(No Model.) 3 Sheets—Sheet 1.

A. A. LOW.

LEAD AND RULE HOLDER.

No. 383,961. Patented June 5, 1888.

Fig. 1.

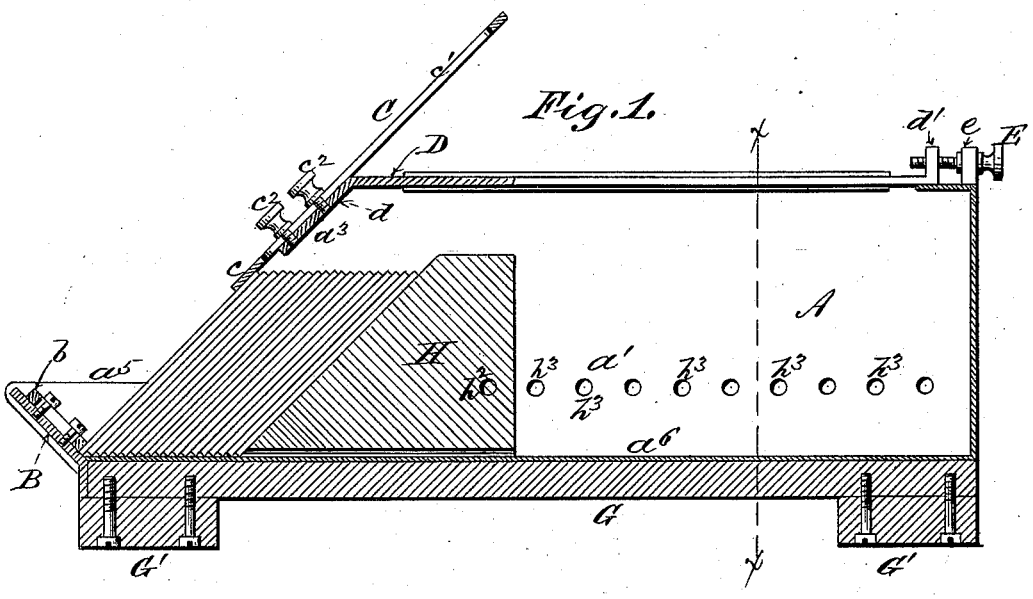


Fig. 2.

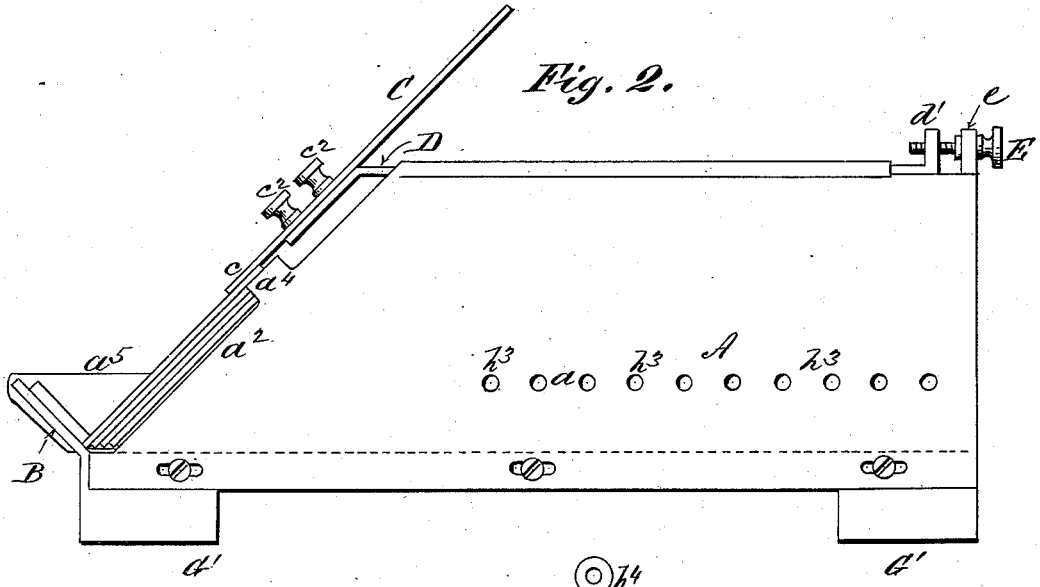
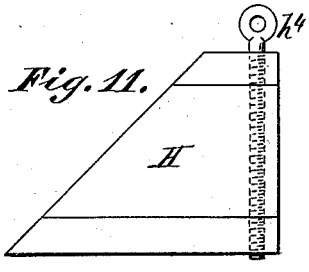


Fig. 11.



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(No Model.) 3 Sheets—Sheet 2.

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LEAD AND RULE HOLDER.

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Fig. 3.

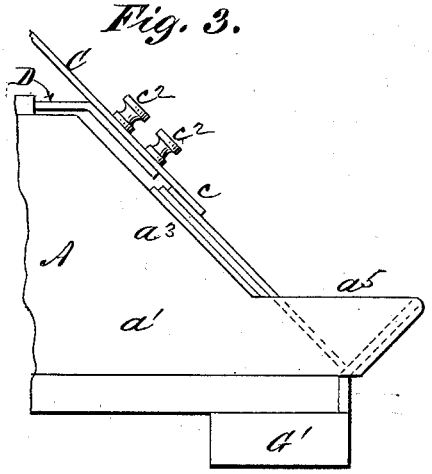


Fig. 4.

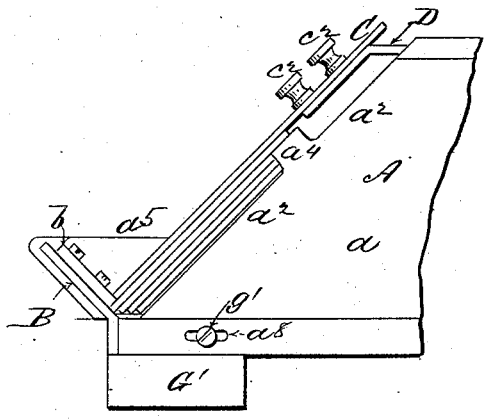


Fig. 5.

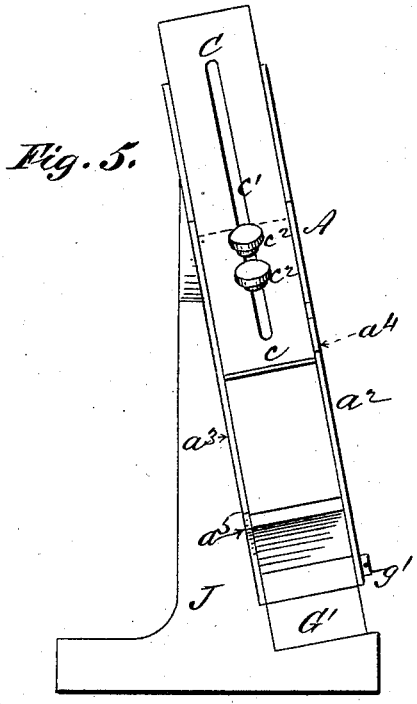
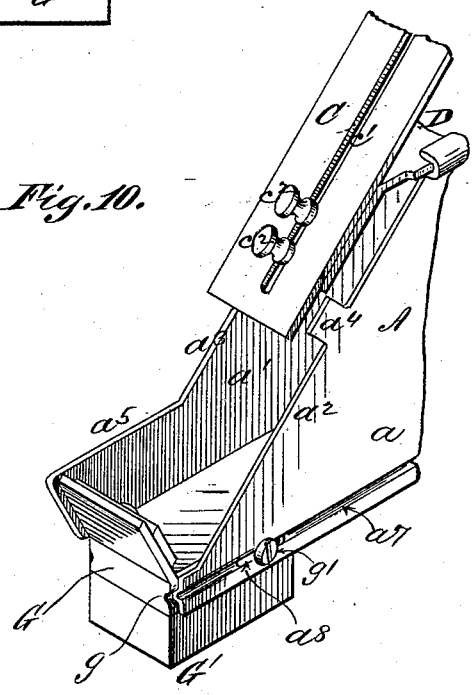


Fig. 10.



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LEAD AND RULE HOLDER.

No. 383,961. Patented June 5, 1888.

Fig. 6.

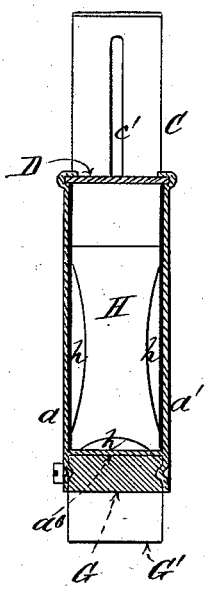


Fig. 7.

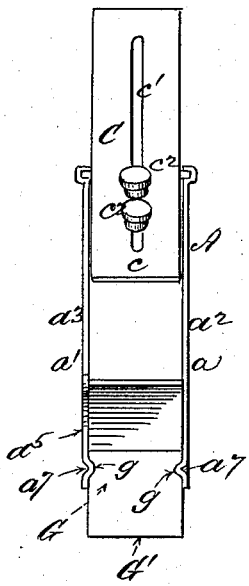


Fig. 9.

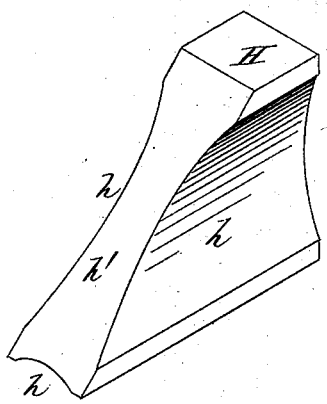
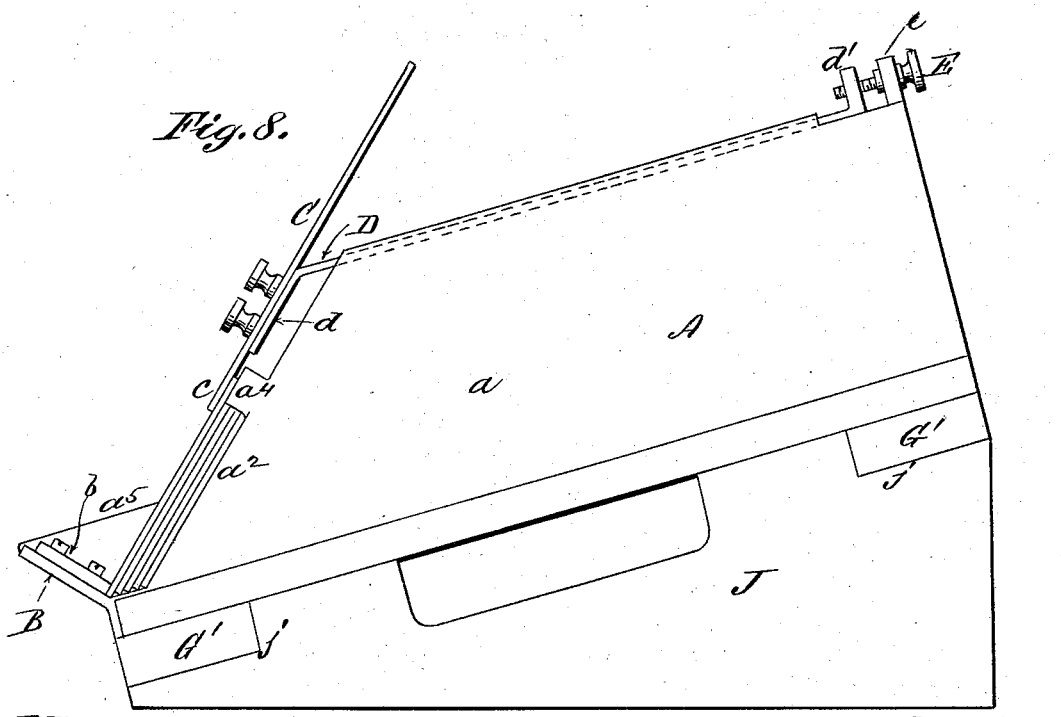


Fig. 8.



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Inventor:
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UNITED STATES PATENT OFFICE.

A. AUGUSTUS LOW, OF BROOKLYN, ASSIGNOR TO THE ALDEN TYPE MACHINE COMPANY, OF NEW YORK, N. Y.

LEAD AND RULE HOLDER.

SPECIFICATION forming part of Letters Patent No. 383,961, dated June 5, 1888.

Application filed December 22, 1886. Serial No. 222,238. (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, in the county of Kings and State of New York, have invented certain new and useful Improvements in Lead and Rule Holders for Compositors' Use, of which the following is a specification sufficient to enable others skilled in the art to which it appertains to make and use the same.

My invention relates to the special class of apparatus for holding and presenting leads and rules heretofore originated by me, for which I have obtained Letters Patent No. 356,845, dated February 1, 1887. In this class of apparatus the leads or rules are arranged in line within the channel or holder, to the lower front end of which they descend by their own gravity, and from which they are successively removed through a transverse opening. I have heretofore employed various means for regulating and controlling the width of this transverse opening to adapt it to leads or rules of different thicknesses, or to the simultaneous removal of two or more leads or rules.

The leading feature in my present invention consists in effecting such regulation of the transverse opening or exit by means of a sliding and adjustable plate situated above the leads or rules, and adapted to answer, also, as cover to the channel or compartment.

I am aware that in my application filed December 16, 1886, Serial No. 221,716, I show a somewhat similar arrangement of an adjustable sliding cover; but in such case it is a cover simply, and nothing more, being designed to rest entirely above the leads and rules, especially those composing the extreme lower portion of the line, and has nothing to do with the width of the transverse exit, whereas in my present construction the lower front end of the adjustable front plate is designed to project down in front of the upper portion of the last lead or rule in the line, and to control the position of the said last lead or leads with relation to the fixed edge or bearing upon the side wall in front of which the leads or rules must pass in order to escape. In other words, the space between the said front edge or bearing upon the side wall and the inner surface of the adjustable front plate constitutes the transverse slot or aperture through which alone the leads or rules can be removed. The simplicity, cheapness, and effectiveness of this method of creating and controlling the transverse exit are of practical importance, the construction being reduced to the fewest possible parts, so that the storage-channels themselves may all be fitted in this way to deliver the leads or rules when required and, under the peculiar conditions of my method of presentation, without the transfer to or use of specially-constructed duplicate channel-holders provided with delivery mechanism, as heretofore.

Still another novel feature of construction consists in the special formation and combination, with the bottom of the channel, of a spine or stiffener, to the front end of which the front lower end, rest is attached. The said spine is grooved longitudinally upon opposite sides, and is held in place by internal longitudinal beads or ribs formed in the lower extensions of the channel-walls, which beads or ribs engage the said longitudinal grooves in the spine, at the same time permitting a slight longitudinal adjustment of the spine when necessary for the purpose of regulating with accuracy the position of the front lower angular line end rest or stop.

In the accompanying drawings, Figure 1 is a longitudinal section of my improved lead-and-rule-holder channel in a horizontal position; Fig. 2, an elevation of the right-hand side of the same; Fig. 3, an elevation of the left-hand side of the front portion of the channel or holder; Fig. 4, an elevation of the right-hand front portion of the channel or holder, showing the front plate lowered; Fig. 5, a front elevation of the channel or holder resting upon a block or holder by which the channel is inclined both laterally and longitudinally. Fig. 6 is a transverse section of the channel upon plane of line *x x*, Fig. 1. Fig. 7 is a front elevation of the channel; Fig. 8, an elevation of the channel resting upon a block or holder by which it is inclined longitudinally. Fig. 9 is an isometrical perspective of the improved form of line sustainer and follower used in the channel. Fig. 10 is an isometrical perspective of the front end of the channel or holder empty. Fig. 11 is an elevation of the end line-support and follower

provided with a screw for effecting a change of adjustment in inclination when desirable.

The channel A is rectangular in form, excepting at the front end, where the front edges, a^2 a^3, of its side walls, a a', are inclined at the angle which it is designed the leads or rules shall assume when in line in the channel. The right-hand edge, a^2, is preferably formed with the projection a^4, the extreme front edge of which forms the rear side of the transverse slot or opening through which the leads or rules are removed. The left-hand-side wall, a', is formed with the lower extension, a^5, which projects forward at the left-hand side of the lower front end line rest, B, and sustains the lower leads or rules upon that side.

The lower end line rest, B, is inclined at an opposite angle to that of the leads or rules, and is provided with the adjustable toe-piece b, which stops the lower edge of the lowest lead or rule, as shown in the drawings, and described in my last application. The upper front end rest c consists of the lower end of the front plate, C, which is adjustable longitudinally upon the slide or frame D.

The front plate, C, is adjusted for use in such manner that its lower end c covers and sustains the extreme upper end of the lowest lead and rule in the line, being regulated in position in accordance with the requirements of the various lengths of leads or rules to be used.

The distance between the inner surface of the upper end rest c and the front end of the projection a^4 is regulated by adjusting the sliding cover-plate D (upon the front end, d, of which the front plate, C, is mounted) longitudinally in the proper direction by means of the screw E, or other similar means. As shown, the screw E turns in the stationary bearing e, while its inner threaded end engages a female screw-thread formed in the lug d', projecting upward from the rear of the cover plate D.

The longitudinal adjustment of the front plate, C, may be accomplished in any suitable or convenient manner. In the drawings the plate C is formed with the longitudinal slot c', through which set-screws c^2 c^2 pass before engaging female threads formed in the inclined end d of the cover-plate D. Underneath the bottom or floor a^6 of the channel is situated a stiffener or spine, G. This spine G may be permanently or rigidly attached to the channel, if desired; but I prefer to attach it so that it may be adjusted longitudinally in either direction within a small degree. A convenient way of providing for this is to form longitudinal grooves g g upon opposite sides of the spine, which will receive and engage internal beads or ribs, a^7 a^7, formed in the lower extensions of the side walls, a a'. Of course it is obvious that the longitudinal ribs may be formed upon the spine and the corresponding longitudinal grooves in the channel side walls, if preferred.

The spine is held in a prescribed position by set-screws g' g', which pass through slots a^8 a^8, formed in the side walls, a a', and enter the spine. By this means the position of the front lower line end rest, B, which is attached to the forward end of the spine G, may be regulated with accuracy.

It is to be understood that, as heretofore, the front edge, a^3, of the left-hand wall, a', is situated a sufficient distance behind the right-hand front edge of cut-off a^4 to permit of the thumb or finger of the operator being pressed against the left-hand edge of the lowest leads or rules, so that they may be quickly and conveniently started forward toward the right through the exit-space. It will also be noticed that a free space is left below the cut-off a^4, which space also facilitates the withdrawal of the leads or rules.

The grooves for the sliding cover D may be made by bending over the upper edges of the side walls, as shown; or it may be supported so as to admit of the necessary longitudinal adjustment in any suitable manner.

The end line support, H, may be cast or otherwise formed with the longitudinal grooves or depressions h h h in its sides and bottom, and its front or bearing surface, h', is inclined at the same angle as the front edges of the side walls, so as to sustain and carry forward the leads or rules at the proper angle for removal. When the channel is not in use, the front plate, C, is lowered into the position shown in Fig. 4, so as to inclose and protect the end of the line of leads or rules.

Attached to the spine are two or more feet or rests, G' G', which serve to raise the bottom of the channel sufficiently to permit the placing of the fingers underneath the channel when it is desired to lift it from a flat surface, and, besides facilitating the handling of the channel generally, afford means for retaining the channel in position upon the block J, which is shouldered or recessed, as at j j, to receive the feet G'. The block J is to support the channel in the proper standard inclined position, and is simple and inexpensive in construction.

The end line-support, H, may be perforated transversely, as at h^2, and the side walls of the channel A may likewise be formed with a series of perforations, h^3, which will correspond with the hole h^2 when opposite, so that a pin may be passed through coinciding holes for the purpose of locking the slug in a prescribed position.

The end line-support and follower, H, may also be provided with a screw, h^4, similar to the manner shown in my last application for patent; but in the present case the screw not only affords a means of handling the follower, but also affords a means of regulating or varying its inclination within the channel, if desirable.

It is obvious that the details of construction may be modified or changed in some respects without deviating from the spirit or intent of

my invention, and I do not therefore confine myself to the identical construction of parts shown.

I am aware that in my application for patent concurrent herewith, Serial No. 221,716, filed December 16, 1886, I show and describe certain features of construction which are also shown herein; and I therefore wish it to be understood that I expressly disclaim herein all features specifically claimed in said application and confine myself herein to the subject-matter of the claims hereinafter set forth.

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

1. The combination, in a lead and rule channel or compartment substantially such as described, of the side walls formed with inclined front edges, and a parallel front plate for supporting the upper end of the last lead or rule in the line, the said front plate being supported from above, so as to leave a free space upon both sides, for the purpose and substantially in the manner described.

2. In a lead and rule holder substantially such as described, formed with the open front end and with side walls the front edges of which are inclined and parallel, an inclined front plate parallel to the said front edges of the side walls, supported by means substantially such as described, by which it may be adjusted toward or from the said front edges of the side walls, substantially in the manner and for the purpose described.

3. In a lead and rule holder substantially such as described, formed with the open front end and with side walls the front edges of which are inclined and parallel, an inclined front plate supported above and parallel to the said front edges of the side walls by means substantially such as described, which admit of its being adjusted in position vertically to increase or diminish the open space between its lower end and the floor of the holder, substantially in the manner and for the purpose described.

4. In a lead and rule holding and presenting channel substantially such as described, the bottom spine or stiffener, G, situated underneath the floor of the channel and having the lower end line-support attached to its front end and being secured between the walls of the channel by means which permit of its being adjusted longitudinally, substantially in the manner and for the purpose described.

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WM. GARDNER.