

Dec. 11, 1934.

E. W. HEWITT

1,983,904

TYPE ALIGNING APPARATUS

Filed Dec. 14, 1929

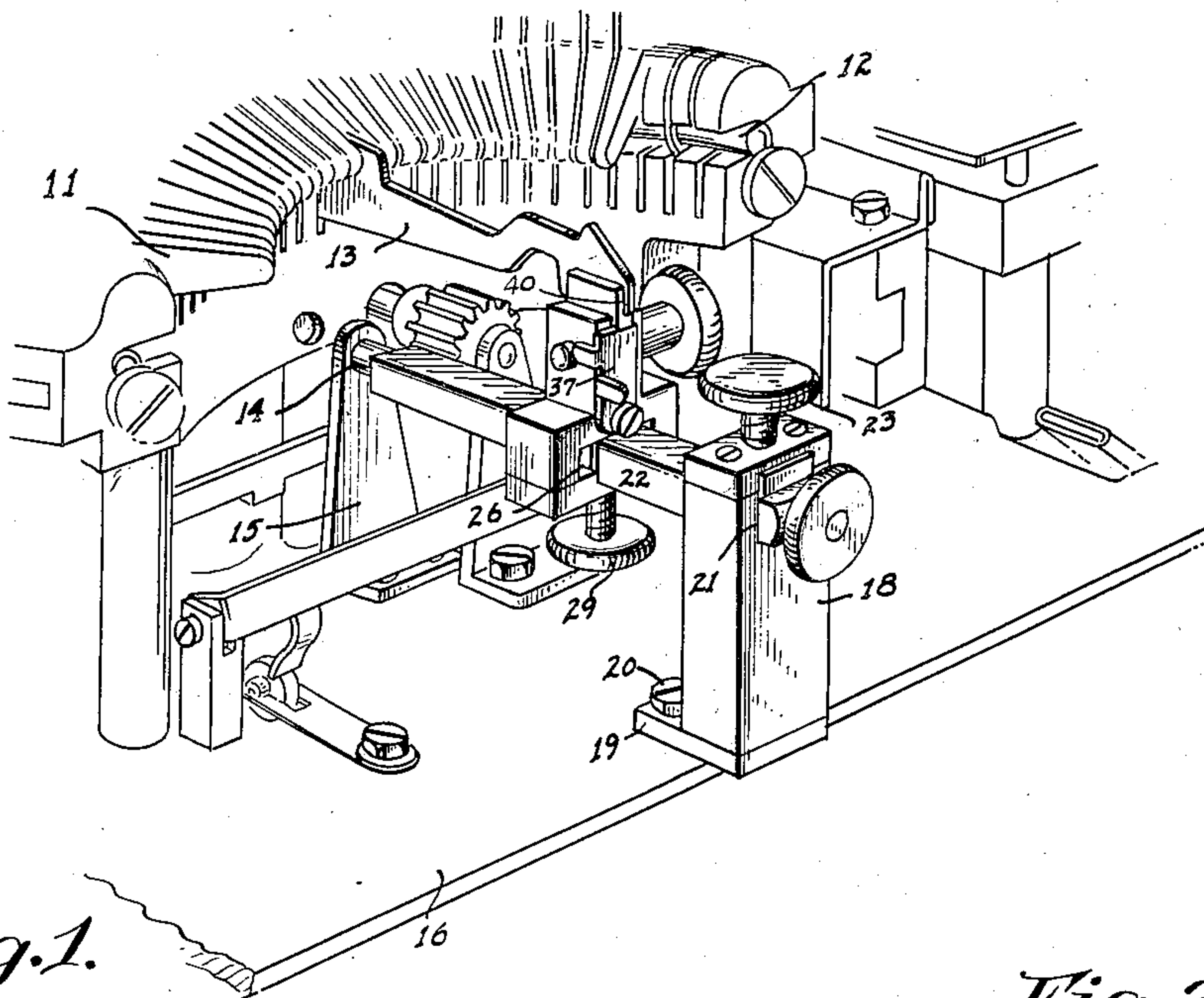


Fig. 1.

Fig. 2.

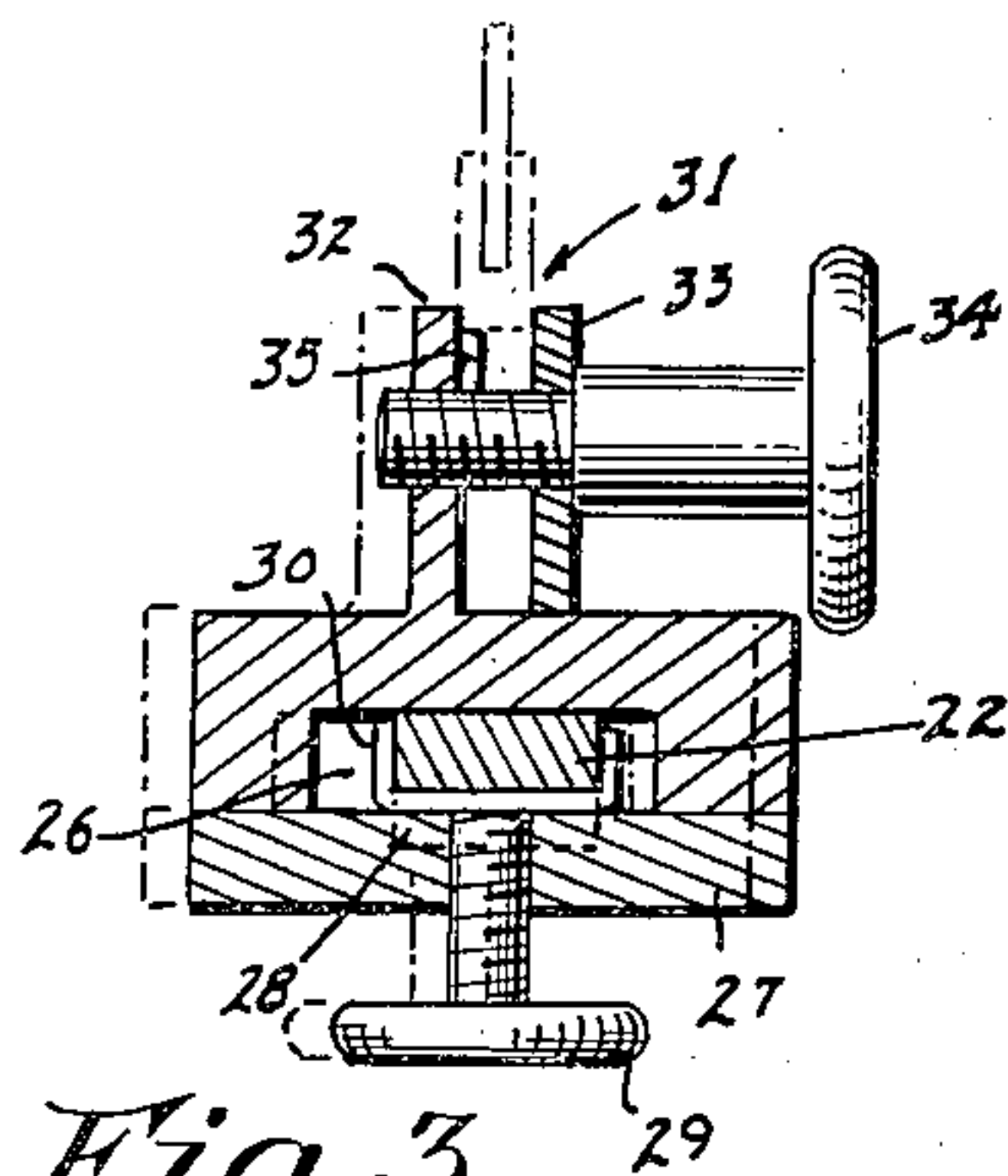


Fig. 3.

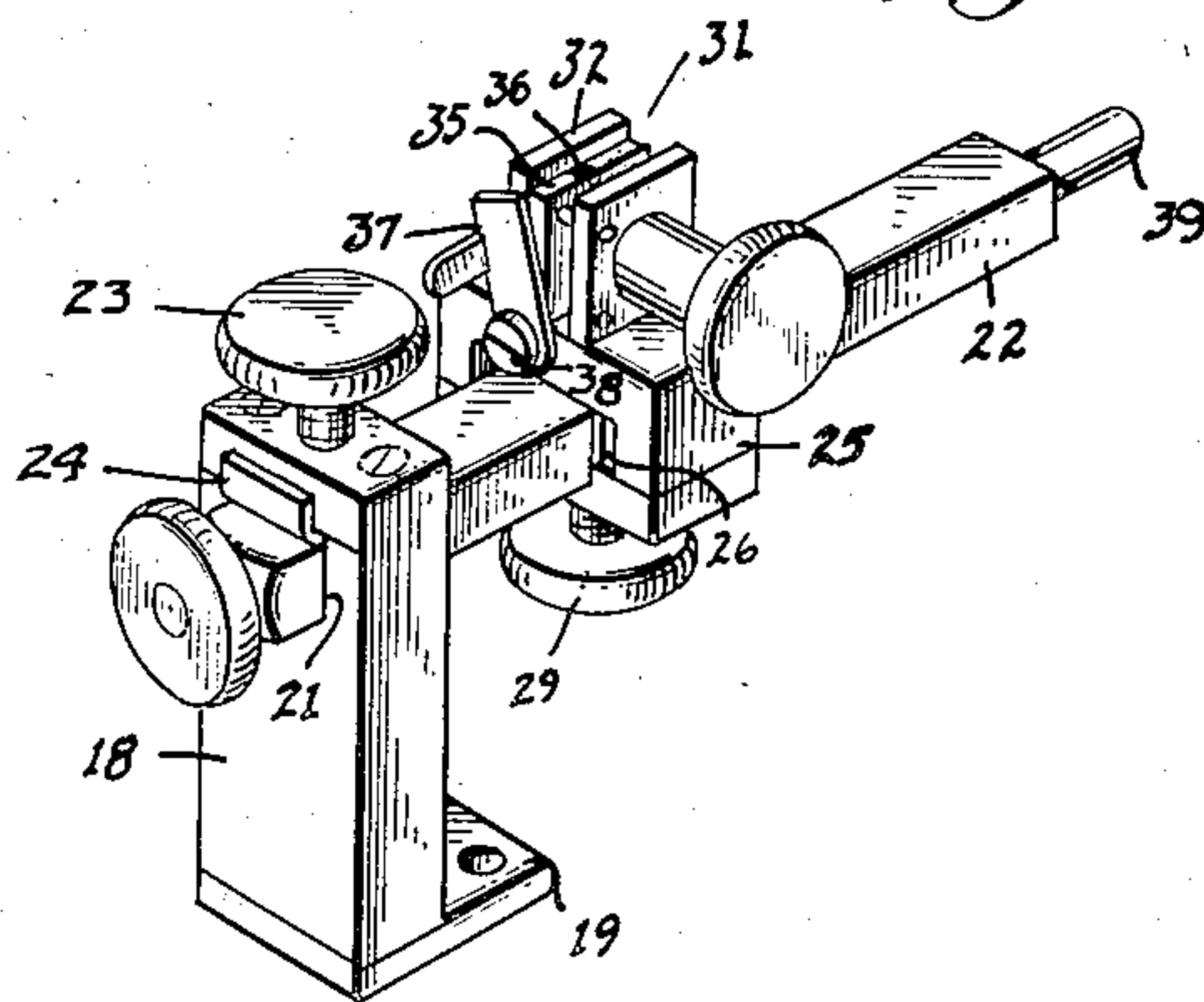
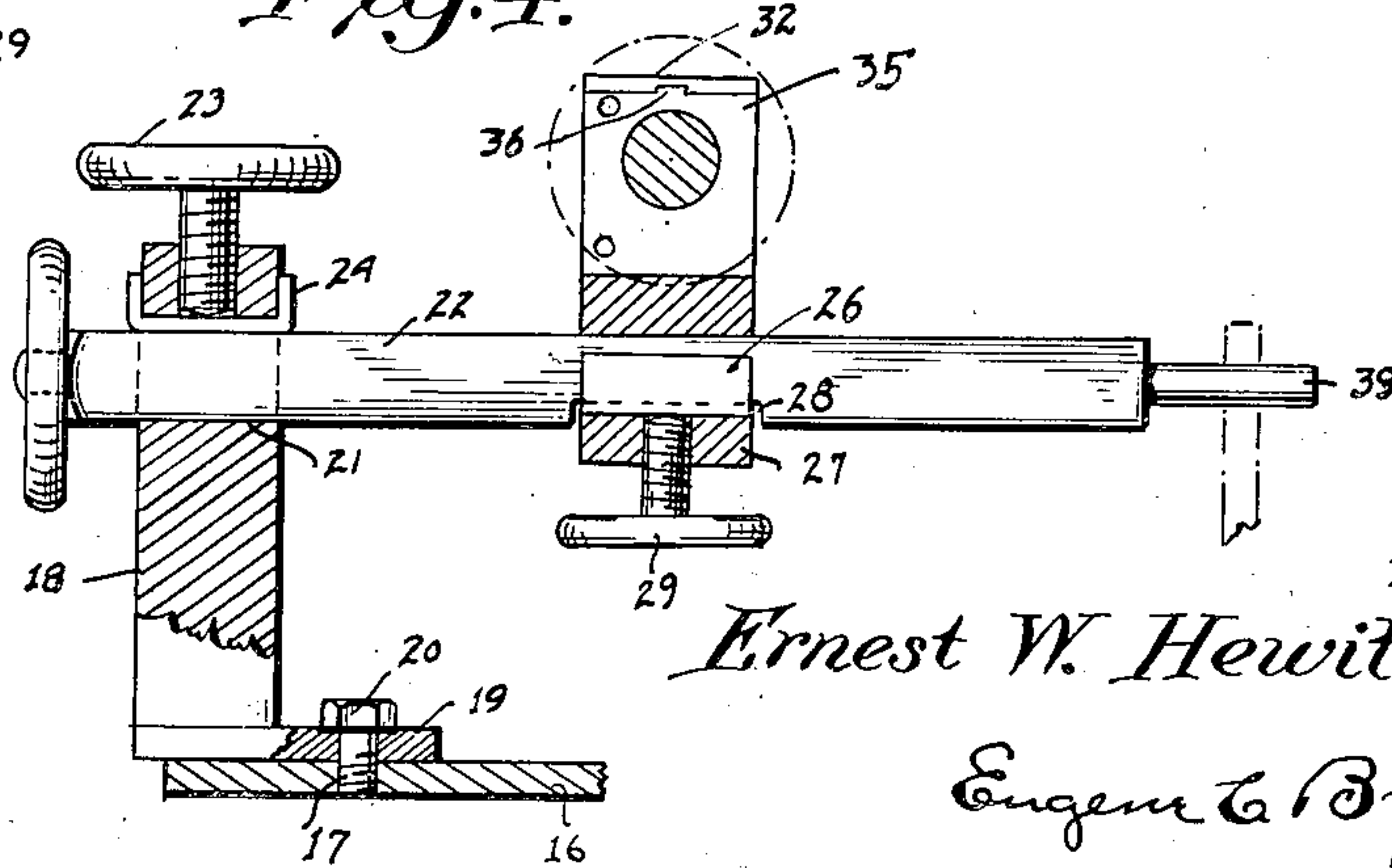


Fig. 4.



Inventor

Ernest W. Hewitt

Engel & Brown
Attorney

UNITED STATES PATENT OFFICE

1,983,904

TYPE ALIGNING APPARATUS

Ernest W. Hewitt, Stamford, Conn., assignor to
The Western Union Telegraph Company, New
York, N. Y., a corporation of New York

Application December 14, 1929, Serial No. 414,187

5 Claims. (Cl. 33—183)

This invention relates to a device for facilitating the attachment of the type slugs to the type bars of writing machines, such as printing telegraph machines and more particularly to the aligning of the type slugs in position for attachment to the type bars.

In printing telegraph machines of the type known as simplex printers or tape teletype, the various characters are disposed on type bars pivoted on an arcuate shaft and striking downward onto a paper tape as it is drawn over a narrow platen. The type slugs are soldered to the type bars, as is usual in typewriter construction, and each type bar ordinarily has both upper and lower case characters thereon. The type slugs, at times, become loosened and must be resoldered and from time to time changes are made in the characters on a particular type bar so that it becomes necessary to replace certain of the slugs.

Heretofore, whenever it was necessary to solder a type slug to a type bar, the judgment of the repairman was depended upon, mainly, in locating the type slug relative to the type bar. After the soldering was completed, the type bar was operated to test the position of the new type, by means of the impression obtained, and if the characters were too far out of alignment the slug was resoldered in a new position. Such procedure was slow and inaccurate and where a number of changes had to be made in the characters, the printing of the machine was often uneven and unsightly.

One of the objects of the present invention is to produce a device for facilitating the soldering of the type slugs to the type bars of such a machine, which will enable the type slugs to be definitely located in the proper printing position and held in such position during the soldering operation.

Other objects and advantages will hereinafter appear.

In accordance with my invention I provide a type aligning attachment, which may be applied to the frame or other fixed part of the machine, in a definite position relative to the printing position of type, the attachment being provided with a vise for holding the type slugs in a fixed position during the soldering operation. The vise is adjustable both transversely and longitudinally so as to bring it into a position for holding the slugs to be soldered in their normal printing position.

In order that a full understanding of the in-

vention may be had reference will be made to the accompanying drawing in which:

Figure 1 is a fragmentary perspective view of a printing machine showing my invention applied thereto;

Figure 2 is a perspective view of the soldering attachment;

Figure 3 is a vertical sectional view through the vise and crosswise adjusting block; and

Figure 4 is a side elevation, partly in section, of the attachment.

Referring to Figure 1, I have shown a portion of a printing machine having a group of type bars 11 mounted on an arcuate shaft 12 and striking downward onto a platen, not shown, in the position occupied by the type bar 13. The platen which has been removed from the machine, as shown in Figure 1, comprises a narrow roller mounted on a horizontal shaft which bears in an opening 14 in a bracket 15 secured to the base plate 16. The opposite end of the platen shaft rotates in a bearing bracket which is secured to the base plate by bolts passing through openings 17 in the base plate 16.

When it is desired to resolder any of the type slugs, the platen, its carriage and associated parts are removed from the machine and the type soldering attachment, forming the subject matter of the present invention, is secured thereto. The platen, its carriage and associated parts form a unit construction which is detachable as a unit from the machine, by removing the screws provided in the openings 17.

The type soldering attachment comprises a vertical bracket 18 having at its base a horizontal lug 19 by which it is secured to the base plate, by means of the screws 20. As stated, the screws 20 engage in the openings 17 by which the platen is attached to the base plate, so that the bracket is located in definite relation to the normal position of the platen. At its upper end the bracket 18 has a rectangular slideway 21 through which extends a rectangular adjusting rod 22, movable forwardly and rearwardly of the machine, in a direction transverse to the normal printing position of the tape. The adjusting rod 22 may be locked in any adjusted position by a thumb screw 23 bearing against a shoe 24 disposed in the slideway.

A crosswise adjusting device is mounted upon the adjusting rod 22 and comprises a rectangular frame 25 having a rectangular opening 26 therein for enabling the frame to be moved transversely of the rod. The lower side 27 of the block engages in a cross groove 28 in the adjusting rod

to retain the block against movement longitudinally of the rod and to guide it in its transverse movement. The block is held in an adjusted position by a thumb screw 29 bearing against a shoe 30.

Secured to the top of the block is a vise 31 having a fixed jaw 32 and a movable jaw 33, the latter being mounted upon a thumb screw 34 threaded in the stationary jaw. The stationary jaw has a type locating block 35 attached to the inner side thereof or formed integrally therewith. The upper face of the locating block terminates below the top of the jaw and has a type aligning ridge 36 on its upper surface. An arm 37 is pivoted at 38 to the frame 25 and is movable from a position at one side of the jaw 32 to a position between the two jaws of the vise. The purpose of the arm 37 is to assist in locating type slugs provided only with lower case characters, as will more clearly appear hereinafter.

The adjusting rod 22 has a cylindrical extension 39 at the end opposite from the bracket 18 which slides in the platen shaft bearing opening 14 in the bracket 15. The bracket 18 is of such height as to locate the adjusting rod 22 substantially on the axis of the platen shaft and the vise 31 extends above the rod to such a height as to position the upper side of the locating block 35 on the level of the printing position of the platen.

In using the attachment, the vise 31 is first located in the correct transverse and longitudinal position by means of one of the type bars which is known to be in proper alignment. Ordinarily the type bar carrying the letter N is employed due to its central position but any other correctly aligned bar may be employed. The vise is opened and the type bar is brought down against the face of the vise and the adjusting frame 25 is moved crosswise until the left hand side of the type slug is in alignment with the fixed jaw 32 of the vise, in which position the adjusting block is locked by the thumb screw 29. The adjusting rod 22 is then slid either forward or backward while holding the type bar with a slight downward pressure until the aligning ridge 36 of the locating block 35 is positioned between the upper and lower case letters with the lower edge of the lower case character against one end of the ridge. If the vise is properly located there should be no pressure of the type slug against either side of the vise during this adjustment.

After the locating block has been thus adjusted in the striking position of the type, the type bar is returned to its unoperated position and the new type slug to be applied, is clamped in the vise with the aligning ridge located between the upper and lower case characters, with the lower edge of the lower case character abutting there against. If no character is provided on the type slug in the upper case position, the arm 37 is rotated into position in front of the vise. The arm 37 extends above the face of the locating block 35 a distance equal to the relief depth of the character and maintains the type slug in the proper horizontal position. The type bar to which the type slug is to be soldered is brought down onto the top of the slug and the slug is heated until the type bar can be pushed to the bottom of the solder tinned groove 40 in the back of the slug.

After the vise and the adjusting block have been adjusted for a particular machine a number of type slugs may be resoldered without changing this adjustment and the slugs will be accurately and readily aligned on the type bars.

What I claim is:—

1. A type aligning device for a type bar printing machine in which type bars strike downwardly into a substantially horizontal plane, said device comprising a bracket attachable to said machine in a definite position relative to the striking position of said type bars, said bracket having a guideway therein, a bar extending through said guideway and adjustable lengthwise of itself therein, a frame mounted on said bar and adjustable transversely thereof and a type slug supporting vise carried by said frame.

2. A type aligning device for a type bar printing machine in which the type bars strike downwardly into a substantially horizontal plane, said device comprising a bracket attachable to said machine in a definite position relative to the striking position of said type bars, said bracket having a guideway therein, a bar extending through said guideway and adjustable lengthwise of itself therein, means for locking said bar in an adjusted position, a frame mounted on said bar so as to be adjustable transversely thereof, means for locking said frame in adjusted position, a type slug locating member carried by said frame, and a vise mounted on said frame adjacent to the locating member for holding a type slug in a definite position relative to said locating member.

3. A type aligning device for a type bar printing machine of the class in which the type bars strike downwardly into a substantially horizontal plane, said device comprising a bracket attachable to said machine, a vise for holding a type slug in said horizontal plane, vise supporting means mounted on said bracket including means whereby said vise may be shifted in directions at right angles to each other in said horizontal plane for adjusting the same and means for securing said vise in a fixed adjusted position.

4. A type aligning device comprising a bracket attachable to a type bar printing machine, a type slug locating member carried by said bracket and adjustable to bring the same into the striking position of said type bars, and a vise for holding the type slug in a fixed relation to said locating member also carried by said bracket having one jaw secured in fixed relation to said locating member whereby said slug is secured in contact with said member in a definite position relative thereto.

5. A type aligning device attachable to a type bar printing machine in which the type slugs normally have both upper and lower case characters thereon, said device comprising a type slug locating member and means for supporting said member, said means being adjustable for bringing said member into the striking position of said type bar, and means adapted to be brought into operative relation to said locating member to engage one end of a type slug having no upper case character thereon and hold the same in proper striking position.

ERNEST W. HEWITT.