

No. 774,239.

PATENTED NOV. 8, 1904.

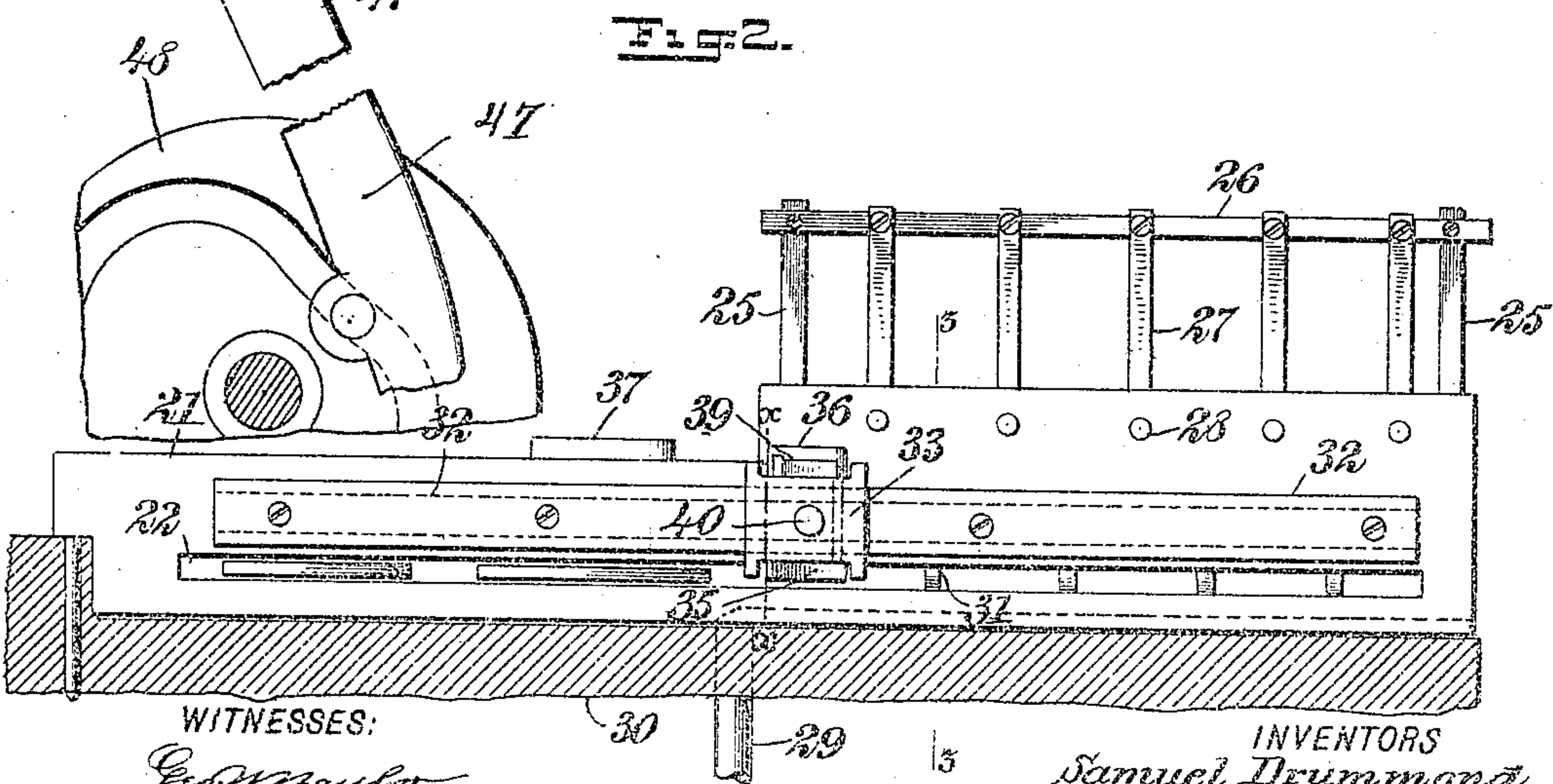
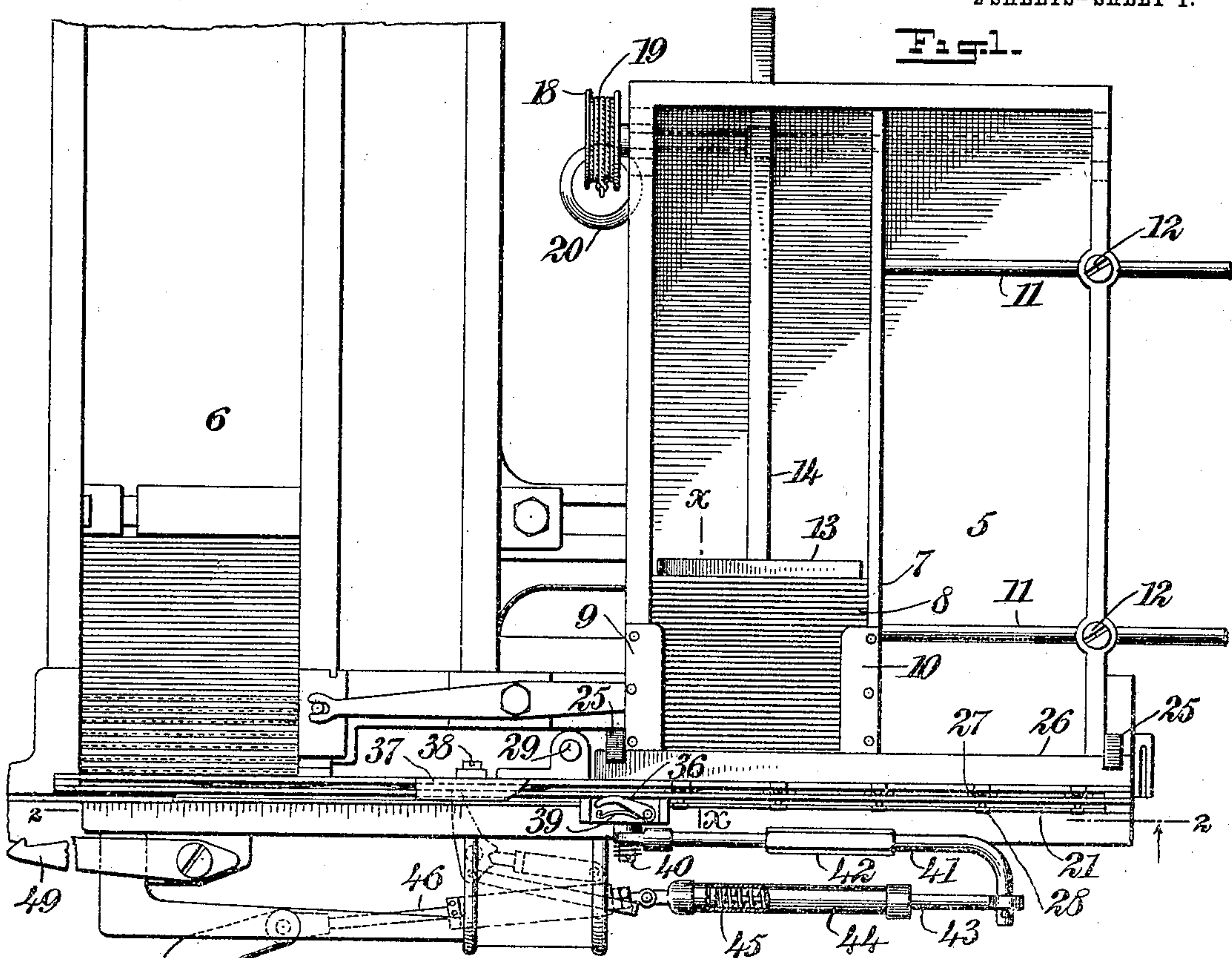
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LEADING ATTACHMENT FOR TYPE-CASTING AND SETTING MACHINES.

APPLICATION FILED SEPT. 19, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



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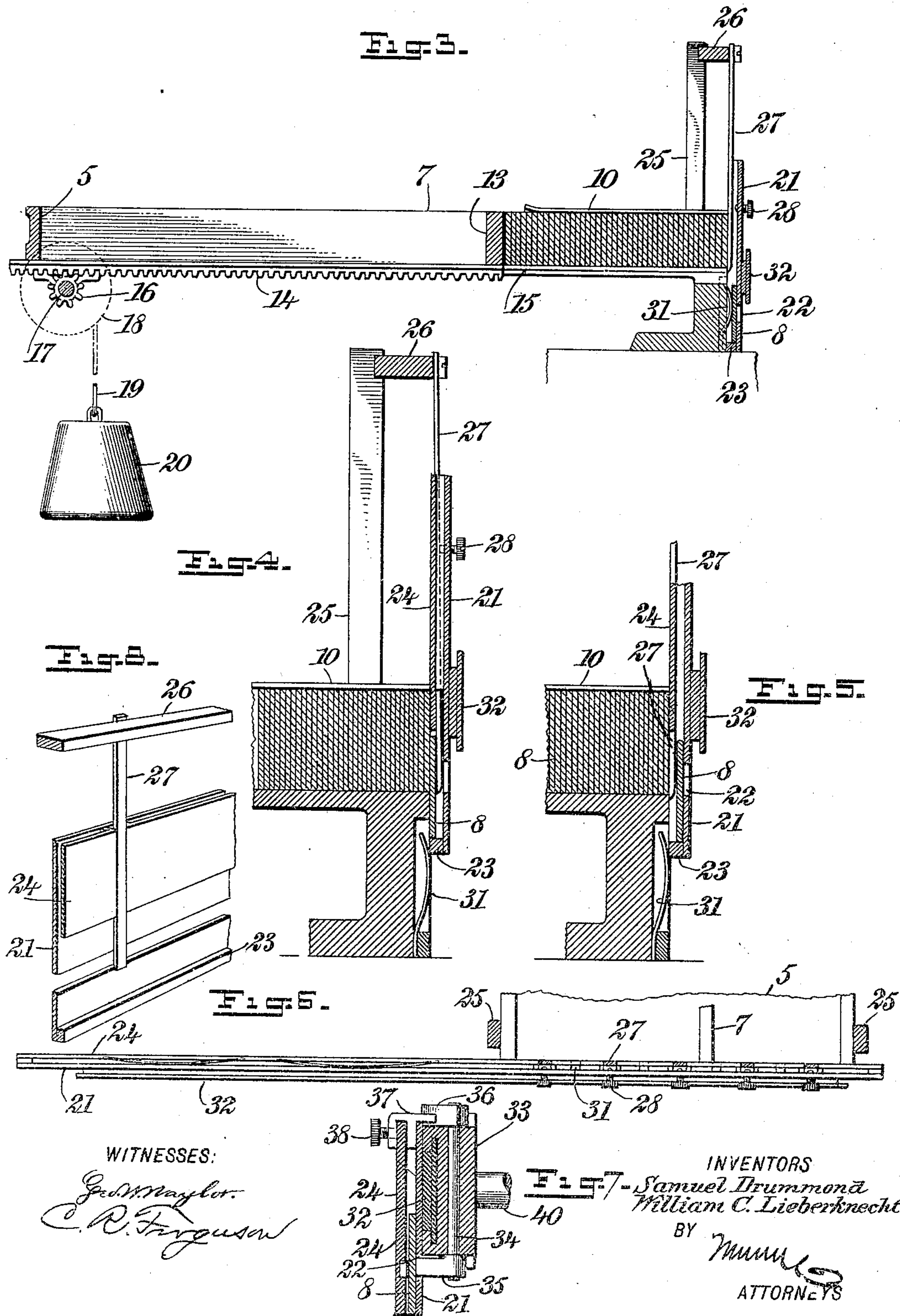
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UNITED STATES PATENT OFFICE.

SAMUEL DRUMMOND AND WILLIAM C. LIEBERKNECHT, OF NEW YORK,
N. Y.; SAID LIEBERKNECHT ASSIGNOR TO SAID DRUMMOND.

LEADING ATTACHMENT FOR TYPE CASTING AND SETTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 774,239, dated November 8, 1904.

Application filed September 19, 1903. Serial No. 173,829. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL DRUMMOND, a resident of the borough of Brooklyn, in the county of Kings, and WILLIAM C. LIEBERKNECHT, a resident of the borough of Manhattan, in the county of New York, city and State of New York, both citizens of the United States, have invented a new and Improved Leading Attachment for Type Casting and Setting Machines, of which the following is a full, clear, and exact description.

This invention relates to improvements in leading attachments for type casting and setting machines, and particularly to the so-called "monotype-machine," the object being to provide a device by means of which leads of any desired size will be automatically fed between the lines of type as composed, thus not only expediting the setting up of matter but resulting in a uniformity of work.

We will describe a leading attachment for type casting and setting machines embodying our invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of an automatic leading attachment embodying our invention. Fig. 2 is a section on the line 2 2 of Fig. 1. Fig. 3 is a section on the line 3 3 of Fig. 2. Figs. 4 and 5 are sections on the line *xx* of Fig. 1, showing the parts in different positions. Fig. 6 is a plan view of the runway for the leads. Fig. 7 is a cross-section thereof, and Fig. 8 is a fragmentary detail in perspective.

Referring to the drawings, 5 designates the lead box or holder, designed to be arranged at the side of the galley 6 opposite that on which the type is composed and moved into the galley-inlet. This holder has an adjustable wall 7, so as to regulate the holder for the length of the leads 8, and at the outlet end the leads are held from moving upward by means of a plate 9, secured to a fixed outer wall of the holder, and a plate 10, attached to the wall 7. This wall 7 is connected to rods 11, which pass through openings in the fixed wall of the

holder and are secured as adjusted by means of screws 12. The leads are forced forward, as here shown, by means of a plunger or follower 13, attached to a rack 14, which moves in a slot 15, formed in the bottom of the holder, and engages with a pinion 16, on the shaft 17 of which is a drum 18 for a rope or line 19, on the free end of which is a weight 20.

While we have shown but one rack 14, it is to be understood that more may be employed, if desired, and, in fact, other means may be devised for forcing the leads forward without departing from the spirit of our invention.

Extended along the front of the holder 5 and across the inlet end of the galley 6 is a runway for the leads. This runway comprises an outer plate 21, having a longitudinal slot 22, and on the lower edge of this outer plate 21 is an inwardly-extended flange 23, and inward of the plate 21, near its upper edge, is an inner plate 24, there being a space between the lower edge of said plate 24 and the flange 23 sufficient to permit the passing therethrough of one or more leads, as may be desired and as will be hereinafter described. Extended upward from opposite sides of the holder 5 are posts or standards 25, connected at the top by a cross-rail 26, and depending from this cross-rail 26 are push-fingers 27. These fingers have loose or slight outward and inward swinging connection with said rail 26, and they pass downward between the plate 24 and the end of the holder. It will be noted that the plate 24 is recessed to receive these fingers, permitting the surfaces of the fingers adjacent to the outlet end of the holder to lie flush with the surface of said plate. It will be noted that the plates 21 24 are somewhat wider at their portion forward of the holder 5, and the throw of the fingers to accommodate the same for different thicknesses of lead may be adjusted by means of screws 28, operating through openings in the outer plate 21. This runway has a vertical movement, and therefore it is attached to a rod 29, movable through an opening in the bed-plate 30 of the machine and operated by a suitable cam mechanism that it is not deemed necessary to show herein.

Upwardly and rearwardly curved springs 31 are secured to the frame of the machine below the outlet end of the holder 5, these springs being designed to force the leads through the space between the plate 24 and the flange 23, as will be hereinafter described.

Movable on a guide-rail 32, attached to the front of the plate 21, is a shifting device for the leads, comprising a block 33, and passing vertically through the said block and having a slight rotary movement is a rod 34, on the lower end of which is a pawl 35, adapted to pass through the slot 22 to engage with a lead, as clearly indicated in Fig. 7. On the upper end of this rod 34 is a cam-lever 36, designed to engage with a releasing cam-block 37, adjustable on the plate 24 and held as adjusted by means of a set-screw 38. The pawl 35 is held yieldingly against the lead or leads by means of a spring 39, secured at one end to the upper end of the block 33 and bearing at its other end against the cam-lever 36.

Extended from a lug 40 on the block 33 is an operating-rod 41. This rod is made in two sections, connected by a sleeve-nut 42, and thus the rod may be adjusted as to its length for the different throw of the block in carrying various lengths of leads.

Connecting with the outwardly-turned end of the rod 41 is a link consisting of a rod 43, extended into a tube 44 and provided at its inner end with a head for engaging one end of a spring 45 in said tube. By means of this spring the shock of movement is relieved. This link has a connection 46 with a cam-lever 47, operating in a horizontal plane by means of a cam 48.

In the operation a line of type is moved to the front of the galley-inlet 6 by means of a hook 49, operated in the usual manner, and the type is transferred into the galley-inlet in the usual way. At the time of transferring a line of type to the galley-inlet a lead will be in position in the runway at one side of the galley-inlet—that is, with one end near the edge of the galley-inlet. After placing the line of type in the galley the runway will be elevated to receive another lead or leads from the holder, and upon this upward movement the lead in front of the galley will be forced therein by the means that move the type-line into the galley, the flange 23 at this time being substantially flush with the bottom of the lead-holder. This lead or leads will strike against the inner side of the fingers 27, spring the same slightly outward, resting with its lower edge on the flange 23, and carrying the lead by the lower edge of the part 24, engaging therewith. The runway will now be lowered until the top edge of the lead or leads is below the lower ends of the fingers 27, as indicated in Fig. 3, and at this time the springs 31 will force the lead or leads forward or against the inner surface of the plate 21, and as the runway moves upward the fingers 27

will be engaged against the inner side of the lead or leads. The swinging connection between the parts 40 41 43 will permit of the free up-and-down movements of the runway. The block 33 will now be moved forward with the pawl 35 in engagement with the lead or leads. The lead or leads will be carried forward, consequently pushing the first-named lead or leads into position in front of the galley-inlet, and it will be passed into the galley-inlet by the means employed for moving the type therein. As the cam-lever 36 engages with the cam-block 37 the pawl will be released or swung out of engagement with the lead or leads, permitting said lead or leads to remain in position to be forced forward by the next lead or leads, as above described, after casting and composing another line of type.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. In a type casting and setting machine, a leading attachment, comprising a holder, a runway having vertical movement forward of the holder and adapted to receive one or more leads at a time from the holder, adjustable spring-fingers between the runway and holder, and means for moving the leads along said holder to their position between the lines of type.

2. In a type casting and setting machine, a leading attachment, comprising a holder for leads, a runway for receiving the leads one or more at a time from said holder, the said runway having vertical movements, fingers extended into the runway for engaging against the front lead in the holder, and means for moving the leads lengthwise of the runway to their position between the lines of type.

3. In a type casting and setting machine, a leading attachment, comprising a runway having vertical movements, means for discharging leads into said runway, the runway being slotted at one side, a block movable along the runway, a pawl carried by said block and adapted to pass through said slot to engage one or more leads, means for moving the block with the lead or leads lengthwise of the runway, and means for releasing the pawl from the lead or leads.

4. In a type casting and setting machine, a leading attachment, comprising an adjustable holder for leads, a runway forward of the holder and having spaced front and rear plates, fingers extended between said plates and the holder, the said runway having vertical movements, springs on a fixed support below the outlet of the holder, for forcing leads against the outer plate, and means for moving the leads lengthwise of the runway.

5. A leading attachment for a type casting and setting machine, comprising a holder for leads, a runway having vertical movement forward of said holder, a block movable along said runway, means for causing back and forth

movements of said block, the front wall of said runway being provided with a slot, a rod extended vertically through the block, a pawl on the lower end of the rod for passing through
5 said slot to engage with a lead or leads, a cam-lever on the upper end of the said rod, a spring engaging therewith, and a cam-block adjustable on the runway for engaging said cam-lever to force the pawl out of engagement with
10 a lead or leads.

6. In a type casting and setting machine, the combination with a galley thereon, of a leading attachment comprising a holder for leads, a runway having vertical movements forward
15 of the holder and galley, means for causing a discharge of leads from the holder one or more at a time into said runway, and a cam-operated mechanism for moving the leads along the runway to the galley-inlet.

20 7. A leading attachment for a type casting and setting machine, comprising a holder, an adjustable wall in said holder, a plunger or follower movable in said holder, a rack attached to said follower, a pinion engaging

with said rack, a weight for rotating the pin- 25
ion, and means for transferring leads from the holder to their position between the lines of type.

8. In a type casting and setting machine, a leading attachment comprising a holder for
30 leads, a runway movable vertically inward of the holder and adapted to receive the leads therefrom, one or more at a time, the said runway comprising inner and outer spaced walls, a fixed support arranged above the outlet end
35 of the holder, fingers attached to said support and extended between the plates and runway, screws passing through the front plate, for regulating said fingers, and means for moving
40 the leads along the runway.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

SAMUEL DRUMMOND.

WILLIAM C. LIEBERKNECHT.

Witnesses:

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WM. J. WELLS, Jr.