

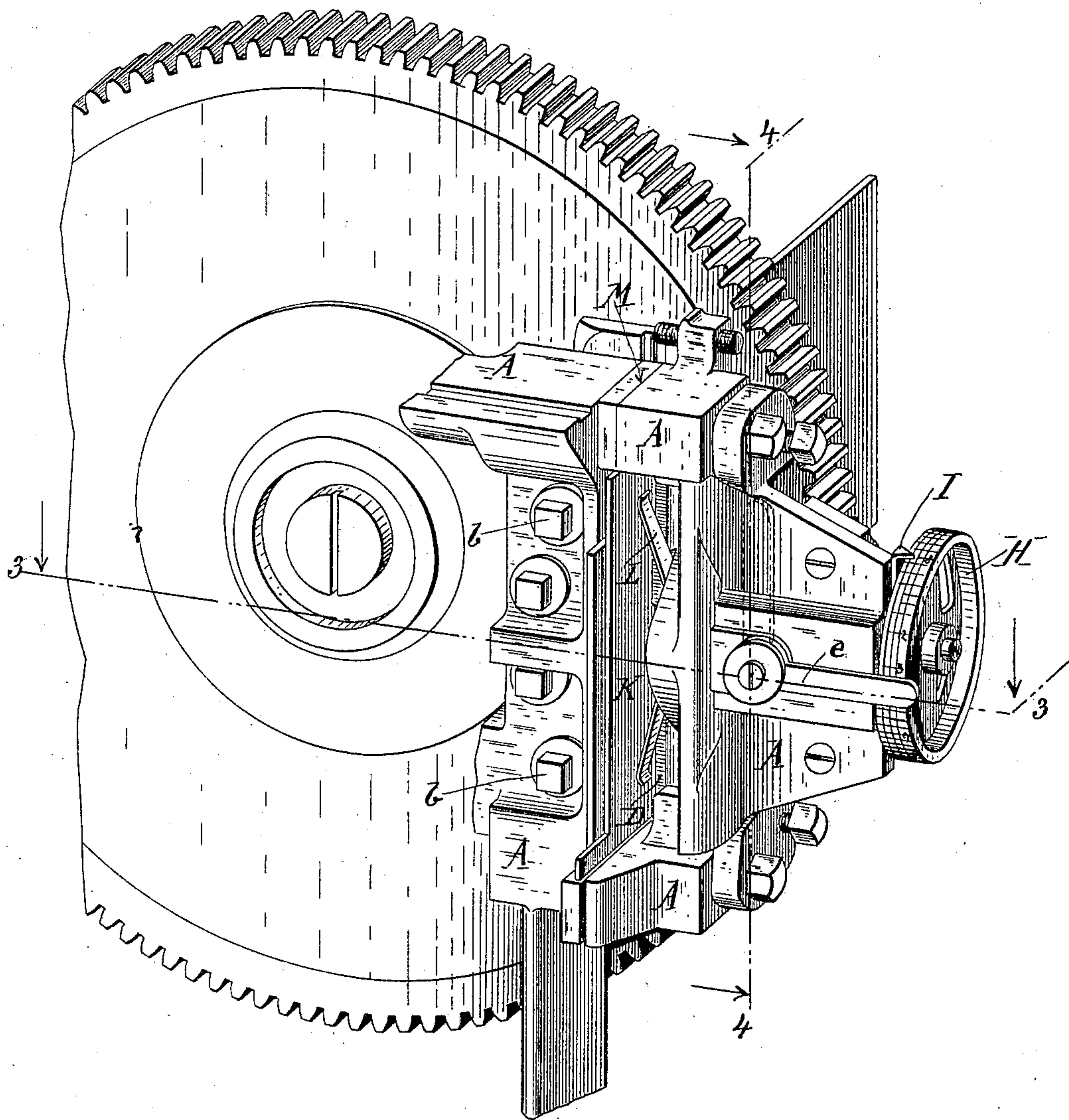
No. 837,226.

PATENTED NOV. 27, 1906.

T. S. HOMANS.  
LINOTYPE MACHINE.  
APPLICATION FILED JUNE 30, 1906.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses  
S. J. Palmer  
L. E. Morrison

Inventor  
T. S. Homans  
By his Attorney  
P. T. Dodge

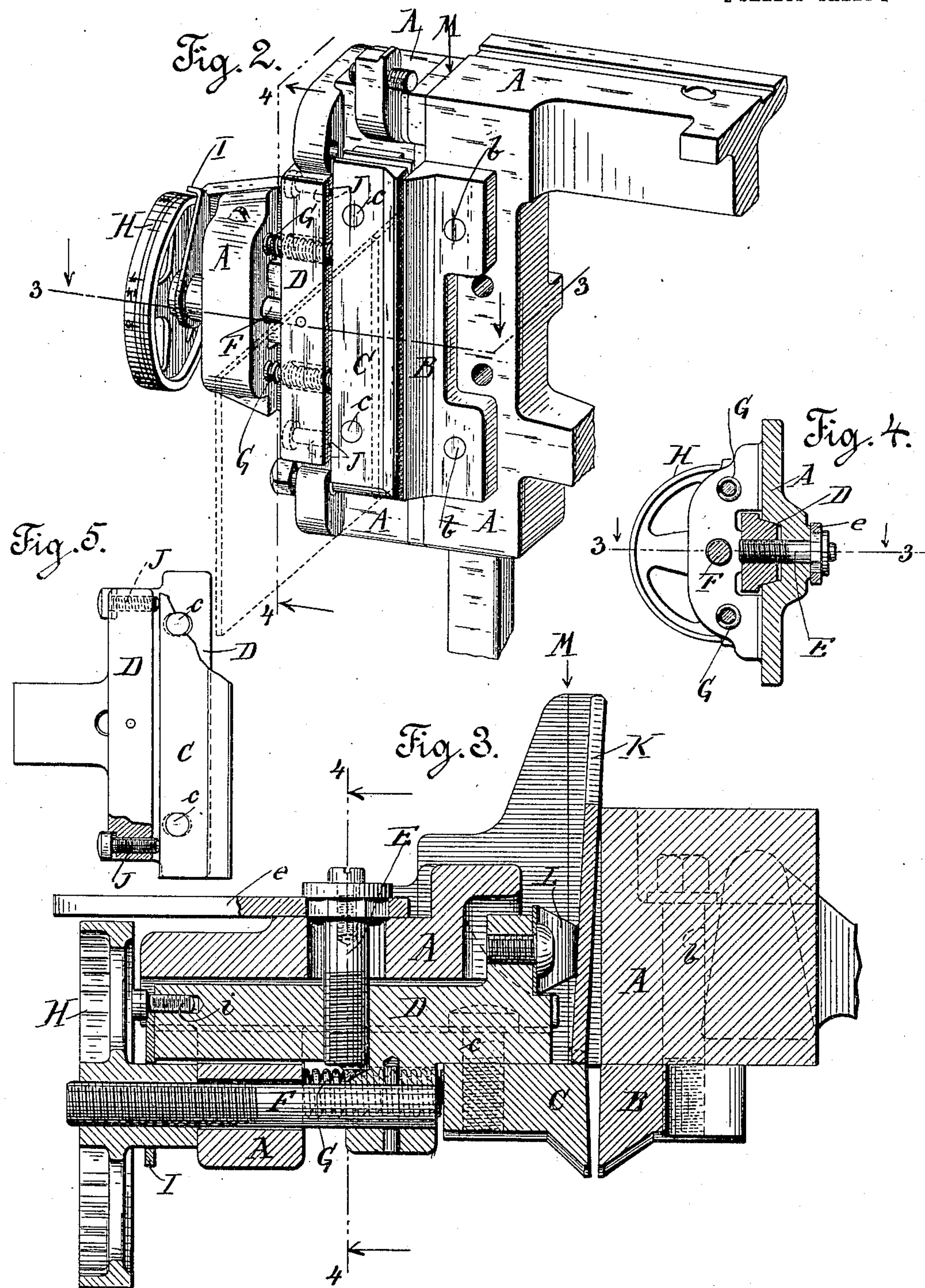
No. 837,226.

PATENTED NOV. 27, 1906.

T. S. HOMANS.  
LINOTYPE MACHINE.

APPLICATION FILED JUNE 30, 1906.

2 SHEETS—SHEET 2.



Witnesses  
S. Fehr-Palmer.  
L. E. Morrison.

Inventor  
T. S. Homans  
By his Attorney  
P. T. Dodge



# UNITED STATES PATENT OFFICE.

THOMAS SIMMONS HOMANS, OF BROOKLYN, NEW YORK, ASSIGNOR TO  
MERGENTHALER LINOTYPE COMPANY, A CORPORATION OF NEW  
YORK.

## LINOTYPE-MACHINE.

No. 837,226.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed June 30, 1906. Serial No. 324,124.

*To all whom it may concern:*

Be it known that I, THOMAS SIMMONS HOMANS, a citizen of the United States, and a resident of the borough of Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Linotype-Machines, of which the following is a specification.

In linotype-machines and analogous machines wherein type-slugs or linotypes are cast in a slotted mold it is customary to eject the slug edgewise from the mold between two knives, which insure the parallelism of the opposite faces and the proper thickness of the slug, these knives being adjustable in order that the slugs may be trimmed to one thickness or another, as demanded.

My invention relates to improved means for supporting and adjusting one of the knives, the object being to secure instantaneous and very accurate adjustment and the firm support of the knife in the exact position required. To this end I mount the movable knife on a slide tapered in cross-section and combined with adjusting and binding screws in such manner that it may be quickly and accurately adjusted to different predetermined positions and then locked firmly in place.

Referring to the drawings, Figure 1 represents a perspective view of the mold-wheel of a Mergenthaler linotype-machine with my knife-supporting mechanism in operative relation thereto. Fig. 2 is a perspective view looking against the inner or receiving faces of the knives with the adjusting and supporting devices. Fig. 3 is a horizontal cross-section on the line 3 3 of Figs. 3 and 4. Fig. 4 is a vertical cross-section on the line 4 4 of Figs. 2 and 3. Fig. 5 is a face view of the knife-supporting slide.

Referring to the drawings, A A represent stationary portions of the machine-frame; B C, the two upright parallel knives between which the slugs or linotypes are delivered edgewise as they leave the mold by the usual ejector-blade.

The knife B is secured rigidly to the frame by clamping-bolts *b* or in any other suitable manner. The opposing movable knife C is secured firmly by bolts *c* or otherwise to a horizontal supporting-slide D of the form shown in Fig. 5. It will be observed that this slide is of a *E* form, having at one end an

upright portion, to which the knife is secured, and having a horizontal portion of tapered form in cross-section, as shown in Fig. 4. This tapered portion is seated in a corresponding groove in the frame A, as shown in Fig. 4, and is held in place therein by a clamping-screw E, passing through a horizontal slot in the frame, its inner end being threaded into the slide D, while its outer end is provided with a handle *e*, secured firmly thereto. By means of the handle, the screw may be turned so as to force the slide firmly into its tapered seat, thereby confining the slide and the knife C very rigidly in position, or the screw may be turned in the opposite direction to release the slide and admit of its being moved endwise horizontally to change the distance between the two knives. The tapered form of the slide in cross-section is important in that it permits the slide to be clamped very securely in the exact position required, so that the knife carried thereby will be in no danger of displacement by the severe pressure to which it is subjected by the outgoing slugs. The tapered form also admits of compensation for wear of the sliding parts, so that there is no danger of the slide being loosely or inaccurately guided.

For the purpose of effecting the movement of the slide and knife I provide the screw F and one or more springs G. These springs extend loosely through a rib on the slide and bear at one end against the knife C and at the opposite end against the main frame, their tendency being to advance the knife C toward its companion, and thus reduce the space between them.

The screw F has its inner end pinned fast to a rib on the slide D and its outer and threaded end extended through an upright nut H in the form of a hand-wheel, the hub of which bears against the outer side of the frame A. When this wheel is turned in one direction, it acts through the screw F to move the slide D and knife C outward, and when turned in the opposite direction it allows the screw to move in the reverse direction and permits the knife C to be moved inward by the springs G toward the knife B.

The periphery of the wheel, which is without lateral movement, is provided with a spiral line and with adjacent graduations or marks at different points in the length of the line, to be read in connection with a pointer



I, which is secured rigidly to the slide D by a screw *i* or otherwise. The screw F is given such pitch and the graduations are so located that in order to set the knife for trimming slugs to standard thicknesses—such as minion, long-primer, &c.—it is only necessary to turn the wheel until the proper graduation is brought opposite the pointer. As the pointer I is moved laterally by the slide, while the wheel or nut H is without lateral motion, the pointer is adapted to follow a spiral line on the periphery of the wheel, as indicated in Fig. 2. This permits the use of graduations extending in two or more lines around the wheel, so that the wide range of adjustment may be provided. Prior to this adjustment the screw E is turned to release the slide, and after the adjustment is effected the screw is again turned to bind the slide firmly in place.

In order to facilitate the proper adjustment or location of the knife C upon the slide D when it is being secured thereon and to give it support against the pressure of the slug, I provide two screws J, passing horizontally through the rib on the slide and bearing against the outer or back edge of the knife, as shown in Figs. 2 and 5.

The essence of my invention consists in combining with the movable knife a supporting-slide accurately guided in the frame, with means for moving this slide to predetermined positions and means for confining it securely in the desired position, and it is manifest that the details may be variously modified without changing essentially the mode of action or passing beyond the scope of my invention.

For the purpose of supporting and guiding the slug after it has passed the knives I provide the usual hinged plate K, acted upon by a spring L; but these features, although shown, form no part of the present invention.

The part of the frame which carries the slide D and wheel H may be made in any suitable form and bolted or otherwise removably attached to the machine-frame, so as to constitute a unitary knife-adjusting structure, which may be applied to or removed from the machine at will. In the drawings the line of separation between this part and the main frame is indicated at M.

It is to be observed that my knife-sustaining slide D is combined with means for moving the same and the knife thereon to definite or predetermined positions and with independent means for clamping it firmly in each position. I am thus enabled to control the knife in such manner that the slugs may be trimmed to the exact standard thicknesses required and with their opposite faces exactly parallel.

Having described my invention, what I claim is—

1. In a slug-trimming mechanism for linotype-machines, the combination of the movable knife, its supporting-slide guided in the frame, means for adjusting the slide to predetermined positions, and independent means for clamping the slide in the required positions.

2. In a linotype-machine, in combination with a fixed supporting member, a slide guided therein, a slug-trimming knife secured rigidly to the slide, a spring tending to move the slide in one direction, a screw mechanism for moving the same in the opposite direction, and means for clamping and releasing the slide at will.

3. In combination with a supporting-frame A, the slide D guided therein, the knife fixed to the slide, a spring tending to move the slide in one direction, the screw and hand-wheel for moving the slide in the opposite direction, and independent means acting to clamp the slide in its different positions.

4. In a linotype-machine, a rigid frame, a knife-carrying slide seated thereon and having in cross-section inclined or tapered surfaces, means for moving the slide endwise different distances, and independent means for instantly clamping the slide to its support.

5. In a linotype-machine, a rigid support A, provided with a fixed knife B, and a knife-carrying slide D having inclined cooperating surfaces, in combination with means for binding said parts together at will.

6. In a linotype-machine, in combination with the knife and its movable support, a screw carried by said support, a wheel threaded on said screw and provided with graduations, and a pointer fixed on the slide; whereby the pointer is adapted to follow a spiral line on the wheel.

7. In combination with the knife-carrying slide and a pointer thereon, a spirally-graduated wheel and means through which the wheel effects the movement of the slide, whereby the pointer is caused to follow the spirally-arranged graduations.

8. In a linotype-machine, and in combination, a fixed support A, a knife-carrying slide D thereon, a clamping-screw E, an adjusting-screw F and its wheel H, and a spring acting in opposition to the last-named screw.

9. In a linotype-machine, and in combination with a knife-adjusting slide D and means for moving the same definite distances, the knife C secured to said slide, and screws J for adjusting the knife upon the slide.

In testimony whereof I hereunto set my hand, this 28th day of June, 1906, in the presence of two attesting witnesses.

THOMAS SIMMONS HOMANS.

Witnesses:

L. B. MOREHOUSE,

D. P. WILLIAMS.