

## CHAPTER 23

# Single Distributor Models 27 and 28; 31 and 32

**T**HERE ARE, basically, but two classes of Linotype machines: first, single distributor machines; and second, plural distributor machines—each class adapted to specific requirements of composition. Through the years as requirements have changed and as Linotype invention has progressed there have been made various models of single and plural distributor machines. At the present time the Linotype art is completely covered by Models 27 and 28, and Models 31 and 32 (replacing Models 8 and 14) in the single distributor class; by Models 29 and 30 (replacing Models 25 and 26) and Model 9 (the original four-magazine, mixing Linotype) in the plural distributor class.

In Chapter 4 the special features of these models (except Model 9), with regard to types and numbers of magazines, types of escapements, etc., have been illustrated and explained; and, the illustration and description of the distribution mechanism contained in Chapter 18 are typical of all the current models of single distributor machines.

There remains still to be shown the special features relating particularly to scope, capacity, etc., of the current machines in this class, and descriptions of the distribution mechanisms of the current models in the plural distributor class, showing particularly the features of the several models which may vary from those of mechanisms already described in previous chapters of this book.

It has been deemed best not to complicate the descriptions of current models by showing them equipped with every possible combination of magazines, regular and auxiliary. Instead, they are shown completely equipped with one kind of regular and auxiliary magazines and described accordingly. Other equipment possible is only briefly noted. Where the current models do not vary from the descriptions in previous chapters, no detailed description is given.

### MODEL 27

This machine carries three extra-wide short Linolite main magazines with a capacity of 12 matrices for each channel. These magazines are  $5\frac{3}{4}$ " wider at the delivery point than the original 72-channel magazine, and will accommodate matrices for type faces up to normal width 36 point. The magazines, which are not interchangeable with any other model except Model 28, have the escapements fastened to them, and the escapements are automatically locked against operation except when the magazine is in operating position.

This model has but one upper section of magazine, generally referred to as the magazine entrance. The magazine entrance remains stationary on the supporting cradle and the three magazines rest in a frame which is movable up and down on rollers in the cradle; the construction being similar to the standard wide auxiliary construction. The magazines are raised or lowered to operating position

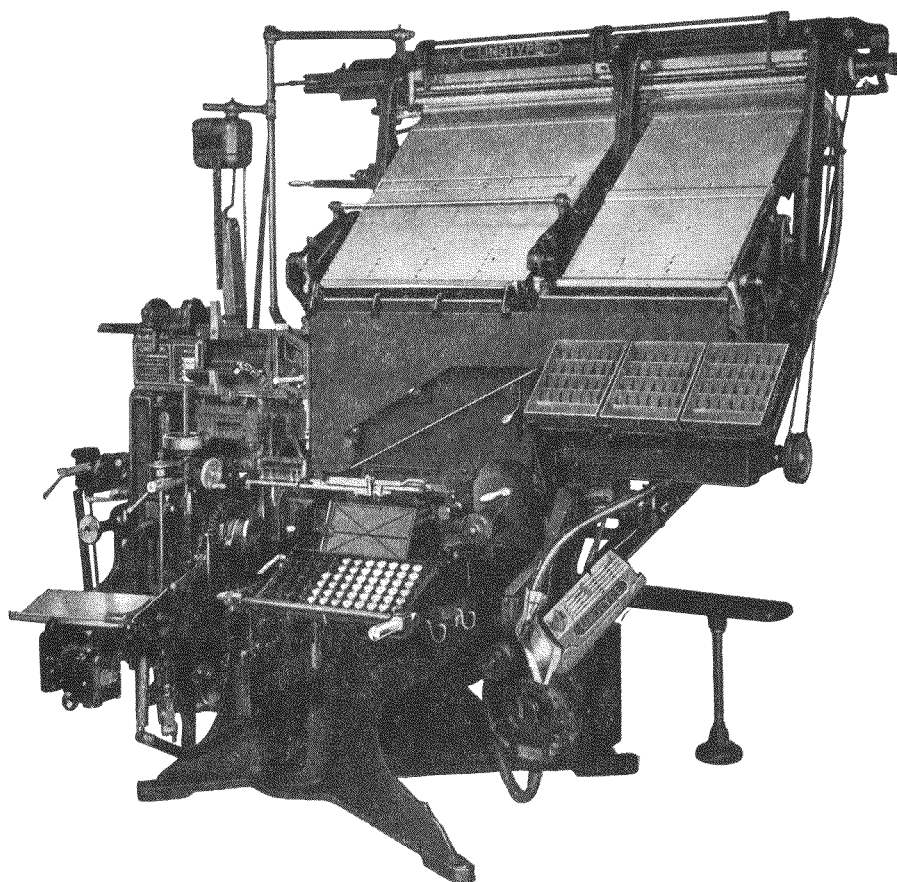


FIG. 1-23. Model 28 Linotype.

by means of a crank handle and a positive gear action to rotate the magazine frame elevating cams. This action through a train of gears is designed to make the raising and lowering of the magazines very easy, the weight of the magazines and their frames being counterbalanced by a spring. Only three turns of the operating handle are necessary to bring into operation the magazine adjacent to the magazine which has been in use. Matrix guards similar to those used on Models 8 and 14 prevent the possibility of shifting or removing magazines while matrices are being distributed or if a matrix should accidentally project beyond the delivery point of the magazine.

An extension bracket composed of a cross-bar connecting two rails which are permanently attached to the front guide holder brackets is swung down to support any magazine for removal or replacement. As the magazine is pulled forward it engages and is supported by this bracket. In replacing a magazine, it is hung on this bracket, tilted backward, and pushed into place. The extension bracket is then swung up in place, out of the way.

The distributor bar of the Model 27 is in two sections, that of the Model 28 in three; any one of which can be replaced without incurring the expense of a com-

plete bar. The first section carries the nine most used characters and is the part of the bar that receives most wear. The distributor screws are "two-pitch."

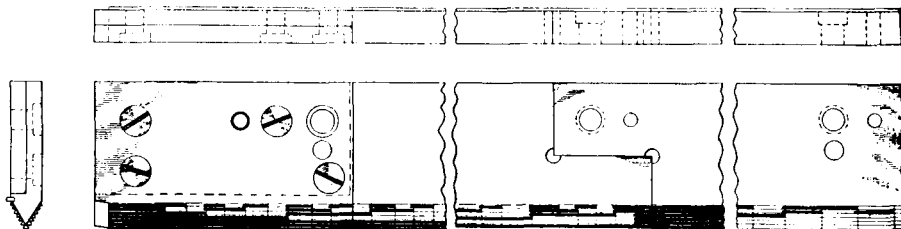


FIG. 2-23. Front view of distributor bar on Model 28 Linotype.

## MODEL 28

This machine is the same as Model 27 with the addition of one, two or three wide 34-channel auxiliary magazines, which enable it to carry more faces and slightly larger faces than even the Model 27. Wide 36 point and condensed faces to 60 point can be run, with the caps in an auxiliary and the lower case in the cap side of one of the main magazines. The auxiliary magazines are standard and are interchangeable with those on other Linotypes so equipped, and the construction of the auxiliary side of this machine is basically the same as for the Model 14 when so equipped. The auxiliary side is operated from the same keyboard as the main magazines, with the same simple keybutton shift as on other single-keyboard Linotypes.

The auxiliary magazines are elevated to operating position by the same crank handle used for elevating the main magazines. A small shift knob located near the crank handle is pushed in or pulled out to indicate whether the main or the auxiliary magazine elevating mechanism is connected with the crank handle.

The channel entrances on Models 27 and 28 are constructed with a thin, flat sheet bronze spring attached to one side of certain of the partitions in order to guide thin matrices through channels which may also be used for wider matrices of wider faces.

## MODELS 31 AND 32

These models are the latest development in the single distributor class of Linotypes. They are designed to not only cover the field so long and creditably occupied by Models 8 and 14, but to extend that field because of their increased magazine equipment, quicker magazine change and various other worthwhile developments to increase operating efficiency.

Model 31 has a maximum equipment of four main magazines; Model 32, four main and four auxiliary magazines. Both models are equipped with the new *One-Turn Shift* which makes any magazine instantly available for use. *Magazine change* is quicker because all magazines are removable when in their operating position onto rails that are permanently attached to the magazine frame housing and, when not in use, fold back completely out of the way. The act of swinging down the left rail raises the magazine to be removed clear of the escapement, and with the right rail, provides a sturdy track for the magazine to slide down. The rails retain all the weight until the magazine is clear of the machine. Then the

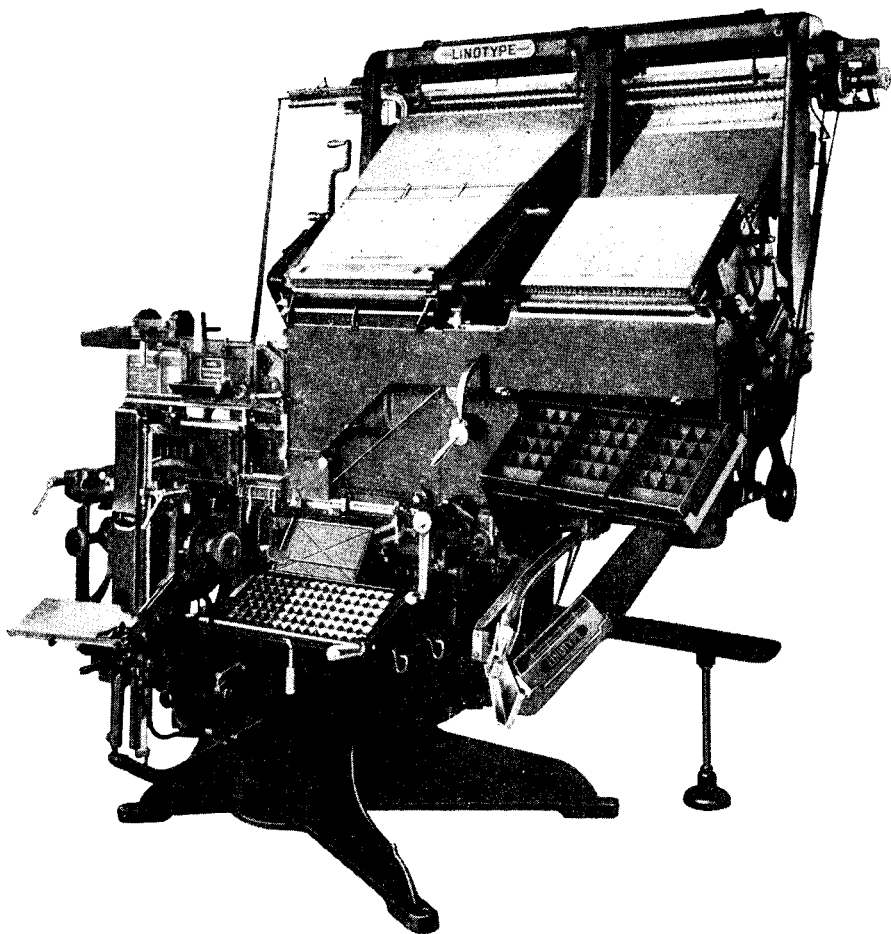


FIG. 3-23. Model 32 Linotype.

magazine pivots into a vertical position, the safest and most convenient position for lifting.

Among other improvements on these models over Models 8 and 14 is the *Straight-Line Escapement*, which provides direct action from the keyboard key rods to the escapement pawls. The length of the lever arms of the operating lever and the escapement lever are proportioned to maintain a ratio of one-to-one, and the operating action of each lever arm is divided to move an equal distance each side of a straight line joining the two lever fulcrums. This assures easy action and minimum friction on the working surfaces while reducing wear on the keyboard rubber rolls. This mechanism is shown in detail in Fig. 16-4.

The channel entrance for the main magazines is readily adjusted for variations in old magazines by merely loosening two screws at either side, sliding the entrance as required and tightening.

Because the main magazines on these models are interchangeable with those of Models 5, 8, 14, 18, 19, 25, 26, 29, 30, L, and the upper magazine of Model 4 this simple and easy adjustment of the channel entrance is a valuable feature.

The distributor bar is in sections, as on Models 27 and 28, and embodies the same advantages of replacement of the short sections and low cost maintenance.

### **The One-Turn Shift**

In this mechanism for raising and lowering the magazines, the combined weight of the magazines and magazine frames is so nearly counterbalanced by large torsion (clock) springs that almost no effort is required of the operator to shift from one magazine to another. The slight effort required for shifting allows a considerable saving in the time required for the operation, to the extent that a shift from any magazine to the next above or below it requires but one complete turn of a crank handle conveniently located for the operator.

Because this One-Turn Shift is not confined to the Models 31 and 32, but is employed also on Models 29 and 30, and because it is so new and different from any elevating mechanism heretofore employed in Linotype machines, no description is attempted in this chapter. A thoroughly detailed description is contained in Chapter 27.

### **Two-in-One Models**

Models 31 and 32 are also equipped as Two-in-One Models and, as such, embody new developments over earlier models.

Descriptions of these features are embodied in Chapter 26 which is devoted wholly to Two-in-One Models.