F. W. LETSCH.

SPACE BAND MECHANISM.

APPLICATION FILED NOV. 5, 1920.

1,430,018. Patented Sept. 26, 1922.

FIG. 2.

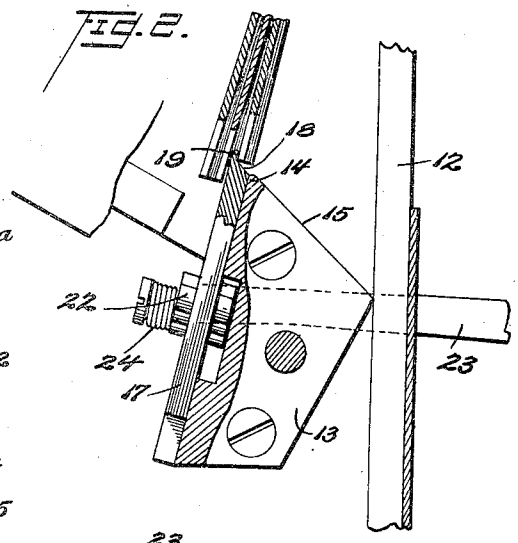
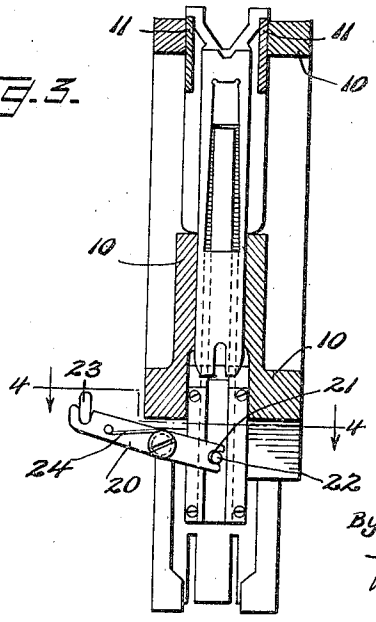


FIG. 1.

FIG. 3.



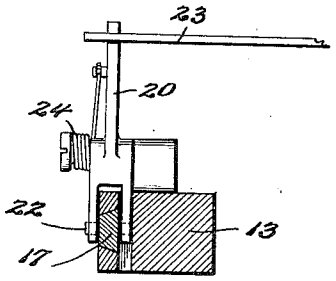


FIG. 4.

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UNITED STATES PATENT OFFICE.

FREDERICK W. LETSCH, OF BALTIMORE, MARYLAND.

SPACE-BAND MECHANISM.

Original application filed March 15, 1918, Serial No. 222,760. Divided and this application filed November 5, 1920. Serial No. 422,065.

To all whom it may concern:

Be it known that I, FREDERICK W. LETSCH, a citizen of the United States, and residing at Baltimore city, State of Maryland, have invented certain new and useful Improvements in Space-Band Mechanism, of which the following is a specification.

This invention relates to space band mechanism for typographic machines, particularly machines of the kind disclosed in my copending application Serial No. 222,760 filed March 15, 1918, of which the present application is a division. It is the aim of the invention to provide space band mechanism to which the space bands are delivered and from which the bands may be easily and positively released for use in assembling a line of matrices and space bands.

In the drawings accompanying this specification and forming a part thereof.

Figure 1 is a front elevation partly broken away of a space band magazine, this figure also illustrating the arrangement of the mechanism for releasing the bands from the magazine;

Figure 2 is an enlarged view partly in section of the mechanism shown at the lower portion of Figure 1;

Figure 3 is a sectional view on the line 3—3 of Figure 1; and

Figure 4 is a sectional view on the line 4—4 of Figure 3.

It will be understood that the space band mechanism of the present invention is arranged in a position on the machine to receive the space bands from an assembled line after the casting operation and after the matrices have been separated from the space bands, and it will be further understood that suitable means (not shown) are provided on the machine for delivering the space bands to this mechanism.

In the drawings the numeral 10 represents generally the magazine into which the space bands are delivered, this magazine at its upper side being provided with spaced rails 11 upon which the ears of the space bands rest as they enter and lie within the magazine. These rails, as shown in the drawing, are inclined downwardly and as the space bands are delivered to the magazine they will slide by gravity down the inclined portion of the rails 11 and the foremost one will rest against the wall of the chute 12 down which the space bands fall when released. At their lower end the rails are spaced a slight distance from the chute 12 as shown at 11^a, this space being sufficient to permit the ears of the space bands to pass as they are released and drop down the chute. In the lower portion of the magazine there is arranged a fixed block 13 suitably secured to the magazine proper or to any other stationary portion of the machine. The upper end of this block indicated by the numeral 14 forms a stop or detent which is positioned to contact with the lower ends of the space bands as they enter the magazine. This detent and the lower end of the rails 11 are so arranged that the space bands in the magazine will be held in an inclined position as shown in the drawing, the foremost space band resting at its lower end against the detent and at its upper end against the wall of the chute 12. The upper surface of the block 13 is inclined as at 15 and it will be understood that when the space bands are lifted over the detent 14 they will slide down this inclined portion to a vertical position and enter the chute 12. The front surface 16 of the block 13, or that against which the lower ends of the space bands are adapted to rest, is also inclined and lies substantially parallel to the position taken by the space bands resting in the magazine. A pusher or lifting device 17 is slidably mounted on the surface 16 of the block 13, this pusher being arranged in a dovetail guideway formed in or secured to the block 13. The upper end of the pusher is provided with an inclined surface at 18 which aligns with the inclined surface 15 of the block 13 when the pusher is elevated. The upper end of the pusher is also provided with a small lip or projection 19 which is adapted to enter a recess in the forward side of the next to the foremost space band where a group of space bands are resting against the detent 4, the purpose of this finger being to ensure that the pusher will raise the foremost space band and will not disturb the next one in the rear. Means are provided for raising and lowering the pusher 17, such means comprising a rocker 20 pivoted intermediate its ends on the block 13 or a projection thereof, one end of said rocker being slotted at 21 and engaging a pin 22 secured to the pusher 17 and the other end of said rocker being operatively connected to a lever 23, the latter being connected in any suitable manner to the

usual space key of the keyboard of the machine. The pusher is normally held in its lower position by a coiled spring 24 operatively connected to the rocker 20.

It will be understood from the foregoing description that as the space key of the machine is operated the pusher 17 will be raised, thus lifting the lower end of the foremost space band above the detent 14 whereupon such space band will slide down the inclined surface 15 of the block 13 and through the chute 12 into the line assembling receptacle of the machine. This means for releasing the space bands by lifting the lower ends of the same acts quickly and positively and has been found to be simple, quiet and effective in operation.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:—

1. In a mechanism of the kind described, a space band magazine, means for supporting space bands at their upper ends in said magazine, an abutment engaging the lower end of the foremost space band of a group for holding the same normally in inclined position, said abutment having an inclined front surface arranged substantially parallel to the space bands when the same are normally positioned against the abutment, a lifting device slidably mounted on said inclined surface of the abutment and adapted to lift the foremost space band and permit the same to swing over said abutment, said device having a projection on its upper end for separating the front space band of a group from the one adjacent thereto.

2. In a mechanism of the kind described, a space band magazine, inclined rails at the upper part of the magazine upon which the ears of space bands are adapted to rest, an abutment at the lower part of the magazine against which the lower end of the foremost space band of a group rests when in normal position in the magazine, said abutment being so positioned that the lower ends of the space bands resting against the same will be held rearwardly of the upper ends thereof, said abutment having an inclined front face arranged substantially parallel to the position taken by the space bands resting in the magazine, a lifting device slidably mounted on said front face of the abutment, said lifting device having a projection on its upper end adapted to be inserted between the front space band and the adjacent one upon upward movement of said lifting device, and means for moving said lifting device.

3. In a mechanism of the kind described, a space band magazine, inclined rails at the upper part of the magazine upon which the ears of space bands are adapted to rest, an abutment at the lower end of the magazine against which the lower end of the foremost space band rests when in normal position in the magazine, said abutment being positioned to hold the lower ends of the space bands rearwardly of the upper ends whereby the same occupy an inclined position in the magazine, said abutment having an inclined front face against which the space bands are adapted to lie in an inclined position, a lifting device slidably mounted on and movable parallel with said inclined face of said abutment, and means for moving said device.

In testimony whereof I affix my signature.

FREDERICK W. LETSCH.