No. 843,173. PATENTED FEB. 5, 1907.

D. B. RAY.

TYPE CHANNEL FOR TYPE DISTRIBUTING MACHINES.

APPLICATION FILED FEB. 17, 1906.

Fig: 1.

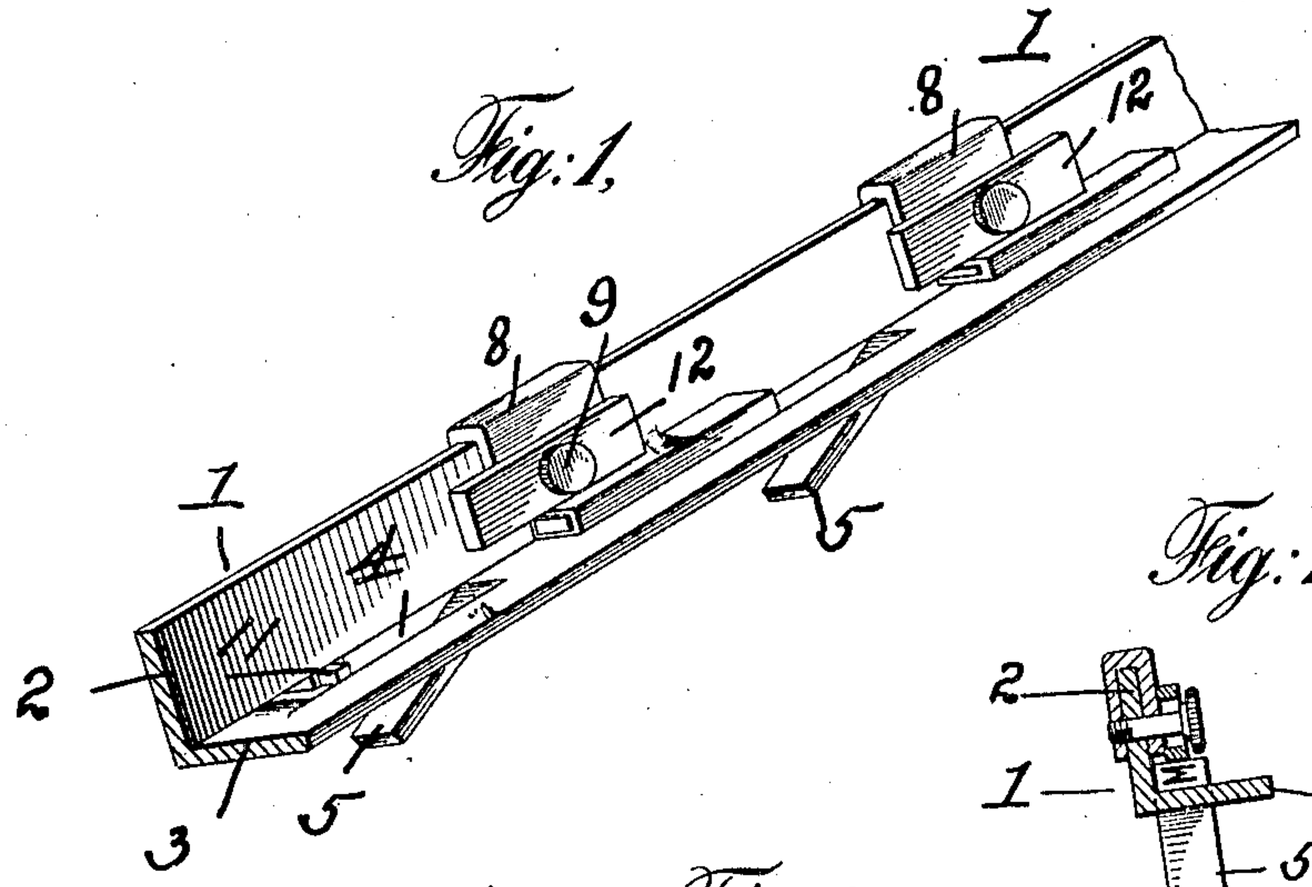


Fig: 2.

Fig: 3.

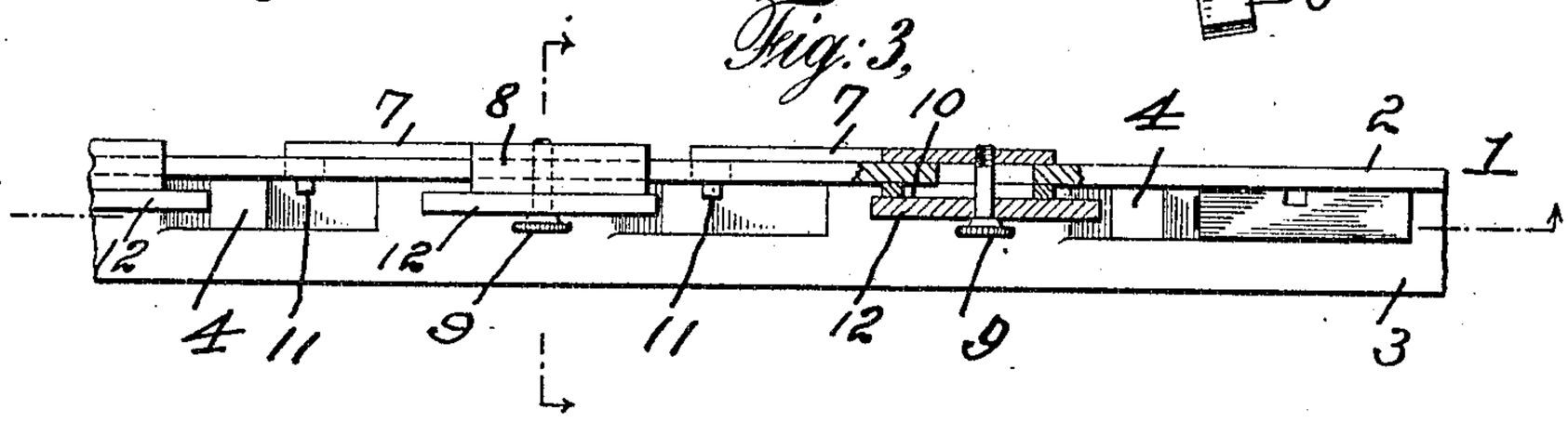
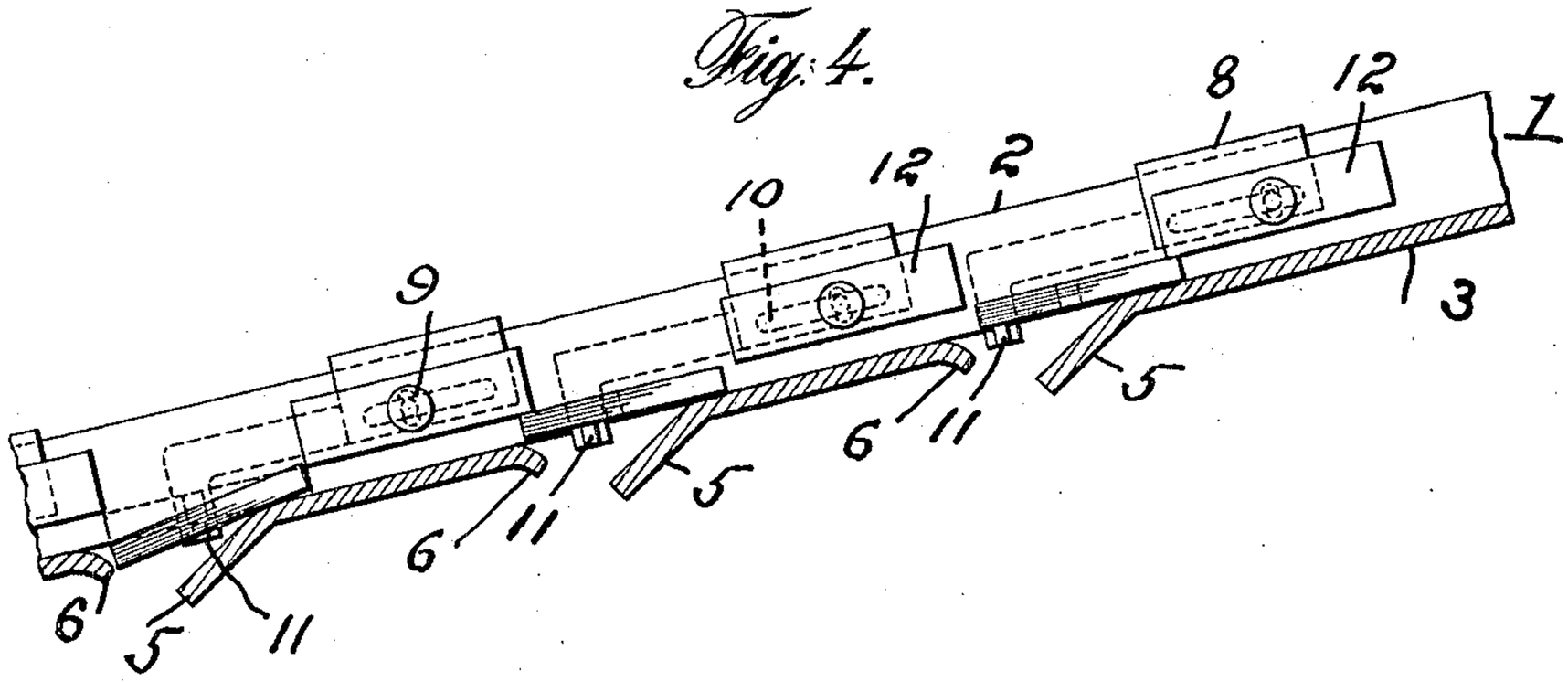


Fig: 4.



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TYPE-CHANNEL FOR TYPE-DISTRIBUTING MACHINES.

No. 843,173. Specification of Letters Patent. Patented Feb. 5, 1907.

Application filed February 17, 1906. Serial No. 301,554.

To all whom it may concern:

Be it known that I, DAVID BRAINERD RAY, a citizen of the United States, residing at Huntington, in the county of Suffolk, State of New York, have invented certain new and useful Improvements in Type-Channels for Type-Distributing Machines, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a perspective view of a portion of a type-channel constructed according to my invention; Fig. 2, a transverse vertical sectional view thereof; Fig. 3, a plan view, and Fig. 4 a vertical longitudinal sectional view.

The invention relates to improvements in type-channels for type-distributing machines in which the type-channels are inclined and are provided with openings at intervals for the passage of type, said channels being provided at the openings with some type-selecting means, so that the proper type will pass through each of the openings.

The main objects of the invention are, first, to provide a type-channel wide enough to convey different sizes or fonts of type, the openings therein being so disposed that only the proper type will be permitted to pass through; second, to provide means for insuring the passage of type over the openings in the channel until they reach the openings through which they are designed to fall; third, to provide means for preventing the type from tipping downward at those openings through which they are not designed to pass; fourth, to provide adjustable selective devices for supporting the type of the different sizes and shapes as they pass over the openings until they reach the openings designed to receive them, and, fifth, to provide means for preventing the type becoming blocked in the channel at the openings.

Referring to the various parts by numerals, 1 designates the type-channel, which is preferably formed of two surfaces 2 and 3, arranged substantially at right angles to each other, one of said surfaces forming the upright side of the channel and the other the bottom thereof. This channel is arranged in the type-distributing machine at an incline longitudinally, so that the type will pass readily down it by gravity when the channel is slightly agitated or vibrated. The channel is also inclined laterally—that is, its bottom inclines upwardly from its juncture with the side wall to its outer free edge—so that the lowest point of the channel is at the point where the side wall and the bottom join. The object of this inclination of the bottom of the channel is to insure the type moving down the channel in contact with the side wall thereof and to prevent any sidewise or lateral movement of the type in the channel. By this arrangement of the channel type of various widths may be separated into classes by means of one set of openings, as will be hereinafter described.

The bottom of the channel is provided at suitable intervals with broad openings 4, said openings being about two-thirds the length of a type and as wide as the widest type to be distributed by the machine. From the upper end of each opening extends a downward and forward inclined discharge-chute 5, and from the lower edge of each of said openings extends a downward and rearward inclined lip 6. It will be readily understood that the distances between the openings may be as great as desired.

The adjustable selective devices consist of a plate 7, having an overturned part 8, which is adapted to fit over the upper edge of the upright wall of the channel and is adjustable along said upright wall by means of a screw 9, which passes through a horizontal slot 10, formed in said overturned part. The forward end of this part 7 is formed with a lateral extending projection 11, which extends into the adjacent type-distributing opening in the bottom of the channel. This projection forms the selective device, and on it the type which are not to pass through the opening ride across the opening. The type are formed with selective notches in one of their side edges, and the projection 11 is so arranged with respect to the opening in the bottom of the channel that when the notch in the type which is to pass through said opening registers with the projection 11 the type will drop through said opening and slide down the discharge-chute 5.

To prevent the type tipping down at the openings through which they are not to pass, guide-blocks 12 are secured to the side wall of the channel. The lower edges of these blocks are arranged close to the bottom of the channel, the space between said blocks and the bottom being just sufficient to permit a type of the proper thickness to ride down the channel. The lower end of each block is so arranged with respect to the ad-

jacent type-distributing opening that the upper end of the type will not be released by said block until the lower end of said type is in engagement with the lip 6 at the lower end of the opening. The upper ends of the blocks are so arranged that the lower end of the type will be engaged thereunder before the upper end of the type can move down the discharge-chute. Of course when a type reaches the opening through which it is designed to pass its lower end will drop through the opening and pass by the end of the lip 6, and its upper end will not be held by the guide-block. This will necessitate a careful arrangement of these guide-blocks, so that only the proper type will be permitted to pass through the distributing-openings. These guide-blocks are provided with slots by which they may be vertically adjusted, and the vertical wall of the type-channel is provided with slots to facilitate the adjustment of both the guide-blocks and the selective devices.

By transversely inclining the bottom wall of the channel, so that its edge which joins with the side wall is lower than the opposite edge (as well as inclining the channel longitudinally to secure the movement of the type down it) type may be distributed by said channel which are narrower than the channel and the distributing-openings. The reason for this is that the type will hug the side wall at the lower edge of the bottom of the channel, so that the notches in the type will pass over the selective devices until said notches register with the proper selective devices to permit the type to pass down through the opening in the channel. The type will not be affected by the excess width of the channel and openings—that is to say, they will move down the channel in close contact with said side wall—so that their longitudinal edges will be parallel with the corresponding edges of the openings. This is necessary, as it is obvious that should the type move transversely in the channel they not only would not register with the proper openings, but the notches in the types would not register with the selective devices or be supported by them as they pass down the channel. The type would be apt to block the channel by becoming wedged across it. By this means it is obvious that types of various widths may be distributed, it being only necessary to adjust the guide-blocks to the length and thickness of the type and to adjust the selective devices according to the position of the notches in the type.

The guide-blocks by preventing the type from tipping at the openings that are not designed to receive them will prevent the next following type from becoming blocked in the channel—that is, the following type cannot ride under the upper end of the preceding type—as might be the case if said preceding type dipped down into the distributing-opening.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An inclined type-channel formed by two surfaces at an angle with each other, said channel having openings at intervals for the passage of type, one of said surfaces being arranged to cause type passing down said channel to bear against the other surface and to pass over said openings.

2. An inclined type-channel having openings at intervals for the passage of type, in combination with an adjustable block adapted to prevent type passing down said channel from tipping endwise at the openings not designed to receive them.

3. An inclined type-channel having openings at intervals for the passage of type, and having lips at the lower ends of said openings.

4. In combination with a type-channel having openings at intervals for the passage of type, an adjustable support adapted to support certain type passing over said opening, and to permit other specially-notched type to pass through said openings.

5. A type-channel for a type-distributing machine comprising a laterally and longitudinally inclined bottom wall and an upright wall connected to the bottom wall along the depressed or lower edge thereof, said bottom wall being formed with openings therein adjacent the upright wall, whereby type in passing down said channel will ride against the upright wall and over the openings in the bottom wall, and selective projections extending into said openings.

6. A type-channel for a type-distributing machine comprising a laterally and longitudinally inclined bottom wall and an upright wall connected to the bottom wall along the depressed or lower edge thereof, said bottom wall being formed with openings therein adjacent the upright wall, whereby type in passing down said channel will ride against the upright wall and over the openings in the bottom wall, and adjustable selective devices extending into said openings.

7. A type-channel for a type-distributing machine comprising a laterally and longitudinally inclined bottom wall and an upright wall connected to the bottom wall along the depressed or lower edge thereof, said bottom wall being formed with openings therein adjacent the upright wall, whereby type in passing down said channel will ride against the upright wall and over the openings in the bottom wall, adjustable selective devices extending into said openings, and rearward and downward projecting lips formed at the lower edges of said openings.

8. A type-channel for a type-distributing machine comprising a laterally and longitu-

dinally inclined bottom wall and an upright wall connected to the bottom wall along the depressed or lower edge thereof, said bottom wall being formed with openings therein adjacent the upright wall, whereby type in passing down said channel will ride against the upright wall and over the openings in the bottom wall, selective projections extending into said openings, and guide-blocks secured to the upright wall of the channel to prevent the type tipping endwise at the openings which are not designed to receive them.

9. A type-channel for a type-distributing machine comprising a laterally and longitudinally inclined bottom wall, an upright wall connected to the bottom wall along the depressed or lower edge thereof, said bottom wall being formed with openings therein adjacent the upright wall, whereby type in passing down said channel will ride against the upright wall and over the openings in the bottom wall, selective projections extending into said openings, and vertically and longitudinally adjustable guide-blocks secured to the upright wall of the channel to prevent the type tipping endwise at the openings which are not designed to receive them.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 10th day of February, 1906.

DAVID BRAINERD RAY.

Witnesses:

GEO. C. HENDRICKSON,

DANIEL B. SMITH.