loosen the lock nut and to turn the screw to set the channel entrance as described above. It will be noted that the screw is threaded in the partition plate bracket *13* and is held in a fixed sidewise position with respect to the channel entrance frame *16* by washers *35* and bushings *36*. Turning the screw clockwise, therefore, will move the assembled channel entrance partition plate to the left (viewed from the rear of the machine). Tighten the lock nut securely when the channel entrance partitions are correctly aligned with respect to the magazine channels.

After the channel entrance partition plate has been set sidewise, the adjustment should be tested by distributing matrices from all of the channels under power. Assemble lines containing matrices from the lower case, figure and cap sections of the keyboard and send them over to the casting mechanism. When at least one matrix of each character has been sent through the distributor, open the matrix guard *7*, Fig. 161, from the front of the machine to see whether all of the matrices have entered the magazine. If a matrix has remained in the channel entrance, observe the relationship between its partitions and the magazine channel and make the necessary fitting. In the case of the wider channels, the matrices will be directed properly into the magazine simply by curving the partition springs.

Closed Position of Channel Entrance Partition Plate. When the partition plate *1*, Fig. 163, is in its closed operating position, there should be 1/32″ space between the lower edge of the partition plate and the upper edge of the magazine plate *31*, as illustrated. The purpose in providing this space is to prevent the partition plate from closing against and damaging the magazine plate, as might be the case if no space were provided between the parts. The slight amount of space between the plates, moreover, will not affect the passage of the matrices from the channel entrance into the magazine because the matrix lugs are long enough to bridge the gap.

The closed position of the partition plate is set by two screws *30*, Fig. 162, against which the channel entrance frame *16* banks. Turning the screws in will permit the partition plate to move in further towards the magazine plate; turning the screws out will widen the gap between the parts. In making the adjustment, the clearance between the partition plate and the magazine plate can be seen most easily if the bottom magazine in the frame is used. It is necessary only to pull the magazine shutter down slightly to see the relationship clearly. When the adjustment is correct, make sure that the channel entrance frame is banking equally against each of the adjusting screws, then tighten the lock nuts securely.

Channel Entrance Partition Plate Bracket Stop Screws. Two locating fingers *25*, Fig. 161, are fastened to the channel entrance partition plate *1* to locate the plate vertically with respect to the magazine. When the channel entrance is in its closed operating position, the locating fingers rest on top of the upper magazine plate *26* and support the partition plate flush with the bottoms of the channels in the lower magazine plate. This aligned relationship between the partition plate *1* and the magazine channels is shown in the detail drawing. This fixed relationship is very important because it insures clearance for the matrices as they enter the magazine. If the partition plate were lower than the edge of the lower magazine plate, it is obvious that the matrix lugs would strike the magazine plate and the matrices would not enter the magazine.

Since the locating fingers *25*, Fig. 161, support the partition plate *1* in its correct vertical position with respect to the magazine, it is necessary only that the partition plate and the locating fingers be supported high enough when the channel entrance is open so that the fingers will engage the upper magazine plate when the entrance is moved in to its closed position. Two stop screws *32* (detail drawing) are provided for this purpose. The screws are threaded in the channel entrance frame and support the partition plate brackets *15* when the channel entrance is open. As the channel entrance is closed, the fingers ride up on the magazine plate *26*, lifting the assembled partition plate and brackets off screws *32* and locating the partition plate flush with the bottoms of the lower magazine plate channels. In setting stop screws *32*, therefore, the channel entrance should be closed, the screws should be adjusted to within 1/16″ of the brackets *15*, then the lock nuts should be tightened. *The stop screws 32 are not intended to be used for adjusting the channel entrance partition plate in relation to the magazine.* If the partition plate is too low with respect to the magazine, the locating fingers *25* should be reworked as described in the section dealing with maintenance of the channel entrance.

Open Position of Channel Entrance. When the channel entrance is opened manually from the rear of the machine, the channel entrance frame *16* banks on two stop screws *33*, Fig. 162. The stop screws should be set to permit the channel entrance to open to a wide position so that it will be easy to work around the distributor, magazines, etc. Make sure that the stop screws support the channel entrance frame equally at both ends.

Maintenance. The most important maintenance requirement of the channel entrance is to keep the partitions and the partition plate clean. It should be borne in mind that the passage of the matrices from the channel entrance into the magazine is effected wholly by gravity. It is obvious that dirt and gummy substances on the partitions or the partition plate will impede the movement of the matrices and will also clog the magazines. The partitions and the partition plate can be cleaned effectively with a swab dipped in a high-test solvent. It is preferable to remove the channel entrance from the machine to facilitate the cleaning operation, but if the entrance is left in position, the tops of the magazines should be covered with a heavy cloth to protect them from the solvent and the dirt.

It may be necessary at long intervals to replace one or more of the channel entrance partitions. While the partitions are flexible to a certain extent, continued pressure against their upper ends may cause some of the partitions to lose their flexibility and to set in incorrect positions. If a partition requires replacement, it is necessary to remove the assembled partition plate by removing the two screws passing through brackets *13* and *15*, Fig. 161. Start each of the locking rods *3*, *4* and *5* with a punch and when the rods project sufficiently beyond the edge of the partition plate, clamp them in a vise and pull the partition plate away from the rods. The jaws of the vise should be lined with brass or other soft metal to prevent damage to the rods. Remove the matrix guard *7* and pry up the brass locking strip *6* carefully. Start the defective partition by backing it with a wooden block and striking the block with a hammer. Remove the partition, insert the new one and assemble the parts by reversing the order of removal. In

replacing the locking strip, begin at one end and work the strip down on the partition lugs carefully by hand.

The channel entrance locating fingers *25*, Fig. 161, control the precise vertical height of the partition plate *1* with respect to the lower magazine plate. As shown in the detail drawing, the fingers rest on top of the upper magazine plate *26* and locate the partition plate flush with bottoms of the lower magazine plate channels. If this relationship is decreased by reason of wear on the fingers, the correct setting can be restored by grinding the required amount of metal off the fingers at the point where they fasten against the partition plate *1*. This will raise the assembled partition plate in relation to the lower magazine plate. *No attempt should be made to bend the locating fingers*—they are hardened to resist wear and will break if subjected to undue strain.

Channel Entrance (Double Distributor)

The channel entrance applied to double distributor machines serves the same purpose as the single distributor channel entrance in that it receives the matrices as they are released from the distributor bars and guides them into the channels of the magazines. The double distributor channel entrance differs in several respects from the single distributor channel entrance, the chief difference being that the former is equipped with two entrances suitable for directing matrices to an upper and a lower magazine. Other differences in construction will be noted throughout the description of the double distributor entrance.

The double distributor channel entrance is shown in Fig. 164. The assembled upper partition plate *2* and the lower partition plate *3* are fastened to the channel entrance frame *1*. The construction of each of the assembled partition plates is essentially the same as that already described and illustrated in the case of the single distributor partition plate. The partitions are inserted in slots punched in the curved partition plates and are held in position by locking rods passing under the plates and above the locking strips. The locking strips *4* serve the same purpose indicated previously in that they maintain the same space between the partitions at the top as that established by the slots in the partition plates below. Matrix guards *5* and *6* are pivoted on the partition locking rods to facilitate the removal of matrices from the entrances and also to prevent damage to the magazines in case the channel entrance is operated when a matrix is partly in the entrance and partly in the magazine. The matrix guards are useful also when the channel entrance partition plates are being adjusted in relation to the magazines, as will be indicated in the section dealing with adjustments.

The method of fastening the assembled partition plates to the channel entrance frame, as shown in Fig. 164, provides a ready means of adjusting the plates with respect to the magazines. The assembled upper plate *2* is fastened to a bar *7* which is supported on two adjusting studs *8*. These studs set the height of the partition plate with respect to the magazine lower plate. The end adjusting screw *9* banks against the upper partition plate bar *7* and sets the sidewise position of the partitions with respect to the magazine channels. The assembled upper partition plate is fastened to the lower plate by two hinge studs *10* passing through brackets on the plates. Adjusting screws similar to those already de-

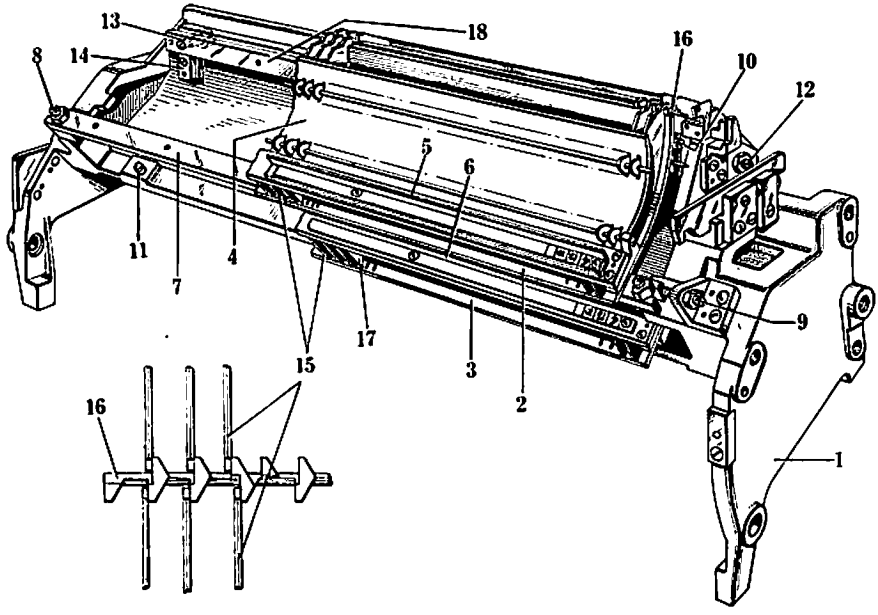

Fig. 164. Double Distributor Channel Entrance. The main view indicates how the upper partition plate *2* and the lower partition plate *3* are mounted on the channel entrance frame *1* and also shows the adjusting screws provided for setting the plates vertically and sidewise. The detail drawing is a top view of the automatic stopping bar *16*, showing how the upper and lower partitions engage the lugs of the bar.

scribed are provided to set the vertical and sidewise position of the lower partition plate *3*. Screws *11* set the height of the lower partition plate with respect to the magazine lower plate and screw *12* is used for setting the sidewise position of the partitions with respect to the magazine channels. The assembled lower partition plate is fastened securely to the channel entrance frame *1* with screws *13* passing through the frame from the rear. The lower partition plate bar *18* rests on two accurately located blocks *14*, which establish the basic vertical position of both partition plates within the channel entrance frame and also provide a means of securing a parallel relationship between the partition plates and the plates of the magazines.

The channel entrance partitions *15*, Fig. 164, are mounted on the partition plates in a manner similar to that described previously for the single distributor entrance. The upper portion of each partition is free to move sidewise because the upper locking lugs are located near the center of each partition. This flexible method of mounting is provided to permit each partition to operate the channel entrance automatic stopping bar *16* whenever a channel is clogged with matrices. Rotation of the distributor screws causes the last matrix in the clogged channel to bear against the right-hand partition (viewed from the front of the machine). As the partition is moved, it bears against a lug of the automatic stopping bar *16* (detail view) and causes the distributor clutch to disengage and to stop rotating the distributor screws. The relationship between the stopping bar

and the distributor clutch is described in connection with the clutch on pages 313-315. It should be noted at this point that the double distributor stopping bar is provided with lugs on each side in order to provide automatic distributor clutch operation by the partitions of both the upper and the lower partition plates. The arrangement of the upper and the lower partitions *15* in relation to the automatic stopping bar *16* is shown clearly in the detail top view, Fig. 164.

The variable spacing feature outlined previously in connection with the Intertype single distributor channel entrance is characteristic also of the double distributor channel entrance. This feature is incorporated in the 72-channel entrance as well as the 90-channel entrance, each individual channel being wide enough to permit the widest character to pass freely through the channel. The maximum sizes of the channels, however, are accurately established to secure positive control of the matrices as they drop between the channel entrance partitions and slide into the channels of the magazine. The channel entrance partitions are also provided with springs *17*, Fig. 164, to hold the thinner matrices upright as they slide through the entrance channels. The springs are easily fitted to guide the thinner matrices of a font into the magazine, but this is usually necessary only for such wide channels as "ffl," em space, "M," "W," etc.

Channel Entrance Operating Mechanism (Manual)

The channel entrance mechanism first applied to Intertype four magazine double distributor machines was operated manually by a lever at the right of the main keyboard. This manual mechanism has recently been supplanted by an assembly driven by power from the intermediate shaft of the machine. While the manual mechanism is now applied only to two magazine mixer machines, it is in satisfactory operation on many machines and is described herewith for the benefit of those whose machines are so equipped.

The manually operated channel entrance mechanism, like the power-driven unit, fulfils three main functions related to the shifting of the magazine frame. These functions are:

1. To open and to close the channel entrance.
2. To raise and to lower the magazine in the lower operating position.
3. To depress the escapement rods.

All of these functions are controlled by the operating lever at the right of the main keyboard and occur simultaneously as the lever is depressed and raised to position.

The assembled operating mechanism is shown in Fig. 165. The channel entrance frame *1* is pivoted at its front end on yokes *2*. The yokes are pivoted on fulcrum studs in the channel entrance frame brackets *3*, which are fastened on the left and right sides of the distributor bracket *4*. The channel entrance frame *1* is connected with left and right-hand magazine lifting levers *5* through operating links *6*, levers *7* and releasing links *8*. The magazine lifting levers *5* pivot with shaft *9* and provide the movement necessary not only for opening and closing the channel entrance but also for lifting and lowering the magazine in the lower operating position. The lifting levers *5* are connected by link *10* with operating

lever *11*, which is depressed and raised by the operator whenever the channel entrance is to be opened and closed.

Right-hand Magazine Lifting Lever. Before describing the operation of the channel entrance and related parts, it is essential first that the construction of the right-hand magazine lifting lever *5*, Fig. 165, be understood. This lever releases the channel entrance latch in preparation for the opening of the entrance and the lever also releases the magazine carriage catch so that the lower magazine can be returned to operating position as the channel entrance is closed. From

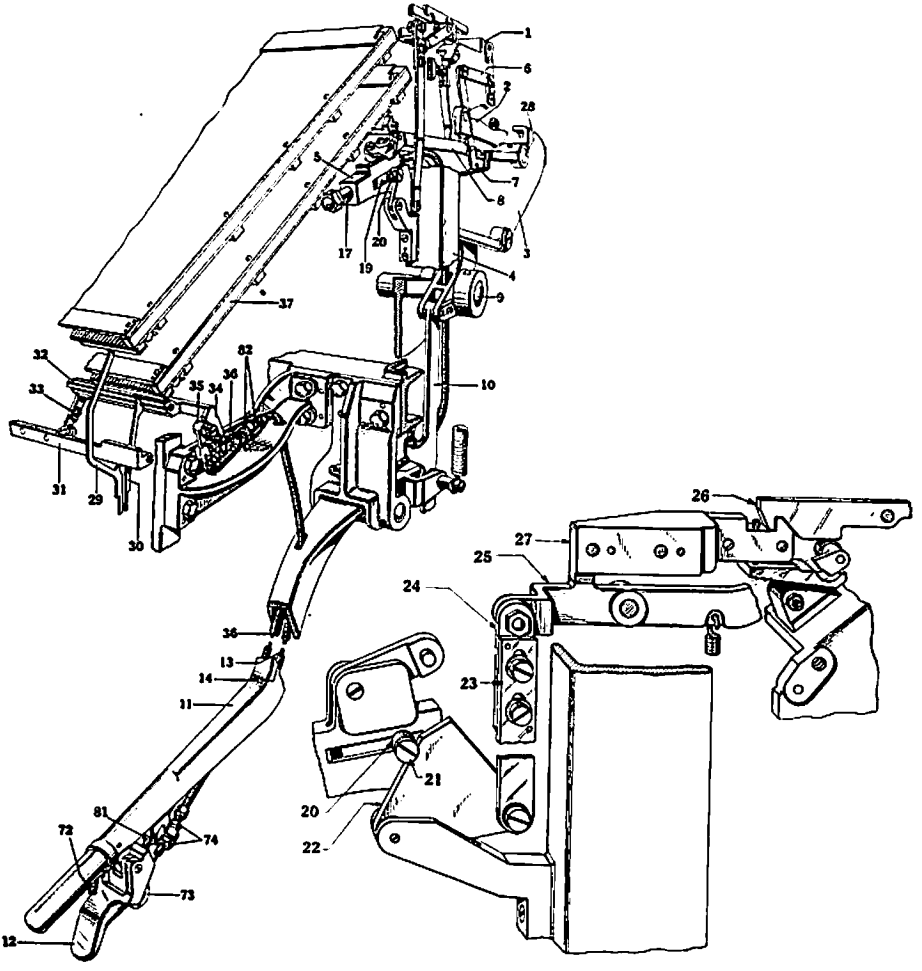

Fig. 165. Channel Entrance Operating Mechanism (Manual). The main assembly drawing shows five unit mechanisms operated by the lower magazine lifting lever *11:* the channel entrance levers, the magazine lifting assembly, the magazine carriage releasing parts, the channel entrance latch mechanism and the escapement rod depressing levers.

The detail drawing is a right-hand side view of the channel entrance latch *26* and its releasing mechanism.

the standpoint of the channel entrance, therefore, it is important that the latch releasing mechanism be understood. Note first in Fig. 165 that right-hand magazine lifting lever *5* is connected by a flexible cable *13* with a releasing lever *12* pivoted at the front of the operating lever *11*. The cable is protected by a casing *14*, but it should be borne in mind that the actual operative part is the cable *13* and not the casing.

Referring now to the detail top view of the magazine lifting lever in Fig. 166, it will be seen that the casing *14* is fastened to a guide *15* on the lifting lever *5*. At the end of the releasing cable *13* there is a fitting *16* which engages releasing rod *17*. The rod is free to move in the bearings of the lifting lever *5* and is normally held out to the left by spring *18*. Pinned on the releasing rod *17* is a block *19* which carries roller *20* on screw *21* forward and backward as the releasing rod assembly is operated by cable *13*. Whenever roller *20* is moved backward, the channel entrance latch is released by a cam arrangement, which will be described now.

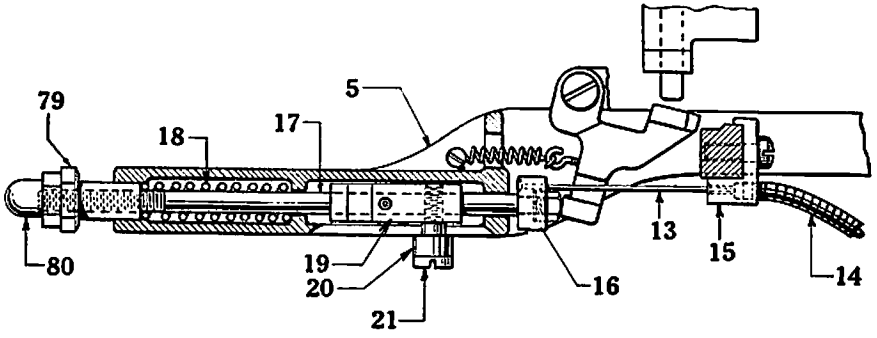

Fig. 166. Top Sectional View of Right-Hand Magazine Lifting Lever *5*. This lever releases the magazine carriage catch and the channel entrance latch when cable *13* pulls rod *17* toward the back of the machine.

Opening of Channel Entrance. The channel entrance latch releasing mechanism is shown in Fig. 165. Referring to the main drawing, it is apparent from the preceding description of the magazine lifting lever that when releasing lever *12* is moved upward by the operator, cable *13* draws the releasing rod block *19* and roller *20* backwards. The roller, as shown in the detail drawing, depresses the pivoted releasing cam *22* and pulls links *23* and *24* downward. Latch lever *25* is thereby raised under the channel entrance latch *26* and the latch is disengaged from hook *27*, leaving the channel entrance free to be opened as described below.

As soon as the channel entrance latch has been released, the channel entrance is opened by downward movement of lever *11*, Fig. 165. Downward movement of the lever causes link *10* to move the pivoted magazine lifting levers *5* toward the back of the machine. The channel entrance frame *1* is connected with the lifting levers by links *6*, levers *7* and releasing links *8*. Backward movement of the lifting levers, therefore, causes the assembled channel entrance to move toward the rear of the machine on the pivoted yokes *2*.

When the channel entrance is opened in the manner described, sufficient clearance is provided for the shifting of the magazine frame. On some occasions,

however, it is desirable to open the channel entrance further in order to provide more room for working around the distributor, the tops of the magazines, etc. This is accomplished by raising the releasing links *8*, Fig. 165, in order to permit the channel entrance to move further toward the rear of the machine. When the releasing links are raised, of course, the channel entrance is temporarily disengaged from the operating levers *7*. It is obvious, therefore, that if operating lever *11* at the front of the machine is raised to close the entrance, the operating parts will function, but the entrance, being disengaged from the operating levers, will simply remain in its open position. The channel entrance can be closed by hand from the rear of the machine in this instance, but to avoid confusion, the entrance should always be returned to position from the rear of the machine if it was opened from the rear originally.

Escapement Rod Depressing Mechanism. Whenever the channel entrance is opened in preparation for shifting the magazine frame, depressing levers *31* and *32*, Fig. 165, are lowered against the escapement rods *29* and *30*. Attached to the back depressing lever is an extension *34*, which engages a roller on the pivoted tripping lever *35*. The tripping lever is connected by a cable *36* with the releasing lever *12* at the front of operating lever *11*. When the releasing lever is moved upward by the operator, the roller on tripping lever *35* bears against the extension *34* and lowers the depressing levers *31* and *32* against the front and back sets of escapements rods *29* and *30*. The depressing levers are connected by link plates *33* and operate simultaneously. If one of the escapement rods has remained in its raised position, therefore, it will be returned to normal position before the lower magazine *37* is withdrawn from between the escapement rods or before the magazine frame is shifted.

Magazine Releasing and Lifting Mechanism. Whenever the channel entrance is closed, the magazine *37* in the lower operating position, as shown in Fig. 165, is automatically released and lowered to operating position over the back escapement rods *30*. The same linkage described previously for releasing the channel entrance latch also releases the magazine carriage catch. When releasing lever *12* is moved upward by the operator, cable *13* draws releasing rod *17* backward.

The releasing rod is shown more clearly in Fig. 167. When the rod *17* is drawn backward by the cable, nut *38* bears against the pivoted magazine releasing bellcrank *39*. The bellcrank is thereby caused to push the magazine carriage catch *40* to the left until the lug of the catch clears the upper lug of block *42*. This releases the magazine carriage from its raised or "shifting" position and as the magazine lifting levers *5* and *46* move forward, the magazine and its carriage are lowered to operating position. The lifting levers, of course, are moved forward when the operator raises the main operating lever *11*, Fig. 165. The carriage is supported while being lowered by the left and right-hand locking blocks *41* and *44*, Fig. 167, which rest against the magazine lifting lever shoes *43* and *45*. As the magazine is being lowered, catch *40* bears against the inside face of block *42* until it reaches the lower lug of the block, which stops the magazine and its carriage in operating position. Spring *47* holds catch *40* to the right against block *42* through the linkage illustrated.

Magazine Frame Lock Pin. A magazine frame locking device is applied to mixer machines to prevent the main magazine frame from being shifted unless

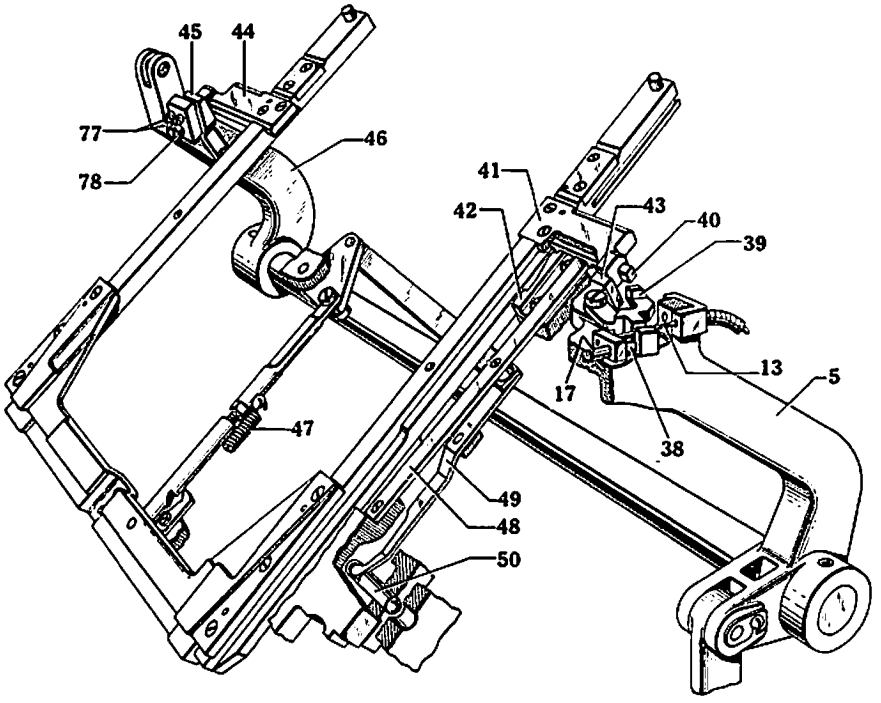

Fig. 167. Magazine Releasing and Lifting Mechanism. The left-hand lifting lever *46* and the right-hand lever *5* raise the lower magazine in operating position to its upper or "shifting" position when the main operating lever is depressed. The bellcrank *39* releases the magazine carriage catch *40* when cable *13* draws rod *17* backward. Cable *13* is operated by the releasing lever at the front of the main operating lever.

the magazine carriage in the lower operating position is locked when it is raised to the upper or "shifting" position. The lock prevents the lower magazine carriage from sliding down inadvertently while shifting the magazine frame.

The locking device, as shown in Fig. 167, consists of a lock pin *50* for each of the three lower magazine carriages. Each pin comes to position in alignment with a hole in the right-hand magazine frame supporting bracket as the lower magazines are moved into operating position. The lock pins are operated by the magazine carriage release bars *48*. When the magazine carriage catch *40* is pushed to the left by bellcrank *39*, the release bar *48* is also moved to the left. This causes the lower end of the pivoted lock operating lever *49* to move to the right and the lock pin *50* of the magazine carriage in position enters the hole in the magazine frame supporting bracket. The lock pin will remain in the bracket until the magazine carriage catch *40* is pushed to the right over the upper lug of block *42* through action of spring *47* and the linkage illustrated. When catch *40* locks in position, bar *48* is moved to the right and pin *50* is withdrawn from the magazine frame supporting bracket. It is apparent, therefore, that if the lower magazine carriage catch *40* does not lock the carriage in its upper or

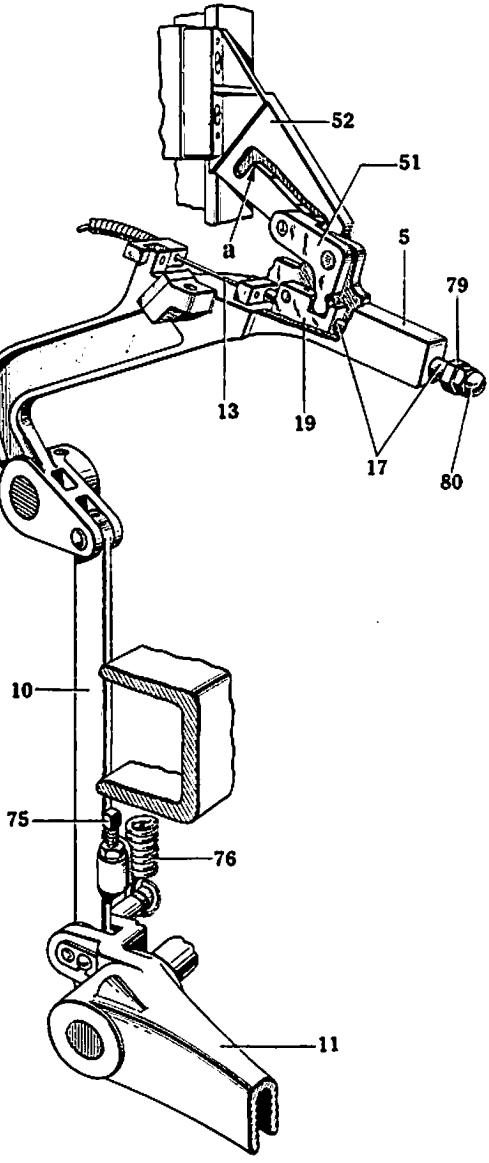

Fig. 168. Magazine Lifting Lever Stop Bracket. The formed track in bracket *52* controls the magazine releasing mechanism while the magazine in the lower operating position is being raised or lowered. The pin in cam lever *51* enters the track when the operating lever *11* is moved slightly, making it unnecessary for the operator to hold the releasing lever while depressing or raising the operating lever. The high point *a* of the track insures the release of the magazine carriage catch.

"shifting" position, pin *50* will lock the entire magazine frame and will make it impossible to shift the frame until the condition is corrected.

The Magazine Lifting Lever Stop Bracket. The magazine lifting lever stop bracket *52*, Fig. 168, is provided to control the magazine releasing mechanism while the magazine in the lower operating position is being raised or lowered. It should be noted first in Fig. 168 that a cam track is provided in stop bracket *52*. Cam lever *51*, pivoted in the right-hand magazine lifting lever *5*, is provided with a pin which moves in the cam track when the operator raises or lowers the operating lever *11* at the right of the keyboard. When the lower magazine is in operating position, the pin in cam lever *51* rests in the lowered part of the cam track at the front of bracket *52*, as illustrated. This permits block *19* and rod *17* to move forward to normal position.

When the releasing lever *12*, Fig. 165, is moved upward by the operator in preparation for shifting magazines, cable *13*, Fig. 168, draws rod *17* and block *19* backward. This causes the pin in cam lever *51* to rise above the stopping surface on bracket *52*. As the operator depresses lever *11* at the right of the keyboard, the pin in cam lever *51* enters the cam track in bracket *52*. The track controls the releasing mechanism from this point on, making it unnecessary for the operator to hold the releasing lever while depressing or raising the operating lever. To obtain greatest ease of movement, the operator should relax his grip on the releasing lever as soon as the operating lever is raised or depressed slightly.

The cam track in the magazine lifting lever stop bracket also insures the release of the magazine carriage catch. Note first in Fig. 167 that the lifting levers *5* and *46* are all the way back when the magazines are being shifted. This means that the pin in cam lever *51*, Fig. 168, would be resting in the slot at the rear of bracket *52* instead of at the front. When operator squeezes the releasing lever, therefore, cable *13* draws rod *17* and block *19* backward, raising the pin in lever *51* above point *a*. This causes bellcrank *39*, Fig. 167, to push the magazine carriage catch *40* in past the upper lug of block *42*. The magazine and its carriage are thereby released and are lowered to operating position as the operator raises the lever at the right of the keyboard. It should be noted that the magazine and its carriage are stopped in operating position when the magazine carriage catch *40* reaches the lower lug of block *42*. When the magazine carriage is in operating position, the lifting levers *5* and *46* move away from the carriage blocks *41* and *44* and are stopped in normal position as the operating lever is raised to its full stroke. The stopping of the lifting levers, as previously described, occurs when lever *51*, Fig. 168, reaches the position shown.

Adjustments

In view of the fact that the double distributor channel entrance mechanism operates part of the magazine frame and escapement rod mechanism as well as the channel entrance, there are a number of adjustments to be made relative to the three assemblies. The following list of settings covers all adjustable parts.

Channel Entrance Frame Stop Screws (Back). The channel entrance frame back stop screws *53*, Fig. 169, regulate the clearance between the upper channel entrance partitions *54* and the lower back distributor screw *55* when the channel entrance is being opened. When the channel entrance latch *26* is released from

its hook, the channel entrance frame pivots down on the back stop screws *53*, then the frame moves out to its open position on the pivoted yokes *2*. As the upper channel entrance partitions *54* move past the lower back distributor screw *55*, there should be as much clearance as possible between the parts. Adjust

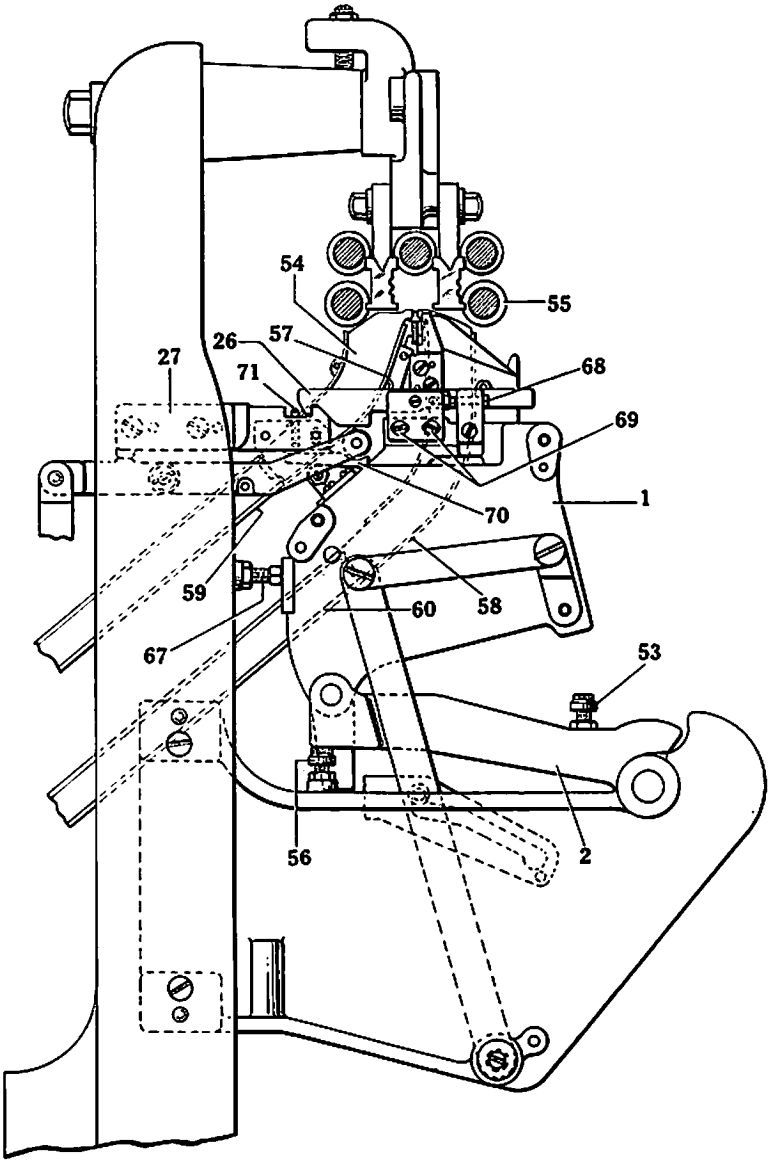

Fig. 169. Double Distributor Channel Entrance (right-hand side view), showing the parts provided for adjusting the entrance in relation to the magazines. The adjustments of the entrance are described fully in the text.

screws *53* down as far as possible, therefore, and tighten the lock nuts. It should be noted that in the case of a double distributor machine with a side magazine unit, there are three back stop screws *53*, one in each of the channel entrance yokes. The screws should be adjusted, of course, to keep the channel entrance level with respect to the distributor screws. It should be noted that the latest stop screws *53* and *56* are provided with neoprene pads, which cushion the channel entrance frame as it opens and closes. These neoprene inserts are clamped firmly in the tops of the screws by a pressing operation.

Channel Entrance Yoke Stop Screws. The yoke stop screws *56*, Fig. 169, set the basic height of the upper and lower partition plates *57* and *58* with respect to the bottom plates *59* and *60* of the magazines. It should be understood that the yoke stop screws provide a means of securing only an approximate height setting of the partition plates. The final setting for height is secured by means of adjusting studs *61*, Fig. 170, for the upper partition plate and by means of adjusting screws *62* for the lower partition plate.

Therefore, in setting the yoke stop screws *56*, Fig. 169, the screws should be adjusted until the partition plates *57* and *58* are aligned as closely as possible with the magazine bottom plates *59* and *60*. It may be found that one partition plate aligns more closely with its magazine than the other, but this condition is remedied by setting the partition plates individually, as described below. In setting stop screws *56*, make sure that the channel entrance is supported equally by the screws and is level with respect to the magazines.

Vertical Alignment of Partition Plates with Magazines. The precise vertical alignment of the channel entrance partition plates *57* and *58*, Fig. 170, with respect to the magazine bottom plates *59* and *60* is controlled by adjusting studs *61* for the upper plate and by adjusting screws *62* for the lower plate. Both partition plates, as shown in the drawing, should be set flush with the bottoms of the channels in the lower plates of the magazines. The flush settings will permit the matrices to enter the magazine channels smoothly and to slide positively down the channels to position.

If it is necessary to set the vertical height of both partition plates, the lower plate *58*, Fig. 170, should be set first. Since it is essential to see the relationship between the lower partition plate and its magazine while making the adjustment, provision is made to simplify the removal of the assembled upper plate *57*. To remove the upper unit, remove the upper nuts from studs *61* and take out the two hinge studs *63*. Lift off the assembled upper partition plate, remove the upper magazine from the frame, then close the channel entrance. Open the hinged matrix guard *65* and observe the height of the lower partition plate *58* with respect to the bottom plate *60* of the magazine. It will be necessary to stand on a chair at the front of the machine to see these parts. The partition plate should be flush with the bottoms of the channels in the magazine plate, as illustrated. If the partition plate is too low, loosen the binding screws *66* slightly, turn the adjusting screws *62* until the partition plate is at the correct height, then tighten the binding screws and the lock nuts on the adjusting screws. Before proceeding to set the vertical height of the upper partition plate, the sidewise setting of the lower plate should be checked while parts are still visible. The sidewise setting of the partition plates is described under the next bold heading.

The vertical setting of the upper partition plate *57*, Fig. 170, with respect to the bottom plate *59* of its magazine is made by means of two adjusting studs *61* at the ends of the partition plate bar. The procedure to be followed is the same as that outlined for the lower partition plate. The upper matrix guard *64* should be raised in order to verify the height of the partition plate and the adjusting stud lock nuts should be tightened securely when the plates are flush, as indicated. It will be noted that the upper partition plate pivots on the hinge studs *63* when being set vertically, so it is not necessary to loosen the binding screws *66* of the lower channel entrance.

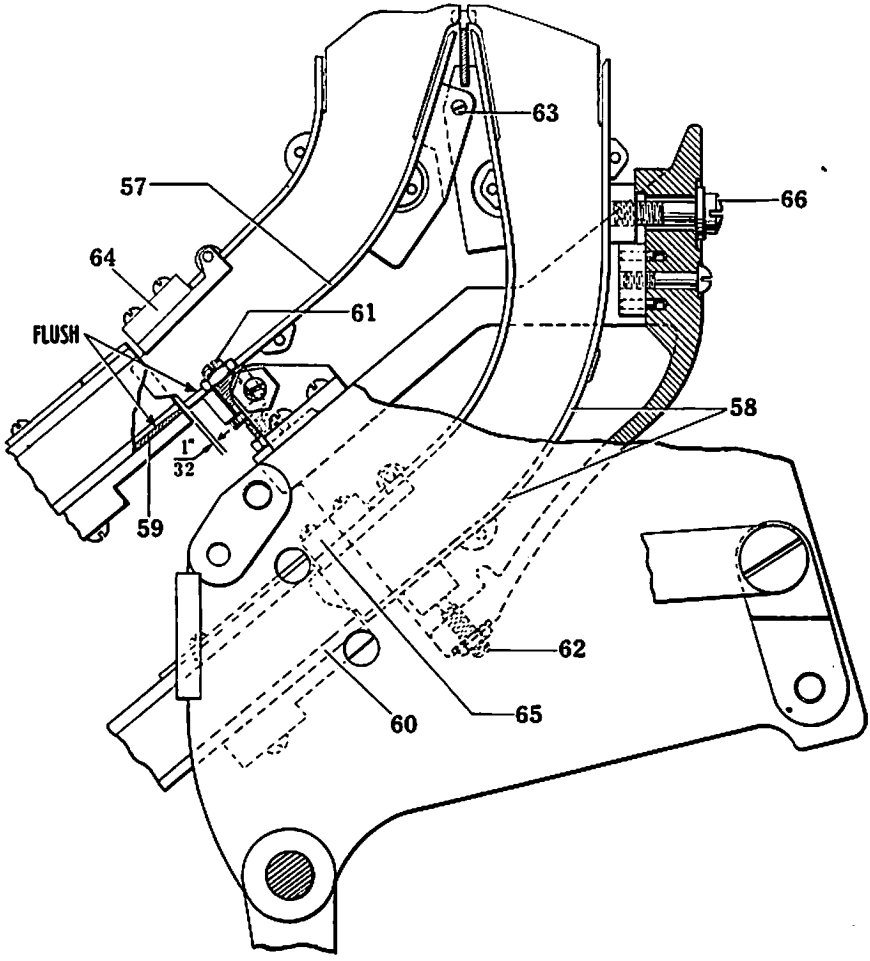

Fig. 170. Channel Entrance Partition Plates Set to Magazines. The upper plate *57* is set vertically by means of studs *61* and the lower plate *58* is adjusted vertically by means of screws *62*.