

J. S. BANCROFT & M. C. INDAHL.

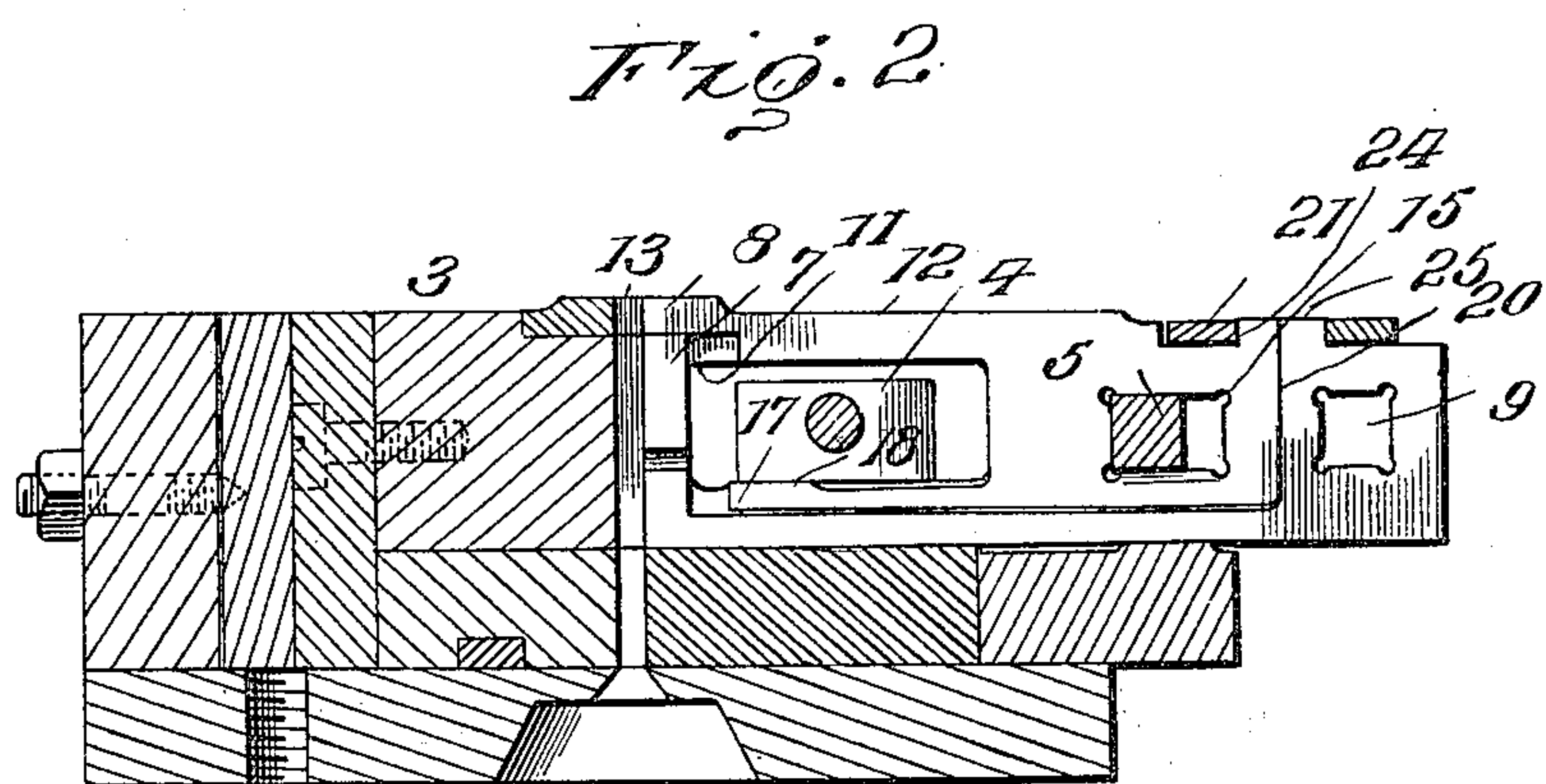
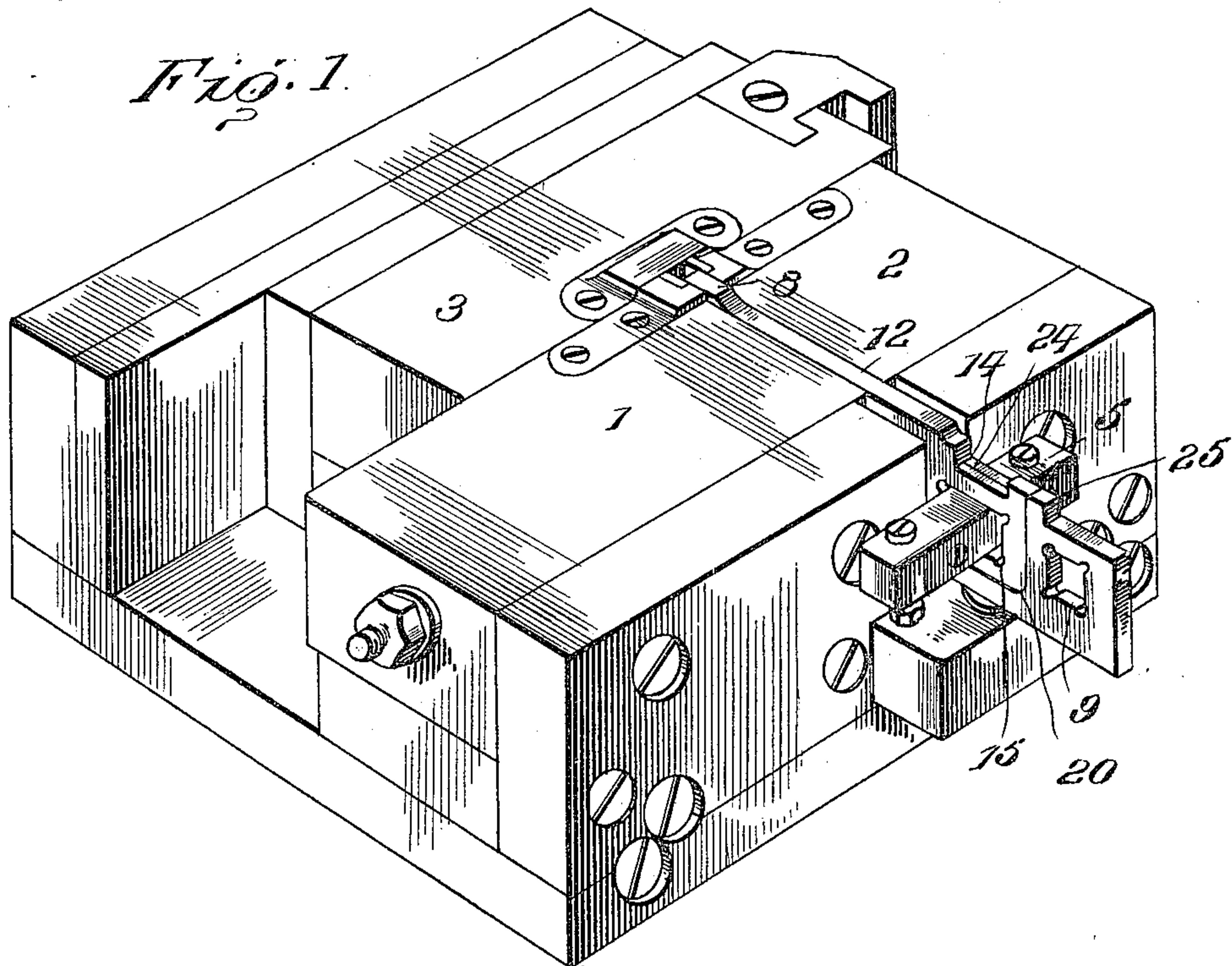
LOW QUAD TYPE MOLD.

APPLICATION FILED JUNE 3, 1909.

962,410.

Patented June 28, 1910.

2 SHEETS—SHEET 1.



Witnesses

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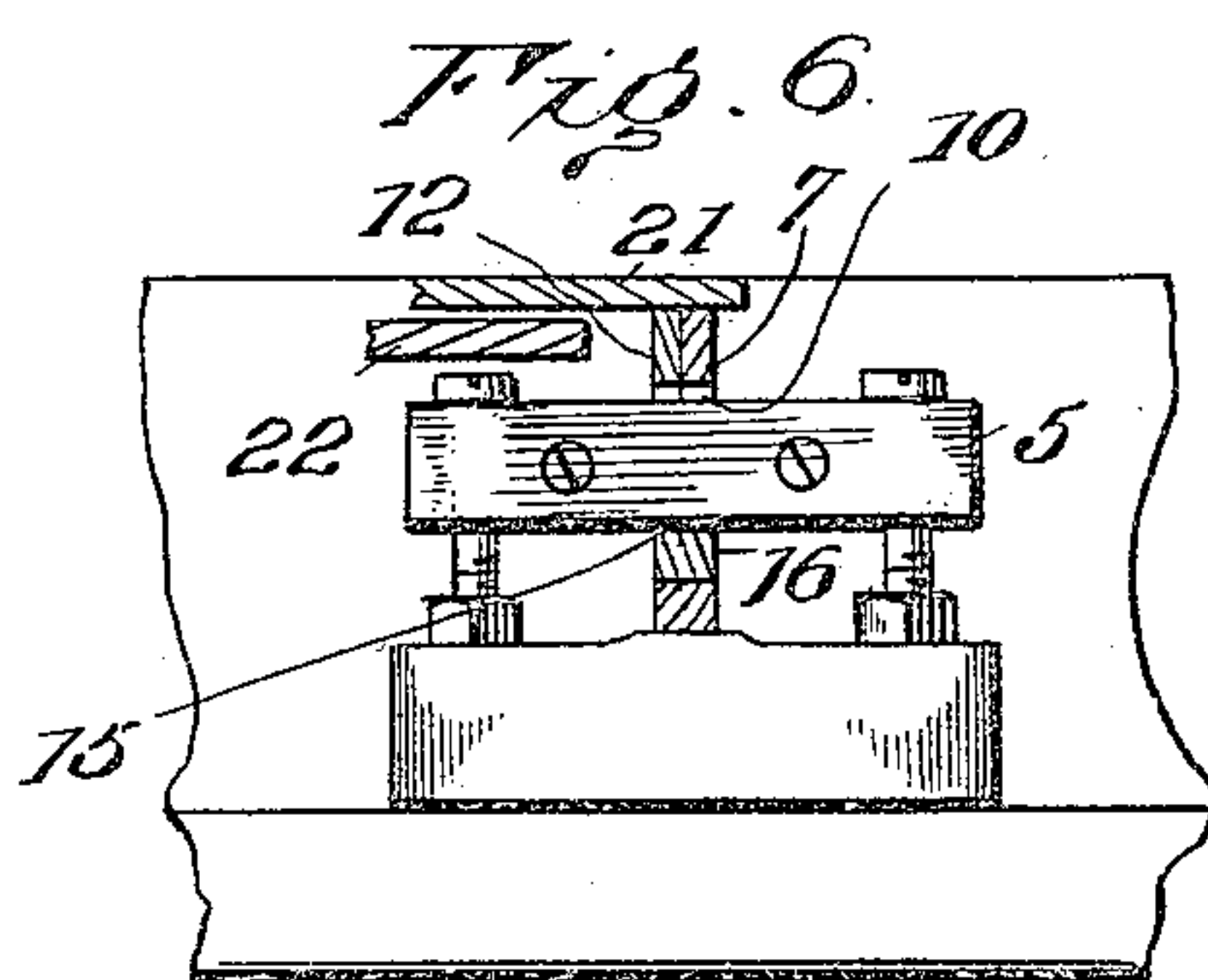
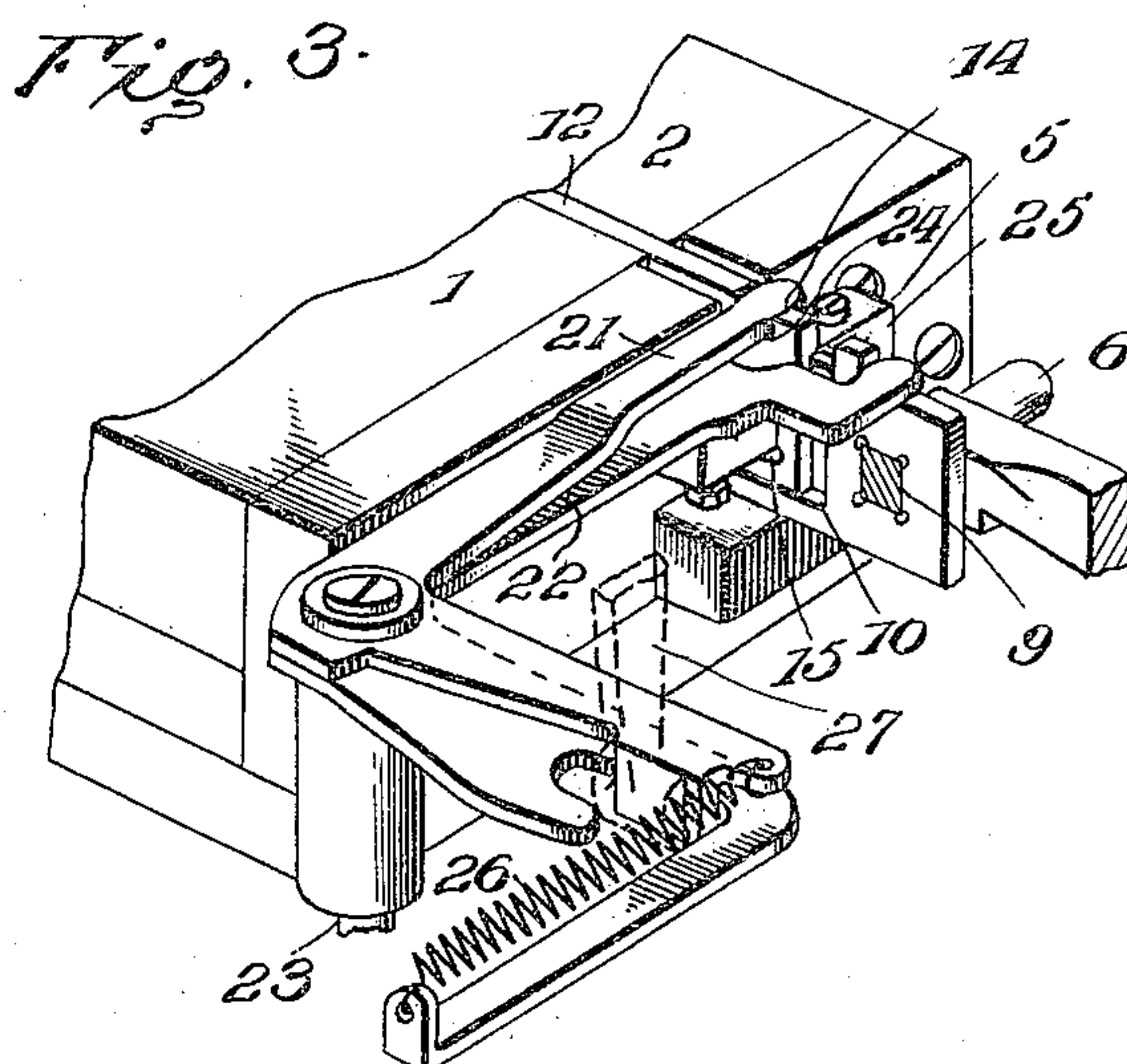
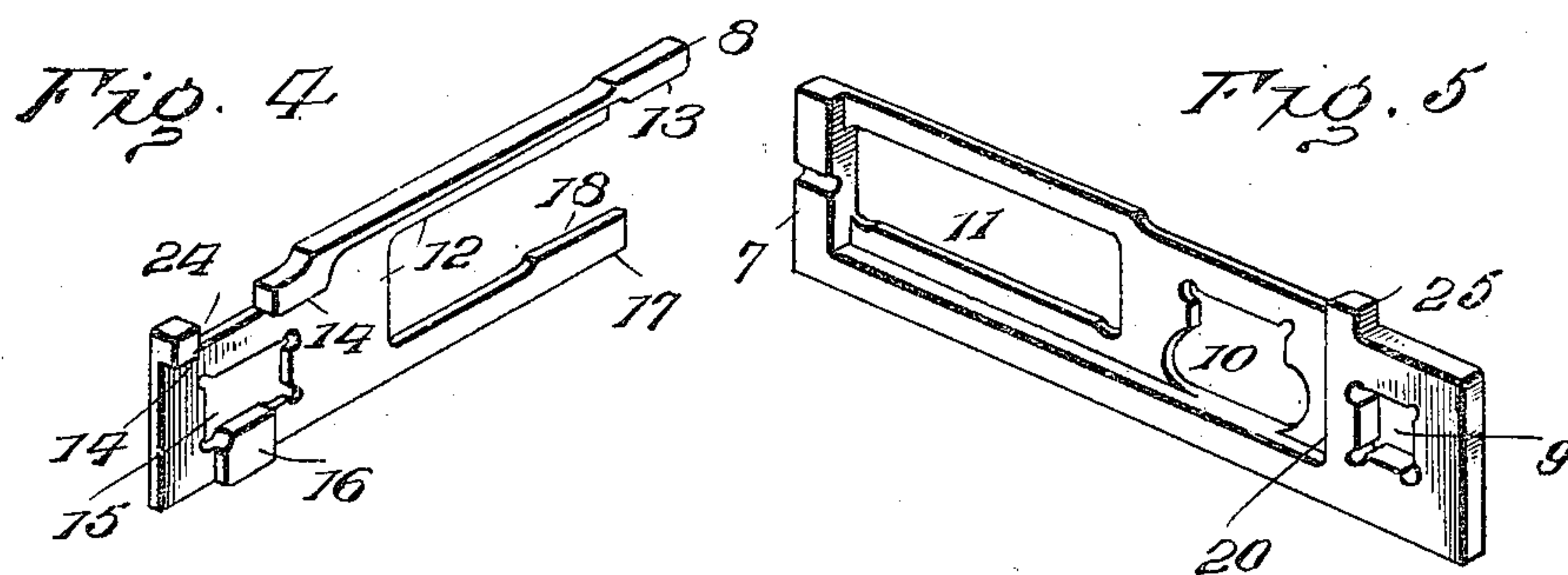
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UNITED STATES PATENT OFFICE.

JOHN SELLERS BANCROFT AND MAURITZ C. INDAHL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO LANSTON MONOTYPE MACHINE COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF VIRGINIA.

LOW-QUAD TYPE-MOLD.

962,410.

Specification of Letters Patent. Patented June 28, 1910.

Application filed June 3, 1909. Serial No. 499,950.

To all whom it may concern:

Be it known that we, JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented a certain new and useful Improvement in Low-Quad Type-Molds; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures of reference marked thereon.

The present invention relates generically to the class of type molds known as low quad molds, and, specifically, to certain improvements upon the molds of Patents Nos. 828,450 of August 14, 1906, and 857,728, of June 25, 1907, with respect to the construction of the divided or sectional mold blade, the means for guiding and maintaining the sections in operative relation to each other and the balance of the mold, and the means for actuating the cut-off section, all as hereinafter fully described and pointed out in the appended claims.

In the accompanying drawings illustrating a preferred form of embodiment of the invention—Figure 1 is a perspective view of a type mold equipped with the improved mold-blade. Fig. 2 is a vertical section in the plane of the side of the mold blade. Fig. 3 is a perspective of the cut-off actuating devices. Fig. 4 is a perspective of the upper or cut-off section of the mold blade. Fig. 5 is a perspective of the lower or main section of the mold blade. Fig. 6 is a rear elevation partly in section of the front stop.

Corresponding numerals designate like parts in the several views.

With the exception of the mold blade and means for effecting relative longitudinal adjustment of the sections thereof, the mold illustrated is of a well known variety equipped with side blocks 1, 2, cross-block 3, combined point gage and top bearing 4, front stop 5, and cross pin 6, the latter coupled with the adjusting devices for communicating the ejecting and dimensioning movements to the mold blade. The mold blade is as heretofore divided longitudinally into two sections, a lower or main section 7 and an upper or cut-off section 8, the latter superimposed upon the main section within the mold blade channel whose side walls are

formed by the parallel faces of side blocks 1, 2.

Main section 7 is provided with the usual transverse openings 9, 10 and 11, the first for cross-pin 6, the second for front stop 5 and the third for top bearing 4; but instead of being made of uniform thickness, corresponding with the width of the mold blade channel, one side is cut away to approximately half its thickness from the front end of opening 11 to the rear of opening 10 and from the top edge to a point below the bottom of opening 11 and coinciding with the bottom of opening 10, the purpose of which will presently appear.

Cut-off section 8, corresponding in width with the mold blade channel, is formed or provided with a dependent web or plate 12 adapted to be received in the recess in section 7, said web terminating a short distance in rear of the casting end of section 8, to afford a bearing surface 13 of the full width of the section, said bearing surface contacting with and riding upon the full width upper edge of section 7 at the front or casting end of the latter. The rear end of section 8 is also provided with an under bearing surface or surfaces 14 by the side of web 12 and engaging a seat on the upper edge of section 7 above opening 10. Web 12 is perforated as at 15 for the passage of front stop 5 and is provided with an off-set portion or lug 16 projecting into opening 10 in section 7, the front stop being adjusted to engage the upper surface of said lug and thereby assist in preventing the lateral tilting of section 8. The front end of web 12 is recessed or slotted for the passage of top bearing 4 and the lower member 17 is furnished at or near its front end with a bearing surface 18 to receive top bearing 4.

The parts are so arranged and proportioned that when sections 7, 8, are assembled bearing surface 18 will stand slightly above the bearing surface on section 7, i. e., the lower margin of opening 11, so that when top bearing 4 is adjusted into contact with section 7, to hold the latter to its seat in the mold blade channel, lower member 17 of web 12 will be displaced and thus put under elastic tension. The effect of this is to tilt section 8 upon its rear bearing 14 and hold its front bearing 13 down under a yielding pressure sufficient to compensate

for any slight spring of the overhanging end of the cut-off section, and without liability or danger of exerting sufficient pressure to cause the cut-off section to bind or hang up when operated. This construction not only supplies an elastic or yielding bearing for the cut-off section while retaining the rigid top bearing for the lower or main section of the mold blade, but it also preserves the straight form of the cut-off section and the single adjustable top bearing and avoids the use of separable elastic pressure devices and obstructions to the upper surface of the mold as a whole. Moreover, by providing separate bearing surfaces at opposite ends of the cut-off section, not only is the fitting of the parts facilitated by reducing the extent of surface to be dressed, but the liability of opening the joint at the junction of the casting faces due to the presence of foreign substances between the contacting surfaces or by reason of unequal expansion of the sections is correspondingly reduced.

The rear wall 20 of the recess in section 7 contacting with the rear end of web 12 serves as the gage for alining the casting faces of the sections when the cut-off section is retracted for producing full body or character type.

The shifting of the cut-off relative to the main section is effected, in the present instance, through the medium of a pair of levers 21, 22, pivotally supported to oscillate freely, as upon a post 23 or other support preferably attached to the frame independently of the mold. The operating end of each lever engages one of the mold blade sections and reciprocates in unison therewith; thus, in the example, lever 21 is received in a bearing or recess 24 formed in the rear upper edge of section 8, while lever 22 engages behind a shoulder 25 on section 7. When as illustrated, both levers engage the same pivot, either or both levers is or are so formed or bent at its operating end as to bring them into the plane of movement of cut-off section 8, to avoid as much as possible any tendency to lateral displacement of the latter.

The cut-off section 8 is retracted and so held while full body type are produced by means of a spring 26 coupled with levers 21, 22, preferably by being interposed between and connected to the power ends of the levers.

The levers and connected spring are free to reciprocate with and follow the movements of the mold blade without interfering therewith or with the action of its adjusting devices and when it becomes necessary or desirable to project the cut-off section into the mold, as when low quads or spaces are desired, it is only necessary to apply pressure to lever 21 in a direction opposed to spring 26, which can readily be ac-

complished through the medium of a lever 27 or equivalent actuating member located in proximity to lever 21 with its path of motion intersecting that of said lever. Any appropriate means such as that disclosed in application Serial No. 506,550, filed July 8, 1909, or Patent No. 828,450, may be employed for controlling the movement of said actuator 27.

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

1. A low quad mold provided with a divided or sectional mold blade the latter comprising a main section recessed on one side in rear of its casting face and a superimposed cut-off section provided with a dependent web extending into the recess in the main section and furcated at its front end to provide a resilient member for engaging the top bearing.

2. In a low quad type mold provided with a mold blade channel and in combination therewith a sectional mold blade working in said channel and comprising a lower or main section recessed on one side and provided with a bearing surface for the top bearing and a superposed cut-off section provided with a dependent web extending into said recess, the front end of said web being recessed and the lower section thereof forming a resilient bearing engaging the top bearing.

3. In a low quad type mold provided with a mold blade channel and in combination therewith a sectional or divided mold blade the same comprising a lower or main section recessed on one side to a portion of its depth, a superposed cut-off section taking its bearing upon the upper edge of the main section and provided with a longitudinal dependent web extending into said recess and slotted at its front end to form a resilient member, and an adjustable top bearing engaging bearing surfaces on the main section and said resilient member of the cut-off section.

4. A sectional or divided mold blade for type molds the same comprising a main section recessed on one side and provided with a bearing surface to receive a top bearing and a superposed cut-off section provided with a resilient member contained within the recess in the main section in proximity to the bearing surface on said main section and adapted to be engaged and put under tension by the top bearing.

5. In a type mold provided with a mold blade channel and in combination therewith a sectional or longitudinally divided mold blade comprising a main or lower section, a superposed cut-off section equipped with a resilient member, and an adjustable top bearing engaging said resilient member to put the same under tension and also engaging a bearing on the main section to retain the

latter upon its seat in the mold blade channel and to retain the cut-off section in contact with the main section under elastic pressure.

5 6. A low quad type mold provided with a divided or sectional mold blade working in the mold blade channel the same comprising a lower or main section and a superposed cut-off section the latter held to its seat on the main section by elastic pressure devices applied to said cut-off section within the mold and below the bearing of said section upon the main section.

15 7. A low quad type mold provided with a divided or sectional mold blade, the lower or main section whereof is engaged by an unyielding top bearing and the superposed cut-off section is provided with yielding pressure device operating to maintain the sections in contact, said yielding pressure device supplementing the action of the top bearing in holding the main section to its seat in the mold blade channel.

25 8. In a low quad type mold provided with a mold blade channel and an adjustable top bearing located therein and in combination therewith a divided or sectional mold blade, the same comprising a recessed main section provided with an opening for the top bearing, a cut-off section superimposed and taking its bearing upon the main section and provided with a dependent web lying within the recess in the main section and carrying a resilient member in position to be engaged and placed under tension by said top bearing when the latter is advanced into contact with its bearing surface on the main section.

35 9. A divided or sectional mold blade for

type molds consisting of a lower or main section provided with a transverse opening, the lower margin whereof constitutes the bearing surface for an adjustable top bearing and a cut-off section superimposed and taking its bearing upon the main section and provided with a resilient member standing slightly above the lower margin of the top bearing opening in the main section in position to be displaced by said top bearing when the latter is advanced into contact with its bearing surface on the main section.

10. A low quad type mold provided with a divided or sectional mold blade and in combination therewith, actuating means for effecting relative adjustments of the mold blade sections, the same including a pair of levers each coupled with one of the mold blade sections and a spring connecting said levers in a manner to cause the approach of their operating ends of those engaging the sections.

11. A low quad type mold provided with a divided or sectional mold blade the members whereof are adapted for simultaneous or dissimultaneous movement and in combination therewith actuating devices for the cut-off member, the same including a pair of levers each engaging one of the mold blade sections, a spring for causing the approach of the operating ends of said levers, and an actuating device in position to engage the lever coupled with the cut-off section and to move said lever in opposition to the spring.

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