

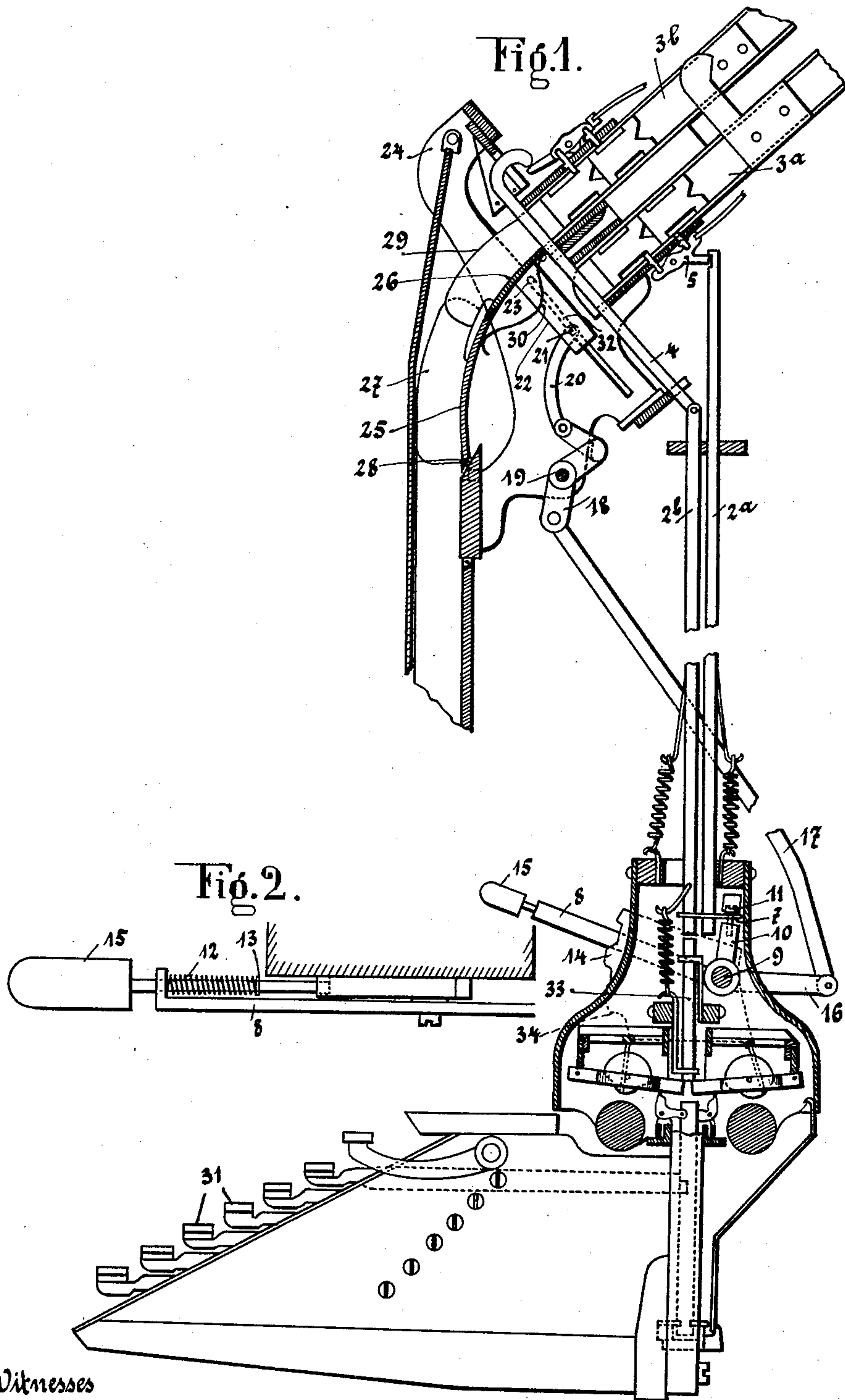
No. 865,846.

PATENTED SEPT. 10, 1907.

C. A. ALBRECHT.

RELEASING DEVICE FOR THE MATRICES IN COMPOSING MACHINES WITH
TWO OR MORE MAGAZINES PLACED ONE ABOVE THE OTHER.

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Witnesses

W. M. Avery

J. P. Davis

Inventor

Christian A. Albrecht

By *Mum Co.*

Attorneys

UNITED STATES PATENT OFFICE.

CHRISTIAN A. ALBRECHT, OF BERLIN, GERMANY.

RELEASING DEVICE FOR THE MATRICES IN COMPOSING-MACHINES WITH TWO OR MORE MAGAZINES PLACED ONE ABOVE THE OTHER.

No. 865,846.

Specification of Letters Patent.

Patented Sept. 10, 1907.

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To all whom it may concern:

Be it known that I, CHRISTIAN A. ALBRECHT, a citizen of the United States of America, and a resident of 17-18 Chausseestrasse, Berlin, Germany, have invented certain new and useful improvements in and relating to releasing devices for the matrices in composing-machines with two or more magazines one placed above the other, of which the following is a specification.

The object of my present invention relates to releasing devices for the matrices in composing machines with two or more magazines one placed above the other, and its object is to convey the matrices to the assembler after they have been taken out of one of the magazines.

I know that there exist releasing mechanisms in which the switching of the common guide chute is effected by means which vertically move said guide chute. But this vertical movement of the guide chute shows the disadvantage that specially constructed magazines are necessary for the conveying of the matrices with this guide chute from the magazines to the assembler. The surfaces of the exits of such specially built magazines known to me are obtuse-angled to the horizontal surfaces of the magazines.

In order to convey the matrices from the magazines to the assembler by means of the common guide chute, by common magazines also, the lower edges of the exits of which are in a right angle to the upper horizontal surfaces of the magazines I provide a common guide chute, consisting of several parts, in such a manner that the one part which directly communicates with the magazines can be moved parallel with the surface of the lower exits of the magazines while the other part or parts can be adjusted corresponding to this movement.

In the accompanying drawings, in which I have illustrated my invention, like letters of reference correspond to like parts throughout the different views.

In said drawings, Figure 1 illustrates a side view of the releasing device; Fig. 2 illustrates a plan view of the hand-lever with its adjusting mechanism drawn on an enlarged scale.

2^a are the successively arranged matrix releasing rods, which are connected to the lower magazine 3^a. 2^b are the also successively arranged matrix releasing rods, which by help of the rods 4 release the matrices placed in the upper magazine 3^b. The releasing rods 2^a are suspended with their upper ends on the releasing levers 5, provided on the magazines 3^a and regulate the discharge of the matrices of the lower magazine. The lower ends of the rods 2^a and 2^b are guided in slots of a switch plate 7, which can easily be switched by means of a hand lever 8 provided on one side of the key-board. This hand lever 8 is fixed on a shaft 9 carrying two arms 10, to which the switch 7 is fastened by means of screws 11.

In order to fix the hand lever in one position or the other I have provided the same with a bolt 13, which by means of a spring 12 ordinarily causes the bolt to engage the spaces between the teeth of a fixed tooth segment 14, from which it can be removed by a handle 15 provided on its free end.

The shaft 9 carries further two arms 16 which are connected by rods 17 to two double-armed levers 18 mounted on a shaft 19. The free ends of the said levers 18 are connected by two rods 20 with the pins 21 of a slide piece 22, which is guided by means of the pins 21 and 23 in slots 32 of two side plates 24 which are fastened on both sides of the magazines to the frame of the machine. The slide piece 22 is connected to the guide chute conveying the matrices to the assembler which chute can alternately communicate by the slide piece 22 with the upper or with the lower magazine. For this purpose the guide chute is composed of two parts 25 and 26, the lower one of which 25 is pivotally connected at 28 to the frame of the machine and provided on its sides with guide plates 27, and connected to the upper part 26 by means of springs 30. The upper part 26 is fixed to the slide piece 22 and provided with the side guide plates 29.

If the position of the guide chute is changed from the upper magazine to the lower one or reversely, the guide plates 27 and 29 telescope with each other on account of the free connection of the parts 25 and 26 and for the reason that the lower ends of the guide plates 29 reach inside the upper ends of the guide plates 27.

The operation of my improved releasing device is as follows:—If one of the key knobs 31 of the key board is operated, the rod 33 is raised in the well known manner and presses against the lower end of the rod 2^b and raises the same (see Fig. 1) so releasing the corresponding matrix, which drops out of the magazine 3^b and sliding through the guide chute, falls into the assembler. If the guide chute is to be switched from the upper magazine 3^b to the lower one 3^a the handle 15 is pulled so as to draw the bolt 13 out of engagement with the upper indentation of the tooth segment 14. At the same time the hand lever 8 is pressed down until the bolt 13 can engage the lower indentation 34 of the tooth segment 14. This operation causes the rods 2^a to correspond with the rods 33 and the guide chute with the lower magazine. If the keys of the key board are now operated the matrices of the magazine 3^a will drop into the assembler. If the guide chute shall again communicate with the upper magazine the operation is reversed, that means, the handle 15 is again pulled until the bolt 13 is out of engagement with the lower indentation 34, and the hand lever 8 is lifted until the bolt 13 can engage the upper indentation of the tooth segment 14. This will cause the rods 2^b to again correspond with the rods 33 and the guide chute with the upper magazine. It will hereafter be clearly understood that the opera-

tion of the hand levers 15 and 8 will move the rods 2^a and 2^b in proper relation with the rods 33, said rods being not movable.

What I claim as new and desire to secure by a United States Letters Patent is:—

1. In a releasing device for the matrices in composing machines with two or more magazines one above the other the combination of a common movable guide chute, a slide piece (22) firmly connected to the upper part of said chute, two side plates (24) placed on both sides of the magazines, slots (32) in said side plates, projections (21, 23) to guide said slide piece in said slots, and a plurality of levers connecting said slide piece with a hand lever (15) substantially as set forth.
2. In a releasing device for the matrices in composing machines with two or more magazines one above the other the common movable guide chute comprising a slide piece (22) and two parts (25, 26) the lower part of which (25) is pivotally mounted with its lower end on the frame of the machine while the other free end is loosely connected with the upper part (26) which is fastened to the said slide piece and communicating with its upper end with the exit of one of the magazines, springs (30) fixed to the bottom of the upper part (26) and securing the free but steady connection of the parts 25 and 26, two side plates (24)

placed on both sides of the magazines, slots (32) in said side plates, pins (21, 23) to guide said slide piece in said slots, and a plurality of levers connecting said slide piece to a hand lever (15) substantially as set forth.

3. In a releasing device for the matrices in composing machines with two or more magazines one above the other, the combination of the common guide chute comprising a slide piece (22), two parts (25, 26) the lower part of which (25) is pivotally mounted with its lower end to the frame of the machine, while the other free end is loosely connected with the upper part (26) which is fastened to the said slide piece and communicating with its upper end with the exit of one of the magazines, springs (30) fixed to the bottom of the upper part (26) and securing the free connection between the two parts 25 and 26, means to move the slide piece vertically in regard to the horizontal surface of the magazines, and means to allow the lower part (25) to self-actingly adjust itself during the movement of the upper part (26) substantially as set forth.

In testimony whereof I have hereunto signed my name this 18th day of May 1906, in the presence of two subscribing witnesses.

CHRISTIAN A. ALBRECHT.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.