

F. HOLDSWORTH.
MACHINE FOR JUSTIFYING TYPE.

(Application filed June 29, 1901.)

(No Model.)

Fig. 3.

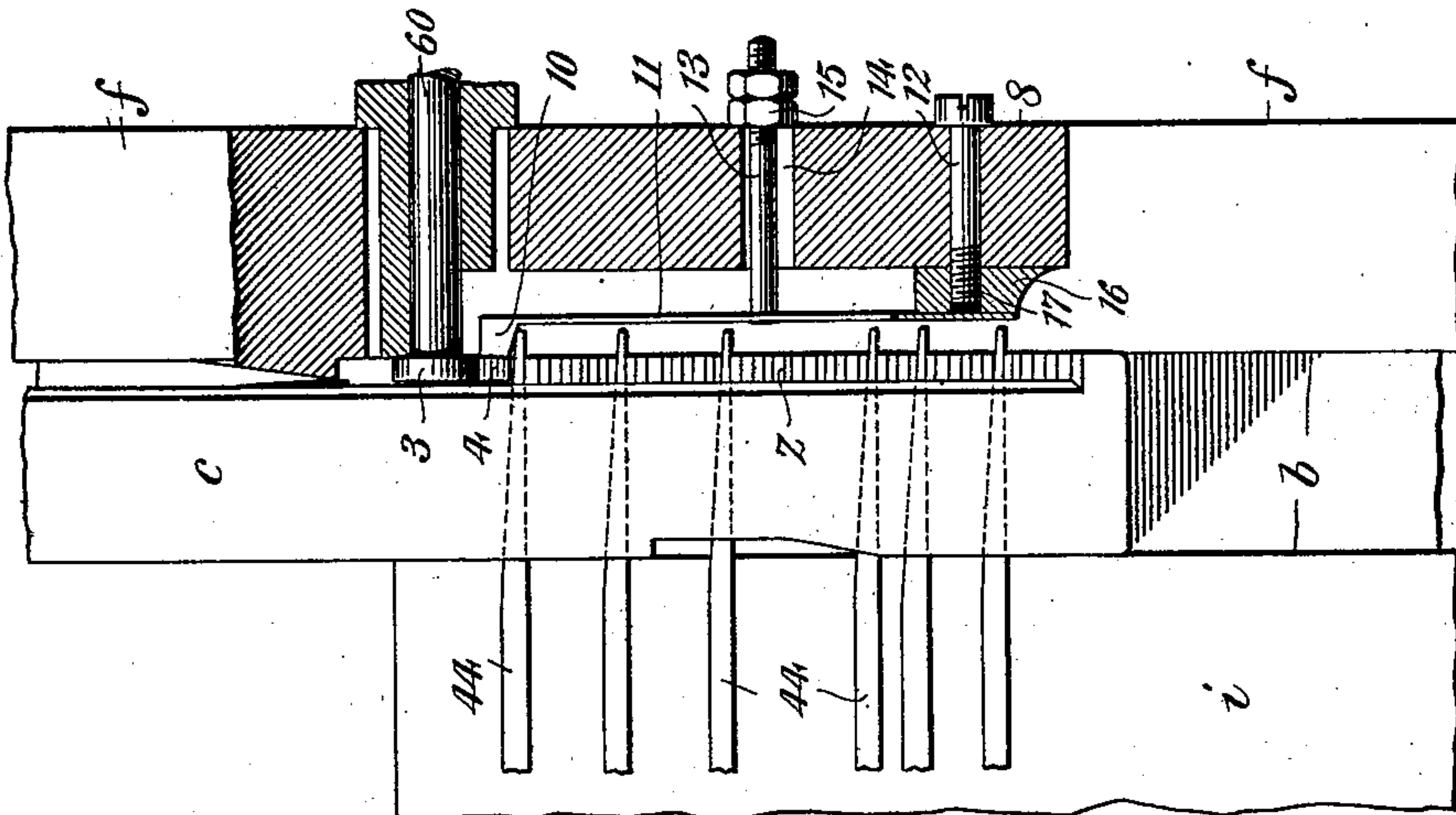


Fig. 2.

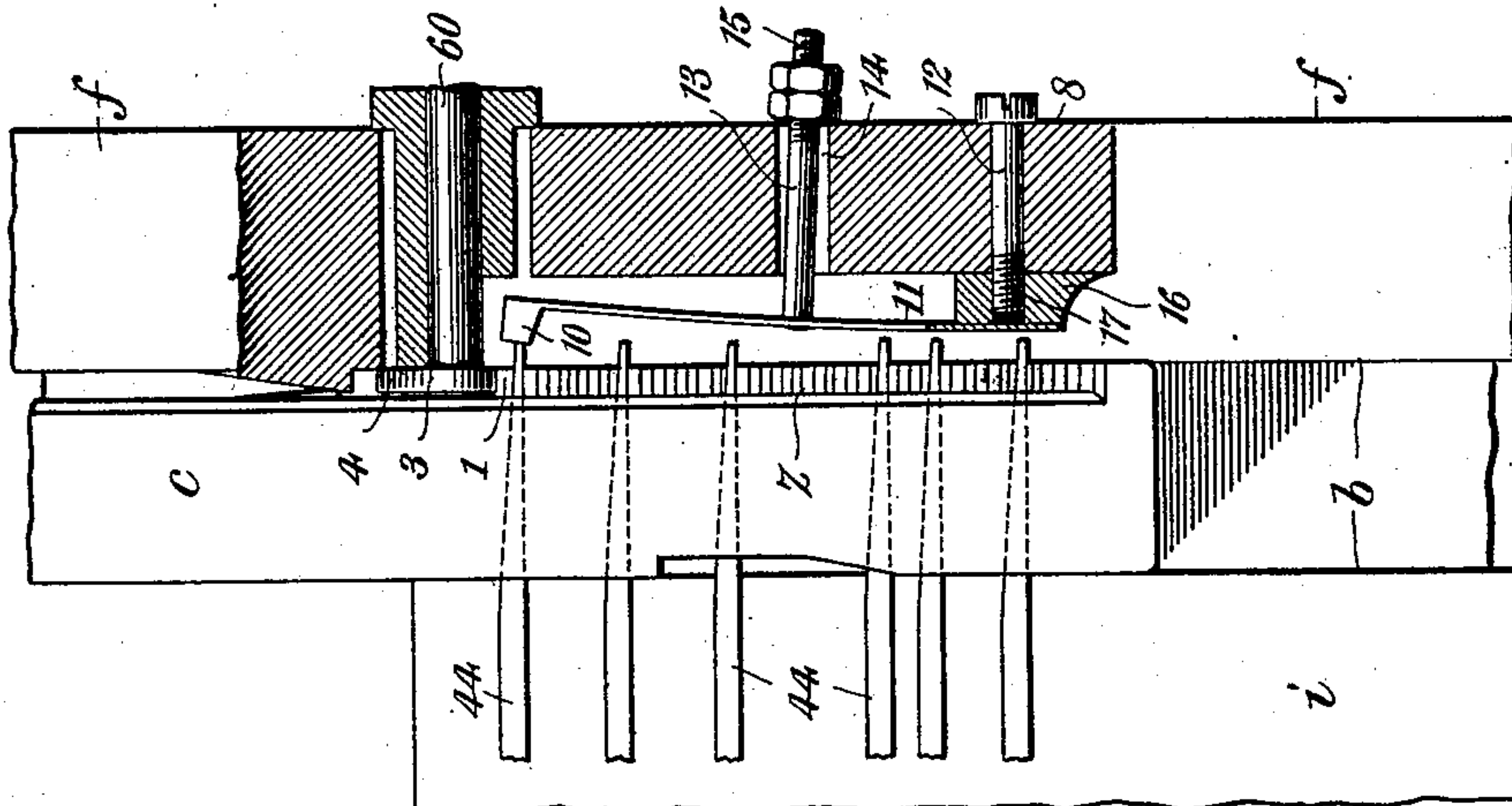
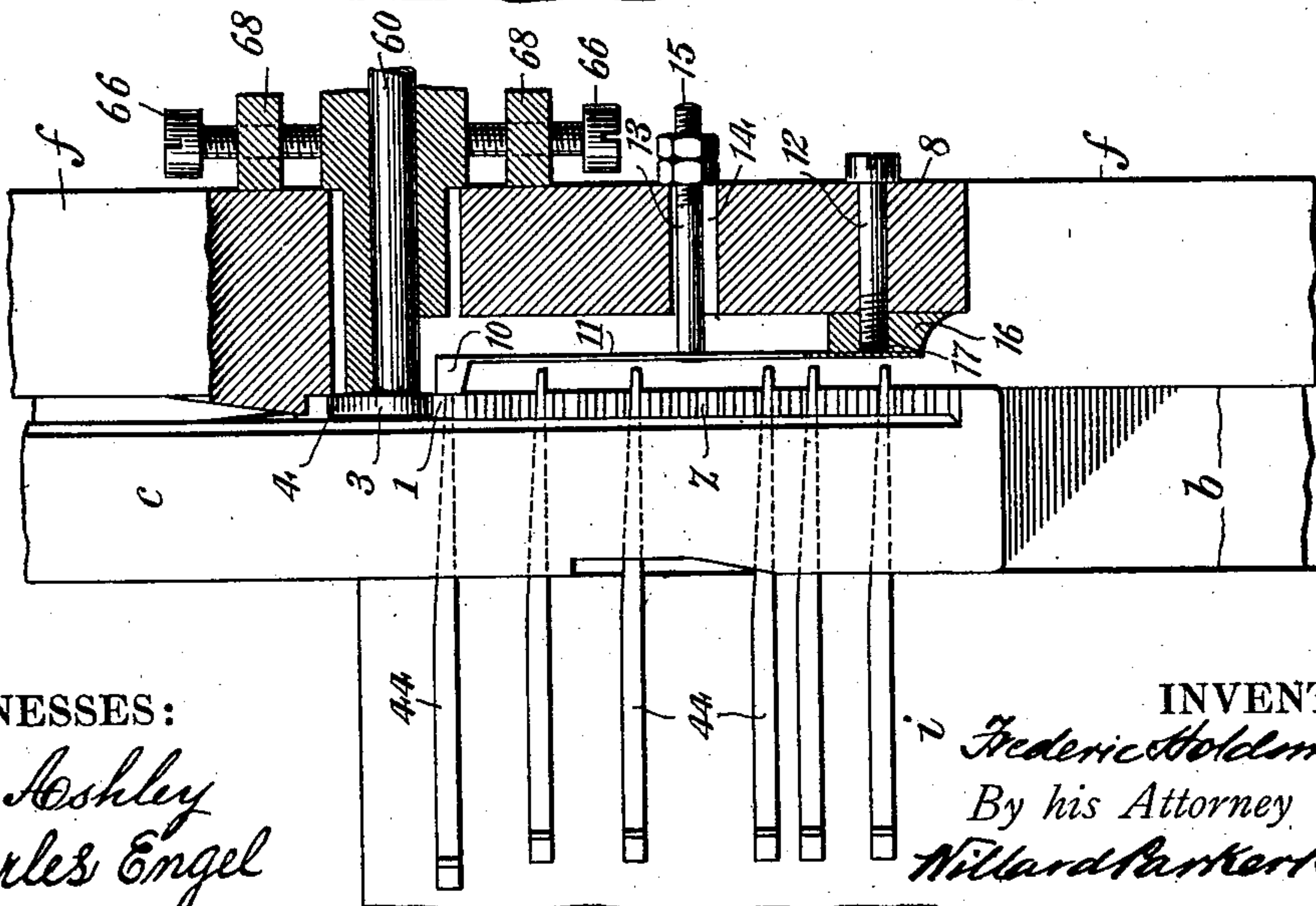


Fig. 1.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FREDERIC HOLDSWORTH, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, TO EDWIN C. HOYT AND FELIX ROSEN, OF NEW YORK, N. Y.

MACHINE FOR JUSTIFYING TYPE.

SPECIFICATION forming part of Letters Patent No. 701,811, dated June 3, 1902.

Application filed June 29, 1901. Serial No. 66,502. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC HOLDSWORTH, a citizen of the United States, and a resident of Manhattan, city, county, and State of New York, have invented a new and useful Improvement in Machines for Justifying Type, of which the following is a specification.

My invention relates to that class of machines for justifying type wherein the types and wedge-shaped spacing devices are assembled in line-holders which travel in a suitable track or mechanism from the place of assembly to the justifying mechanism, thence to a galley into which the line of type is removed. In this type of machine the type characters as they are assembled in the line-holders with the movable spacing devices are usually fed forward by a cam or some other similar device which operate to close up the line as it advances forward to sufficient distance to prevent another character being inserted. In this class of machines as heretofore constructed it has been found that the space-bar would frequently spring back as the cam rotated, block the succeeding type characters, and prevent them from dropping freely into the type-recess in the line-holder.

The object of this invention is to provide suitable and simple mechanism for holding the space-bar in the position to which it is advanced by the rotation of the cam and prevent it from moving backward to block the dropping of the following type.

The improvements shown are specially adapted to the automatic machine for justifying type shown and described in application for Letters Patent of the United States filed by Frank McClintock July 20, 1900, under Serial No. 24,291.

The invention is shown in its preferred construction in the accompanying sheet of drawings, in which—

Figure 1 is a view, partly in section, showing a space-bar being inserted between the last type and the cam. Fig. 2 is a view showing the space-bar pushed entirely in. Fig. 3 is a view showing the space-bar advanced by the rotation of the cam.

Similar characters refer to similar parts throughout the several views.

In the drawings, *i* represents the side plates; *c*, the line-holder, which travels in the track or way *b*.

z represents the types assembled in the line-holder.

44 represents the space-bars.

The cam 3 is attached to the shaft 60, which is rapidly rotated by suitable mechanism, as shown in the original application. The types are assembled by gravity, being dropped foremost into the type-recess 1 in the line-holder *c*. The rotation of the cam 3 causes the large part thereof to advance the types and space-bars successively as fast as they are assembled in the line-holder. The space-bars 44 are inserted crosswise of the types through an opening in the line-holder *c* by means of suitable mechanism, as shown in the specification referred to. In the machine as heretofore constructed the space-bar when inserted to the position shown in Fig. 2 was by the rotation of the cam 3 moved forward in contact with the last type, leaving a space for succeeding type to drop down between the space-bar and the cam as the rotation of the cam carried the large part to the rear. It was found in practice that the thin end of the space-bar 44 would frequently move away from the type toward the hub of the cam, and thus block up the opening 1 and prevent the succeeding type from dropping down into the type-recess. In order to retain the thin end of the space-bar in its advanced position, a movable stop 10 is provided, attached to a spring 11, which is secured to the plate *f* by means of a screw 12. A pin 13 is screwed to the spring 11 and extends outward through an opening 14 in the plate *f*. This pin has a screw on its outer end, with nuts 15 thereon, which serve to adjust latterly the normal position of the face of the stop 10. When the space-bar 44 is inserted, the point will come in contact with the stop 10 and push it inward, as shown in Fig. 2, in which the space-bar has been fully inserted into the line. The revolution of the cam 3 immediately thereafter brings the en-

larged part 4 in contact with the thin end of the space-bar and moves it forward to the position shown in Fig. 3, whereupon the spring 11 returns the stop 10 to its normal position, in which it engages the end of the space-bar and prevents it moving to the rear as the cam revolves.

I claim as my invention—

1. The combination with the line-holder containing types in line, of a space-bar inserted therein crosswise of said types and projecting beyond the same; a device engaging with the projecting end of the space-bar for holding it, by means of said end, in the position to which it is advanced by the type-advancing mechanism and preventing it from moving backward.

2. The combination with the line-holder containing types in line, of a space-bar inserted therein crosswise of the types and projecting beyond the same; a movable stop attached to a suitable spring upon the side plate engaging with the projecting end of the space-bar for holding it, by means of such end, in

the position to which it is advanced by the type-advancing mechanism and preventing it from moving backward.

3. The combination with the line-holder containing types in line, of a space-bar inserted therein crosswise of the types and projecting beyond the same; a movable stop attached to a suitable spring upon the side plate engaging with the projecting end of the space-bar for holding it, by means of such end, in the position to which it is advanced by the type-advancing mechanism and preventing it from moving backward; and means, substantially as described, for limiting the movement of the spring.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 28th day of June, 1901.

FREDERIC HOLDSWORTH.

Witnesses:

CHARLES ENGEL,

THOMAS HOLDEN, Jr.