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Patented Dec. 30, 1902.

C. A. ALBRECHT.

MATRIX DISTRIBUTING MECHANISM FOR LINOTYPE MACHINES.

(Application filed Aug. 18, 1902.)

(No Model.)

2 Sheets—Sheet 2.

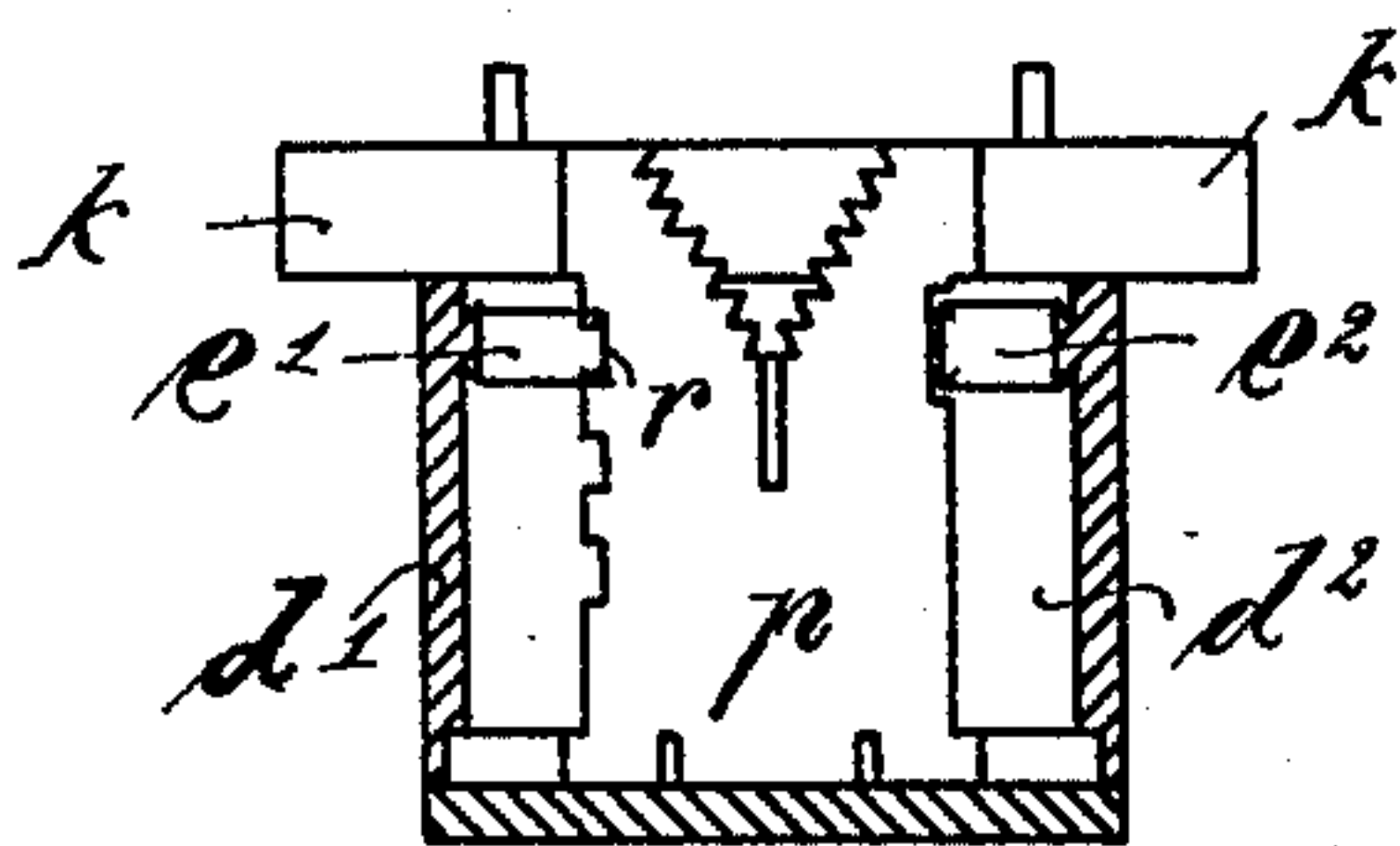


Fig. 3.

Fig. 4.

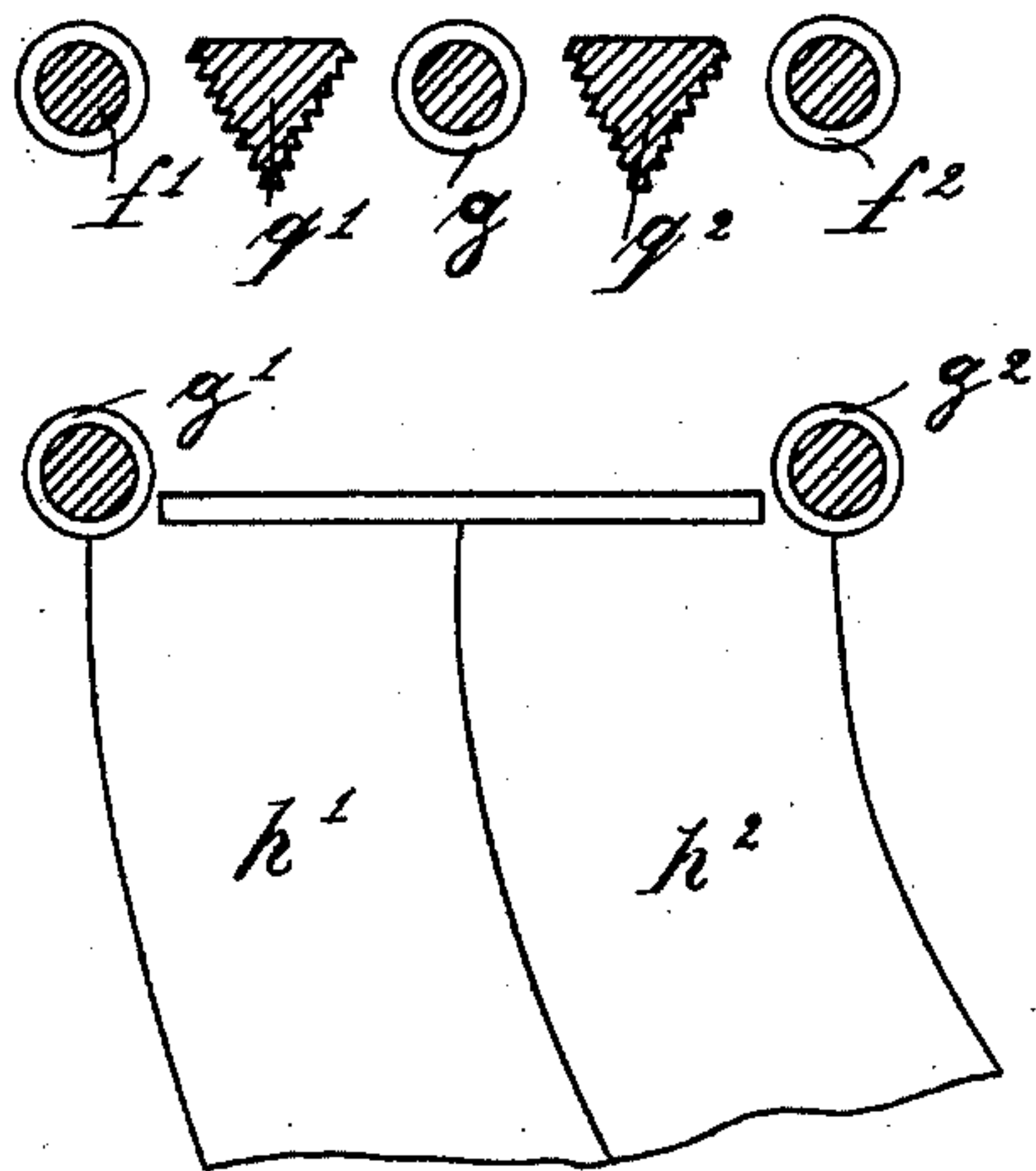


Fig. 5.

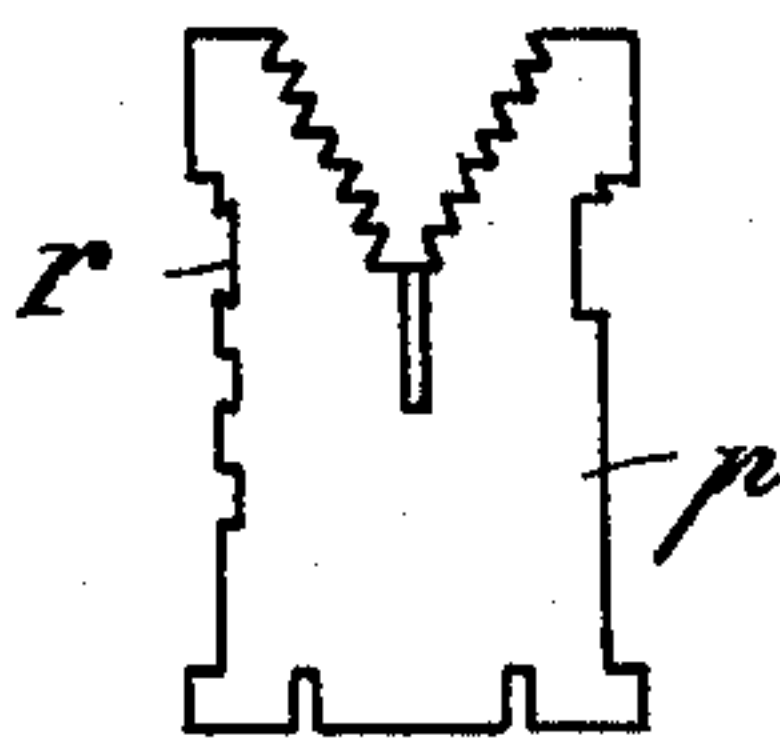
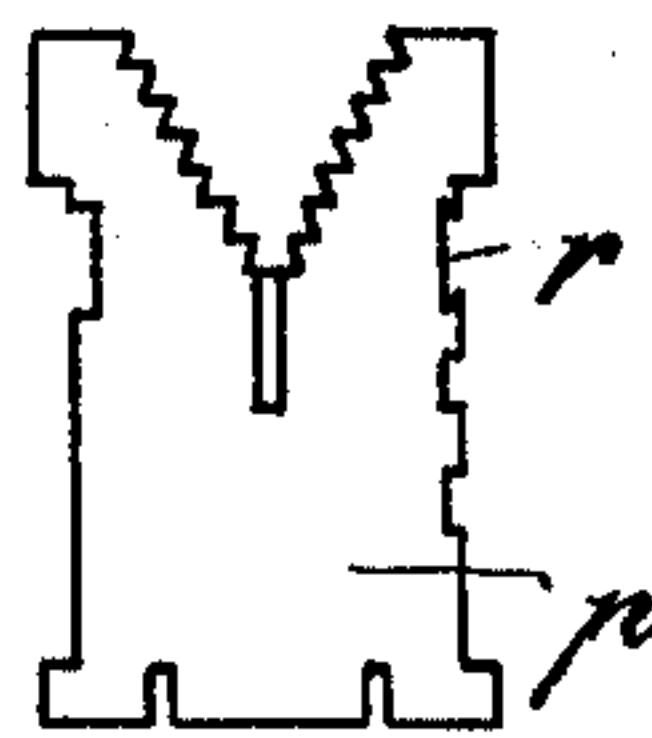


Fig. 6.



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UNITED STATES PATENT OFFICE.

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MATRIX-DISTRIBUTING MECHANISM FOR LINOTYPE-MACHINES.

SPECIFICATION forming part of Letters Patent No. 716,975, dated December 30, 1902.

Application filed August 18, 1902. Serial No. 120,136. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN AUGUSTUS ALBRECHT, a citizen of the United States of America, and a resident of Berlin, in the Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Matrix-Distributing Mechanisms for Linotype-Machines, of which the following is an exact specification.

My invention relates to improvements in matrix-distributing mechanisms for linotype-machines, and more especially to distributing mechanisms for such machines in which several groups of matrices provided with several kinds of characters are used, and has for its purpose to provide a mechanism by means of which it is attained that the matrices can be distributed in two separate magazines situated one above or at the side of the other one, so that they can be discharged from the magazines by means of one single keyboard. In this case a mechanism must be provided for connecting the keyboard alternately at will with one or the other magazine, so that the matrices are always discharged from that magazine to which the keyboard is connected. I attain this object by means of the construction illustrated in the accompanying drawings, in which—

Figure 1 is a side view of the working parts of the distributing mechanism. Fig. 2 is a plan of the same. Figs. 3, 4, 5, and 6 are detail views of parts of the mechanism.

According to the present invention the matrices are passed to two separate distributing-rails, along which rails the matrices are moved in the well-known manner by means of continuous screws until they arrive at the points at which they fall down into the proper channels of the magazine.

The characteristic feature of my invention consists in each matrix being at first pushed forward by means of a shifter, whereby it is guided along a rail leading to that distributing-rail to which the respective matrix belongs. The matrices carrying the different kinds of characters are on one side provided with recesses for guiding the same, so that according to the position of this recess the matrices pass to one or to the other distributing-rail.

In the drawings, *a* is the box into which the

rows of matrices to be distributed are brought. At one side of this box the shifter *b*, movable in the vertical direction, is situated. This shifter *b* is moved upward and downward by means of an angle-lever *c*, one shank of which is oscillated in any convenient way—as, for instance, by means of a curved groove provided in one of the continuous screws for moving the matrices along the distributing-rails. On the left-hand side (when considering the drawings) two curved or angular rails *d'* and *d''* are fixed to the box *a*. To these rails dovetailed guide-rails *e'* and *e''* are fixed. These rails lead to the endless screws *f'* and *f''*. Between these endless screws *f'* and *f''* an endless screw *g* is situated, and underneath these screws endless screws *g'* and *g''* are provided, as may be seen from Fig. 4. Underneath the endless screws distributing-channels *h'* and *h''* are arranged, which lead the matrices to the magazine situated one above or at the side of the other one. Within the box *a* a shifter *k* is situated, which projects on both sides over the box *a* and which is moved by means of levers *m*, pivoted at *m'*. The levers *m* are oscillated at *m''* in any convenient way—as, for instance, in the same way as the lever *c*, by means of curved grooves provided in the endless screws for moving the matrices.

The devices for moving the levers *c* and *m* are not shown in the drawings, as the same do not form a part of the invention and as any convenient device may be used for this purpose.

The effect of the device is as follows: As soon as the linotype is cast the matrices by means of which the casting has been made are brought in the well-known manner into the box *a* to the point *o*, Fig. 1. The shifter *b* shifts all the matrices one after the other upward to the position in which the matrix *p* is situated in Fig. 1. In the distributing mechanisms hitherto used the matrix *p* was moved forward from this position directly by means of the endless screws. This cannot be done in the apparatus forming the object of the present invention, as the respective matrix must be brought at first to that distributing-rail *q'* or *q''* which leads to that magazine to which the respective matrix belongs. In order to effect this, a shifter *k* is provided which

moves the matrix p as soon as it arrives in the position shown in Fig. 1 forward. During this forward movement the dovetailed recess r , provided either at the left-hand side, 5 as shown in Fig. 5, or at the right-hand side, as shown in Fig. 6, of the matrix, is guided along one of the dovetailed guide-rails e' or e^2 , fixed to the rails d and d^2 . It will be understood that the shifter k moves always straightly forward and the matrix p will move either along 10 the rail e' or along the rail e^2 , according to whether the dovetailed recess r of the same is situated at the right-hand or at the left-hand side. If this recess is situated at the right-hand side, it will in the matrix being pushed straightly forward engage with the guide-rail 15 e' , situated at the right-hand side of the machine. In this case on the left-hand side of the matrix a cut-out is provided, which does not engage with the guide-rail. If, however, 20 the dovetailed cut-out is provided at the left-hand side, the matrix in being pushed straightly forward by means of the shifter k will be guided along the left-hand guide-rail e^2 , as the dovetailed cut-out r engages with this guide-rail e^2 , while on the other side a cut-out is provided which allows the guide-rail e' to pass through the same without guiding the matrix—that is to say, this cut-out is 25 not dovetailed, as may be seen from the drawings. As shown in dotted lines in Fig. 2 in connection with the matrix p' , the matrices are moved along the guide-rails e' or e^2 by means of the shifter k until they reach 30 the respective distributing-rail q' or q^2 . The matrices are then carried along the distributing-rail by means of the continuous screws in the well-known manner. As soon as the

matrices arrive at their proper point of the distributing-rail q' or q^2 they fall down 40 through the channels h' or h^2 into their magazine. The recesses for guiding the matrices may naturally have any convenient form and may be provided at any convenient place of the matrices, the main idea consisting in the 45 recesses, as well as the guide-rails for the same, being formed so that according to the kind of letters provided upon the matrices they are guided along the guide-rails e' or e^2 to the distributing-rails q' or q^2 . 50

Having thus fully described the nature of this invention, what I desire to secure by Letters Patent of the United States is—

In distributing mechanisms for linotype-machines, the combination of a box in which 55 the linotypes to be distributed are situated, a shifter b provided at this box, means for moving this shifter upward and downward, a second shifter k situated above the matrices, means for moving this shifter backward and 60 forward, recesses provided at different places of the matrices, guide-rails e' and e^2 corresponding to the recesses in the matrices, distributing-rails q' and q^2 beginning at the end of the guide-rails e' and e^2 and means for 65 moving the matrices along the distributing-rails, substantially as described and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of 70 two subscribing witnesses.

CHRISTIAN A. ALBRECHT.

Witnesses:

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HENRY HASPER.