35 REPERFORATOR BASES

DESCRIPTION AND PRINCIPLES OF OPERATION

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1. GENERAL

1.01 This section provides descriptive and operating information for 35 reperforator bases.

1.02 The 35 reperforator bases consist of three different types: the 35 receiving-only (RO) base, the 35 multiple reperforator base, and the 35 auxiliary reperforator base. The bases provide a foundation for a motor unit and either one or three reperforator units, and for electrical and mechanical operational devices and accessories.

1.03 The approximate dimensions of the bases are shown below:

Base	Approximate Dimensions (Inches)		
	Height	Width	Depth
RO Reperforator Base			
Single-Plate	9-1/2	11	12-13/16
Double-Plate	10	13-9/32	12-13/16
Multiple Reperforator Base	9*	20-7/10	20-4/5
Auxiliary Reperforator Base	13	9-1/2	13

* With components and tape rolls.

2. RECEIVING-ONLY REPERFORATOR BASES

SINGLE-PLATE BASE (Not Illustrated)

2.01 This base contains a plate that rests on four metal feet and which serves as a foundation for the other components and accessories. Wiring, a power switch, a fuse, two terminal boards, and two electrical connectors comprise the electrical circuitry, and are mounted on a bracket at the rear of the plate. The reperforator unit is mounted by four tapped holes at the left front of the plate. The motor unit is supported by three posts and an adjusting plate. A tape container with roller, a wire guide and wooden filler for a tape roll is attached to the extreme right of the plate. A tape-out mechanism incorporating two switches which may be connected to visual or audible alarms is located in the rear of the tape container. A chad chute is provided for disposal of chad.

2.02 Motion is transferred from the motor unit to the reperforator by a single-speed drive mechanism. Gear sets may be interchanged to obtain different operating speeds.

DOUBLE-PLATE BASE (Figure 1)

2.03 In this base, an upper plate is separated from a somewhat larger lower plate, or subbase, by rubber vibration mounts. The subbase rests on the lower extension of the vibration mounts. Wiring, a power switch, a connector and two terminal boards comprise the electrical circuitry. (A variation of this base contains one electrical connector and one terminal board.)

2.04 The tape container, tape-out mechanism (Figure 2), and the mounting facilities for the motor unit are identical to those of the single-plate base (2.01). A low-tape lamp is mounted by a bracket on the tape container.

2.05 Motion is transferred from the motor unit to the reperforator unit through a single-speed drive mechanism. Gear sets may be interchanged to obtain different operating speeds.

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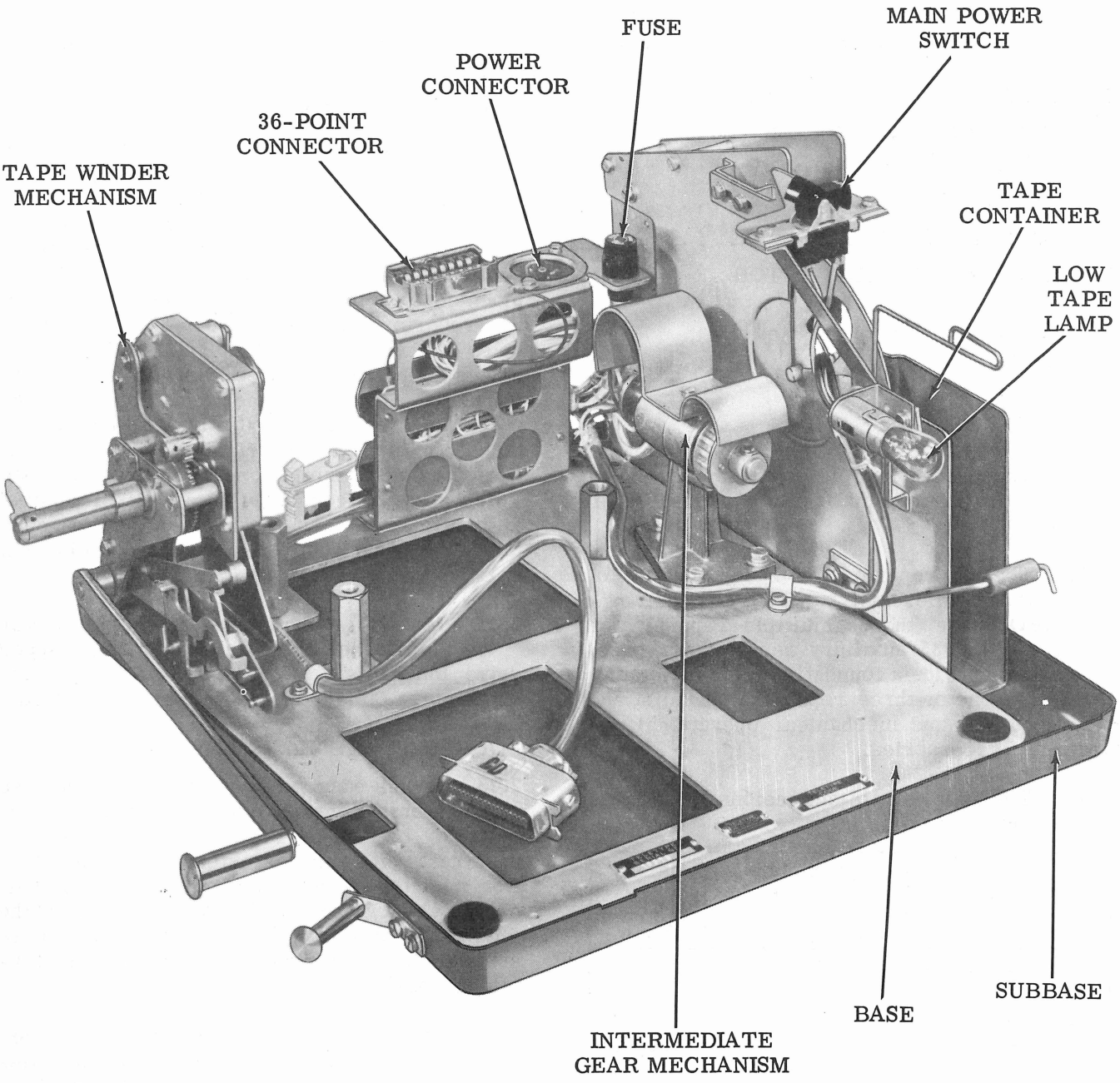

Figure 1 - Typical 35 Receiving-Only Reperforator Base

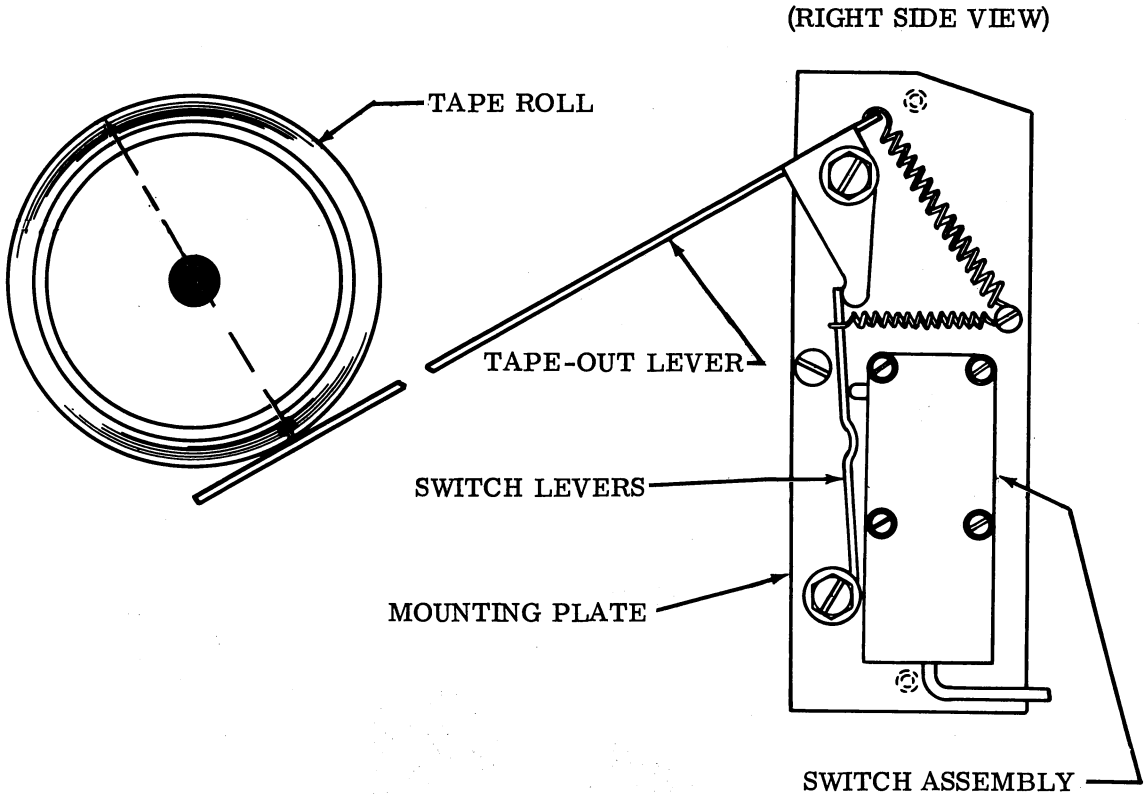

Figure 2 - Tape-Out Mechanism

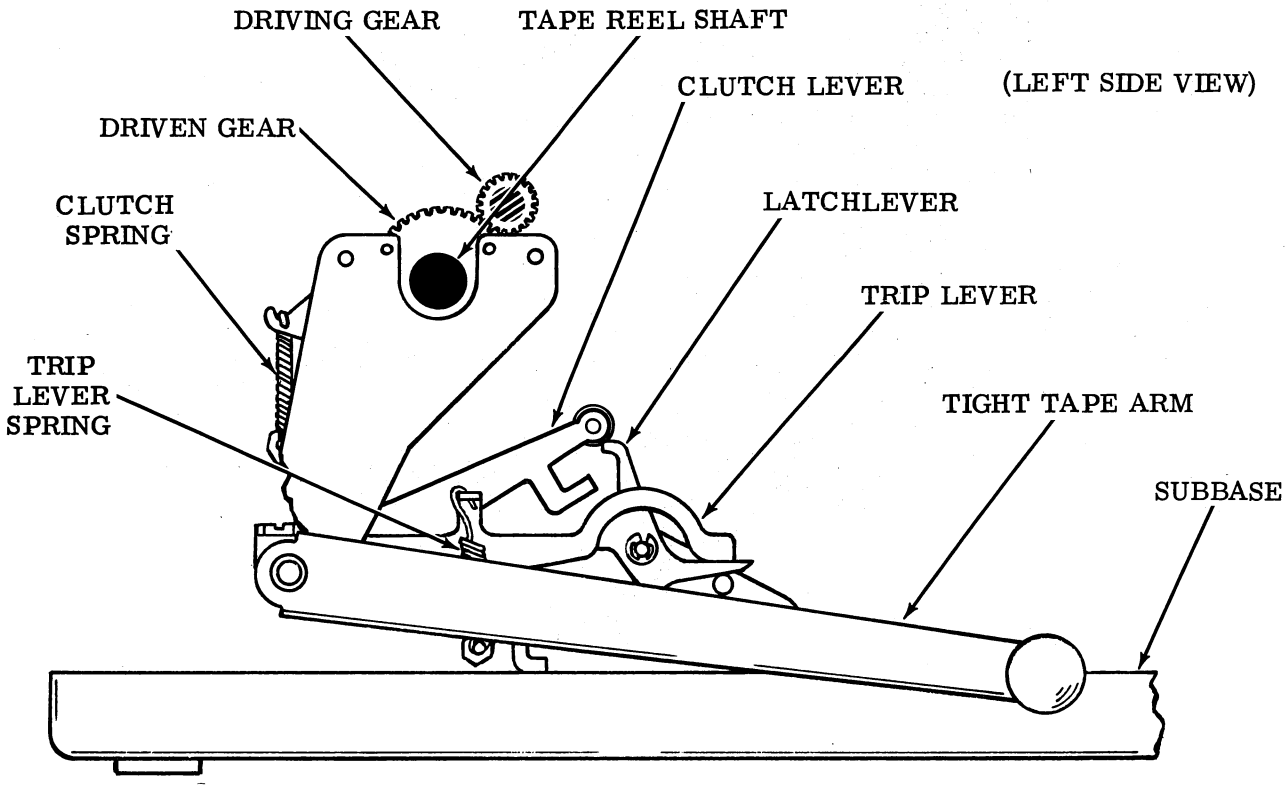

Figure 3 - Tape Winder Mechanism

2.06 Some bases are equipped with a tape winder mechanism (Figure 3) which winds the perforated tape on a tape reel. The tape winder mechanism mounts on the left side of the base and extends a rotating shaft and a tight-tape arm beyond the left side of the cover. The tape winder is driven off the rear of the motor unit by a belt and pulley. A sealed gear reduction mechanism drives the shaft and reel of tape attached to it. In its normally raised position, when the equipment is idling, the tight-tape arm and its associated trip lever and latch hold the driving gear upward, out of engagement with the driven gear. When the tape feeds from the reperforator, the tape arm is permitted to drop until the trip lever engages the right extension of the latchlever. The upper arm of the latchlever, rotating clockwise, releases the clutch lever which drops, under tension of its spring, permitting the gears to mesh. The tape winder is rotated in a clockwise direction until the tape arm is again raised, and the clutch lever lifts the gears out of engagement.

3. MULTIPLE REPERFORATOR BASE (Figure 4)

3.01 This base provides mounting facilities for three reperforator units and one motor unit, and for the necessary accessory

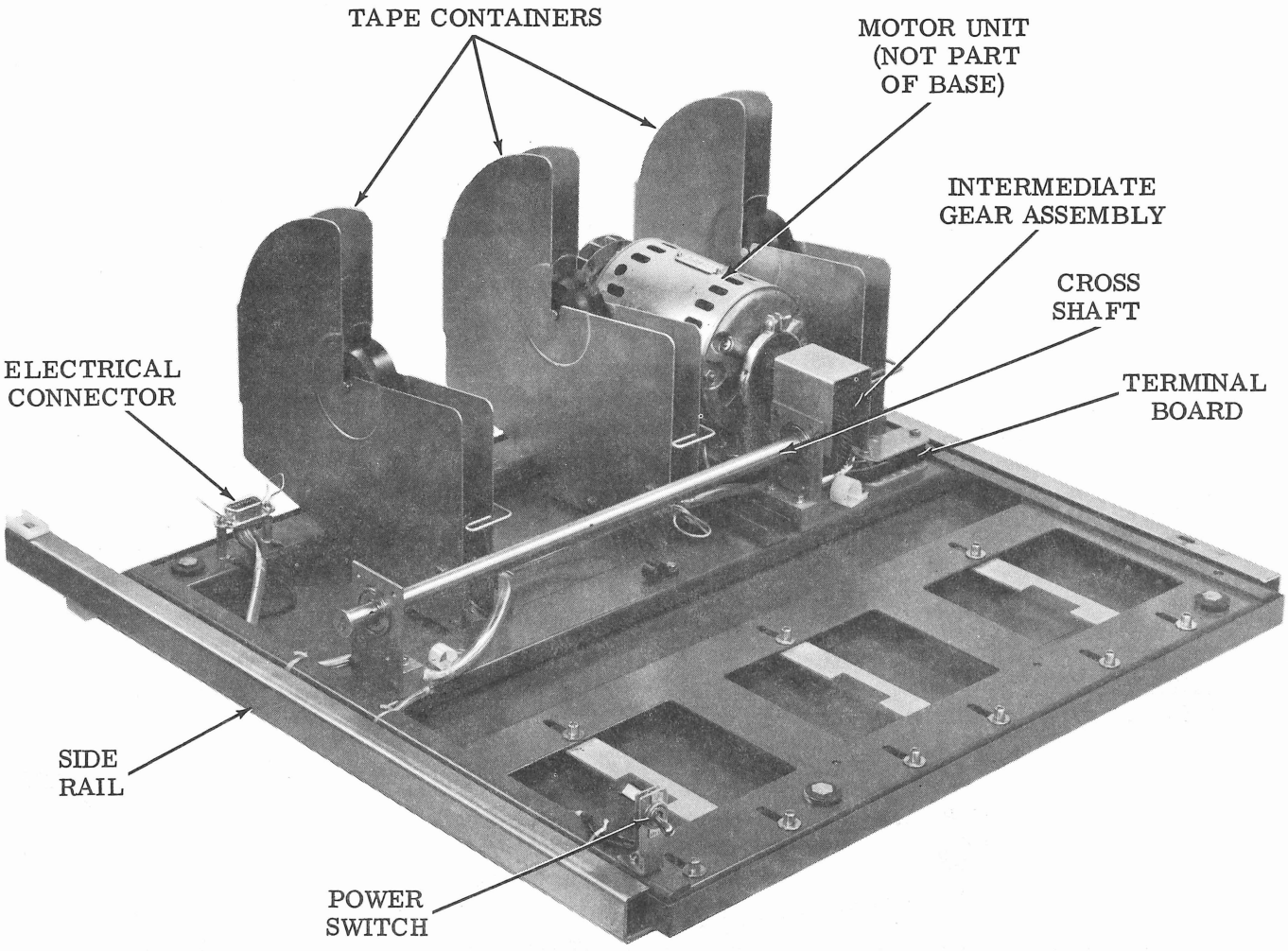

Figure 4 - Typical 35 Multiple Reperforator Base

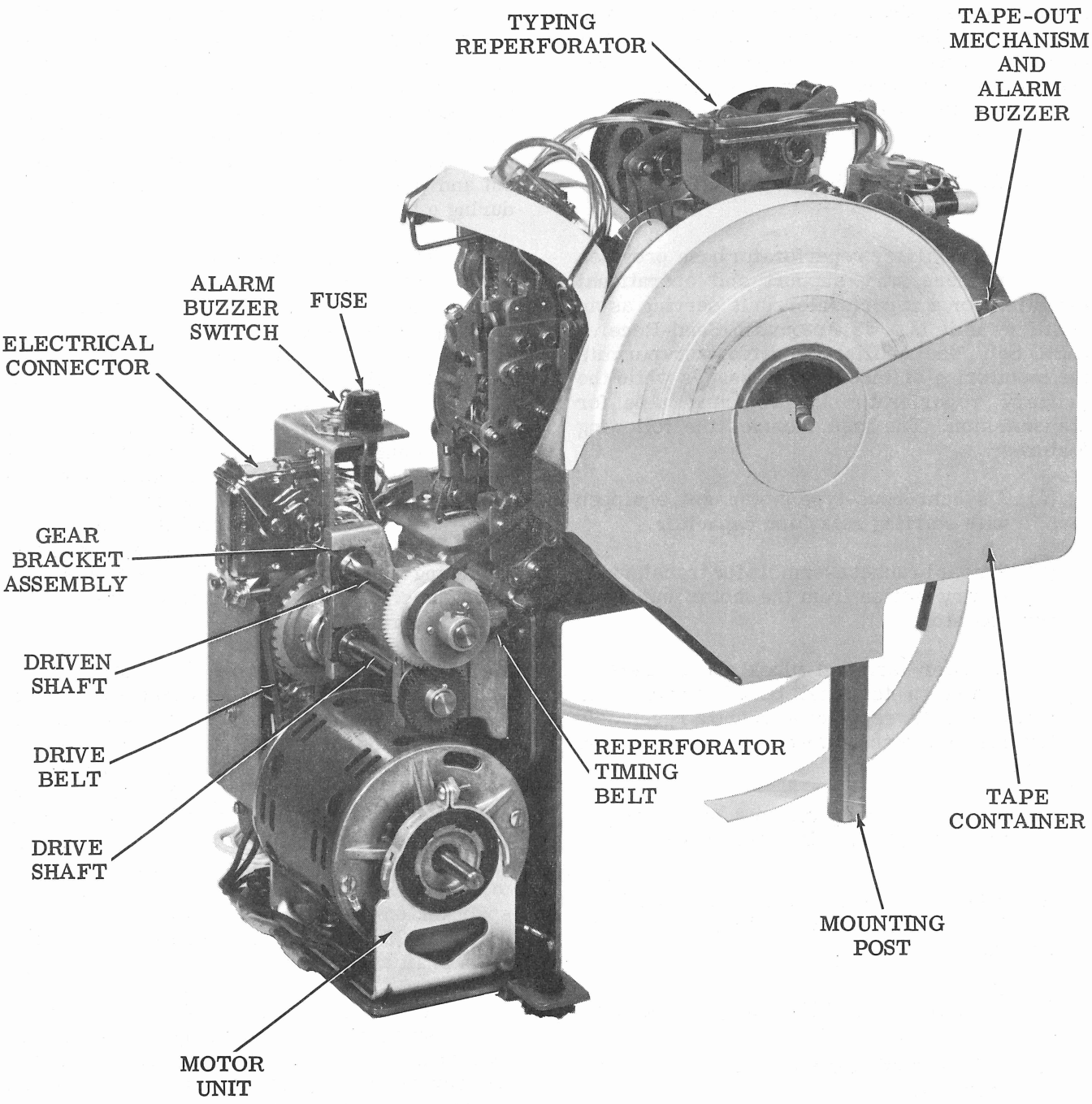

Figure 5 - Typical 35 Auxiliary Reperforator Base

equipment. A plate upon which the components are installed is separated from an oil pan by resilient mountings. Side rails are provided for installation of the base in a cabinet. Posts on an adjustment plate are provided for mounting a motor unit. Three tape containers equipped with tape-out switches, a connector, terminal blocks, and a main power switch, are also included. Three chad containers are provided to accommodate fully-perforated tape output reperforator units.

3.02 The reperforator units, which are mounted near the front of the base, receive rotary motion from the motor unit through a cross-shaft assembly and timing belts. Inter-

mediate gear assemblies transfer the motion from the cross shaft to the reperforator units via timing belts. The units may operate at a common speed or at independently varied speeds. Speed changes are made by interchanging gears at the motor unit and in the intermediate gear assemblies.

4. AUXILIARY REPERFORATOR BASE (Figure 5)

4.01 The auxiliary reperforator base provides the necessary support and operational facilities for a reperforator unit serving as an auxiliary unit in a 35 Automatic Send-Receive (ASR) Set. The auxiliary reperforator permits the monitoring of incoming messages while the primary reperforator is preparing tape for transmission. The base includes the following features:

(a) A synchronous-type motor unit, equipped with starting relay and capacitor.

(b) A gear bracket assembly for transferring rotary motion from the motor unit to the reperforator.

(c) A power terminal block and connector, a fuse, a terminal board, a cable for connecting the reperforator, and a receptacle for interconnecting with an electrical service unit.

(d) A tape container for an 8-inch diameter tape roll (2-inch diameter core).

(e) A tape-out lamp, alarm buzzer, actuating switch assembly, and buzzer disabling switch.

(f) Tape routing and chad disposal devices.

(g) A base plate for mounting of the above features.

4.02 The base plate is mounted in the ASR cabinet by means of three hexagonal posts, with two posts supporting the rear of the plate and one longer post supporting the front of the plate. The plate is supported on the posts with rubber bushings which isolate it from the cabinet and prevent the transmission of vibration from the base to the cabinet.

4.03 The cable for connecting the reperforator supplies both the signal input and switched and fused power. When used with a typing reperforator it provides power for operation of the ribbon-shift mechanism and connects the tape-feed motor hold switch and tape-feed magnet with control circuits in the electrical service unit. These control circuits initiate tape feed-out and prevent the motor unit from turning off during a feed-out period.

4.04 The synchronous-type motor rotates at 3600 rpm and operates from 115 volts, 60 cycles ac power. It has two windings: a starting winding and a run winding. When power is applied to the motor unit initially, current flows through the start winding of the motor start relay which then closes the motor start contact, completing the series circuit to the start winding and capacitor. Current then flows through the starting and run windings of the motor, causing it to rotate. As the speed of the motor increases, current in the windings decreases. The motor start relay de-energizes, removing the starting winding and capacitor from the circuit, and current flows only through the motor run winding.

4.05 Rotary motion from the motor unit is transferred to the reperforator through the gear bracket assembly. The motion is coupled to the drive shaft of the gear bracket assembly through a 16-tooth motor sprocket, a drive belt, and a 32-tooth sprocket on the drive shaft. The drive shaft, rotating at 1800 rpm, transfers motion to the driven shaft by means of its 42-tooth gear which engages with a 63-tooth gear on the driven shaft. A 16-tooth sprocket on the driven shaft and a timing belt drive the 28-tooth sprocket on the reperforator main shaft at 685 rpm.

4.06 The tape-out circuitry consists of two switches mounted in tandem (Figure 2), an alarm buzzer, and a tape-out lamp. Operating current is supplied from circuitry in the associated electrical service unit. A normally-open tape-out switch contact is closed when the tape supply is low and illuminates the tape-out lamp and actuates the buzzer. A transfer contact operates a lamp and buzzer located on the ASR set cabinet and prevents automatic answerback. A single-pole, double-throw switch permits the operator to turn off the buzzer when replacing the tape roll. The tape-out lamp remains on until the tape supply is replenished.