

4. MAIN OPERATIONS

4.1 OPERATION OF THE DETECTION MECHANISM

- (1) The Detector Cam Assy ⑤① generates rotational power in the direction B as shown by an arrow in the Fig.3 as the Reel Spindle Assy (D) ⑮ rotates.
- (2) The Sensor Arm ④③ turns as shown by the arrows C in the Fig. 3, on the fulcrum A by the rotational force of the Detector Cam Assy ⑤①.
- (3) The Detector Gear ④⑧ always rotates. The sensing pin of the Sensor Arm ④③ moves along the outer cam.

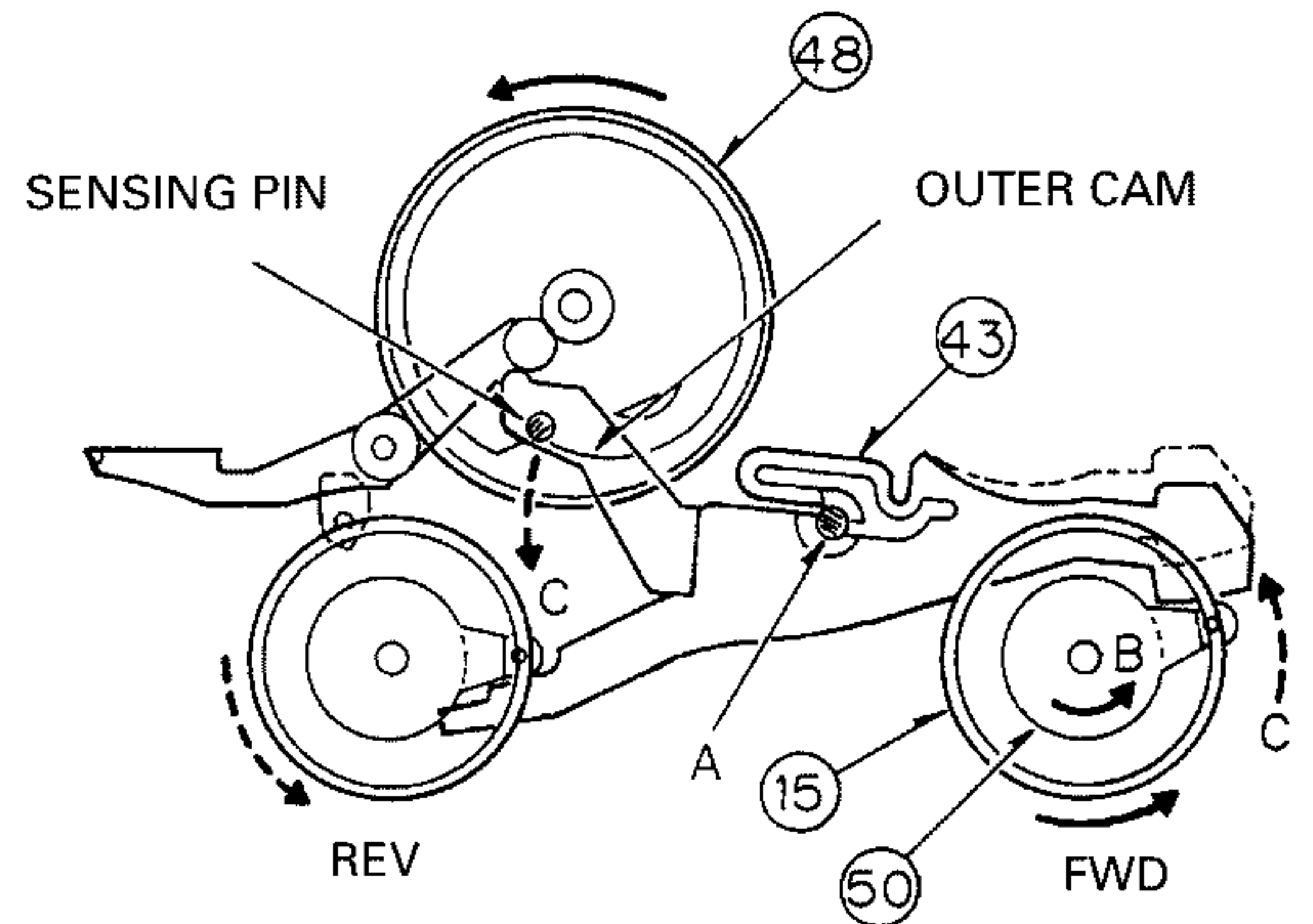


Fig. 3

- (4) When the Reel Spindle Assy (D) ⑮ stops (or tape rewinding is completed), the Detector Cam Assy ⑤① also stops.
- (5) When the Detector Cam Assy ⑤① stops, the Sensor Arm ④③ also stops turning in the direction C (Fig.3), and stands still.
- (6) The sensing pin of the Sensor Arm ④③ is pushed toward the fulcrum of the Detector Gear ④⑧ by the inside cam of the Detector Gear ④⑧. (Fig.4)
- (7) This movement unlocks the Gear Lock Arm ④⑦ from the Selector Gear ④④. The Selector Gear ④④ rushes toward the Detector Gear ④⑧ with the pressure of the Dash Spring ⑦⑦. When the Selector Gear ④④ gets engaged with the Detector Gear ④⑧, the Selector Gear ④④ starts rotating.

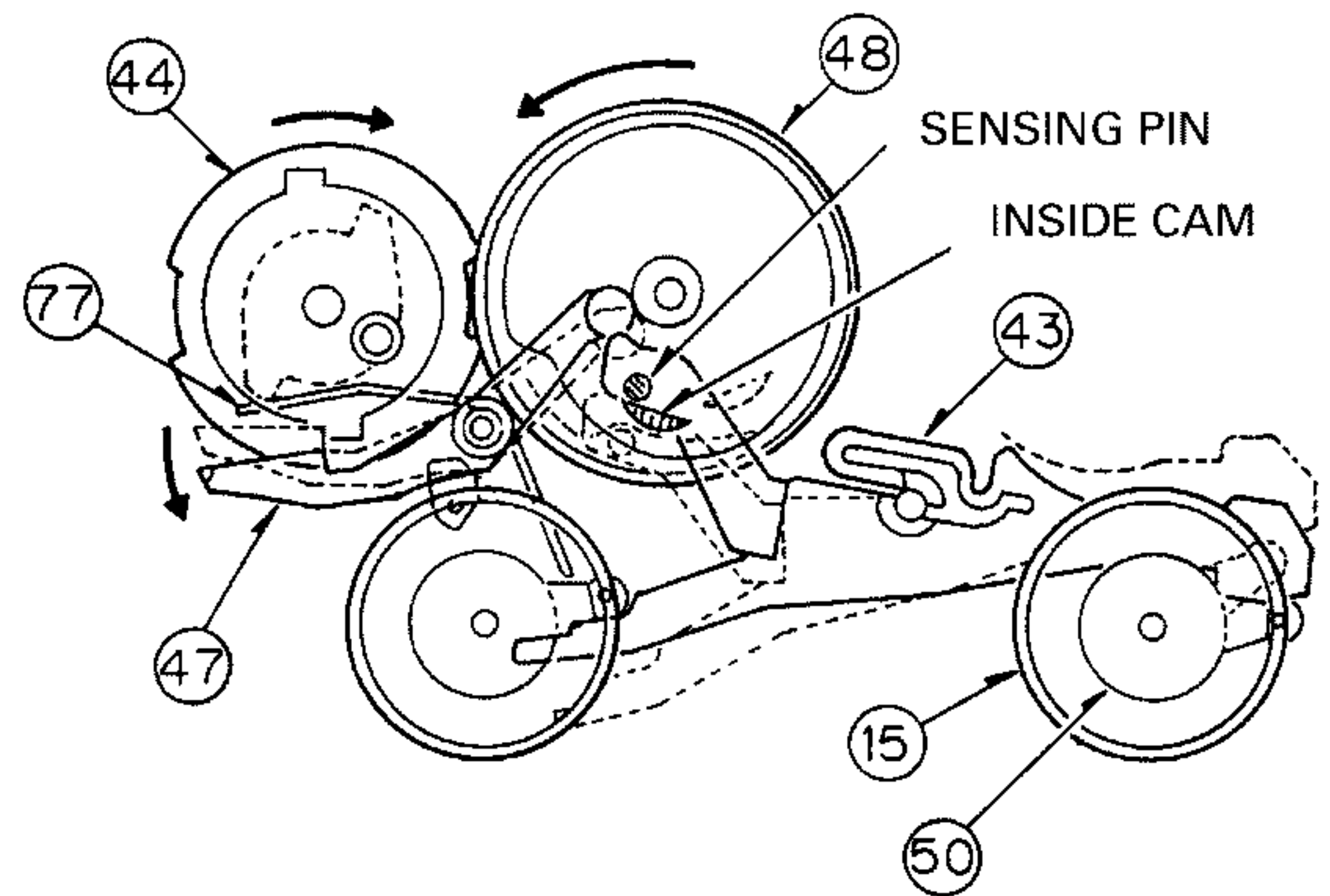


Fig. 4

CASSETTE MECHANISM

- (8) The Selector Gear ④④ rotates by 180 degrees, and locks with the Gear Lock Arm ④⑦.
- (9) By a half rotation (180 degrees) of the Selector Gear ④④, the Conversion Lever ②④ and the FR Changing Arm Assy ④ move.
- (10) The Pinch Arms (F) Assy (PS) and (R) Assy (PS) (①④ and ①③) and the Slide Switch(SW3) ①①① are switched by the FR Changing Arm Assy ④. At the same time, the Head(HD1) ⑨⑧ is moved upward and downward by the linked Adjuster Link (X) ④⑥. The TU Gear Arm Assy ④⑨ is switched by the FR Arm (A) Assy ①⑩ and FF Arm ④② to change the direction (FWD and REV).

FWD operation

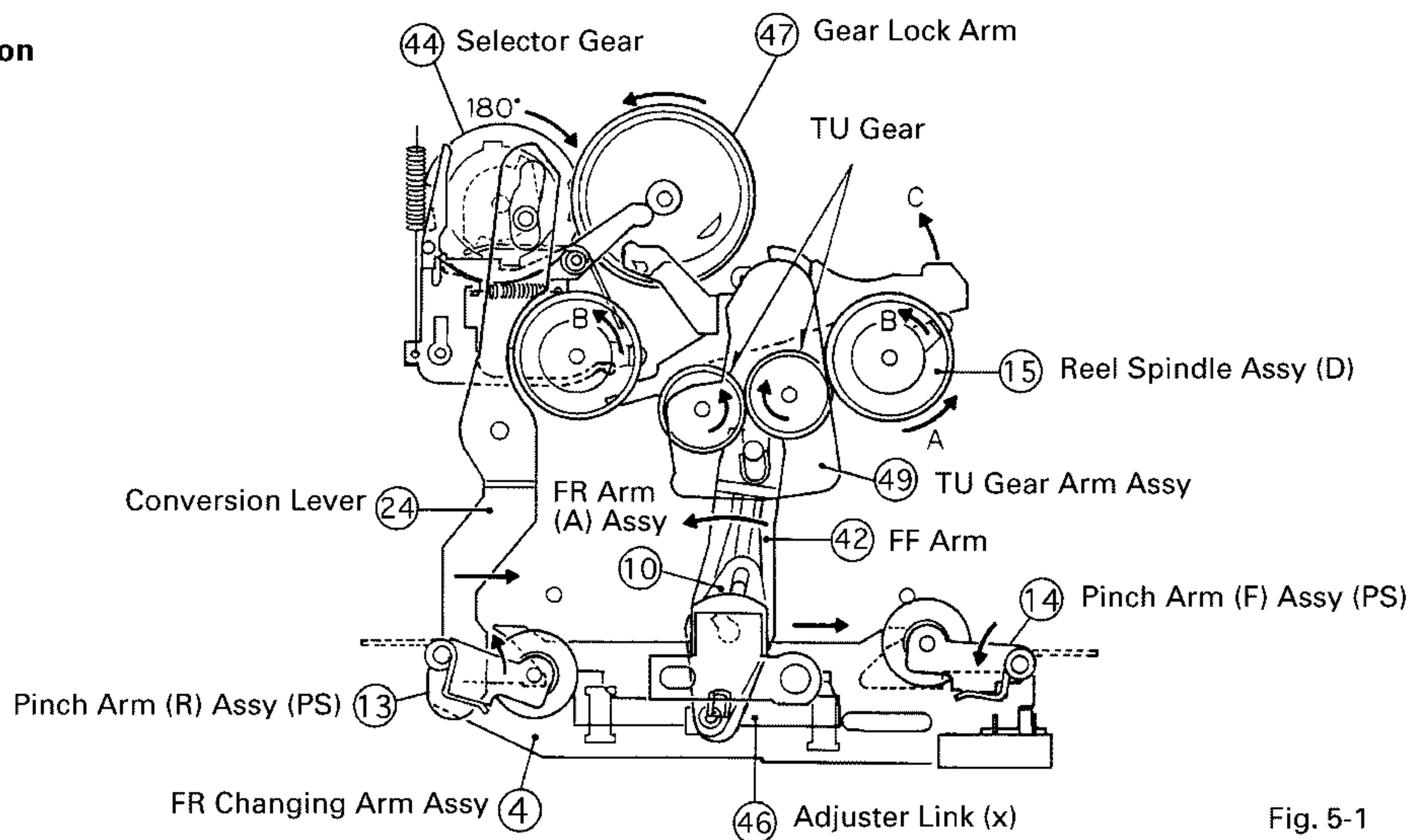


Fig. 5-1

REV operation

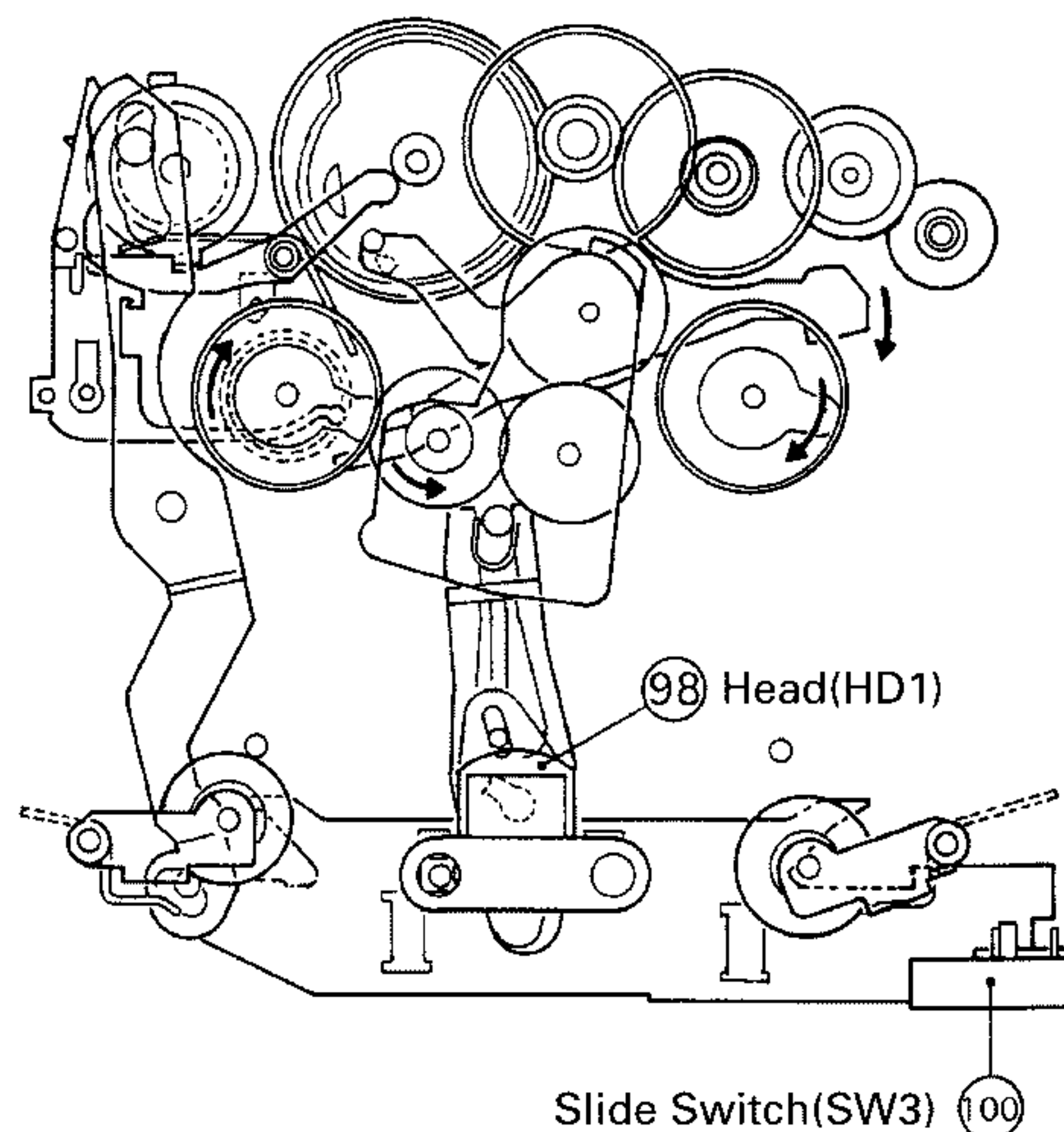


Fig. 5-2

4.2 MANUAL PROGRAM OPERATION

- (1) Pressing the FF and REW Lever (AT) (30 and 31) simultaneously moves the Program Arm (A) in the direction shown by the arrow, by the pressure of the Program Arm Spring (71). (Fig.6)
- (2) The Program Arm (A) is then moved further by the guiding hole of the lever.
- (3) The movement of the Program Arm (A) is conveyed to the Change Lever (B) (28), Selector Link (B) (86), Ratchet (41) and then Gear Lock Arm (47).
- (4) The Gear Lock Arm (47) is unlocked. The Dash Spring (77) causes the Selector Gear (44) to rush and engage with the Detector Gear (48). The Selector Gear (44) rotates.
- (5) The projecting portion of the cam of the Selector Gear (44) taps the Ratchet (41). The Gear Lock Arm (47) is released from the Ratchet (41), returns to the given position, and locks the Selector Gear (44).
- (6) Due to the Lock of the Gear Lock Arm (47), the Selector Gear (44) rotates by 180 degrees and stops.
- (7) By a half rotation (180 degrees) of the Selector Gear (44), the Conversion Lever (24) and the FR Changing Arm Assy (4) moves.
- (8) The Pinch Arm (F) Assy (PS) and (R) Assy (PS) (14 and 13) and the Slide Switch (SW3) (100) are switched by the FR Changing Arm Assy (4). At the same time, the Head (HD1) (98) is moved upward and downward by the linked Adjuster Link (X) (46). The TU Gear Arm Assy (49) is switched by the FR Arm (A) Assy (10) and FF Arm (42) to change the direction of rotation (FWD and REV) of the Reel Spindle Assy (D) (15).

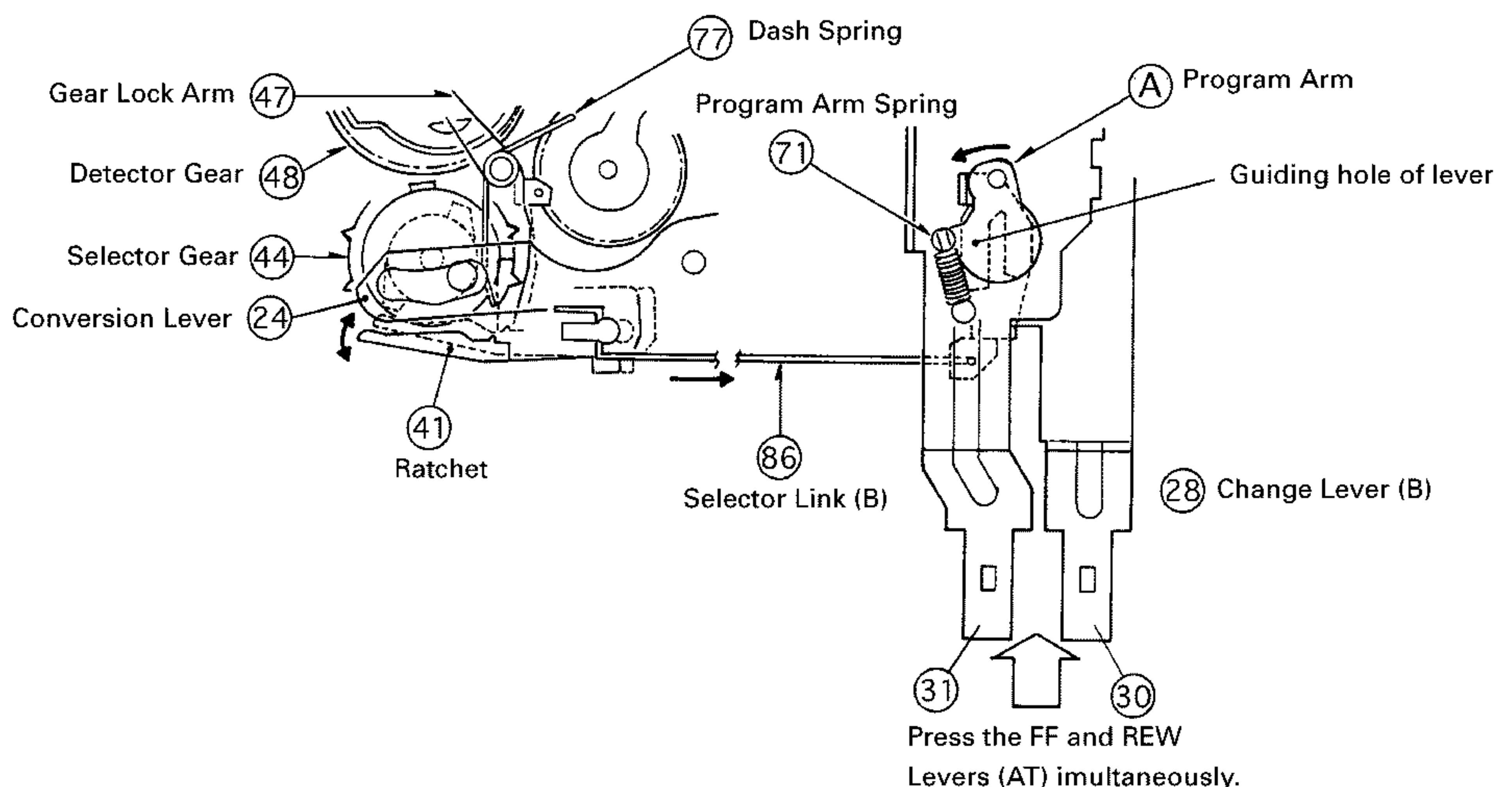


Fig. 6

CASSETTE MECHANISM

4.3 AUTO REPLAY OPERATION

- (1) When the rotation of the Reel Spindle Assy (D) ⑮ stops, the detection mechanism operates. (For the operation of the detection mechanism, refer to 4.1 OPERATION OF THE DETECTION MECHANISM.)
- (2) After detection, the system operates in reverse. The FR Changing Arm Assy ④ moves and the linked Adjuster Link (X) ④⑥ taps the Lock Arm (A) ②⑦ to unlock the FF and REW Levers (AT) ③⑩ and ③①).
- (3) The FF and REW Levers (AT) ③⑩ and ③① return to the given position by the pressure of the FF/REW Lever Spring ⑥④. Then the Head Plate Assy (S) ② is pushed out by the pressure of the Head Plate Spring ⑥⑨.

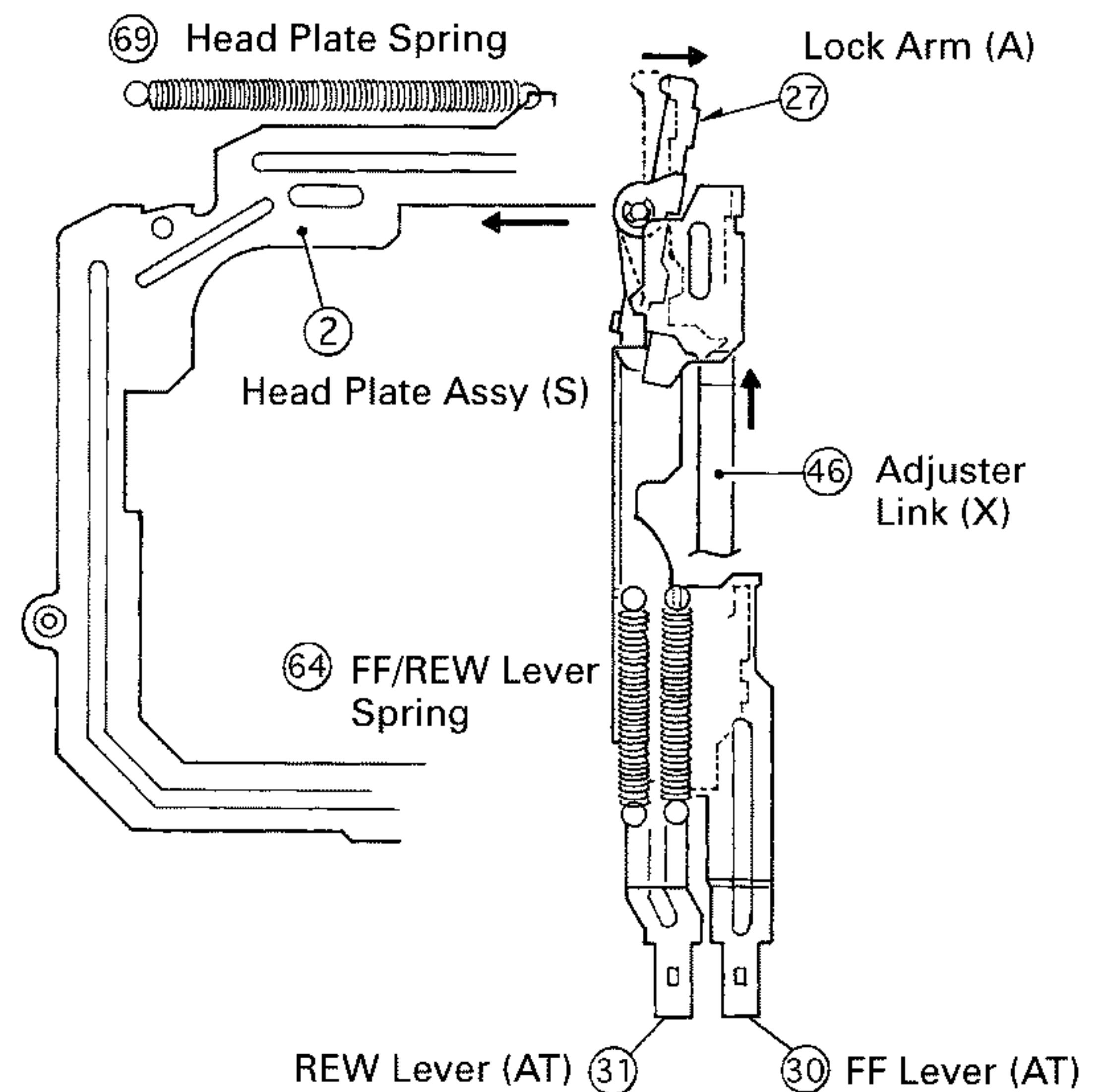


Fig. 7

4.4 CASSETTE INSERTION AND LOADING OPERATION

- (1) Inserting a cassette rotates the Center Plate Spring (B) ⑦⑧ in the reverse direction to activate pressure in the withdrawal direction.
- (2) The Tape Hooker ⑤② withdraws the cassette by the pressure of the Spring.
- (3) The Tape Hooker ⑤② taps the Eject Cam Lock Assy ⑥ to unlock the Eject Cam ②⑩. Then the Eject Cam ②⑩ moves in the direction shown by an arrow in the Fig.8.
- (4) The Eject Cam ②⑩ lowers the Cassette Hanger (X) ②②, and the Head Plate Assy (S) ② moves forward.
- (5) The tooth of the Cassette Hanger (X) ②② shifts the Power Switch(SW1) ⑨⑨ to ON.

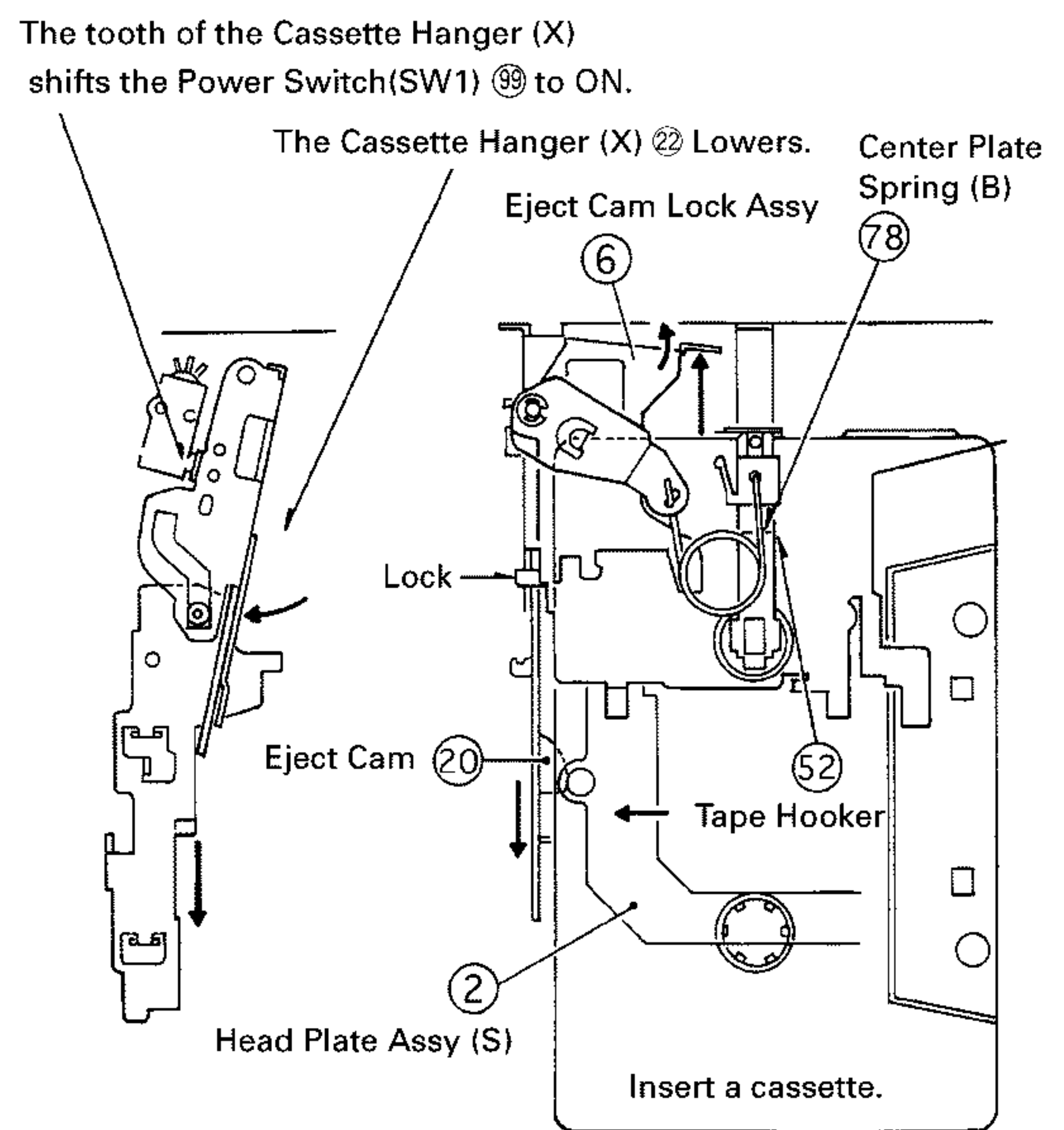


Fig. 8

4.5 MUTE MECHANISM

- (1) Pressing the FF Lever (AT) ③① or REW Lever (AT) ③② (FF/REW operation) retracts the Head Plate Assy (S) ②.
- (2) When the Head Plate Assy (S) ② retracts, the Mute Arm (N) ⑤① presses the Mute Switch(SW2) ①② to shift it to ON.

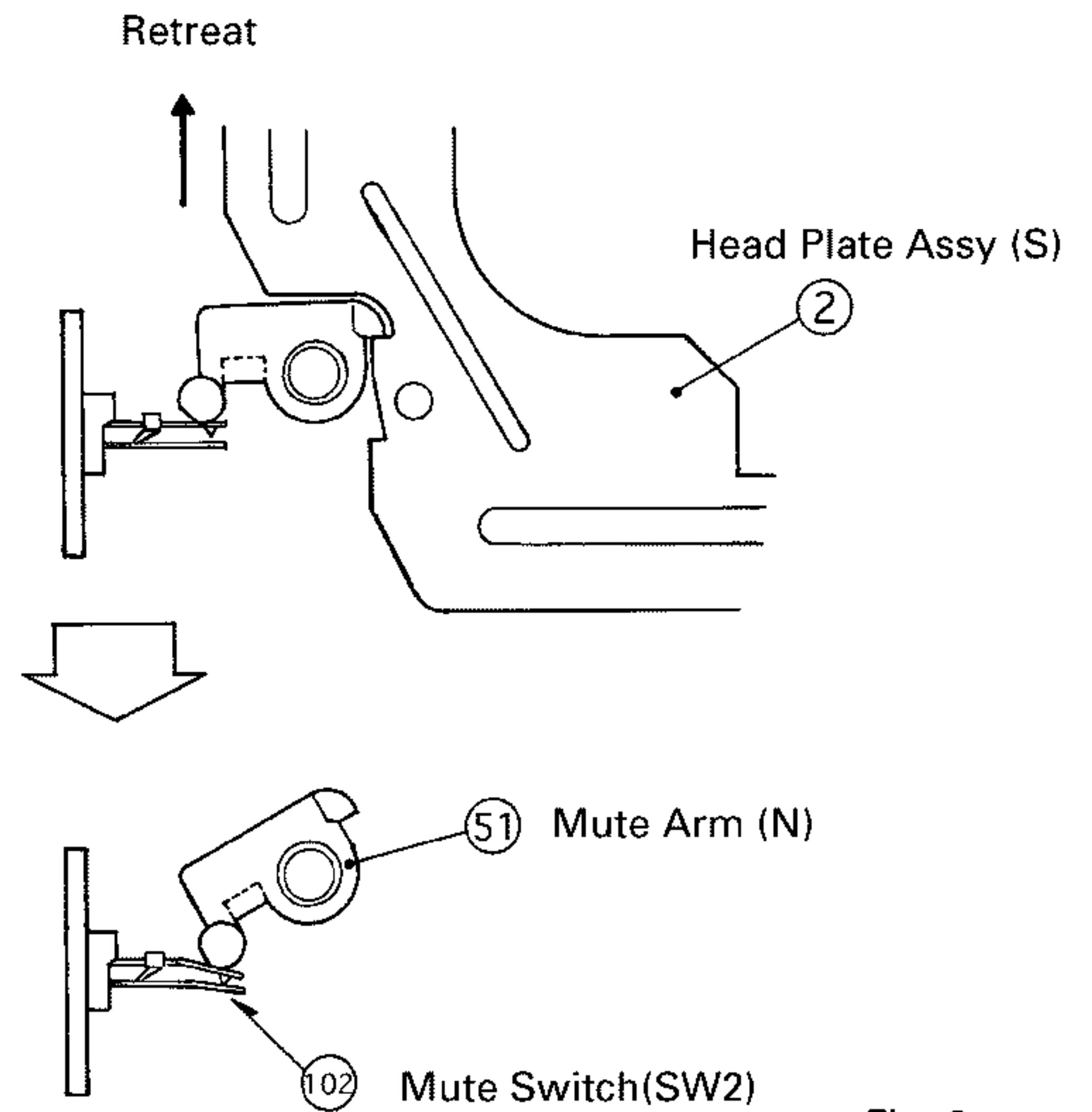


Fig. 9

4.6 FF OPERATION (IN THE FWD DIRECTION)

- (1) When the FF Lever (AT) ③① is pressed, it locks with the Lock Arm (A) ②⑦.
- (2) The tilted portion of the FF Lever (AT) ③① retracts the Head Plate Assy (S) ②. When the Head Plate Assy (S) ② moves backward, the Pinch Arm (F) Assy (PS) ①④ moves away from the Flywheel Assy (BF) ①②.
- (3) Then, the Reel Spindle Assy (D) ①⑤ rewinds the tape (with the clutch mechanism inactivated).

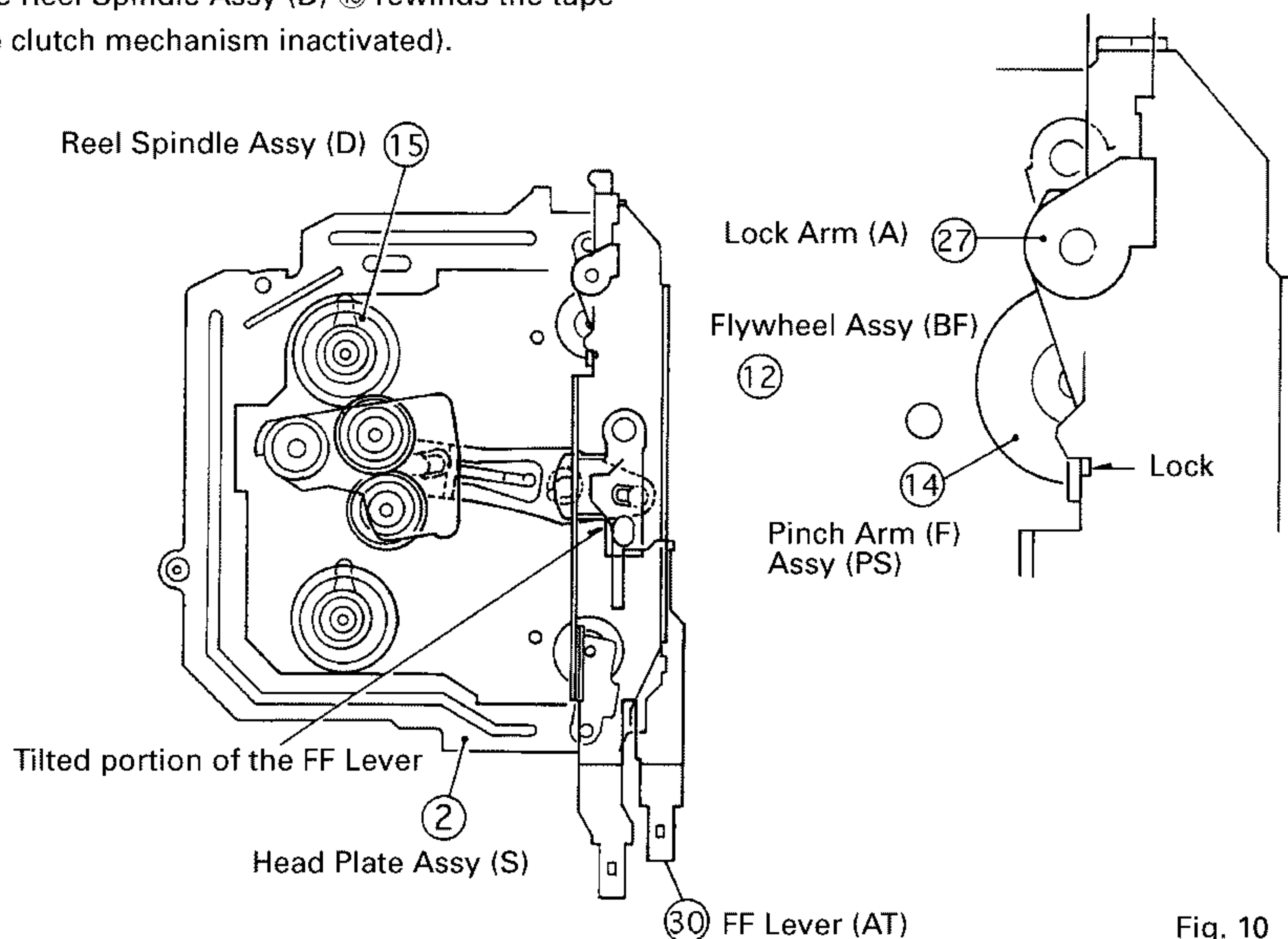


Fig. 10

CASSETTE MECHANISM

4.7 REW OPERATION (IN THE FWD DIRECTION)

- (1) When the REW Lever (AT) ③① is pressed, it locks with the Lock Arm (A) ②⑦.
- (2) The tilted portion of the REW Lever (AT) ③① retracts the Head Plate Assy (S) ②. When the Head Plate Assy (S) ② moves backward, the Pinch Arm (F) Assy (PS) ①④ moves away from the Flywheel Assy (BF) ①②.
- (3) The tooth of the REW Lever (AT) ③① presses the Change Lever (B) ②⑧. The Change Lever (B) ②⑧ links to the FR Arm (B) ②⑨, FF Arm ④②, and then TU Gear Arm Assy ④⑨.
- (4) The TU Gear Arm Assy ④⑨ moves toward the opposite side of the Reel Spindle Assy (D) ①⑤ for the playback and engages with the other Reel Spindle Assy (D) ①⑤ to rewind the tape.

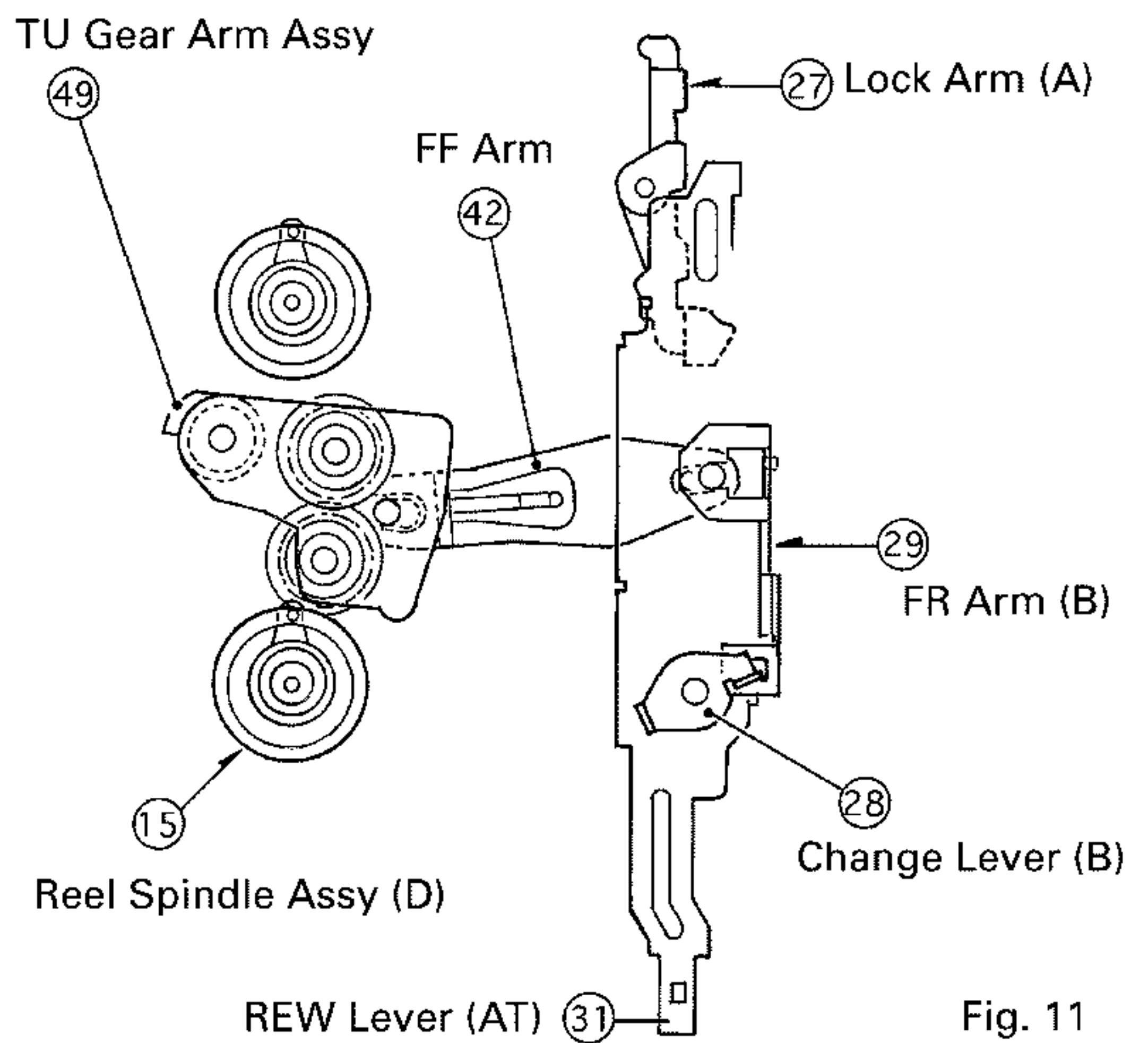


Fig. 11

4.8 AMS OPERATION

- (1) The FF and REW Levers (AT) (③⑩ and ③①) are locked by the Lock Arm (A) ②⑦.
- (2) The Release Arm ③② is pulled by the Plunger(SO1) ①①④.
- (3) The Release Arm ③② strikes the Lock Arm (A) ②⑦ to unlock it.
- (4) The FF and REW Levers (AT) (③⑩ and ③①) are returned by the pressure of the FF/REW Lever Spring ⑥④, the Head Plate Assy (S) ② is pushed out, and the system plays back.

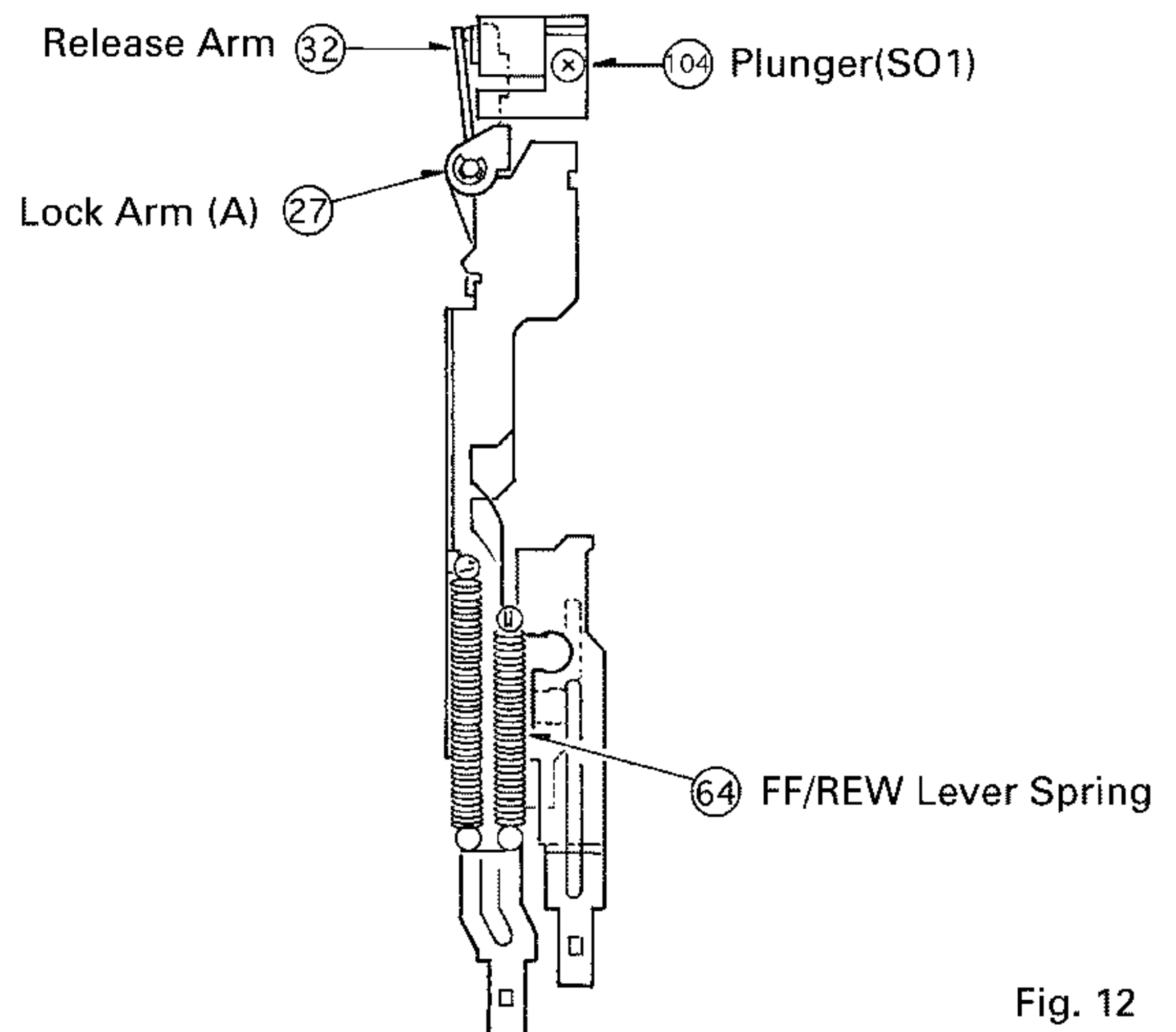


Fig. 12

4.9 EJ OPERATION (CASSETTE EJECTION)

- (1) Press the Eject Lever ②①. The Eject Lever ②① pushes the Eject Cam ②⑩. The cam (tilted portion) of the Eject Cam ②⑩ retracts the Head Plate Assy (S) ②.
- (2) Then, the Head Plate Assy (S) ② pushes the Pinch Arm (F) Assy (PS) and (R) Assy (PS) (①④ and ①③) to retract them.
- (3) The Cassette Hanger (X) ②② is lifted by the projected portion of the Eject Cam ②⑩. The lifted Cassette Hanger (X) ②② shifts the Power Switch(SW1) ⑨⑨ to OFF. At the same time, the Return Link ⑧⑨ pushes the Center Plate ②⑥ to rotate the Center Plate Spring (B) ⑦⑧ in the reverse direction.
- (4) The pressure of the Center Plate Spring (B) ⑦⑧ causes the Tape Hooker ⑤② to move toward the ejection direction. The Tape Hooker ⑤② moves the Eject Cam Lock Assy ⑥ to lock the Eject Cam ②⑩.
- (5) The cassette is ejected by the Tape Hooker ⑤②.

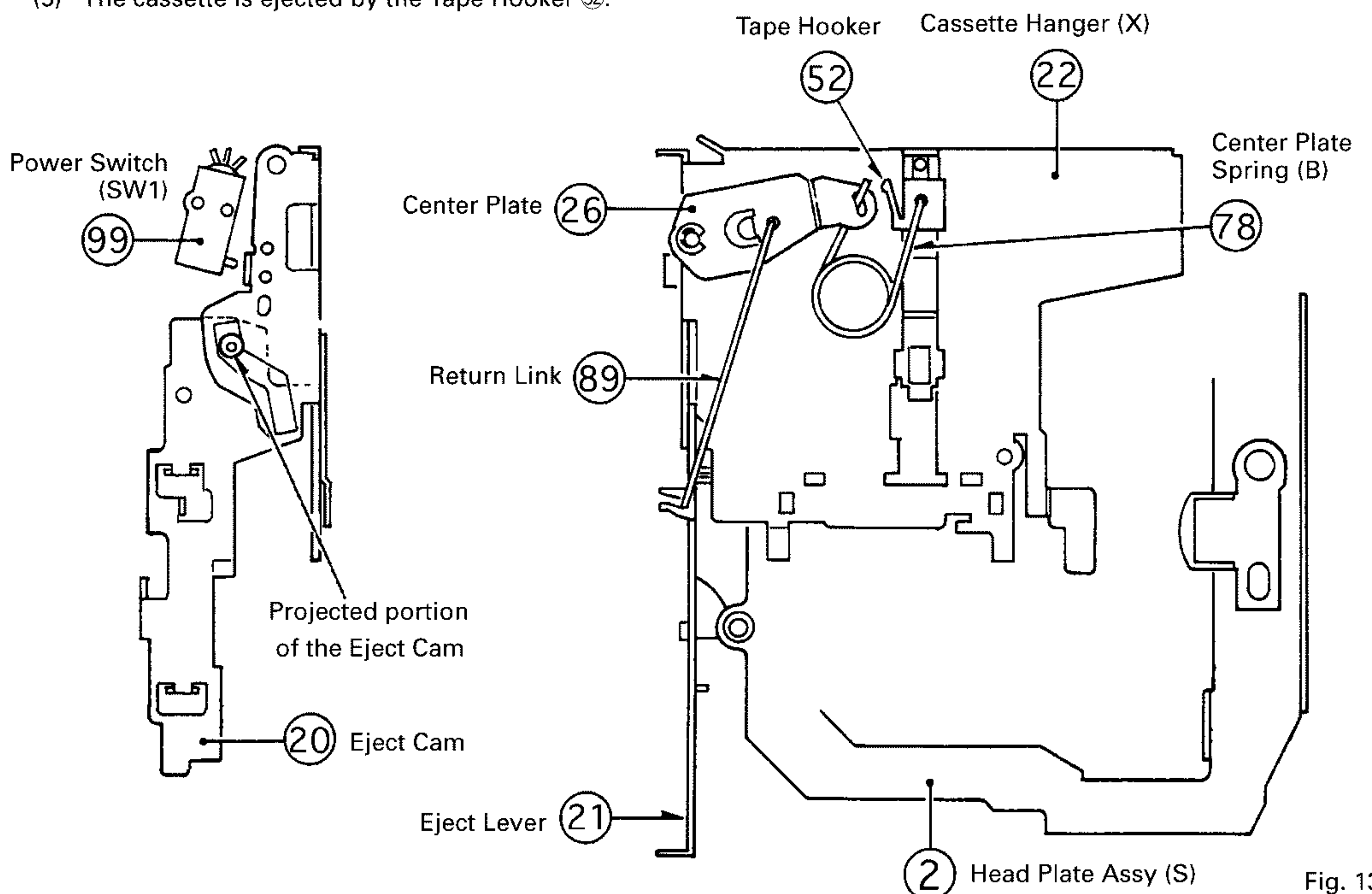


Fig. 13