

(No Model.)

A. A. LOW.
LEAD AND RULE HOLDER.

No. 356,845.

Patented Feb. 1, 1887.

Fig. 1.

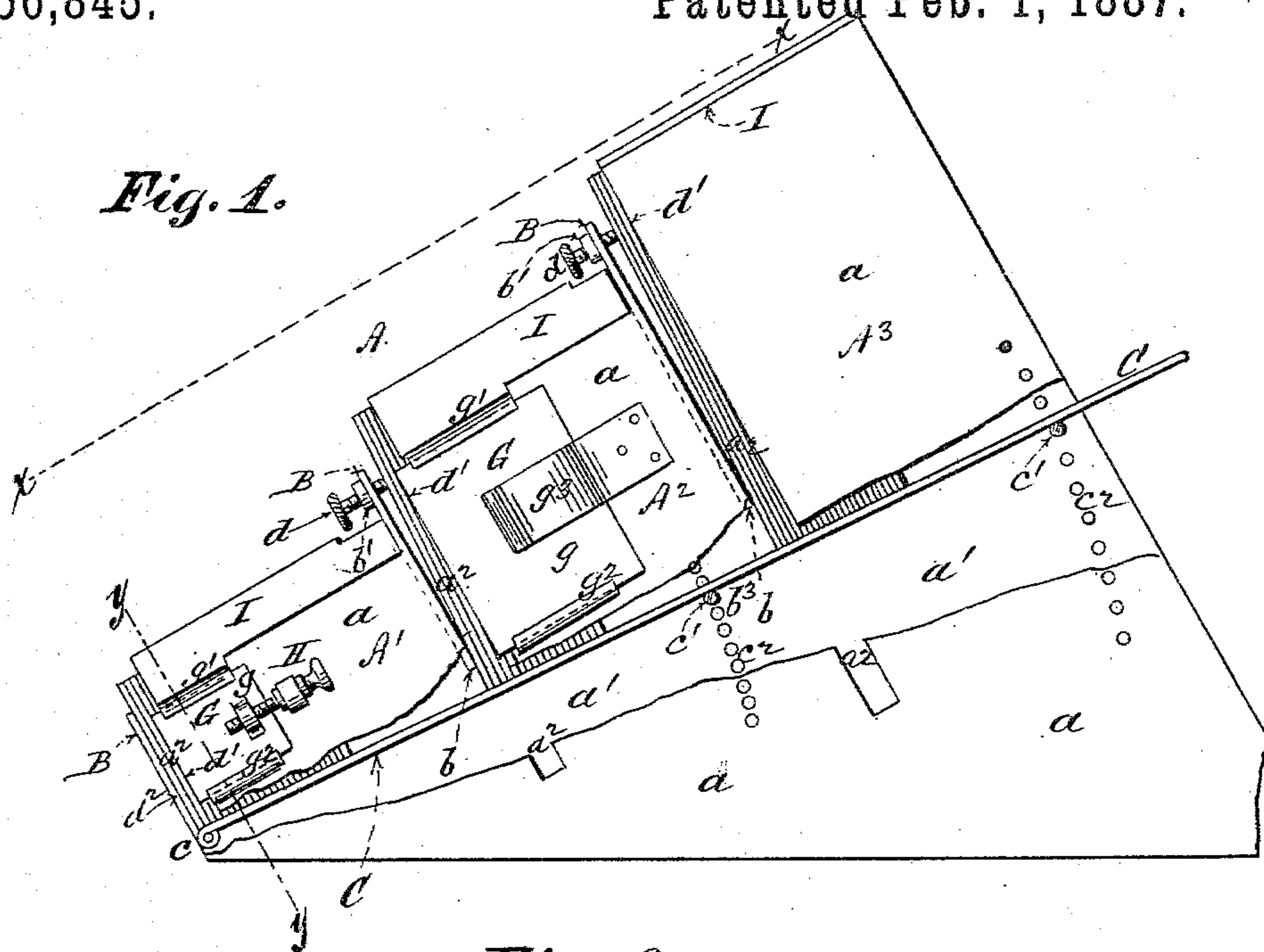


Fig. 2.

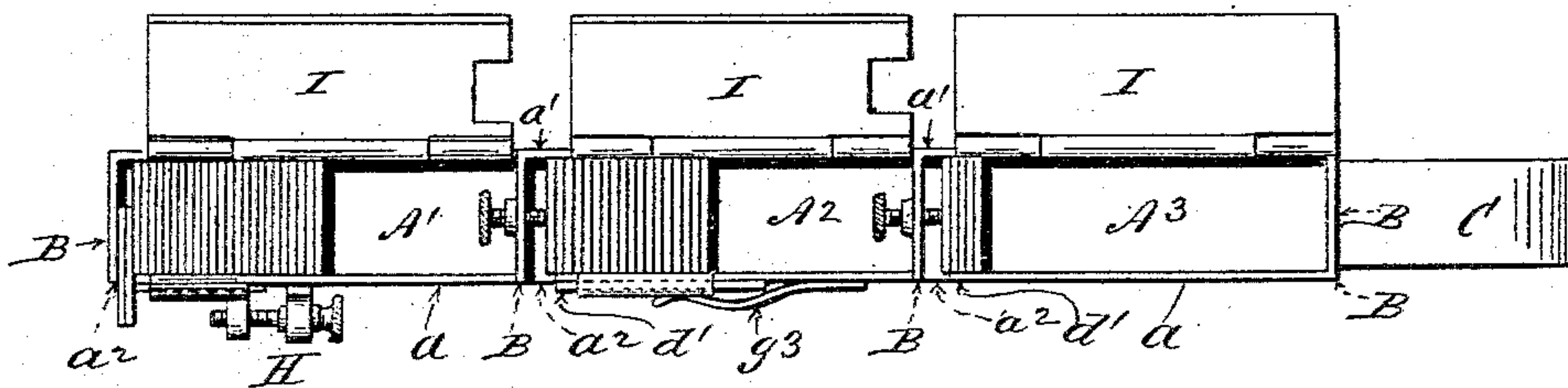


Fig. 3.

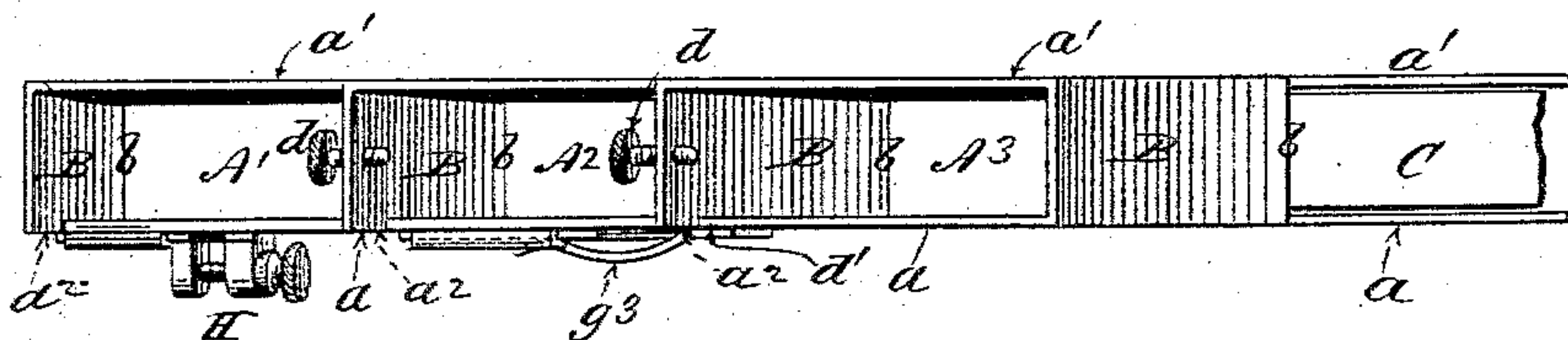
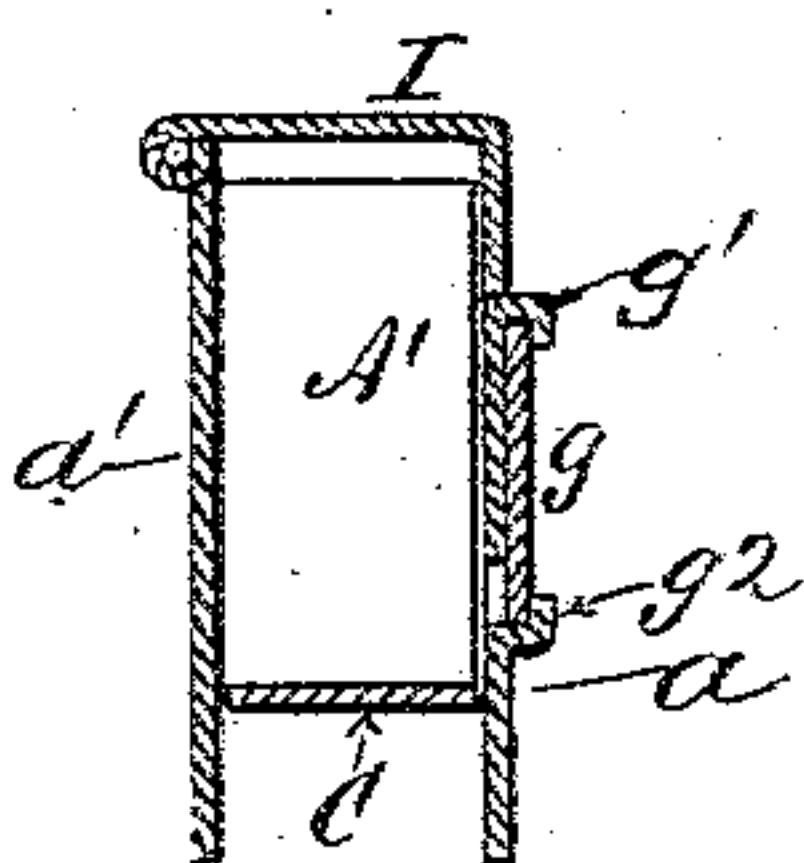


Fig. 4.



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LEAD AND RULE HOLDER.

SPECIFICATION forming part of Letters Patent No. 356,845, dated February 1, 1887.

Application filed November 16, 1885. Serial No. 182,932. (No model.)

To all whom it may concern:

Be it known that I, A. AUGUSTUS LOW, a citizen of the United States, residing in the city of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Lead and Rule Holders for the Use of Compositors, of which the following is a specification.

My invention relates to the special means employed for holding and presenting for use the leads and rules used by printers and compositors for insertion between the lines of composition and for similar purposes.

My main object is to afford means by which a suitable number of leads or rules may be deposited simultaneously into a receptacle from which only a prescribed number are to be removed at a given time, and then only in a prescribed manner, the spaces or rules feeding themselves successively and automatically into a prescribed position, from which they can be quickly and conveniently removed by the thumb and finger of the compositor. Heretofore such leads and rules have been presented for use in series, the members of which rested upon one another in a horizontal or nearly horizontal position, and were removed as wanted for use by pressing the finger upon the upper one of a pile or series, and sliding it over and away from the next lower lead or rule sufficiently to admit of one of its edges being grasped between the thumb and finger, and thus permit of its transfer. This means of picking up the leads or rules from the top of a column is obviously inconvenient on account of the difficulty in "starting" a lead or rule, as above set forth, preparatory to grasping it for removal; and another disadvantage is that the position of the leads or rule to be removed is variable and dependent upon the height of the column, so that the compositor has to exercise more care and attention in securing a lead or rule than would be required of him if the leads or rules were invariably presented to him in a prescribed place and position. It is also frequently necessary, as in certain classes of book-work in which the spaces between the lines are unusually large, to insert two or more leads or rules between the lines, necessitating here-

tofore two, three, or more separate and distinct movements of the hand and fingers of the operator, according to the number of leads to be used together.

It is my object to obviate this undue expenditure of time and energy by providing means by which two, three, or more leads or rules may be simultaneously removed for use, the number being regulated by means which may be adjusted to prevent the removal of more than required at a given time.

The main feature of my invention consists, essentially, in a series of elongated boxes or receptacles open upon the top for the reception of the leads or rules, which rest upon their ends against the floors of the compartments, the four sides of which are inclosed, with the exception of a lateral slot or opening formed in one side, through which the leads or rules which coincide in position therewith may be removed, as hereinafter set forth. These compartments or boxes are preferably inclined sufficiently to cause the leads or rules to slide down to the lower ends automatically by gravity; but it is to be observed that the leads or rules rest with their ends upon the floors of the compartments, and the weight of the column is mainly sustained thereby, so as to lessen as far as possible the resistance to be overcome while detaching and withdrawing a lead or rule.

One feature of my invention in this connection consists in providing the compartments with bottoms or floors, which are adjustable in height and inclination for the double purpose of adapting the compartments to leads and rules of different lengths and of regulating the descent of and pressure exerted by the columns of leads or rules in a longitudinal direction.

My invention also includes the combination and arrangement, with the laterally-slotted compartments above set forth, of the special means hereinafter described for regulating the number of leads or rules that may be removed at one time.

Thus by my improvements I not only greatly facilitate the removal of a single lead or rule, but also enable the compositor to as readily

and quickly grasp, remove, and place in position simultaneously two or three leads, as though one at a time only were being handled.

I am aware that type containing channels have been formed with transverse slots through which the types are withdrawn laterally, as in the Patent to L. K. Johnson, No. 230,784, and to the said Johnson and myself, No. 271,711, and I do not seek to claim herein such form of transverse opening broadly, but only in combination with my special features of construction herein set forth, which effect a new and important result in adapting and utilizing the method of detaching and removing the individual types, as described in the said patents, to the presenting and removal of "leads" and "rules."

While it may be said that the operation of detaching and removing the lower member of a column is in either case substantially the same, still the nature and requirements of the present use necessitate the special forms of construction which constitute my present invention.

I am aware that in the patents issued to L. K. Johnson, Nos. 254,019, 263,707, 279,168, and 268,409, various means are shown for regulating the size of a transverse slot or opening through which types are withdrawn, and I do not seek to cover herein means for such purpose broadly, the special construction and arrangement alone being claimed, whereby the principle involved is adapted to the requirements of a new device for holding and presenting leads and rules.

In the accompanying drawings, Figure 1 is a side elevation of three lead and rule compartments combined and arranged together, a portion of the side wall being broken away to show the adjustable floor. Fig. 2 is a projection upon plane of line xx , Fig. 1, showing the covers of the compartments thrown back. Fig. 3 is a plan of the empty compartments, the covers being omitted. Fig. 4 is a transverse section upon plane of line yy , Fig. 1.

Any number of the receptacles A may be combined and arranged upon a single base or frame. As shown in the drawings, three compartments, $A^1 A^2 A^3$, are arranged in line, the shorter or more shallow one, A^1 , for the accommodation of the smaller leads or rules, being arranged in front, while the highest in the series, A^3 , as shown, is placed at the back, with the compartments intermediate in height arranged between in like order, the design being to group all the compartments in compact and convenient relation to each other, without interference in use, by utilizing the space thus afforded by the difference in height or length between the different sizes of leads and rules for the purpose of exposing and presenting the upper ends of the leads or rules in succession in such manner that they may be grasped and removed by the compositor.

As shown in the drawings, the device is designed to be constructed of sheet metal stamped and pressed into the required shapes.

It is obvious that other forms of material, &c., may be used; but I prefer, by way of illustration, to describe the construction shown.

Two side walls, $a a'$, extend the whole length and height of the device, their lower portions constituting the standards or base, while their upper portions constitute the side walls of the compartments $A^1 A^2 A^3$, the end walls or division-pieces, $B B$, of which are rigidly secured between them.

The floors of the compartments $A^1 A^2 A^3$ may be rigidly secured in position between the side walls, $a a'$, if desired; but I prefer to make the floors adjustable in inclination and with relation to the positions of the lower ends, bb , of the stationary end walls, $B B$. To this end I pivotally connect one end of the floor-piece or type-support C at or near the front of the device, as indicated at c , Fig. 1, and so that it extends longitudinally between the side walls, $a a'$, and supports its opposite or rear extremity by means which are adjustable in height vertically. The means for thus supporting and regulating the inclination of the floor-piece C may obviously be varied in form and construction without departing from my invention. For instance, in place of the transverse pins c' , interchangeable in any of the series of coinciding holes c^2 formed in the side walls, $a a'$, may be substituted any other equivalent means of effecting the same result. In order to properly re-enforce and support the floor-piece C , I design to employ one or more intermediate means of support, as shown at b^3 , Fig. 1, when necessary.

One of the side walls, preferably the right, a , is formed with the elongated slots $a^2 a^2$, the lower edges of which coincide in position with the upper sides of the end walls or division-pieces, $B B$. These slots are of a width equal to the combined thickness of the greatest number of leads or rules that it may be desired to remove from the particular compartment simultaneously.

For the purpose of limiting the number of leads or rules to be removed at a given time to one or two, or any number less than that provided for by the actual width of the slots a^2 , various means may be employed.

An adjusting-rest, d , may be provided at or near the upper extremities of the end or division walls, $B B$, which, by its position with relation to the opposed stationary edge d' of the slot a^2 , will regulate the number of leads or rules that may be passed laterally between it and the upper portion of the said opposed edge d' . As shown in the drawings, this adjustable rest d consists simply of a screw passing through and engaging with a boss, b' , formed upon the end wall or partition, B . Where the screw d , which is the simplest and cheapest form, is used, the leads or rules are prevented from twisting or turning laterally upon or around the end of the screw d by reason of their lower portions being held true and square by the lower portion, b , of the end walls, B , against which the adjoining portions of the

lowest lead or rule are held in all cases by the column above.

In conjunction with or as a substitute for the adjustable rest d , I propose to use an adjustable gate or gage-plate, G , by means of which the available area of the slots a^2 may be regulated. These gates G are arranged upon the upper sides of the slots a^2 , and are adjustable with relation to the end walls, B . They are preferably formed of plates g , which slide between grooves or ways g' g^2 , bent or struck up in the metal forming the side walls, a a' , as will be understood by reference to Fig. 4. Suitable means are provided for holding these sliding gates G in the required position either by friction or by positive means. Where it is desired to retain them in position by friction, a spring, g^3 , may be attached at one extremity to either the side wall a or the gate G , and made to press at the other extremity against either the side wall or the gate, as the case may be. Where positive means of retaining the gate in position are preferred, an adjusting-screw, H , may be arranged to actuate the gates, substantially as shown in the drawings.

Hinged covers or lids I are attached to one side wall, a' , for the purpose of inclosing and protecting the compartments and contents. These covers end upon a line connecting with the upper or rear edges of the slots a^2 , so that they do not obstruct the action of the fingers in removing the leads or rules, which is accomplished by pressing the ball of the thumb against their upper left edges until their upper right edges project outward upon the right side a sufficient distance to be grasped between the thumb and fingers, when they may be readily withdrawn through the slot a^2 .

It is of course to be understood that the upper ends of the walls or divisions B B and the adjoining portions of the left-hand side wall, a' , are formed so as to expose the upper ends of the leads or rules sufficiently to permit of the action of the thumb and finger of the operator, as above stated.

Having thus described a means for carrying out my invention, I desire to state that I do not limit myself to the exact form of parts shown; but

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

1. A series of lead and rule holders of different sizes, formed with transverse slots and arranged in succession upon a common frame or base, with the smaller compartments in front and the succeeding compartments arranged in order according to size, so as to afford access to the front upper portion of each compartment, substantially in the manner and for the purpose described.

2. A series of lead and rule holders of different sizes, arranged substantially in the manner and for the purpose described, formed with transverse slots, and with movable sections in the side walls adjoining said slots, which sections are supported in suitable grooves or ways formed on the side walls of the compartments, and are held in the required position for the purpose described by means substantially as herein shown and described.

3. In combination with a series of lead and rule holding compartments of different sizes, arranged substantially in the manner and for the purpose described, and formed with transverse slots and lead or rule supporting partitions or shoulders coinciding therewith, the means, substantially such as herein described, for varying the inclination of the leads or rules with relation to the said transverse slots, for the purpose and substantially in the manner described.

4. A series of lead and rule holding compartments of different sizes, formed with transverse slots and arranged substantially in the manner and for the purpose set forth, provided with an adjustable bottom which is common to all the compartments, said bottom being pivotally connected to the front or lower end of the series, and being supported at the other extremity by means, substantially as described, which permit of its adjustment in inclination, substantially in the manner and for the purpose described.

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Witnesses:

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