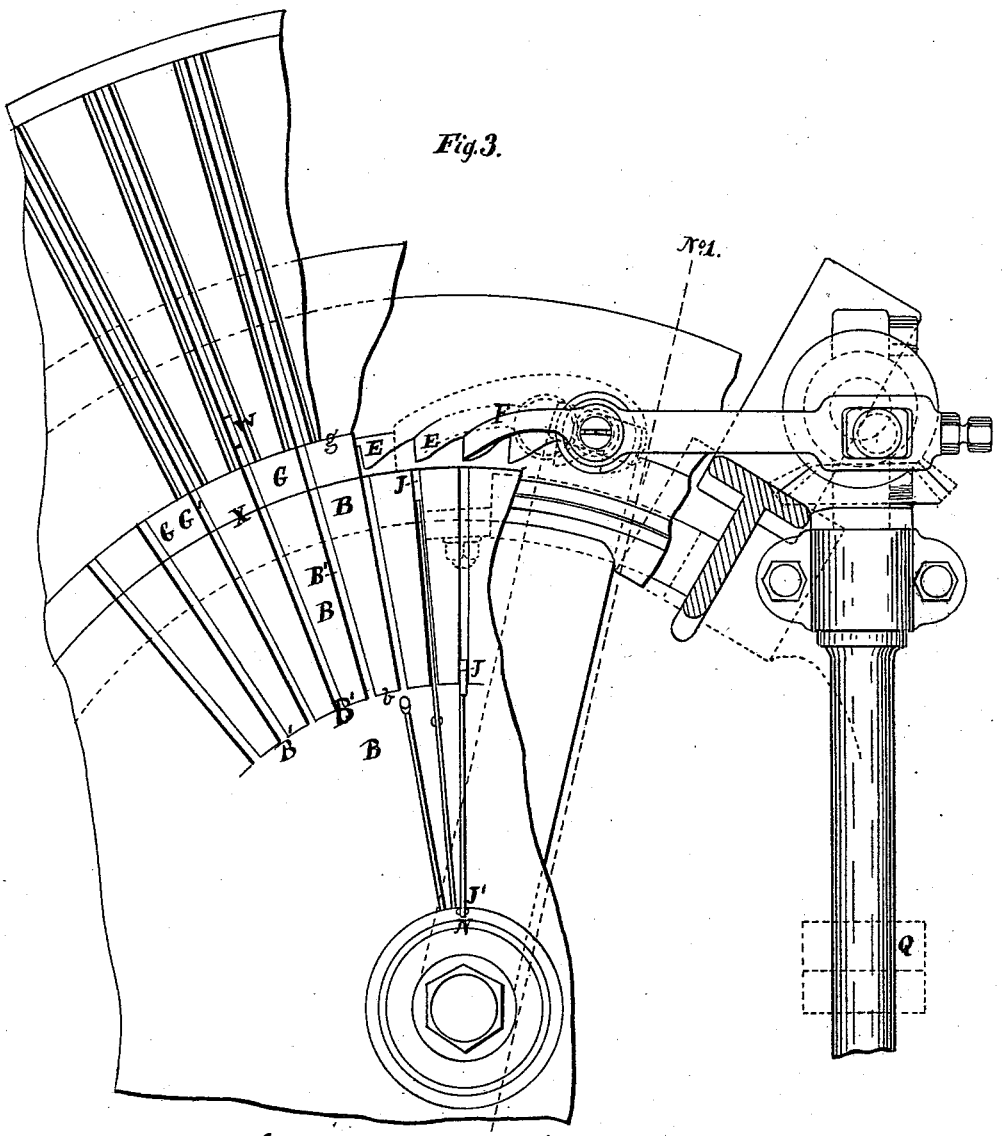
Fig. 3.



Witnesses.
Chas. J. Peckins
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4 Sheets—Sheet 3.

D. REYNOLDS.

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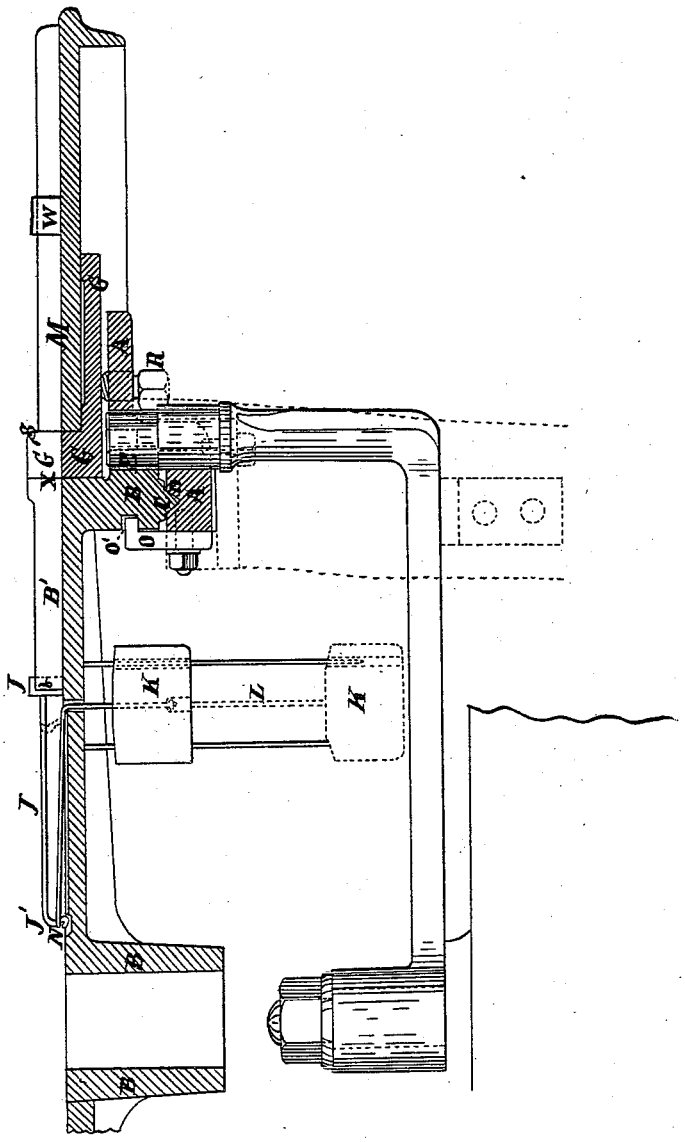

Fig. 4.

Witnesses:
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4 Sheets—Sheet 4.

D. REYNOLDS.

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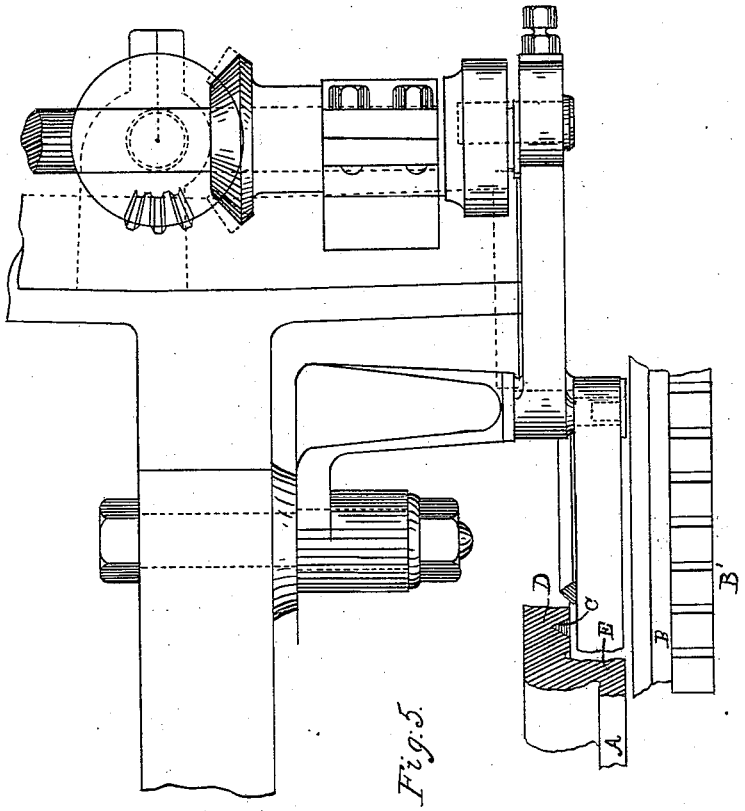

Fig. 5.

Witnesses.
Chas. J. Selkirk
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Dexter Reynolds.
Inventor.

UNITED STATES PATENT OFFICE.

DEXTER REYNOLDS, OF ALBANY, NEW YORK.

IMPROVEMENT IN TYPE-DISTRIBUTING MACHINES.

Specification forming part of Letters Patent No. **192,281**, dated June 19, 1877; application filed June 19, 1876.

To all whom it may concern:

Be it known that I, DEXTER REYNOLDS, of the city and county of Albany, and State of New York, have invented certain new and useful Improvements in Type-Distributing Machinery; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in four sheets, and to the letters of reference marked thereon, (wherein similar letters represent like parts,) making a part of this specification.

The nature of my invention relates to the automatic distribution of types provided with nicks for subsequent use in type-setting machines.

Figure I is a perspective view of some of the movable channels and stationary ones opposite thereto. Fig. II is a face view of the mouths of the stationary cells at the line X, Fig. III, showing the fixed pins thereon. Fig. III is a plan view of the machine embodying my improvements. Fig. IV is a sectional elevation taken at line No. 1, Fig. III. Fig. V is a side elevation of a section of the machine.

On a base, A, preferably of iron, and of circular form, with three legs, I place the circular plate B, supported and revoluble thereon by its V-shaped ring C in the groove D. This plate B has cut on its outer edge the ratchet E, into which engages the pawl F, which, actuated from the pulley Q by suitable intermediate mechanism, imparts a circular equal intermittent movement to the plate B, or such intermittent movement can be given to the plate B by any other known mechanical device. Also, on the base A, surrounding the plate B, I place the plate G, preferably resting on set-screws R, so as to be raised or lowered, and in the plates B and G, extending from *b* to *g*, I cut grooves or channels B′ G′, corresponding to the width of the side of the types of the font to be distributed, with a suitable allowance for their easy movement therethrough, the center lines of all the grooves radiating to the center of the plate B and the sides of the grooves being parallel thereto. At the dividing-line X, Fig. III, between the plates B and G, the depth of the groove is about the depth of the length of a type, and the bottoms of all the grooves being in the same plane, the types a short distance each side of such dividing-line will project above the groove, rendering more easy the placing of the types in B′ and their removal from G′. The grooves B′ and G′ are so cut as to match each other on each full separate movement of the plate B, caused by the action of the pawl F on the ratchet E. At the mouth of each channel G′, at the line X, I place one or more fixed pins, H, in different positions on each, as shown, Fig. II, for each different character to be distributed, and according to any plan on which the types to be distributed are nicked; but two pins on each channel G′, by the diversity of their positions, will be found sufficient for the distribution of all the characters desired. The channels G′ may be extended to any desirable length by cutting them through the plate M, supported on and fastened to G, as shown, Fig. IV. The channels B′ I make, preferably, about four inches in length, so as to hold a full line of types from any ordinary column or page, and in each I place the pusher J, actuated by the weight K, attached to the cord L, and each pusher can be drawn back and held at rest and inactive by its hooked end J′, resting in the notch N. The plates O, bolted to the base A, with lips O′ passing into a groove B in cut therefor, (shown in Fig. IV,) are designed to guard against the lifting of the plate B from any cause whatever. In each channel G′ I place the slugs W, (shown in Fig. IV,) against which the types can bank and be kept on their feet. Should, from carelessness or any cause, any types in the channel B′ not rest on their feet, they may be restored thereto before being presented to G′ by an inclined plate fastened to B, under which they must pass.

Having described the construction of my machine, I will now explain its operation.

The operator shoves back a pusher, J, until it is at rest, then lifting a line of types, from the column or page to be distributed, by the lead between it and the next line, (or, if the matter be solid, by the use of a temporary lead,) he places such line in front of the pusher and releases it, so as to act thereon, and repeats this operation until all the channels B′ are filled or the matter to be distributed is exhausted. Motion being communicated by the pulley Q, the plate B revolves with an intermittent

movement, and as each channel B′ comes to a channel, G′, it becomes coincident with it, and for a short period at rest, and the line of types in B′ being constantly pressed forward by the pusher J through the action of the weight K, it follows that when the nicks in the types at the end of the line, or any number of succeeding ones in the same line, correspond to the pins on the connecting coincident channel G′, there being nothing to resist their passage, they instantly pass over thereto, while if the pins and nicks do not agree no action takes place. As the revolution of the plate B need not be over about once a minute, its movement is so slow that the filling of the channels B′ can be done whether they are in motion or at rest.

The novelty of this machine consists in its simplicity and the peculiar construction and adjustment of its parts, whereby results can be had never before obtained, viz., the distribution from each channel B′ on each revolution of one or more different types into their several appropriate receptacles G′, or of several different types, as a word in Italics or small caps, into one channel, G′, or a number of the same types, as doublets or a line of quads, into one single channel, G′, and thence the distribution of a greatly-increased variety of characters with fewer channels and of a greater number of types in the same time at the same speed.

While I have hereinbefore described what I consider the most convenient and best form of construction for operation in my machine, I do not intend to be strictly confined thereto, for it may readily be seen that by a slight modification the operation of the machine could be reversed and the same results obtained. Thus, the pushers J could be removed from the channels B′ and placed in the channels G′, making them the feeding-channels, and the pins removed from G′ and similarly placed on B′, making the latter the receiving-channel—in this latter case the feeding-channels being stationary and the receiving-channels having an intermittent movement, the reverse of what has hereinbefore been described. Further, the channels B′ could be made stationary and the channels G provided with a ratchet, E, and actuated by a pawl, F. In other words, the operation will be the same whether the channels B′ are movable and G′ stationary, or the reverse, or whether channels B′ are provided with pushers and G′ with fixed pins, or the reverse, provided only the channels into which the lines of types are placed for distribution are provided with pushers, as described, and the channels into which the types are to be distributed into sorts are provided with fixed pins, as described, regardless of the fact whether the one or the other is stationary or movable.

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

A series of equidistant stationary channels, in combination with a series of equidistant coincident channels, provided with a ratchet, E, actuated by a pawl, F, or their mechanical equivalents, to give them an intermittent movement, so as to cause them to become seriatim and respectively coincident with the others, each of the channels of the series into which the types are to be distributed being provided with fixed pins, and each of the channels in the other series into which the types are to be placed for distribution constructed for and provided with pushers J, having a movement equal to the length of a line of types in any ordinary column or page, and actuated by a weight, K, attached to a cord, L, or their mechanical equivalents, substantially as described.

DEXTER REYNOLDS.

Witnesses:
CHAS. J. SELKIRK,
ALEX. SELKIRK.