32 AND 33 TELETYPEWRITER SET

INSTALLATION

1. GENERAL

1.01 This section provides instructions for unpacking, installing, connecting, and preparing the 32 and 33 Teletypewriter Set for use. A 115-volt power source and signal-line current and leads must be furnished by the customer. See the appropriate description section for detailed power and signal-line requirements.

1.02 This section is reissued as a general revision. Because of this, marginal arrows ordinarily used to indicate changes have been omitted.

1.03 References to "left," "right," "front," or "rear," etc, consider the Teletypewriter Set to be viewed from a position where the typing unit carriage faces up and the typing unit selector mechanism is located to the viewer's left.

UNPACKING

1.04 The Teletypewriter Set is packed in one carton. Observe all caution and instruction labels on the carton before breaking the seals. Remove the upper filler pads. Carefully take out the typing unit to avoid marring or otherwise damaging the plastic cover. Remove the remaining carton fillers and take out the stand (if used).

1.05 The typing unit and subbase are mounted on a wooden shipping pallet by seven screws. Four of the screws are no. 14Z self-tapping screws that secure the subbase to the pallet. The remaining three are standard machine screws that pass through aluminum bushings into tapped holes in the typing unit's base casting. Since the typing unit floats on rubber mounts, it is secured with separate screws. Tilt the mounted typing unit and take out the screw in the countersunk hole first. Loosen the
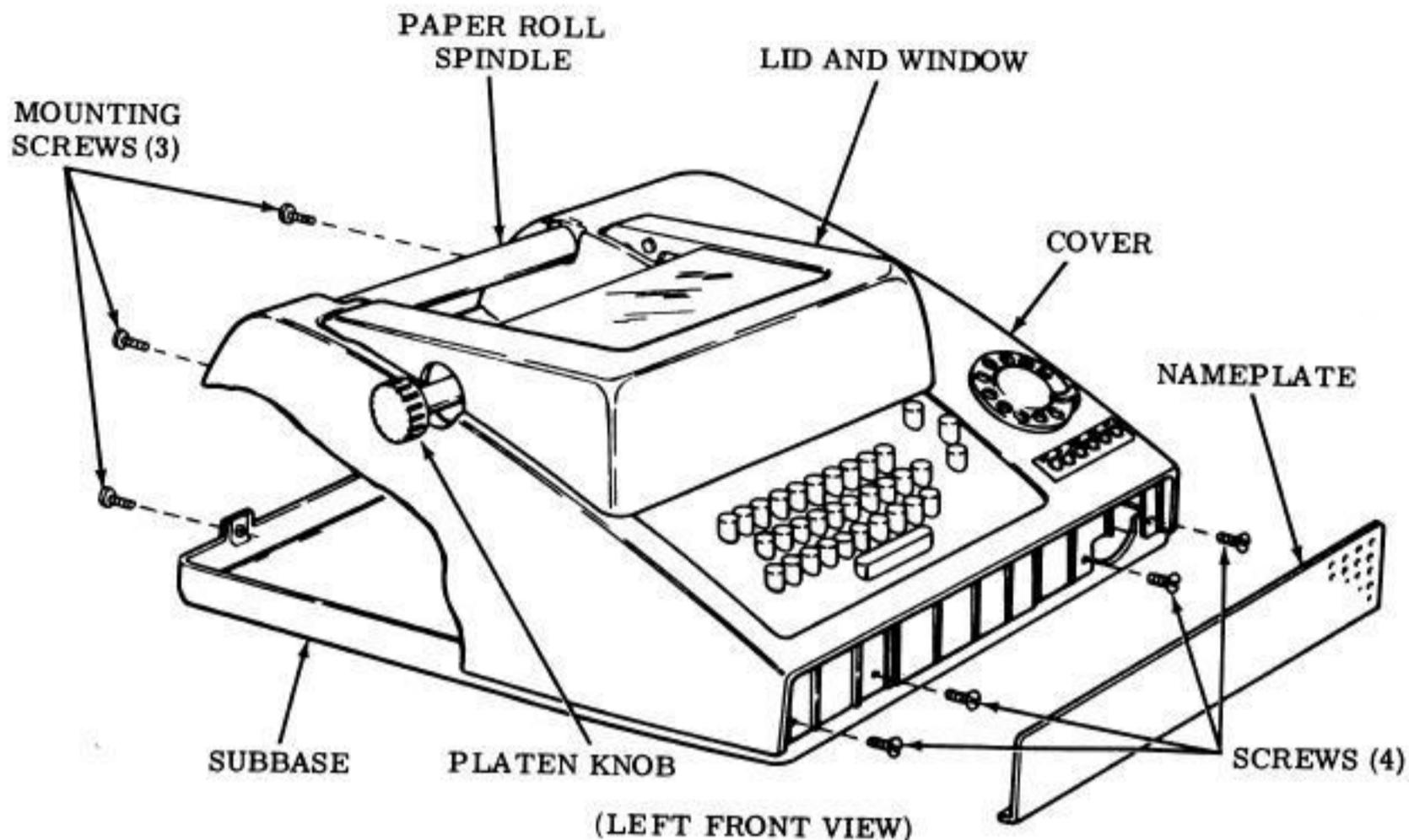
Figure 1 - Cover Mounting

remaining six screws slightly. Return the typing unit to its upright position. Slide it to the edge of the bench and remove the six screws by hand. The typing unit can now be lifted from the pallet. Discard the seven mounting screws and the three aluminum bushings.

CAUTION: DO NOT TILT THE TYPING UNIT AFTER IT HAS BEEN REMOVED FROM THE PALLET. THE TYPING UNIT FLOATS ON RUBBER ISOLATORS AND MAY PULL LOOSE IF IT IS TILTED.

PREPARATION FOR INSTALLATION

1.06   Remove the tape from across the top of the cover and take out the cables, platen knob, and paper spindle from the paper recess. Unwrap the parts.

1.07   Remove the bezel, if used, from the call control unit by removing two mounting screws. Remove the volume control knob, if used, or the power switch rotary knob, if used, by pulling frontward. Remove the nameplate by pulling it down and out (Figure 1). This will

expose four cover mounting screws. Remove these screws and three mounting screws from the rear of the cover. Gently lift the cover from the subbase.

Note: On Automatic Send-Receive (ASR) Teletypewriter Sets, remove the screw from the left rear corner of the tape reader cover before gently lifting the ASR cover from the subbase.

1.08   Remove the twist-tie on the left side that holds the carriage, the tissue paper below it that retains spacing pawls, and the two yellow clips from under the hooks of the function levers.

1.09   If a stand is used, place it in an uncrowded area. Remove two mounting screws and take off the rear panel. Remove the copy holder, if used, from inside the stand. Take the hardware out of the bag tied to the stand.

1.10   Using the screws supplied with the data set, if used, fasten the set to the relay rack.

SUBBASE

REAR MOUNTING
SCREWS (2)

FRONT MOUNTING
SCREWS (2)

TYPING UNIT

STAND

(LEFT FRONT VIEW)

LEGS

LEVELING
SCREWS (2)

FOR BOLTED INSTALLATION
INSTALL LAG BOLTS (2)
FROM INSIDE REAR OF STAND

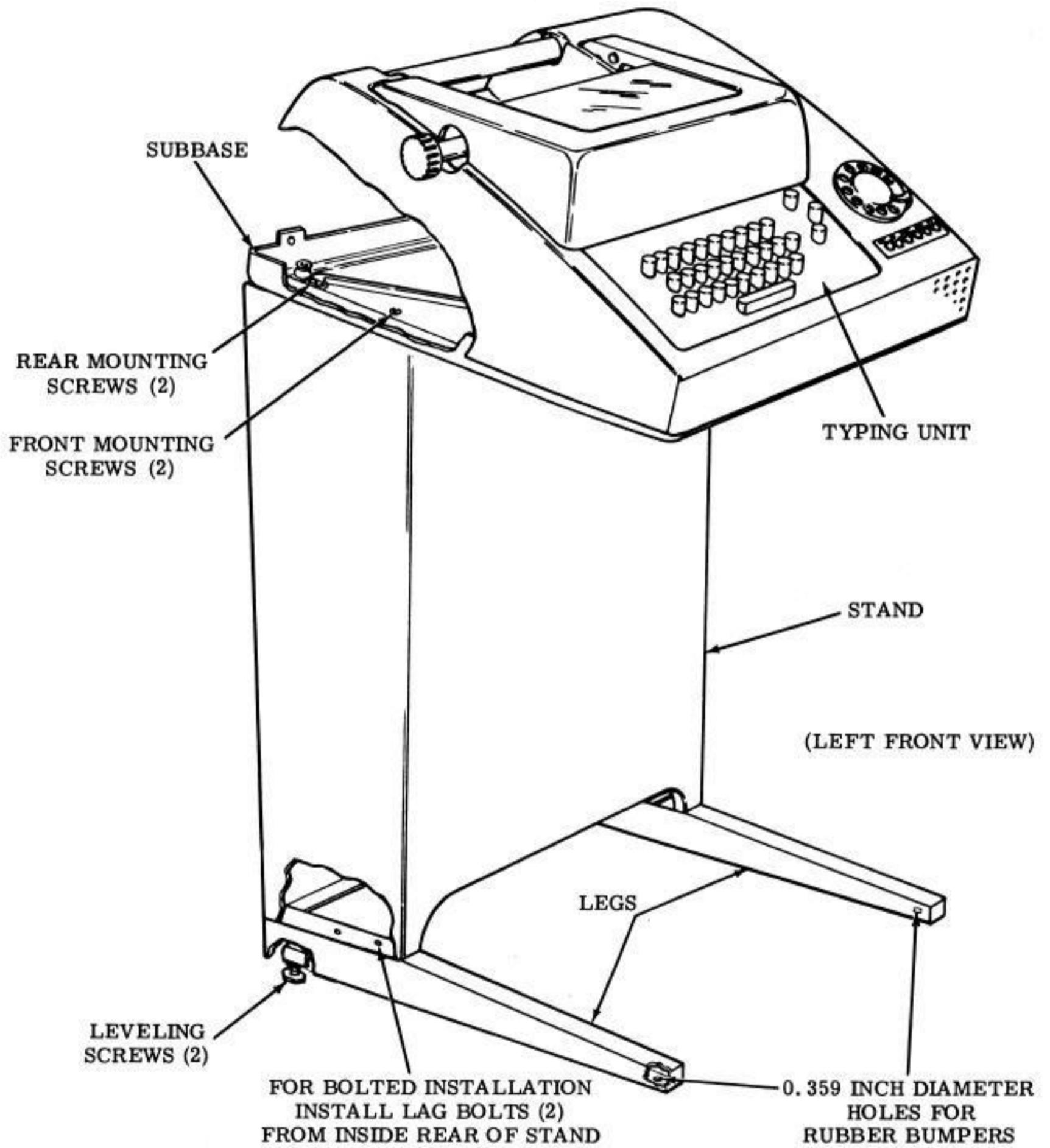0.359 INCH DIAMETER
HOLES FOR
RUBBER BUMPERS

Figure 2 - Stand Leveling and Anchoring and Assembly of Subbase
with Typing Unit to Stand

ANSWER-BACK DRUM

NOT USED

LEVELS

5   4 3 2 1

CHARACTER SUPPRESSION
STOP CAM
FEED RATCHET

(REAR VIEW)

LETTERS TWX & TELEX	FIGURES TWX	FIGURES TELEX	CODE LEVELS
A	–	–	
B	5/8	?	
C	WRU	:	
D	$	+	
E	3	3	
F	1/4	$	
G	&	&	
H		#	
I	8	8	
J	'	BELL	
K	1/2	(	
L	3/4	)	
M	.	.	
N	7/8	,	
O	9	9	
P	0	0	
Q	1	1	
R	4	4	
S	BELL	'	
T	5	5	
U	7	7	
V	3/8	;	
W	2	2	
X	/	/	
Y	6	6	
Z	"	"	
CARRIAGE RETURN			
LINE FEED			
LETTERS SHIFT			
FIGURES SHIFT			
SPACE			
BLANK			
1 CYCLE OPER – ROW 6			
1 CYCLE OPER – ROW ST			
2 CYCLE OPER – ROWS 6&17			
2 CYCLE OPER – ROWS ST&11			
3 CYCLE OPER – ROWS 6,13,&20			
3 CYCLE OPER – ROWS ST,7,&14			

CHARACTER SUPPRESSION
STOP CAM
FEED RATCHET

ROWS

TP95368 SCREWDRIVER

(LEFT SIDE VIEW)
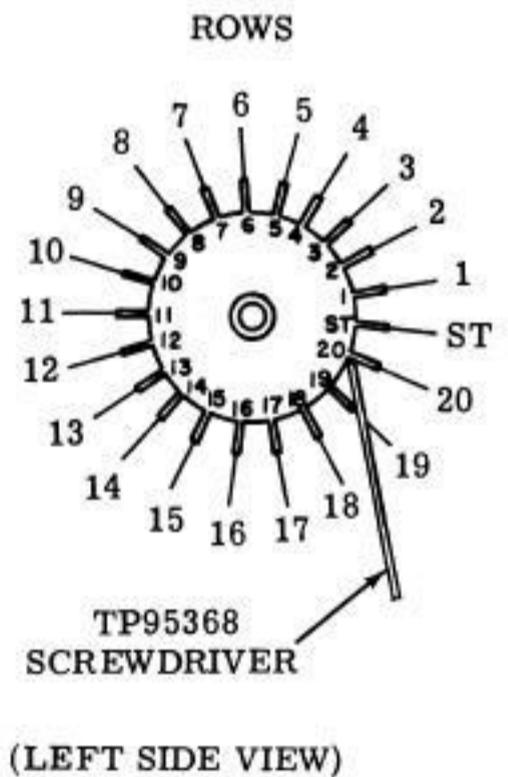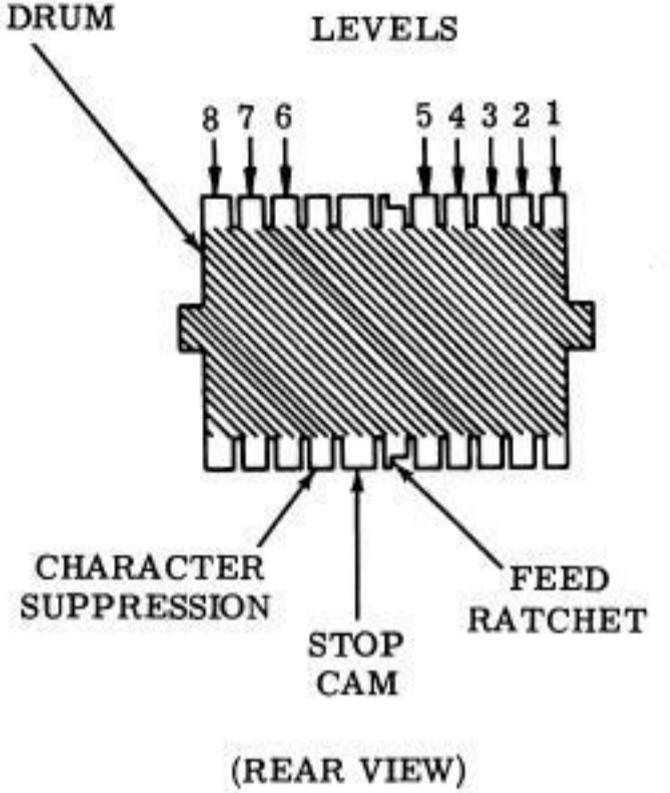
■ LEAVE TINE

□ REMOVE TINE

Figure 3 – Coding of Answer-Back Drum — 32 Teletypewriter Set

Figure 4 - Coding of Answer-Back Drum — 33 Teletypewriter Set

2. INSTALLATION

MOUNTING TYPING UNIT ON STAND

2.01 If the Teletypewriter Set is to be bolted to the floor, remove the front screw in each leg of the stand (Figure 2).

2.02 The subbase with the typing unit is mounted on the stand (Figure 2) by four no. 14Z screws with flat washers. Some subbases may use two no. 14Z screws and two no. 10-32 hex head screws. The two no. 14Z screws are used in two rear mounting holes, and the two no. 10-32 screws with flat washers and lockwashers are used in the two front tapped bosses of the subbase.

2.03 Place the subbase with the typing unit on top of the stand so that its back edge and sides line up with the back edge and sides of the stand. Support the subbase with typing unit at all times until one, or, preferably, both screws are inserted and tightened. Insert two no. 14Z screws carefully to avoid dislodging the speed nuts located in the subbase. There are three pairs of holes in the top of the stand. Use the most rearward and most frontward pairs. Secure the mounting screws.

CODING THE ANSWER-BACK DRUM

2.04 Figures 3 and 4 illustrate the coding of the answer-back drum.

2.05 Remove the answer-back drum as follows:

(a) Disengage the distributor clutch.

(b) Stand at the rear of the Teletypewriter Set and rotate the answer-back drum in the frontward direction while pulling toward the rear against the tension of the contact springs and the detent lever until the drum shaft is just clear of the right and left slots in the contact block.

(c) Lift the feed pawl and remove the answer-back drum. Do not overextend the feed pawl spring.

2.06 The answer-back drum, prior to coding, is identical in either 5- or 8-level operation. As can be seen in Figure 3, three levels are not used when coding the answer-back drum for 5-level operation. The tines in these three levels may be left intact, since

no contact wire springs sense these positions. When coding the answer-back drum for 8-level operation, all levels on the answer-back drum are used (see Figure 4).

2.07 Code the answer-back drum in a counterclockwise direction, as viewed from the numbered end, beginning with row no. 1.

Note: The ST row is actually the first row sensed, and the beginning of a cycle of answer-back operation, but it is coded at the factory for character suppression and requires no coding by customers.

2.08 A row is coded for a particular character by breaking and removing the tine(s) as designated in Figures 3 or 4. Either of the two following methods may be used for breaking off tines:

(a) Method 1: Use a TP95368 screwdriver to remove each tine. Place the end of the screwdriver blade at the base of the tine to be removed. While applying pressure against the base of the adjacent tine, press the side of the blade against the top of the tine to be removed until it breaks. If both tines adjacent to the tine to be removed have been broken off, apply the end of the screwdriver to the stub of either one in breaking off the unwanted tine. This method of removing a tine is indicated in the illustration showing the tine rows in Figures 3 and 4. In the illustration, pressure is being applied to the base of a row no. 20 tine and against the top of an adjacent tine in row no. 19 to break it off.

(b) Method 2: Use a TP161686 tine tool or a pair of TP108285 long-nosed pliers to remove each unwanted tine. Place the unwanted tine into slot of the tine tool, or grasp the unwanted tine firmly with the long-nosed pliers, and then, with the tool or the pliers held stationary, rotate the answer-back drum back and forth until the unwanted tine breaks off near its base. Use care not to damage adjacent tines.

2.09 The length of an answer-back sequence can be varied either by removing the stop cam level tines and/or the character suppression level tines.

(a) A 1-, 2-, or 3-cycle operation can be obtained by removing the appropriate

tine(s) from the stop cam level, as indicated in Figures 3 and 4.

Note: Whenever a stop cam tine is removed, the character suppression tine in the same row must also be removed.

(b) For short sequences, consider coding the answer-back drum for either 2- or 3-cycle operation. When the answer-back drum is coded for multiple-cycle operation, each segment must have the same message coded into it. For longer sequences, code the answer-back drum for 1-cycle operation.

(c) By removing the character suppression tine from rows which are surplus after coding a message into the answer-back drum, the length of an answer-back sequence can be shortened. The removal of the character suppression tine from any row prevents the transmission on the signal line of character code combinations from the answer-back mechanism. Do not, however, remove the character suppression tine from the last row of each segment of the answer-back drum—row no. 20 for answer-back drums coded for 1-cycle operation—on 33 Teletypewriter Sets used in systems where a response to each answer-back activation signal must always be obtained. The last row can be coded with any other character that is compatible with the particular system.

Note: Another use which can be made of the character suppression level tines is the elimination of coding errors. If a coding error is made or, for some other reason, if it is necessary to suppress (erase) characters from the answer-back drum, remove the character suppression tine from the row(s) affected.

2.09 As previously stated in 2.07, the character suppression tine in the ST row is removed at the factory. The stop cam tine in row no. 6 is also removed at the factory. These two levels are always coded the same for 1-cycle operation and are part of the coding for the 2- or 3-cycle operation when either is used.

2.10 The number of rows available for message coding is shown below for 1-, 2-, or 3- cycle operation:

CYCLE OPERATION	TOTAL ROWS	AVAILABLE ROWS
1	21	20
2	10 (11)*	9 (10)*
3	7	6

*Alternately one, then the other.

2.11 The number of rows available for coding a station identification message, however, is less than the number of available rows shown above. A certain number of nonprinting functions such as "carriage return," "line feed," or "letters" must be coded into the answer-back drum to condition a receiving Teletypewriter Set to accept and print the station identification message. Normally, a message must begin and end with "carriage return" and "line feed." This assures one that the transmitted message will appear at the beginning of a line of a receiving Teletypewriter Set, and that overprinting of the message will not occur.

Note: For 5-level operation, the "letters" code combination is also included at the beginning of a transmitted message to place each receiving Teletypewriter Set in the unshift position.

2.12 In Bell System switched network service, the station identification for 1-cycle operation may not exceed 12 characters, including spaces. The answer-back drum should be coded as follows:

ABBREVIATION	KEY TO ABBREVIATION
CR	Carriage Return
LF	Line Feed
RO	Rub Out
SP	Space
SUP	Character Suppression
XON	Tape Reader On

(a) Example 1:

SUP CR LF RO

ROBERTS SP AMES CR LF XON SUP SUP

Company   City

Station Identification
(Maximum - 12 char-
acters)

> Note: In this System, the XON character
> code combination must be the final sig-
> nificant character code combination in
> the coded answer-back message. It may
> be followed by the "character suppres-
> sion" code combination only.

(b) Example 2:

SUP CR LF RO

ERIE SP BOST CR LF XON SUP SUP SUP
                    SUP SUP

Company   City

Station Identifi-
cation (Less than
maximum number
of characters)

> Note: If the station identification is less
> than the maximum of 12 characters in
> length, then the remaining rows on the
> answer-back drum must be coded with
> the character suppression code accord-
> ing to Example 2 above.

2.13   To replace the answer-back drum, lift
the feed pawl and rest the answer-back
drum shaft on top of the right and left sides of
the contact block. Drop the pawl onto the an-
swer-back drum and rotate the answer-back
drum frontward while pulling it toward the rear
against the contact springs and detent lever un-
til the shaft drops over the rear of the contact
block on the right and left sides. Lower the
answer-back drum until the shaft seats into the
right and left slots. Rotate the answer-back
drum against its detent to assure proper seat-
ing of the associated parts. Check that the con-
tact springs are located in their proper slots.

ADJUSTMENTS

2.14   Check DASHPOT ORIFICE (Spacing Area)
adjustment, since altitude may have some
affect on dashpot operation. Also check DIS-
TRIBUTOR TRIP LINKAGE (Keyboard) and
"HERE-IS" ADJUSTING BRACKET (Answer-
Back Area) adjustments. See the appropriate
typing unit and keyboard sections for adjust-
ing procedures.

2.15   Teletypewriter Sets equipped with an
answer-back mechanism must be tested
for the obtaining of the proper response when a
predetermined call character, such as WRU or
FIGS D is transmitted. The following procedure
is recommended for performing this test:

(a) Request back-up station test center to
call the station being installed and trans-
mit the predetermined call character signal
several times after a connection has been
established.

(b) The station being installed shall answer
automatically and transmit the answer-
back message when the predetermined call
character signal is received.

(c) The installed station's answer-back
mechanism shall respond to the receipt
of each predetermined call character sig-
nal from the test center.

> Note: An exception is 33 Teletypewriter
> Sets, which have the character suppres-
> sion tine in the last row (2.09 (c)) re-
> moved from the answer-back drum.

PLACEMENT

A. Without Stand

2.16   If no stand is included, place the Tele-
typewriter Set on the surface where it
is to be used.

B. With Stand

2.17   Figure 2 illustrates the leveling and
anchoring of the stand.

2.18   Place the partially assembled Teletype-
writer Set where it is to be used, and
check it for rocking. This may be corrected
by adjusting the leveling screws located under
rear corners of the stand. Tip the stand slightly
for access.

Note: Early design Teletypewriter Sets "walk" under certain conditions. Reaction to the carriage returning to its left position may cause early design Teletypewriter Sets to move across the floor toward the left. To correct this, either add weight to the stand, arrange to have it bolted to the floor, or drill one 0.0359 inch diameter hole into each leg and install two TP182285 rubber bumpers, one in each leg.

2.19 If the Teletypewriter Set is to be bolted to the floor, place stand at the desired location and drive lag bolts into the floor through the front holes in the legs.

2.20 Place the relay rack with data set inside the stand.

ELECTRICAL CONNECTION

CAUTION: MAKE SURE POWER CORD IS NOT CONNECTED.

2.21 Refer to the appropriate wiring diagrams packed with the Teletypewriter Set or to the appropriate wiring diagram section, when provided.

2.22 Connect the signal line leads (supplied by customer) to the terminals on the terminal board at the rear of the call control unit, as indicated in the wiring diagram.

2.23 Where a data set is used, connect the connectors on the cables from the data set to those on the cables from the call control unit. Connect the telephone line and data set power leads to terminals indicated on wiring diagram. Maintain correct polarity.

2.24 Connect polarized power cord to a 115-volt, 60-cycle ac source.

3. FINAL ASSEMBLY

GENERAL

3.01 Replace the back panel onto the stand, if used, using the removed screws.

Note: On an ASR, before replacing the cover over the typing unit and onto the subbase, remove the retaining ring from the tape reader upstop screw (Figure 10), and the yellow packing clip from under the tape punch sensing lever (Paragraph 7.01).

3.02 Replace the cover over the typing unit and onto the subbase (Figure 1). Take care that all seams are tight and that keyboard pushbuttons, dial, etc, are properly aligned through holes. Insert and tighten three flat head screws at the back and four pan head screws at the front.

Note: On an ASR, insert and tighten the screw at the left rear corner of the tape reader cover.

3.03 Replace the nameplate, making sure that the formed lip fits around the bottom of the flange on the cover, that the top edge is behind the small lip on the cover, and that the bottom of the nameplate rests on top of the two small projections on the subbase.

3.04 Replace the volume control knob, if used, or the power switch rotary knob, if used, positioning and pushing rearward.

3.05 Replace the bezel, if used, over the call control unit. Position the bezel to the cover and insert and tighten two mounting screws.

3.06 On friction feed typing units, align the platen knob with the flat on the left side of the platen, and push it into place. On sprocket feed typing units, assemble the platen knob to the left side of the platen. Fully seat the platen knob to the right, and secure it with the screw provided.

RIBBON INSTALLATION

3.07 Figure 5 illustrates ribbon threading.

3.08 Raise the lid on the cover. Pull both spools off the friction spindles.

3.09 Engage the hook that is on the end of the ribbon in the hub of the empty spool; or if there is no hook, pierce the end of the ribbon over the point of the arrow in the hub of the empty spool. Wind a few turns of ribbon onto the empty spool in the direction indicated by the arrow, and make sure that the reversing eyelet has been wound upon the spool.

3.10 Place the spools on the shafts in such a manner that the ribbon feeds to the rear from the right side of the right spool and from the left side of the left spool. Turn each spool slightly until the driving pin on the spool engages the hole in the spool. Pull the ribbon
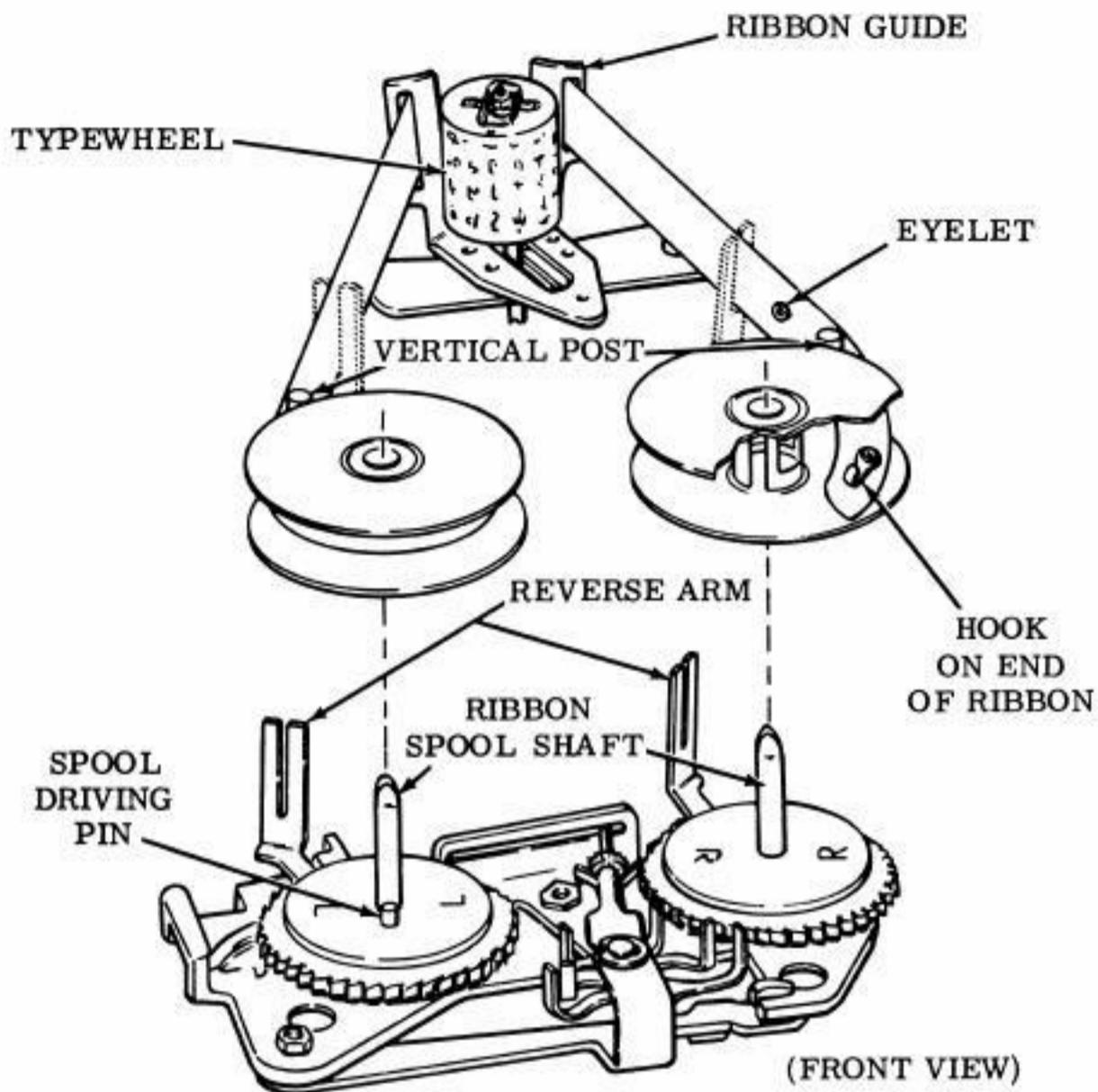
RIBBON GUIDE

TYPEWHEEL

EYELET

VERTICAL POST

REVERSE ARM

HOOK
ON END
OF RIBBON

SPOOL
DRIVING
PIN

RIBBON
SPOOL SHAFT

(FRONT VIEW)

Figure 5 - Ribbon Threading

PAPER DEFLECTOR
GUIDE

PAPER GUIDE

COVER LID

ROLL OF PAPER

PRESSURE
LEVER

PLATEN

COVER

PRESSURE
ROLLER

PAPER
GUIDEPLATE

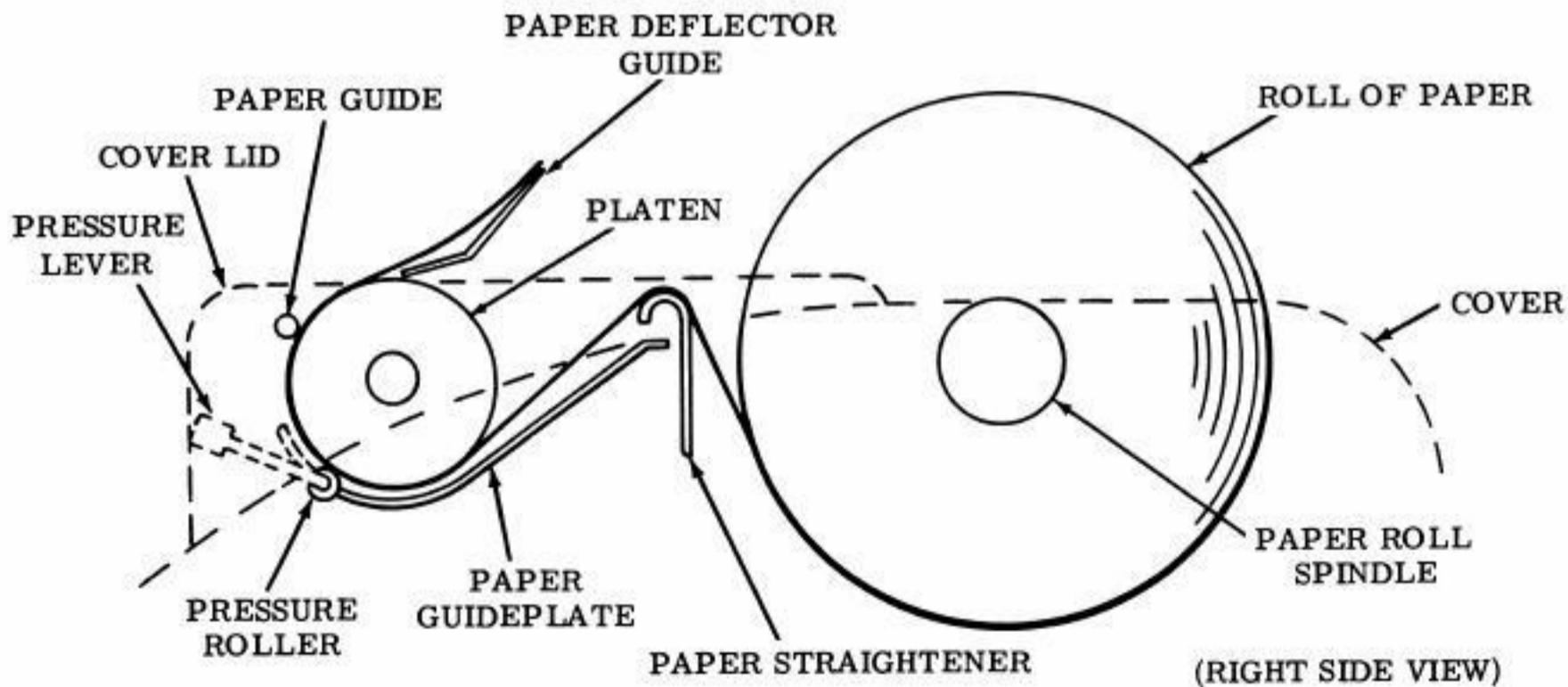PAPER STRAIGHTENER

PAPER ROLL
SPINDLE

(RIGHT SIDE VIEW)

Figure 6 - Paper Threading — Friction Feed

around the right vertical post and through the slot in the reverse arm. Place the ribbon in the right slot of the ribbon guide, around the rear of the guide on both the right and left side, and through the left slot of the guide. Pull it forward on the left side through the reverse arm slot and around the left side of the vertical post. Rotate the spool to take up any slack.

PAPER OR FORM INSTALLATION

A. Friction Feed

3.11   Figure 6 illustrates paper threading for a friction feed typing unit.

3.12   A friction feed Teletypewriter Set accommodates a standard roll of paper 8-1/2 inches wide and 5 inches in diameter.

3.13   Insert the paper roll spindle into the roll of paper so that an equal length of spindle is exposed at either end of the roll.

3.14   Place the roll of paper into the paper recess of the cover so that the ends of the paper roll spindle rest in slots provided, and so that the paper will unroll forward from the bottom.

3.15   Raise the lid on the cover. Fold the leading edge of the paper back and crease it to present a smooth edge when threading it. The paper should unroll from the bottom of the roll, pass forward and up, over the paper straightener, and down and under the platen. Release the pressure roller tension by moving the pressure lever frontward. Push the paper in as far as it will go. Reapply the pressure roller tension and advance the paper by turning the platen knob clockwise, as viewed from the right, until the paper can be passed under the paper guide. Release the tension on the pressure roller again, and straighten the paper. Reapply the pressure roller tension to hold the paper in place. Close the cover lid.

Note: When typing units are stored or out of service for an extended period of time, release the pressure roller tension by moving the pressure lever frontward.

B. Sprocket Feed

3.16   A Teletypewriter Set, sprocket feed, accommodates forms 8-1/2 inches wide and of various lengths. The forms are normally
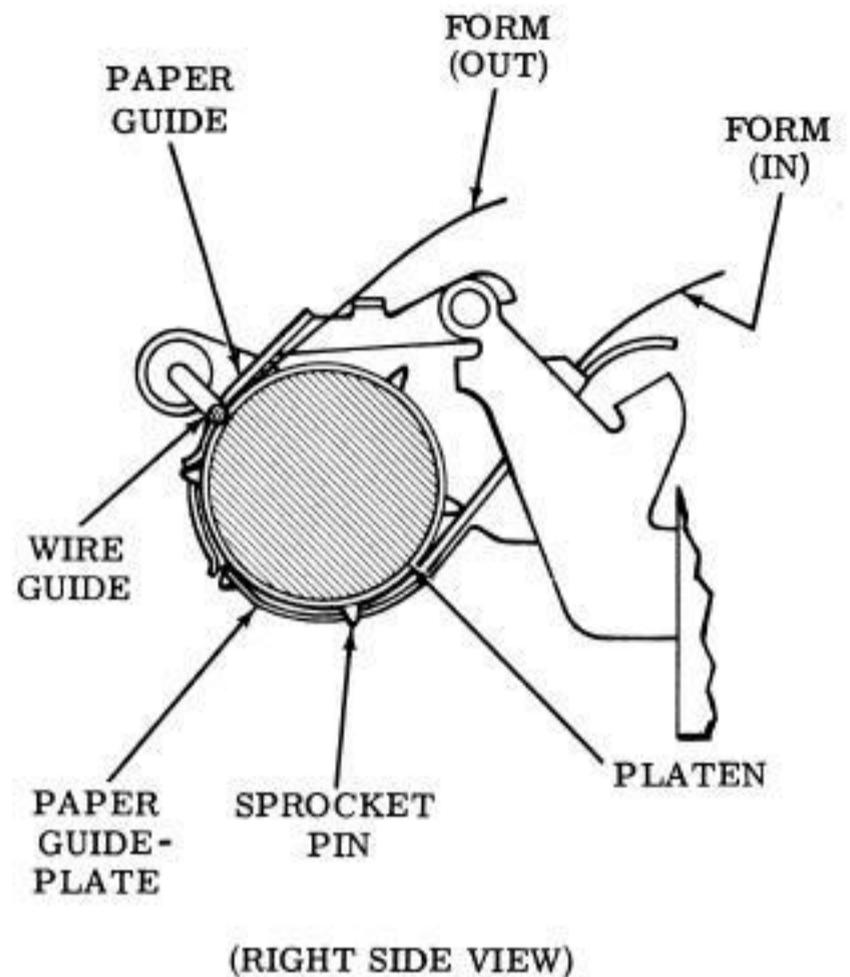

(RIGHT SIDE VIEW)

Figure 7 - Form Threading — Sprocket Feed

passed to the typing unit from a conveniently located stack of forms.

3.17   Place the paper roll spindle into the paper recess of the cover so that the ends of the paper roll spindle rest in the slots provided in the cover.

3.18   Figure 7 illustrates form threading for a sprocket feed typing unit.

3.19   Form Threading: Raise the lid of the cover. Get the leading form from a stack of forms, and pass it under the paper roll spindle—leading edge first. Thread the form under the low-paper and paper-out arms, if used, and between the platen and paper guide-plate. Guide the form squarely into the platen and, with the plunger of the platen knob depressed, gently rotate the platen clockwise, as viewed from the right side, until the form is advanced by the sprocket pins beyond the forward edge of the paper guideplate. Lift up the wire guide with the two paper guides, and continue to rotate the platen clockwise, as viewed from the right side, until the form is fully engaged by the sprocket pins. Lower the
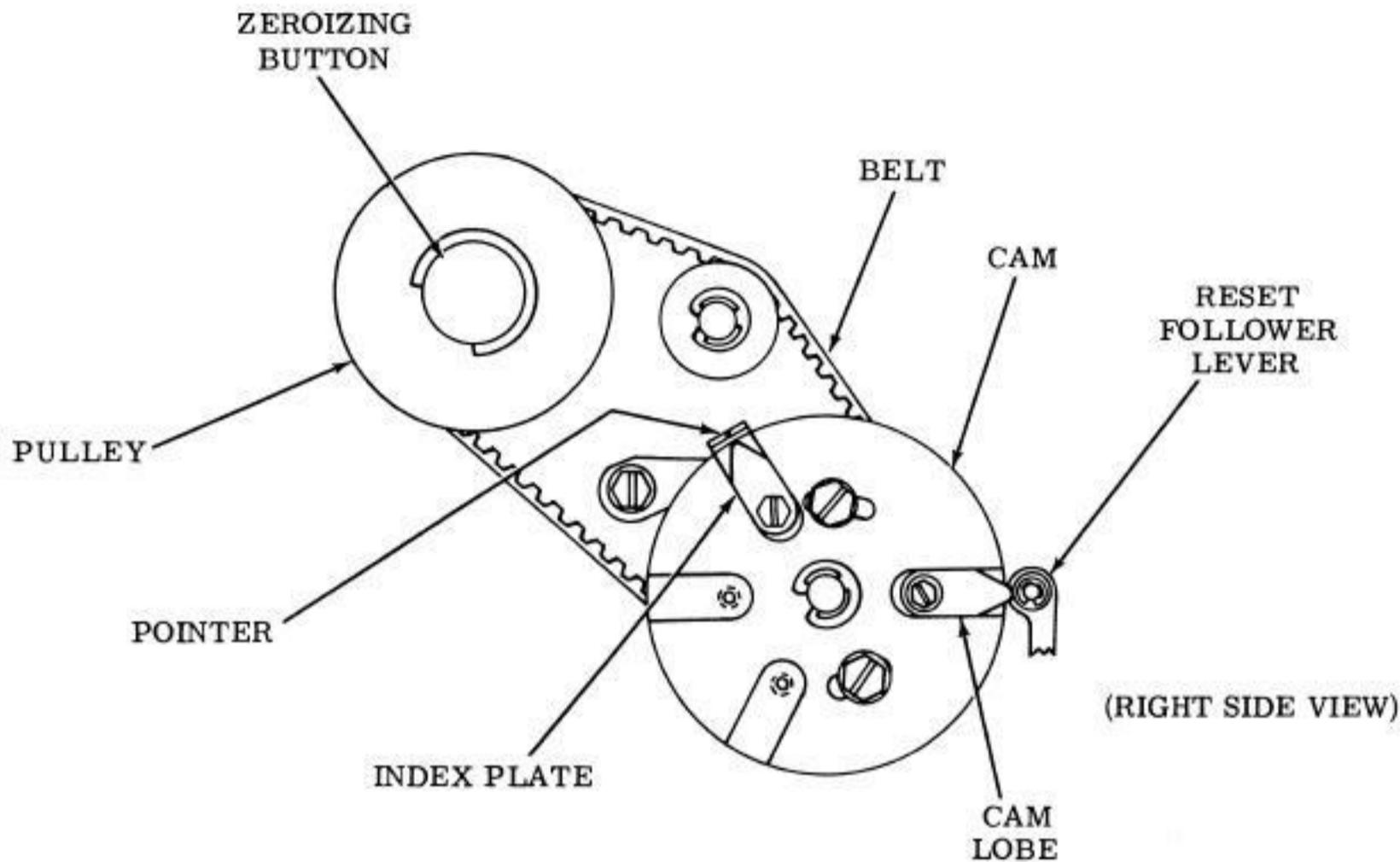
Figure 8 - Zeroizing Position of Platen Drive Mechanism — One Cam Lobe Operation

wire guide with the two paper guides. Rotate the platen further to position the form for the first typing line. After the first form is fed out, lift the form over the paper roll spindle to separate the incoming forms from the outgoing forms.

3.20   Figure 8 illustrates the zeroizing position of the platen drive mechanism for one cam lobe operation. For the zeroized position of the platen drive mechanism using more than one cam lobe, see the CAM ZERO POSITION (Platen Drive Area, Sprocket Feed Mechanism) adjustment in the appropriate typing unit adjustment section.

3.21   Zeroized Position: With a form positioned in the typing unit at its first printing line, depress the zeroizing button, located on the right side of the platen, to the left. Rotate the pulley until the index plate or cam lobe on the cam at the platen drive mechanism is lined up with the pointer. Line up either the index plate or a cam lobe with the pointer, depending whether one, two, or three cam lobes are being used (3.20). Release the zeroizing button, and the platen

drive mechanism along with the associated form-out mechanism is in its zeroized position—set to advance a form to the first printing line of the next form.

Note: To initiate the action to feed out a form, depress the FIGS Z keytop on 5-level Teletypewriter Sets or the CTRL FORM keytop on 8-level Teletypewriter Sets. The form-out mechanism will not respond to successive commands to feed out a form. At the end of a form feed-out, advance the form at least one line before issuing a second form-out command.

4.   OPTIONAL FEATURES

COPY HOLDER

4.01   Figure 9 illustrates the copyholder.

4.02   Stand at the rear of the Teletypewriter Set. Hold the copy holder so that the line guide faces frontward. Locate the four mounting slots in the cover, two on either side of the paper mounting recess. Tilt the copy holder toward the rear, and partially insert

LINE GUIDE

FRONT MOUNTING
TABS (2)

REAR MOUNTING
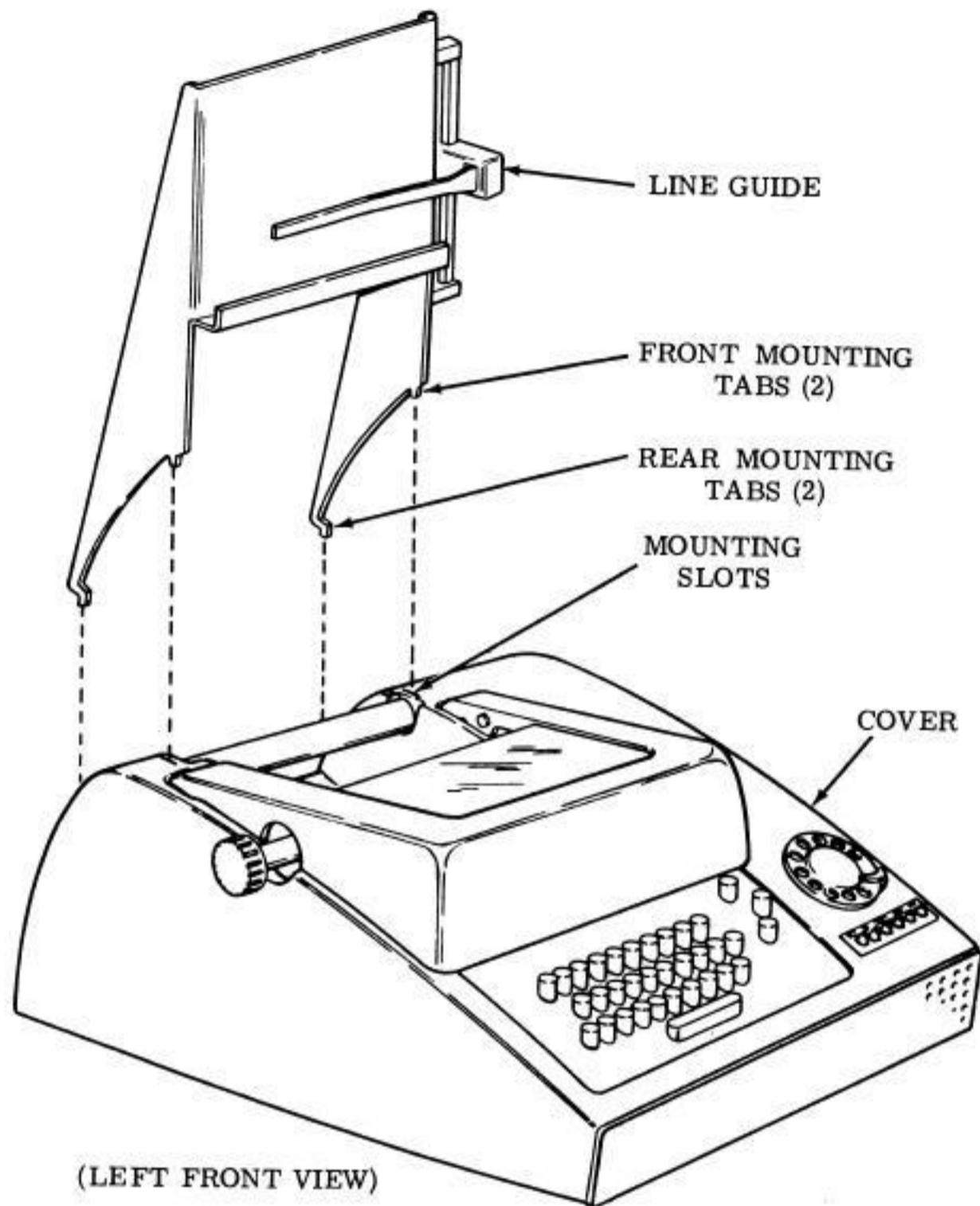TABS (2)

MOUNTING
SLOTS

COVER

(LEFT FRONT VIEW)

Figure 9 - Copy Holder

the rear right and left tabs on the copy holder onto the respective rear right and left slots. Pivot the copy holder forward until the front right and left tabs align with the front right and left slots. Push downward on the copy holder until the tabs are fully seated.

HUM SQUELCH

4.03   When the Teletypewriter Set is not in use, the J1D101A data set produces a hum through the loudspeaker. Also, the time-clock synchronization signals can be heard. To squelch these, modify the wiring on J1D101A data set as follows:

(a)   Remove from terminal no. 50 on the terminal board the black-green lead going to the 50-pin connector.

(b)   Add a length of wire to the removed lead and connect it to the common contact no. 7 of CON relay. Insulate the splice with tape.

(c) Add a lead connecting the normally closed contact no. 7 of CON relay to the common contact no. 5 of OR relay.

(d) Add a lead connecting the normally open contact no. 5 of OR relay to terminal no. 50 on the terminal board.

BUSY CIRCUIT

4.04 The 33 Teletypewriter Set is normally wired in a "do not answer" mode of operation for low-paper alarms and out-of-service. In this mode, the Teletypewriter Set will not answer an incoming call. To wire the Teletypewriter Set to indicate "busy" instead of not answering, move the BK-S wire from terminal no. 2 to terminal no. 4 on the ringer terminal strip.

HAND RECEIVER

4.05 To install the hand receiver, connect two white wires to terminals no. 5 and 6 on the 9-point terminal board.
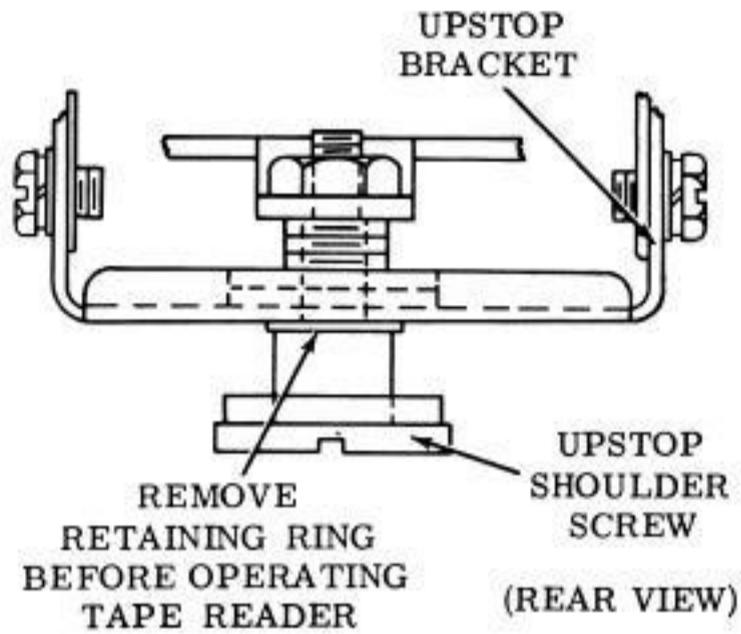
UPSTOP
BRACKET

REMOVE
RETAINING RING
BEFORE OPERATING
TAPE READER

UPSTOP
SHOULDER
SCREW

(REAR VIEW)

Figure 10 - Tape Reader Upstop
Bracket Retaining Ring

RIGHT PANEL

POWER PACK

1/2 INCH

CONNECTOR
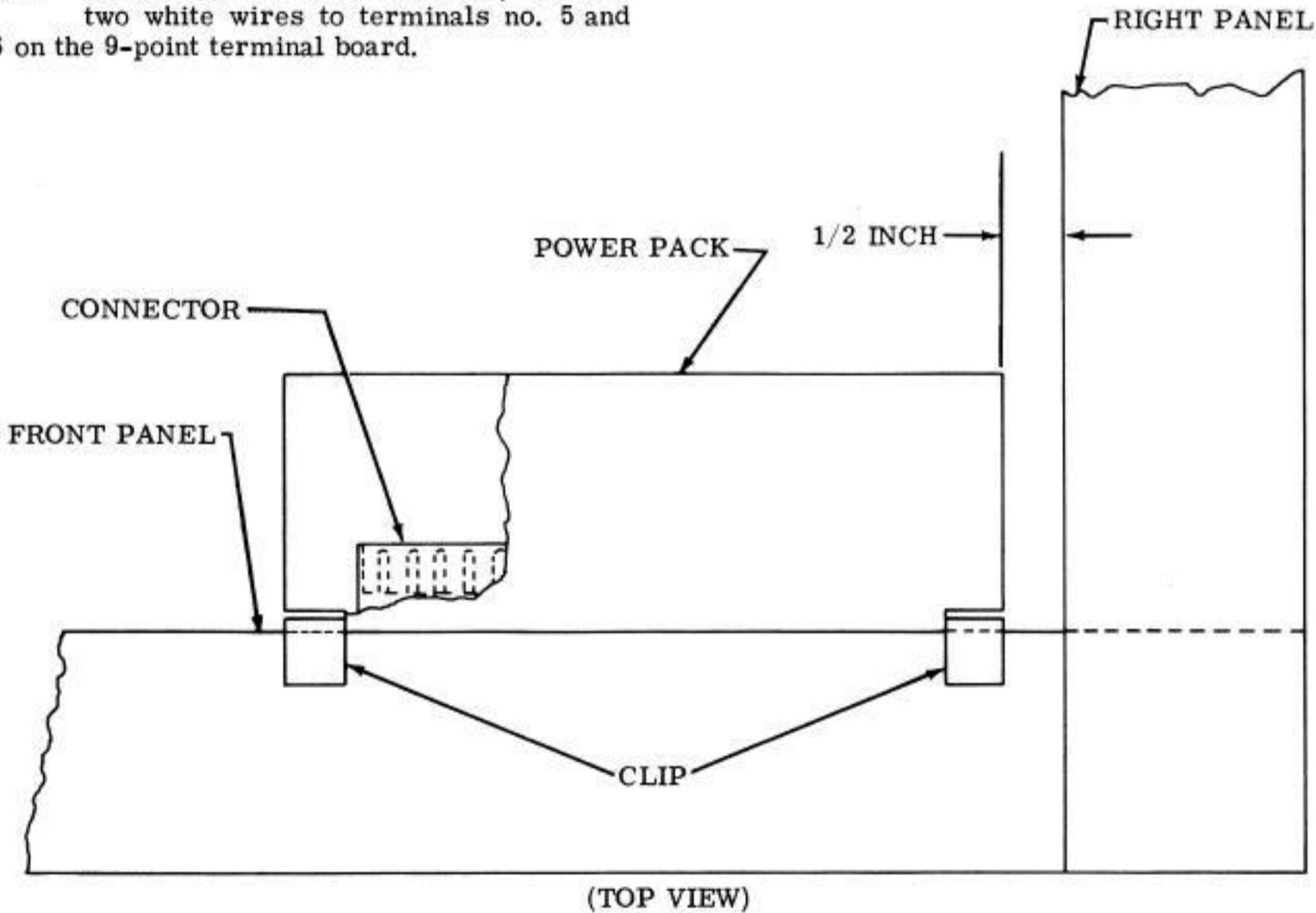
FRONT PANEL

CLIP

(TOP VIEW)

Figure 11 - Power Pack Assembly

5. TAPE READER

5.01 A retaining ring (Figure 10) is assembled to the upstop screw to prevent the sensing pins from being dislodged during shipment. This retaining ring must be removed before placing the tape reader in operation. Check the packing instructions.

5.02 When inserting tape into the tape reader prior to operation, allow enough slack in the tape between the tape punch and the tape reader so that the tape reader lid can be easily closed.

CAUTION: THE TAPE READER OPERATES UNDER HIGH VOLTAGE. PRECAUTIONARY MEASURES SHALL BE TAKEN WHENEVER POWER TO THE TAPE READER IS TURNED ON. HIGH VOLTAGE FROM THE POWER PACK WILL CONTINUE UNTIL APPROXIMATELY 10 SECONDS AFTER THE TAPE READER HAS BEEN DISCONNECTED.

5.03 While the tape reader is operating under power, do not push the control lever beyond the STOP position. When it is necessary to place the control lever into the FREE position, wait until the tape reader has stopped before pushing the control lever there.

6. POWER PACK ASSEMBLY

6.01 The power pack assembly (Figure 11) is snapped on, with two clips assembled to the power pack, to the front panel of the stand. Position the power pack so that it shall be spaced approximately 1/2 inch from the right panel of the stand.

6.02 The auxiliary ASR power supply is mounted in the enclosure of the stand. It is used in the off-line mode to provide 115 volts on the tape reader, keyboard, answer-back, and distributor contacts only when a tape reader is used. When the tape reader is not used, a dummy plug with a jumper wire is in-

TAPE ROLL

2-PIECE SPOOL

(FRONT VIEW)

2-PIECE SPOOL
FOR 1-INCH INSIDE DIAMETER TAPE ROLLS

TAPE ROLL

TUBE SPOOL

(FRONT VIEW)

TUBE-TYPE SPOOL
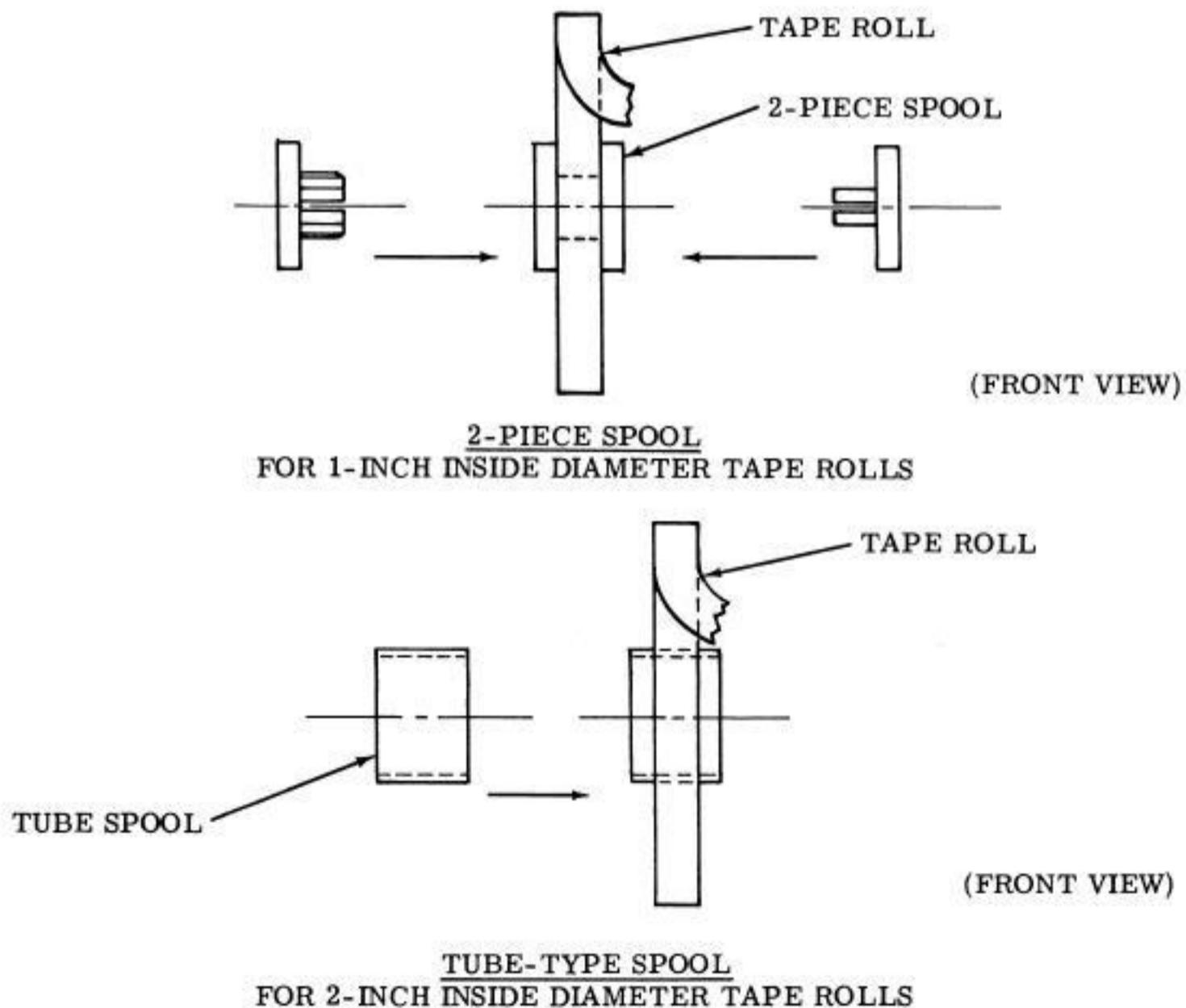FOR 2-INCH INSIDE DIAMETER TAPE ROLLS

Figure 12 - Tape Roll and Tape Spool Assembly

serted in position R2 at the rear of the call control unit.

7. TAPE PUNCH

7.01   The tape punch, drive link mechanism, base casting, and plastic cover are all assembled together at the factory on 32 or 33 Teletypewriter Sets. However, before the ASR is shipped, a yellow packing clip is assembled under the sensing levers and behind the 0 codebar extension between the tape punch base casting and the left codebar extension guide. During the installation, remove the composite typing unit and tape punch cover assembly (1.07 and 3.01), and remove the yellow packing clip. It is very important that the clip is removed prior to operating the tape punch. Check the packing instructions.

7.02   Figure 12 illustrates the proper installation of a tape roll onto a tape spool assembly.
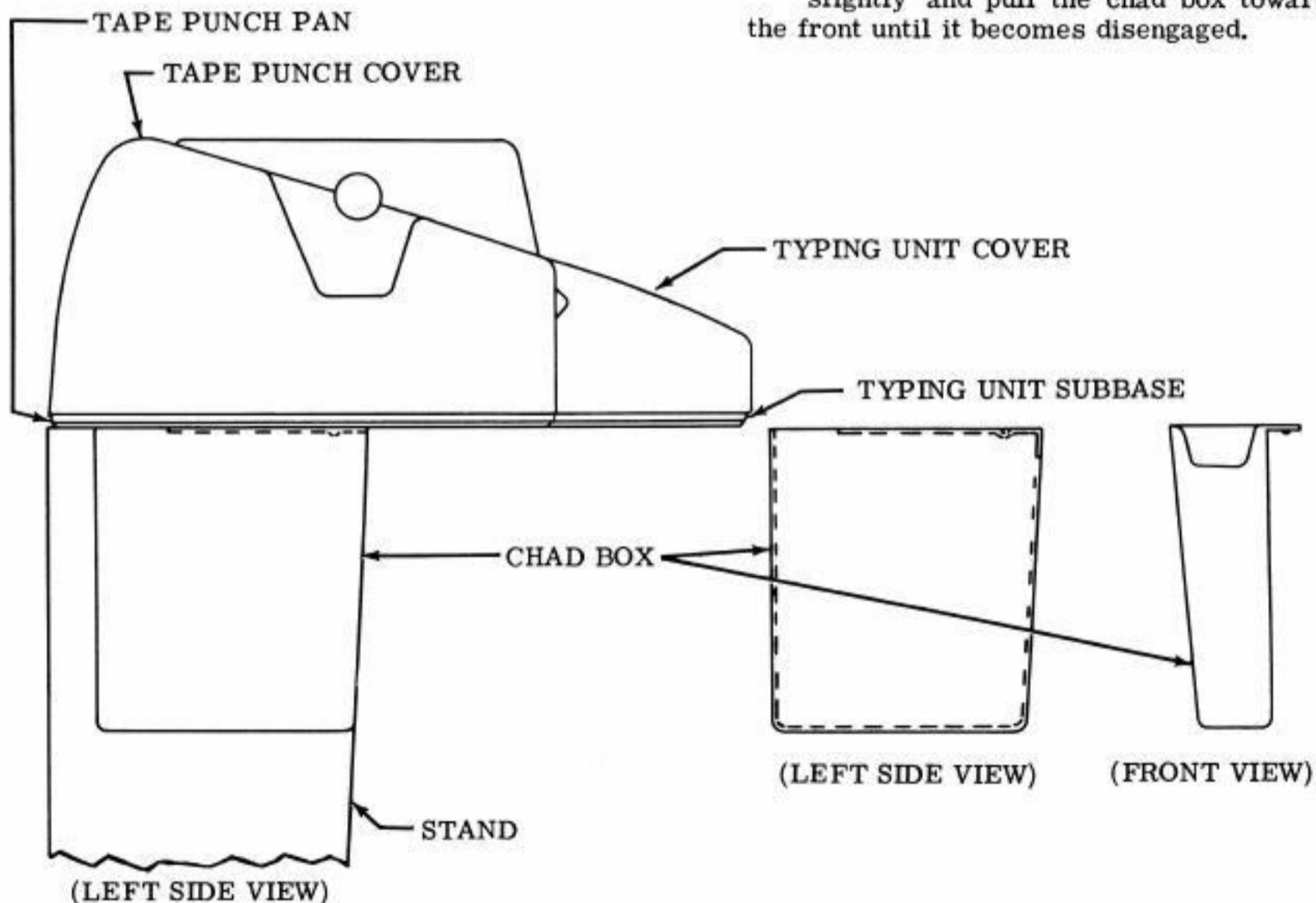
(a)   For the 2-inch inside diameter tape roll, use the tube-type spool.

(b)   For the 1-inch inside diameter tape roll, use the 2-piece spool.

(c)   Assemble the tape with the spool into the tape punch cover so that the leading edge of the tape is always at the top of the roll.

7.03   Figure 13 illustrates how the chad box assembly should be installed.

(a)   Assemble the chad box under the tape punch pan by inserting the back of the flanged surface between the stand and the typing unit subbase.

(b)   Push the chad box towards the rear until a bent surface located at the front of the chad box engages the stand. An embossing located on the front bottom surface of the flanged surface engages an oblong hole in the stand and holds the chad box in place.

(c)   To empty the chad box, lift the front slightly and pull the chad box towards the front until it becomes disengaged.

Figure 13 - Tape Punch Chad Chute Assembly