No. 650,193. Patented May 22, 1900.

H. B. ROUSE.

PRINTER'S LEAD AND RULE CUTTER.

(Application filed Mar. 23, 1899.)

(No Model.) 3 Sheets—Sheet 1.

FIG. 1

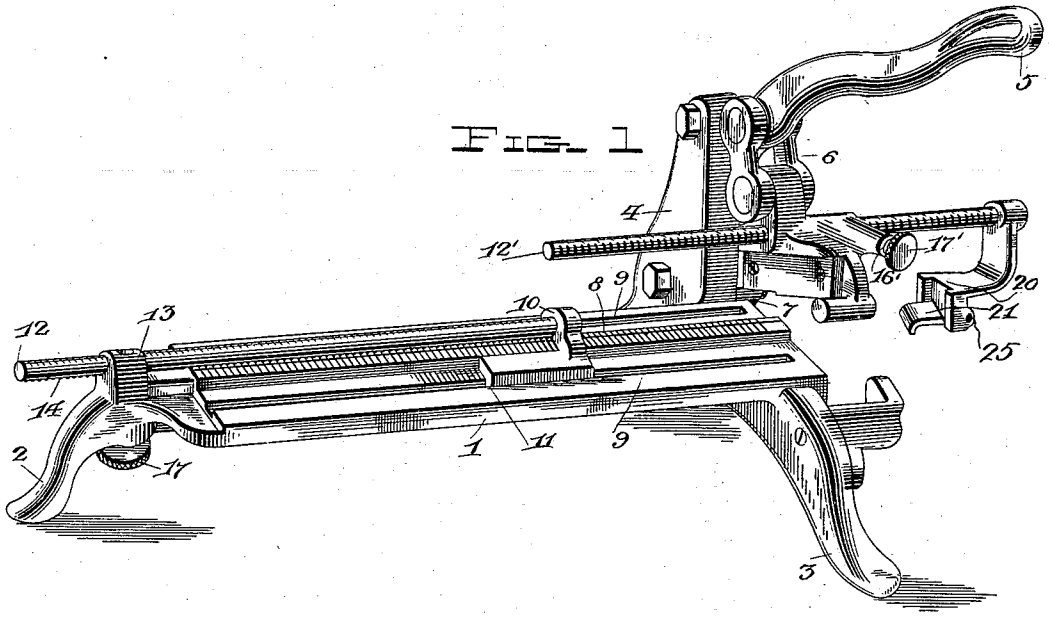


FIG. 2

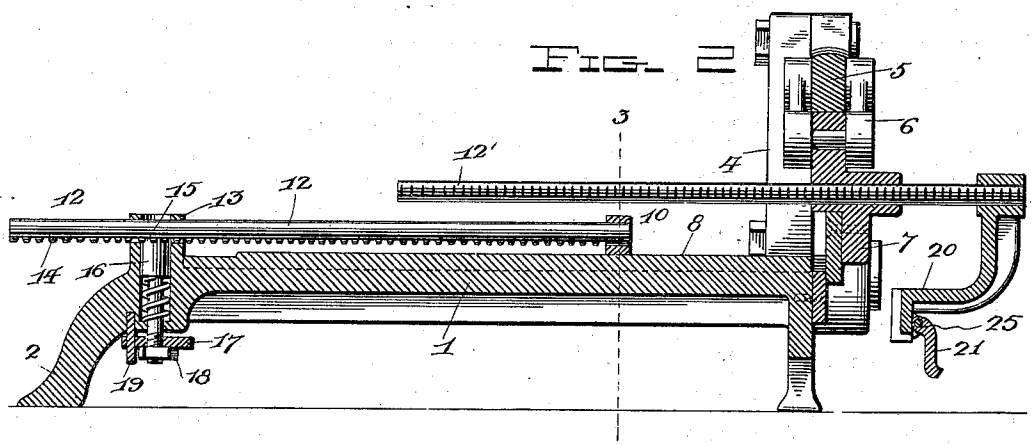
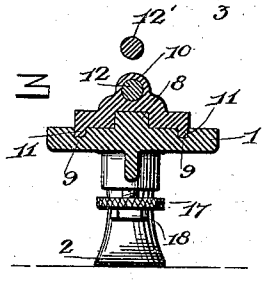


FIG. 3



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(No Model.) 3 Sheets—Sheet 2.

FIG. 4

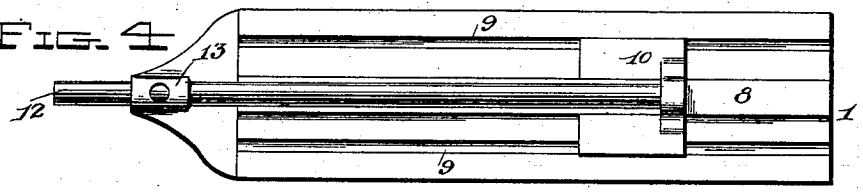


FIG. 5

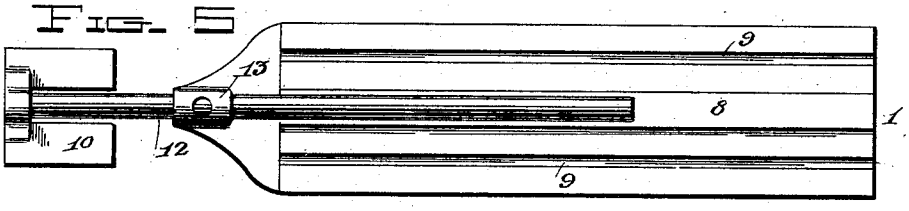


FIG. 6

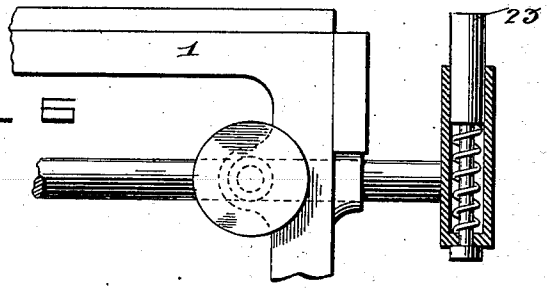


FIG. 8

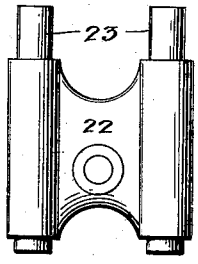
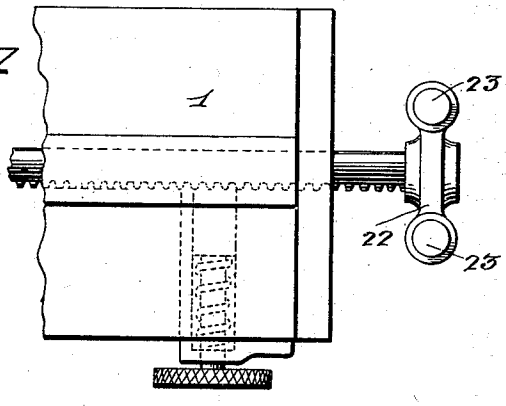


FIG. 7



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(No Model.) 3 Sheets—Sheet 3.

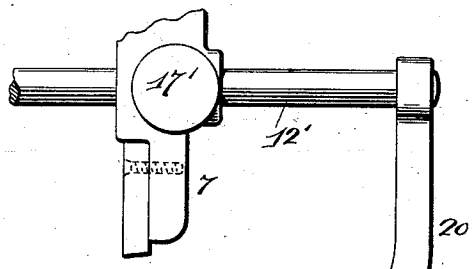


FIG. 9

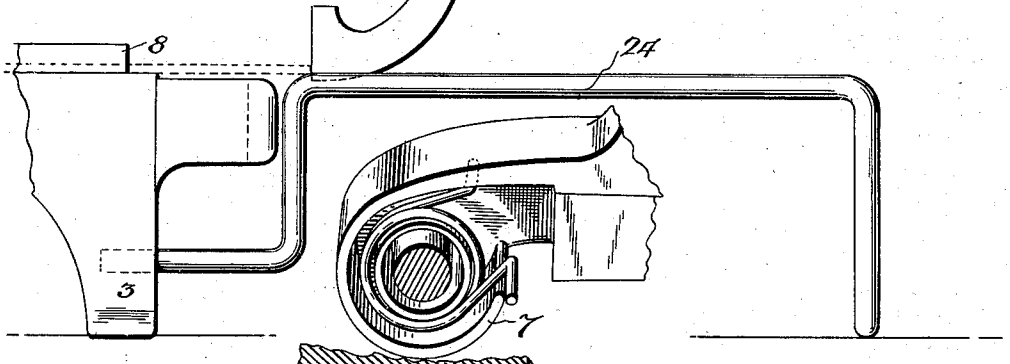


FIG. 11

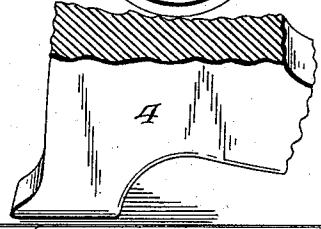
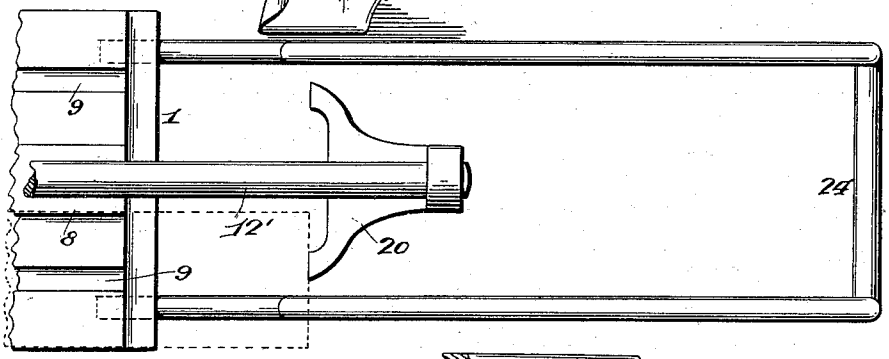


FIG. 10



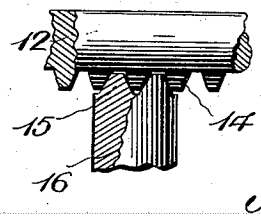


FIG. 12

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UNITED STATES PATENT OFFICE.

HARRY B. ROUSE, OF CHICAGO, ILLINOIS.

PRINTER'S LEAD AND RULE CUTTER.

SPECIFICATION forming part of Letters Patent No. 650,193, dated May 22, 1900.

Application filed March 23, 1899. Serial No. 710,173. (No model.)

To all whom it may concern:

Be it known that I, HARRY B. ROUSE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Printers' Lead and Rule Cutters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain novel improvements in printers' combination lead and rule cutters, and more particularly to an improved reversible gage having peculiar advantageous features in connection with this class of machines.

The object of the invention is to improve and simplify the construction of the gage, and thereby increase the utility, accuracy, and range of the cutter, thus greatly conducing to the speed and convenience of manipulation.

To these ends the invention consists in the construction, combination, and arrangement of the device, as will be hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying drawings the same reference characters marked thereon indicate the same parts of the invention.

Figure 1 is a perspective view of a printer's combination lead and rule cutter embodying my improvements. Fig. 2 is a longitudinal section through the center of the bed or table. Fig. 3 is a transverse section on the line 3 3 of Fig. 2. Fig. 4 is a plan view of the table and table-gage. Fig. 5 is a similar view showing the table-gage reversed to cut leads or rules of a greater length than the table-bed. Fig. 6 shows the manner of mounting the gage-rod beneath the table-bed. Fig. 7 is another explanatory view of the same. Fig. 8 is a front elevation of the gage-head shown in Figs. 6 and 7. Fig. 9 is a side elevation of the cutting end of the machine, showing a detachable wire bracket to support the projecting end of the lead or rule. Fig. 10 is a top plan view of the same. Fig. 11 is a detail perspective view, partly in section, of the standard and spring-actuated cutter-jaw. Fig. 12 is an enlarged detail section of the intermeshing teeth 14 and 15 on gage-rod 12 and the spring-actuated bolt 16.

1 denotes the bed-plate, formed with the integral legs 2 and 3 and the leg-standard 4. The usual hand-lever 5 is fulcrumed on the upper end of the standard, and it is connected by the link 6 with the spring-actuated cutter-jaw 7, also fulcrumed on the standard below the hand-lever. The spring in the jaw 7 encircles the pivot-screw and is concealed in a pocket formed in the standard 4. The bed-plate is provided with the longitudinal rib 8 and with the parallel grooves 9 9, one of which is formed on either side of the rib and extends the entire length of the bed. The top face of the rib is provided with a graduated scale denoting picas.

10 denotes the gage-head, which straddles the rib, and its sides are formed with parallel guide-flanges 11 11, which have a sliding engagement with the grooves 9 9, and consequently extend below the face of the table-bed.

12 denotes the gage-rod, fixed at one end to the head 10 and extending rearwardly through a guide-post 13, arising from the leg 2, and this rod is also provided with a graduated pica-scale, as shown, which forms a continuation on the rib-scale above mentioned, so that when the gage-head 13 is reversed, as shown in Fig. 5, leads or rules of unusual length may be cut with the same facility as those more commonly required. The lower face of the gage-rod is provided with a series of graduated teeth 14, corresponding to the pica-scale on the rib 8, and the intervening spaces between these teeth are V-shaped to receive the correspondingly-formed locking-teeth 15 on the spring-actuated bolt 16, extending upwardly through the post 13, and its lower end carries a milled-head thumb-washer 17, which is held in place by a nut 18. This washer 17 is fixed to the bolt 16, so as to move up and down with it, and 19 denotes a guide-pin fixed in the leg 2 parallel with the bolt 16 and extending downward through the washer to prevent the bolt turning axially, and thereby retain the locking-teeth 15 on the upper end of the bolt in parallel alinement with the spaces between the teeth 14 on the gage-rod, and thus insure their engagement in the operation of altering the adjustment

of the gage. It will be understood that the washer 17 has a threaded engagement with the bolt 16 and when adjusted to its proper position is locked in place by the jam-nut 18. A similar gage-rod 12′ is mounted in the cutter-arm 7, and its adjustment is in like manner regulated by the bolt 16′, which is manipulated by the milled-head nut 17′. The outer end of the rod 12′ carries a gage-arm 20, in the lower end of which is mounted a hinged shelf 21, which when in a horizontal position supports the outer end of the lead or rule while being cut; but in cutting very short rules or leads this shelf may be turned downwardly and out of the way, as shown in Fig. 2, permitting the gage 20 to extend under the cutter-arms and to come up to within a very short distance of the table. This hinged shelf is held in a horizontal position by friction between the parallel walls of the gage-arm shown in Fig. 1.

In Figs. 9 and 10 I have dispensed with the hinged shelf 21, and in lieu thereof I employ a detachable wire bracket 24, which has a sliding engagement with the cutter and which forms a convenient support for the end of the lead or rule which extends over the cutting edge of the bed or table. In Figs. 7 and 8 the same principles of construction are involved, the gage-rod and locking-bolt in this instance being mounted beneath the table-bed, and to conform to this arrangement I have provided the outer end of the gage-rod with a cross-head 22, in which are mounted the spring-actuated plungers 23 23, which project into the path of and form the gages for the leads and rules, respectively, and in cutting very short pieces these plungers will come under the cutter-arm, which in descending retracts them without interfering with their efficiency as gages. This particular form of gage-rod can be easily, quickly, and accurately set to half as well as whole pica measure, (the printer's standard of measurement.) It is also absolutely positive in engagement and self-centering as well. The tapering teeth on the bolt and the corresponding notches on the gage-rod accurately compensate for wear, as it is obvious that any wear will only allow the teeth to mesh more deeply.

Another important feature to which attention may be called is the flanges on the gage-block 10, which project into the grooves 9 9, formed in the table-bed, and thus extend below the face of the table and on which the lead or rule to be cut is laid. Consequently no lead or rule however thin can slip under the head-block.

While I have shown and described the particular form of grooved table or bed and flanged gage as applied to a lead and rule cutter, I do not wish to be understood as limiting myself to such use, as it is evident that the same gaging device is applicable to other machines of this class—as, for example, brass-rule-mitering machines and the like; neither do I wish to limit myself to a notched rod, as a notched bar of a rectangular form and provided on one of its edges with the retaining-notches may be employed to accomplish the same result.

The accompanying drawings show my invention in the best form now known to me, but many changes in the details might be made within the skill of a good mechanic without departing from the spirit of my invention as set forth in the claims at the end of this specification.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

1. In a printer's lead and rule cutter, the bed-plate 1 formed with the integral longitudinal rib 8 and parallel grooves 9 9, one on either side of said rib, in combination with the sliding gage-head 10 adapted to straddle said rib, and formed with the integral parallel guide-flanges 11 11, which have a sliding engagement with said grooves 9 9, substantially as shown and described.

2. In a printer's lead and rule cutter, a grooved table, a flanged gage-block having a sliding engagement with said grooved table, a notched rod carried by said gage-block, and means for locking said rod at predetermined points, substantially as and for the purpose set forth.

3. In a printer's lead and rule cutter, a grooved table, a flanged gage-block, a notched rod carried by said block, and a spring-actuated bolt, adapted to engage said notched rod, substantially as and for the purpose set forth.

4. In a printer's lead and rule cutter, a grooved table, a flanged gage-block, a notched rod carried by said block, and a spring-actuated locking-bolt, formed with teeth which are adapted to engage said notched rod, to retain the same at certain predetermined points, substantially as and for the purpose set forth.

5. In a printer's lead and rule cutter, an adjustable gage-head, and a shelf, hinged to said head, substantially as and for the purpose set forth.

6. In a printer's lead and rule cutter, an adjustable gage-head, and a series of spring-actuated plungers, carried by said gage-head, substantially as and for the purpose set forth.

7. In a printer's lead and rule cutter, a table, a gage-block, having a longitudinal sliding engagement with said table, a notched rod carried by said gage-block, and means for locking said notched rod and gage-block at predetermined points, substantially as and for the purpose set forth.

8. In a printer's lead and rule cutter, a table, a gage-head, having a longitudinal sliding engagement with said table, a notched rod carried by said gage-head, and means for securing said rod and gage-head in a normal and in a reversed position with reference to said cutter, substantially as and for the purpose set forth.

9. In a printer's lead and rule cutter, a table, a stationary cutter-blade fixed to said table, a coacting cutter-blade lever pivoted to said table and formed with a gage-guide orifice and an intersecting locking-bolt orifice—a notched gage-rod and its head—and having a sliding engagement with said cutter-blade lever, and a spring-actuated locking-bolt mounted in said intersecting orifice and having its inner end formed with longitudinal teeth which are adapted to project into the path of the notched side of said gage-rod, substantially as and for the purpose set forth.

10. In a printer's lead and rule cutter, the combination with a notched rod, a cross-head with depressible plungers attached to one end of said rod, and means for locking said rod at predetermined points, substantially as and for the purpose set forth.

11. In a printer's lead and rule cutter, a gage comprising a notched reversible gage-rod and its head, the notches of which are formed with converging walls, and a spring-actuated locking-bolt formed at its inner end with corresponding longitudinal teeth, the lengths of which are less than the depth of said notches, substantially as and for the purpose set forth.

12. In a printer's lead and rule cutter, a stationary bed-plate, and a sliding gage-block, one of which is formed with a flange and the other with a groove to receive said flange, substantially as and for the purpose set forth.

13. In a printer's lead and rule cutter, a table, a gage-block having a sliding engagement with said table, a rod carried by said block and formed with flaring notches and a spring-actuated locking-bolt, mounted in said table and having one end formed with correspondingly-shaped teeth to engage, but not bottom in said notches, substantially as shown and described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HARRY B. ROUSE.

Witnesses:
W. ARTHUR JONES,
WM. BUHLE.