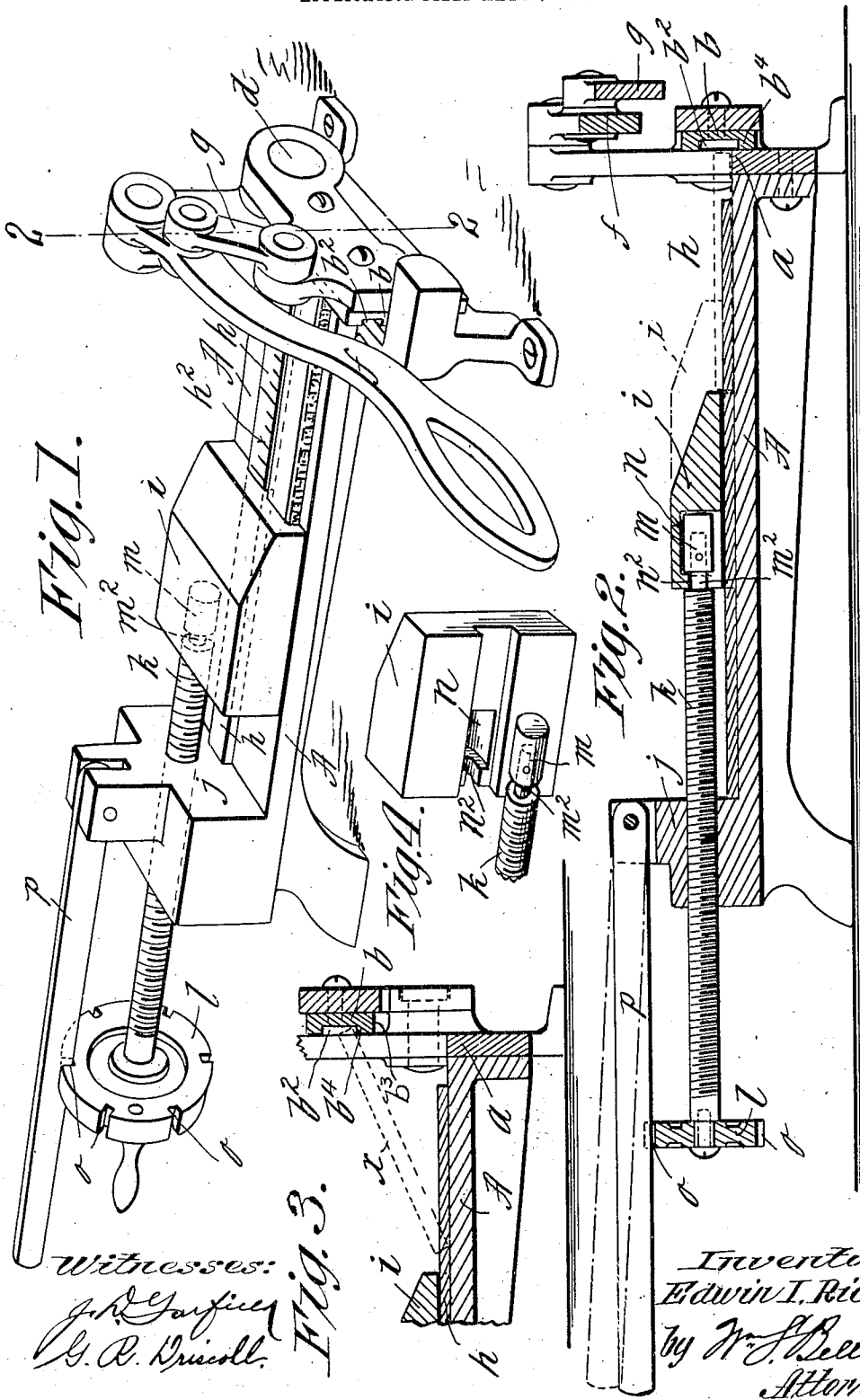


E. I. RICE.
PRINTER'S LEAD CUTTER.
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Witnesses:
J. D. Garfield
G. R. Brinell

Inventor:
 Edwin I. Rice,
 by *W. J. Bellon*,
 Attorney.

UNITED STATES PATENT OFFICE.

EDWIN I. RICE, OF SPRINGFIELD, MASSACHUSETTS.

PRINTER'S LEAD-CUTTER.

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To all whom it may concern:

Be it known that I, EDWIN I. RICE, a citizen of the United States of America, and resident of Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Printers' Lead-Cutters, of which the following is a full, clear, and exact description.

The object of this invention is to generally improve the construction of a cutter for printers' leads, rules, and linotype-slugs, whereby the machine is susceptible of production at comparatively small cost, capable of utilization in an extremely rapid manner, and generally more satisfactory and desirable in use.

The invention consists in the combinations or arrangements of parts and in the constructions of certain of the parts, all substantially as hereinafter fully described, and set forth in the claims.

The improved printer's lead-cutter is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view. Fig. 2 is a central vertical longitudinal sectional view of the machine, the movable member of the shear being shown in its lowered position. Fig. 3 is a sectional view similar to Fig. 2, but showing only the right-hand portion of the machine, the movable shear member being shown as in its elevated position and the upwardly-swung position of the properly-cut lead indicated by dotted lines. Fig. 4 is a perspective view showing structural features of the feed-screw and the gage-block, to be hereinafter referred to.

Similar characters of reference indicate corresponding parts in all of the views.

In the drawings, A represents a table, at the right-hand end of which is a fixed member *a* of a shear, *b* representing the movable member of the shear, pivoted at *d* and operated by the handle-lever *f* and link *g*. On the top of the table, made as one therewith, is a longitudinal rib *h*, fitting about and guided by which is a movable gage-block *i*, which is quite bulky and heavy and not liable to displacement. The table is made at its left-hand end with a solid upwardly-extending portion *j*, screw-threading horizontally and longitudinally through which is a screw-shaft *k*, having at its outer end a handle-wheel *l*, while its inner end is made with a

head and neck *m m'*, as shown in Fig. 4, receiving engagement with the semicylindrical socket *n*, so that the gage-block *i* may be easily disengaged from the screw and one considerably longer interchanged therefor. The socket *n* is continued to the end of the block by the semicylindrical recess *n* of smaller size. The hand-wheel *l* has regularly-spaced notches *o*, engaging in which is a catch-lever *p*, which is pivoted to the portion *j* of the table. The notches *o* are made with respect to the pitch of the screw-threads of the shaft *k* and with the scale graduations *h'* on the rib *h* so that a given number of complete turns or fraction of turns as measured by the wheel-notches *o* will cause the end of the gage-block to be positioned at a known distance from the fixed shear member *a* at the right-hand end of the table, whereby with a given setting of the gage a lead may be cut off to have a length of a desired number of picas or points. In cases where it is desired that short leads be cut it is more convenient to substitute the gage-block *i* by one very much longer instead of performing the somewhat slow operation of turning the screw-shaft a great number of times, and this, as apparent, may be readily done by the formations *m*, *m'*, and *n* between the gage-block and operating-screw for the detachable engagement of the block with the screw. The dotted lines in Fig. 2 indicate a longer gage-block, assumed to be capable of substitution for the one represented in such figure by the full lines. It will be noticed that the vertically-movable member of the shear *b* is made with a recess *b'* in its inner face slightly above its cutting edge *b''*. This is regarded as an important feature in printers' lead-cutters, for in practice in the common form of lead-cutters on the upward return movement of the shear the lead, tightly held between the gage-block and vertically-moving shear, is by the friction between the cut-off end of the lead and the face of the shear tilted upwardly, causing a jamming of the corners of the lead at its ends against both the gage and shear.

In the operation of this machine the cut-off lead will of itself catch, or it may by having a slight sliding movement imparted thereto while the shear *a* is lowered be made to catch against the shoulder *b'*, whereupon the lifting of the shear will also lift the lead therewith, as represented at *x* in Fig. 3, not only saving the

lead from becoming jammed at its ends, but also leaving it to be more easily picked up by the compositor than would be the case if it were left flat on the table and close against the rib *h*.

I claim—

1. In a printer's lead-cutter, in combination, a bed or table having a longitudinal guide-rib at its top, having a fixed shear member at one end thereof, and having an upstanding portion at its other end, a movable shear member coacting with the fixed shear member, and means for operating it, a gage-block having a sliding and guiding engagement with said rib, and a screw-shaft having a traveling engagement in said upstanding portion of the table, and provided with a head taking in a socket in said gage-block, and means for turning said shaft.

2. In a printer's lead-cutter, in combination, a bed or table having a longitudinal guide-rib at its top, having a fixed shear member at one end thereof, and having an upstanding portion at its other end, a movable shear member coacting with the fixed shear member, and means for operating it, a gage-block having a sliding and guiding engagement with said rib, and a screw-shaft having a threaded bearing in, and a longitudinal feed movement through said upstanding portion of the table, and swiveled in said block, and having at its outer end a notched hand-wheel, and a manually-operated catch-lever pivoted to said upstanding portion of the table and adapted to engage in the notches of said wheel, and positively lock the same.

3. In a printer's lead-cutter, in combination, a bed or table having a longitudinal

guide-rib at its top and having a fixed shear member at one end thereof, having an upstanding portion at its other end, a movable shear member coacting with the fixed shear member, and means for operating it, a gage-block having a sliding and guiding engagement with said rib, and having in its under side near one end a semicylindrical socket, and a semicylindrical recess of less diameter leading from said socket to the end of the block, and a screw-shaft having a thread engagement and a longitudinal feed movement through said upstanding portion of the table, provided at its inner extremity with a cylindrical portion, to engage in said semicylindrical socket of the gage-block, and having a necked-down portion adjacent said cylindrical end portion, and means for rotating said shaft.

4. In a printer's lead-cutter in combination, a bed or table having a fixed shear member at one end thereof, a gage-block having a perpendicular working face slidable along said table, means for moving said gage-block, and a movable shear member coacting with said fixed shear member and having a working face parallel with the working face of said gage-block, and also having a rectangular recess in its working face opposite the gage-block, whereby jamming of the work is prevented.

Signed by me at Springfield, Massachusetts, in presence of two subscribing witnesses.

EDWIN I. RICE.

Witnesses:

G. R. DRISCOLL,
WM. S. BELLOWS.