(No Model.) 2 Sheets—Sheet 1.

D. REYNOLDS.

TYPE DISTRIBUTING MACHINERY.

No. 306,283. Patented Oct. 7, 1884.

Fig. 1.

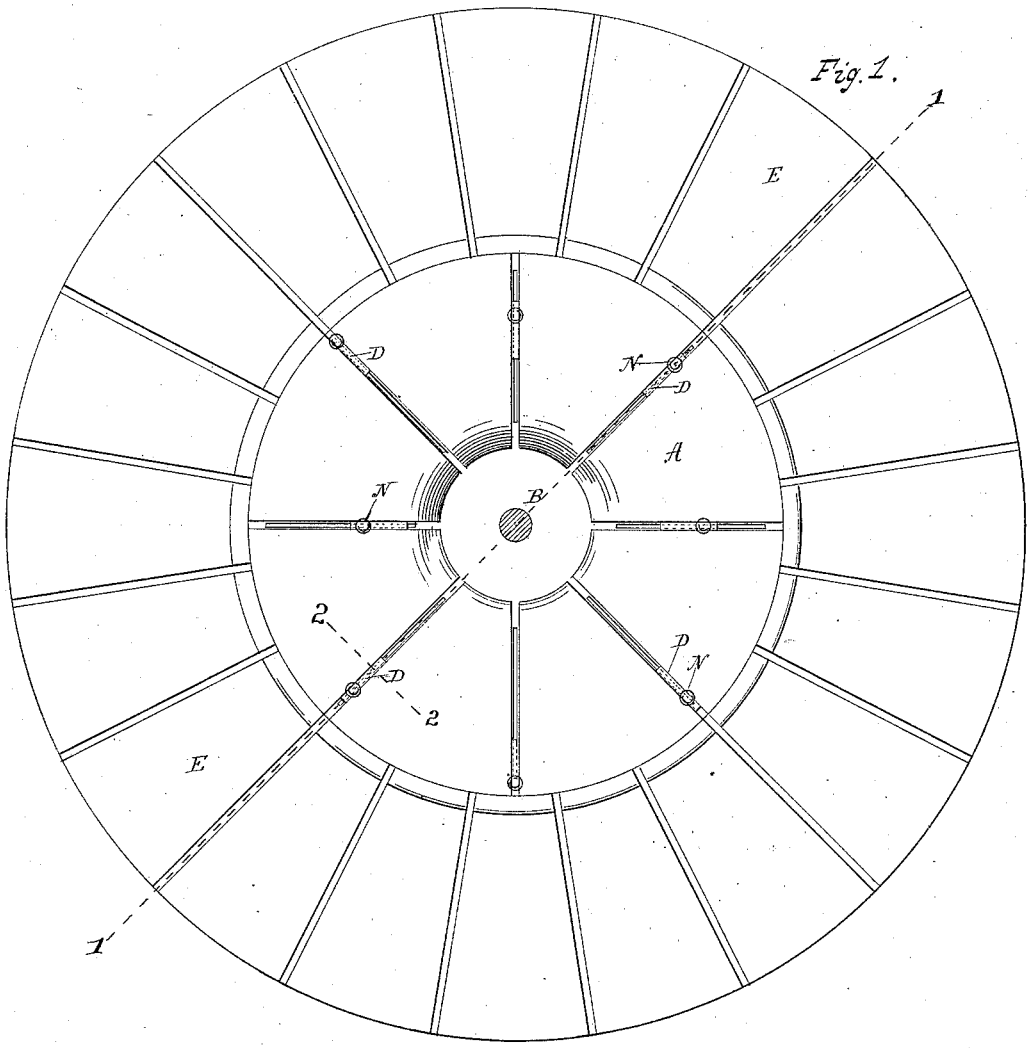


Fig. 3.

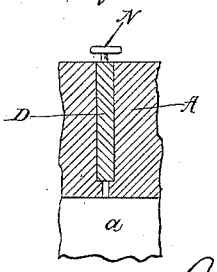
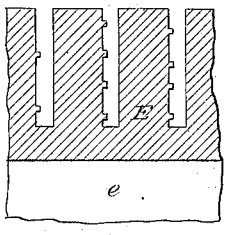


Fig. 4.



Witnesses.
Charles Seekink
Richard P. Dunnary

Dexter Reynolds
Inventor.
by his Attorney
Alex. Seekink

(No Model.) 2 Sheets—Sheet 2.

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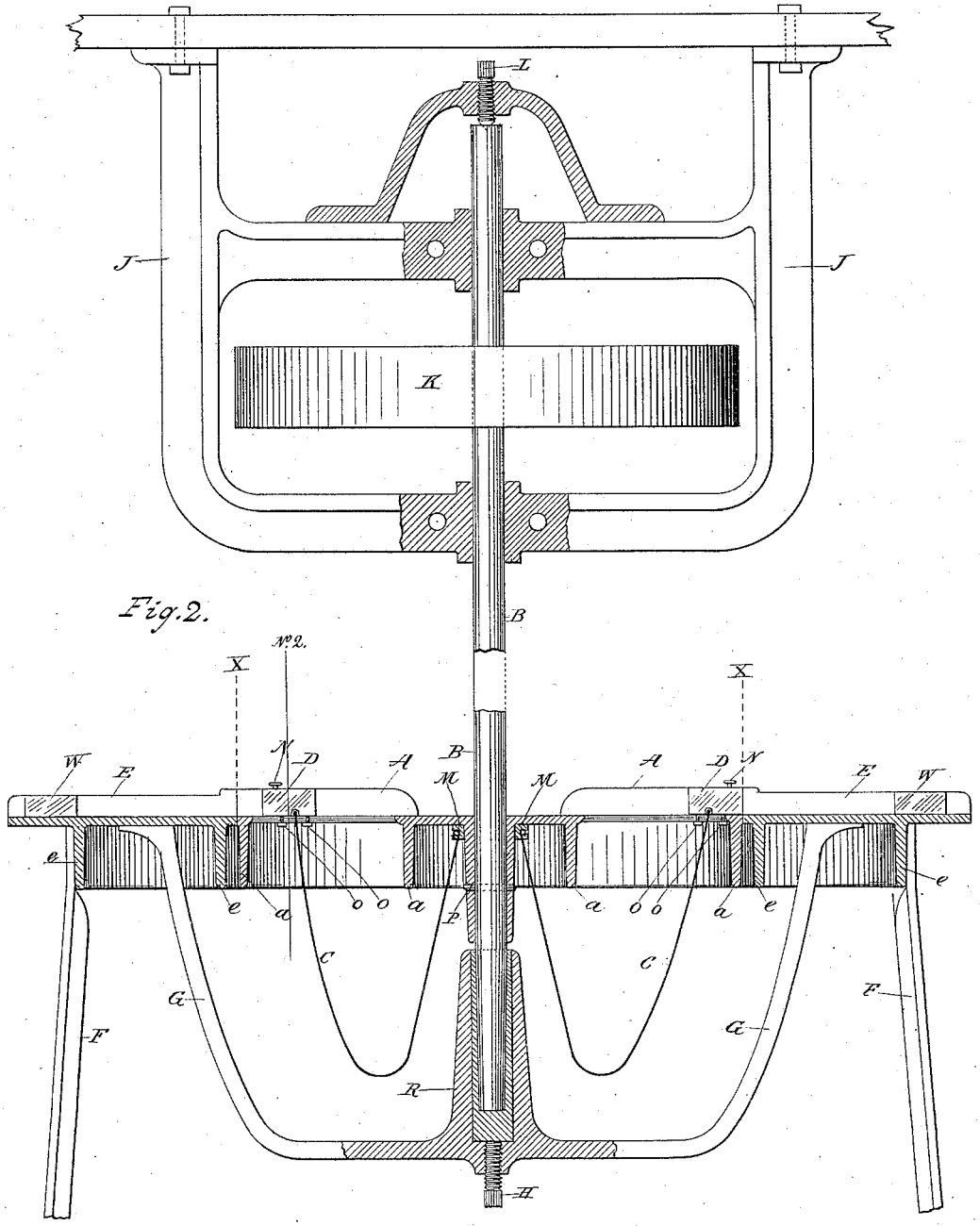

Fig. 2.

Witnesses:
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by his Attorney
Alex Sedgwick

UNITED STATES PATENT OFFICE.

DEXTER REYNOLDS, OF ALBANY, NEW YORK.

TYPE-DISTRIBUTING MACHINERY.

SPECIFICATION forming part of Letters Patent No. 306,283, dated October 7, 1884.

Application filed October 1, 1883. (No model.)

To all whom it may concern:

Be it known that I, DEXTER REYNOLDS, a citizen of the United States, and residing in the city and county of Albany, and State of New York, have invented certain new and useful Improvements in Type-Distributing Machinery, of which the following is a specification.

My invention relates to the automatic distribution of type (provided with nicks) for subsequent use in a type-setting machine, or otherwise.

The object of my invention is the construction of a machine for distributing type previously suitably nicked therefor, my machine having a series of channels or grooves constructed to receive in lines (instead of single letters at a time) the type intended for distribution, in combination with a series of channels provided at their entrance with fixed pins or wards to keep out those type not correspondingly nicked and to admit those that are. It is an improvement on my previous invention, for which Letters Patent were granted to me dated June 19, 1877, and numbered 192,281, and reissued under date of February 8, 1881, and numbered 9,560, and differs therefrom in these respects, that while in the former the channels in each series were required to be equidistant and very exact, and one series had to be adjusted and made to move and coincide with the other with a very exact and intermittent movement by means of an accurately-cut ratchet with a pawl, in this either series of channels can be cut without regard to the others, and any number in either, and at the same or any distance apart, and, dispensing with the ratchet and pawl and the intermittent movement, one series is simply continuously moved past the other. With the use of a ratchet and pawl there was of necessity more or less concussion at the inception of each movement, and a liability to jar the type over, so that they sometimes became nipped or blocked the machine. Dispensing with this mechanism seems, by the steadiness and quietness of the continuous movement, to have cured these defects. I attain these objects by the mechanism illustrated in the accompanying drawings, and hereinafter particularly described, which I deem the simplest and best, although I am not and do not intend to be confined thereto, as there are several modified constructions which will produce similar though not perhaps as good results, some of which are hereinafter set forth.

In the accompanying drawings there are four figures illustrating my invention, in all of which the same designation of parts by letter-reference is used.

Referring to the drawings, Figure 1 is a plan view of my improved type-distributer. Fig. 2 is a sectional elevation of the same, taken at line 1 1 in Fig. 1. Fig. 3 is a cross-sectional view taken at line 2 2 in Fig. 2; and Fig. 4 is a view of the entrances of the receiving-channels in plate E, taken at dotted line X in Fig. 2.

In the drawings, A is a plate, preferably of cast-iron, of any desired diameter. One of sixteen inches will admit of the introduction of over sixty lines of small pica, over four and a half inches long each, or exceeding the width of any ordinary column or page. These channels may be cut from the circumference toward the center, or to a point or points out of the center, and at equal or any distances apart, the depth to which the channels in plate A should preferably be cut being such that a high space will very slightly extend above the upper surface of plate A, and such channels should be as nice a fit as consistent with the ready passage of the type therethrough.

P is a pin by which plate A is secured to upright shaft B, so as to be revolved thereby. The bottoms of the channels in plate A are grooved nearly their entire length, through their centers through the iron below, so as to admit of the passage therethrough of the springs C, attached at one end at M, and inserted at their other ends into the circular space in pusher D, as shown in Fig. 2.

N is a pin inserted in the top of each pusher D, by which they can be moved back toward shaft B, to admit of the insertion of a line of type in front.

O O are screws or pins with heads wider than the grooves in the bottoms of the channels, which screws or pins pass through such

grooves and into the bottoms of pushers D, preventing their being shoved up or canted backward or forward, while permitting their ready passage therethrough.

Instead of screws or pins O O, a groove might be cut in one or both sides of each channel, and a pin or pins inserted in pushers D, playing therein, would accomplish the same result. In the former case any pusher D may be prevented from passing beyond the circumference of plate A when the channels are empty, by the grooves in the bottoms of such channels being cut to only such a distance that the forward screw or pin will be arrested in its forward movement at the desired point, and in the latter by the pin striking an obstruction to its forward passage placed at the proper point in the groove in which it plays. So, also, the pusher D, when pushed back to admit of the insertion of a line of type, may by any suitable device be held in such position when desired.

Any desirable form may be given to spring C or pusher D, and such pusher, instead of by a spring, may be moved forward by gravity or otherwise. The pushers D should be slightly beveled on their front edges, which first approach the pins or channels in plate E, hereinafter referred to.

a a are ribs to strengthen and stiffen plate A. Plate E is also preferably made of cast-iron, and is intended to be stationary, surrounding but not touching plate A and supported on legs F, *e e* being ribs merely to strengthen and stiffen plate E. This plate can be of any desired diameter, according to the length of the channels it is desired to contain. In this plate may be cut any number of channels to the same depth as those in plate A, and preferably from about one sixty-fourth to one thirty-second wider than those in plate A, so as to admit of the more ready entrance of the type thereto. The channels may be at any distance apart, equal or otherwise, but preferably, as there is room for them, at least double the number of those in plate A. At their entrances, on the dotted line X, are inserted fixed pins or wards differing in position for each type. They may be of any desired number and placed on either side or on the bottom, and such pins should be slightly beveled on their edges, and the edge of the side of the channel to which they are attached should also be slightly rounded.

In each channel in plate E is placed a slug, W, of lead or any other material, against which the type can bank, and which will prevent their falling over.

I have found it advantageous to attach a light spring to the side of each slug, which, pressing against the sides of the channels, imparts to the slug a more steady movement.

G are supports, preferably three in number, cast with or attachable to plate E, having a hub, R, at their point of junction with each other, fitted for and in which is inserted upright shaft B, (tapered or otherwise,) supported on and adjustable by set-screw H; or the shaft may be tapered and fitted into a circular box, which may be inserted in hub R, which, resting on set-screw H, may be supported and raised or lowered thereby, as shown in Fig. 2. Shaft B has also at its upper end a pulley, K, in hanger J, the shaft passing through boxes fastened to such hangers above and below pulley K, and is kept from being raised by set-screw L. By this pulley a continuous rotary movement is given to plate A within plate E on a center common to both.

The operation of the machine is as follows, viz: The channels in plate A being each filled with a line of type, and a continuous motion at a suitable speed being communicated to plate A by shaft B from a belt on pulley K, the exits of each channel in plate A will pass successively on each revolution in front of and across the entrances to each channel in plate E, and during their coincidence, when the type or types in the end of a line in the channels of plate A is or are nicked to correspond with the pins in the entrance of the coincident channel in plate E, the spring C will push such type or types from one channel to the other.

What I deem and claim as new and useful in this my invention, and desire to secure by Letters Patent, is—

A series of channels each adapted to hold a line of type (variously nicked) pressed toward the exit of such channels by a spring or otherwise, in combination with another series of channels provided at their entrances with fixed pins or wards to separate the type, and mechanism to move one series with a continuous parallel movement past the other series, one series being so arranged with reference to the other series that on each passage of the one series past the other series the exit of each channel in the one series shall coincide with the entrance to each channel in the other series, so that during such coincidence any type or types whose nicks agree with the pins opposite thereto shall pass from the channel of the one series to the channel of the other series.

DEXTER REYNOLDS.

Witnesses:
RICHARD P. DUMARY,
CHARLES SELKIRK.