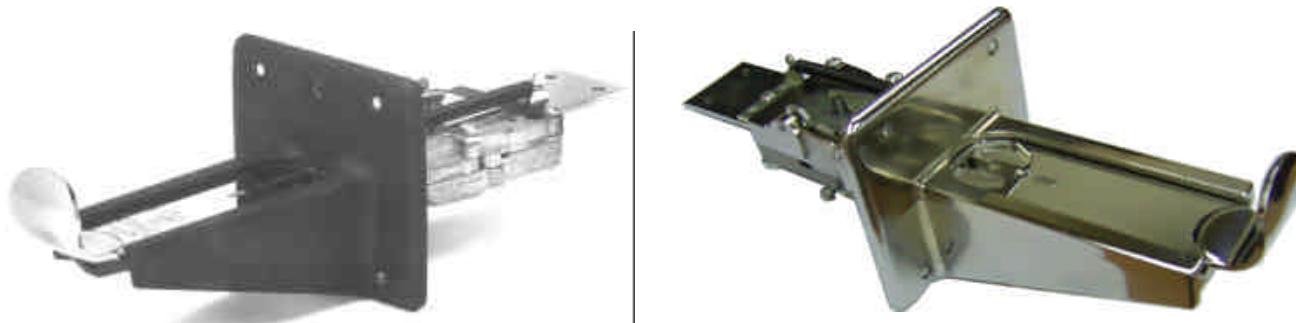


Maintenance Notes On Monarch's Model 444 Coin/Token Lay Down Chute

Your coin chutes are checked at the factory. Every effort has been made to assure that your Model 444 will operate smoothly and with minimal problems now and for many years to come.



However, as with any mechanical device, a basic understanding of its operation, maintenance needs, and adjustments will extend the useful service life of the product.

Please read the following notes and assure yourself of having a long lasting product. This IS a very simple device, but it does need some attention to maintain its sensitivity and function.

The basic design has remained unchanged for over 50 years. Over nine million units have been put in service in that time. Like a screwdriver, it is a basic tool which does what it is designed to do, and does it well, if applied properly. And like any other tool, it will fail if abused or improperly applied, or not maintained. We have made every effort to provide you with a quality product, and hope you will find it serves you well. If you have any questions or problems regarding the device, we look forward to helping you.

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OPERATION

Refer to the Parts Drawing for Part Identification

Note that drawing numbers with an asterisk (*) have special notes.

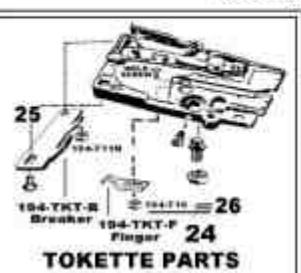
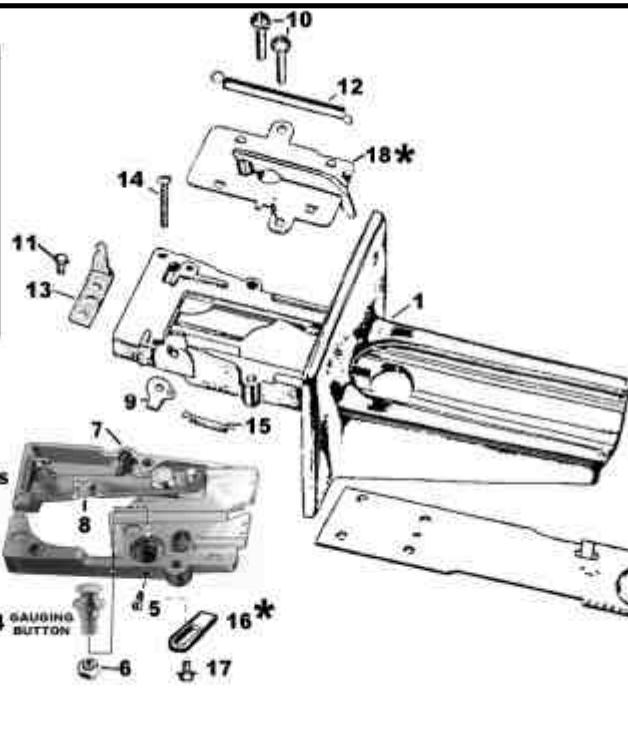
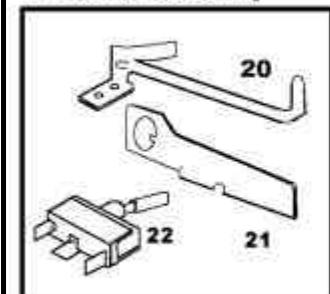
The Model 444 is a simple mechanism. This simplicity makes it a very reliable chute for use with single coin or token. The coin or token is sized and shaped to fit into a similarly sized and shaped opening in the slide (#2). As the slide is pushed in, the top dog (Part of #18*) checks for the presence of a token or coin, and exerts some downward pressure to encourage it to drop into the lower gauging channel. If no coin is present, the top dog drops into the opening and prevents the slide from advancing further. Disabling this feature may be just enough to allow a free vend in some applications. The Coin TokenName is also passed under a magnet (also a part of #18, but does not show) to detect ferrous slugs. The magnets keep a ferrous coin from falling for further gauging.

If your mechanism was ordered for Canadian coins, then there are no magnets. But if you are adapting an existing mechanism then the magnets must be removed to allow the chute to accept any ferrous(meaning it has some iron content) coins. Remove the two screws (#10) holding the top plate (#18). The plate has the tips of four aluminum tabs. Straighten the tabs and carefully remove the aluminum rectangular piece from the bottom (not visible in drawing) of the plate. Inside are two ferrous plastic magnets. Remove these, reattach the aluminum cover (it must be in place for the chute to function properly) and reassemble the unit, including any switch brackets that may have been removed.

As the token/coin drops into the lower level, it slides along the bottom plate (#7*, a picture at the right illustrates a coin passing between the gauging buttons and the latch arm moved to the "Open" position), advanced by the carriers on the bottom of the slide (#2). For most tokens/coins, it is guided between the fixed measuring button (#4), and the measuring button on the latch arm (#8). In these cases, the buttons have a "V" which supports the token/coin as it passes between them, this lends a greater sensitivity to the measurement of the token being evaluated. In the case of Lug Type High Security tokens (such as the Chilly Willy, Football Lugged or the LTB series), there is no fixed button, and the latch arm is configured differently. Rather, the token is held in proper relationship to the latch arm by the extruded button in the token passing along a guide groove in the bottom plate (#3*). There is a wear compensating bar (#16) for this as well. This means the token is actually being assessed on two different inter-related levels. This makes fabricating bogus tokens very difficult. So they are ideal for high ticket vends.



Once the coin or token has been found acceptable, the latch arm (#7*) moves aside and allows the slide (#2*) to pass into the last inch of inward travel. As the slide enters this area, the ratchet (#9) engages the teeth of the slide (#2*), preventing the slide from being withdrawn without completing the stroke. Once the inward motion is completed, it prevents the slide from being only partially withdrawn and then pushed in again for an added vend. This ratchet controlled area is called the "safety zone." Any application that allows the product or service to be vended prior to the coin chute entering this area will allow free vends to occur. This also applies to units with the electric switch. The switch trip (#20) is moved back and activates the switch, then is pulled forward and deactivates the switch, all within the safety zone.

19 Switch Assembly

This illustrates the generic part numbers for the components in the Model 444.

This chute has many variations as to the coin or token it may accept. So your information on some parts MUST include the token or coin your unit accepts.

Also note that changing from one coin or token to another involves much more than just changing the slide. To make such a change, it is best to buy a new unit.

PARTS LIST FOR MODEL 444

and notes on variations

- 1) 194-1-BK Black Housing
194-1-C Chrome Housing
- 2) 194-2 Slide NOTE The slide is made to match the coin or token to be accepted
Any orders must clearly define this. Manual & Electric Slides are different too!
- 3) 194-3-A Bottom Plate - Casting only. Some coins or tokens require modified plate.
- 4) 194-3-1 Gauging Button NOTE This varies according to coin or token to be accepted.
- 5) 194-3-2 Adjusting Screw (not for lug token chutes)
- 6) 194-3-3 Nut, secures gauging button
- 7) 194-3-4 Coil Spring for latch arm
- 8) 194-5 Latch Arm (there are 15 styles depending on coin or token to be accepted)
- 9) 194-06 Ratchet Dog
- 10) 194-6 Screw for Top Plate (Three required - except for Tokette chutes)
- 11) 17V-6 Screw for Slide Stop
- 12) 17M-1 Pull back Spring
- 13) 194-9 Slide Stop (manual or electric switch?)
- 14) 194-T11 Corner Screw (Tokettes only)
- 15) 17M-3 Ratchet Spring
- 16) 194-3-2A Adjuster for LUG TOKEN CHUTE ONLY
- 17) 194-3-3A Screw for Adjuster LUG TOKEN CHUTE ONLY
- 18) 194-00 TOP PLATE ASSEMBLY consisting of:

194-4 Top Plate	194-02 Magnet Cover (not seen in drawing)
194-01 Top Dog	194-03 Magnets, two per unit (not seen in drawing)
194-04 Top Dog Spring	(NOTE: Plates for Electric Switch must have drilled and tapped holes)

NOTE:
WHENEVER ORDERING
SPECIFY THE
PART NUMBER AND
WHAT COIN OR TOKEN
& MANUAL OR ELECTRIC

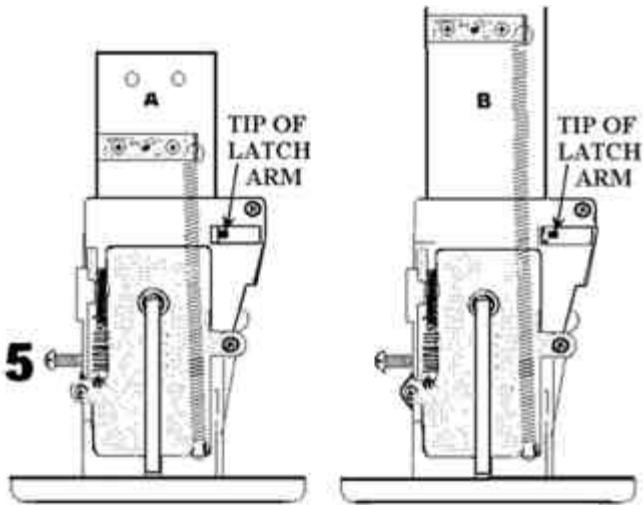
- 19) 194-05ES Switch Assembly - Consists of:
 - 20) 194-05 Trip Bracket ELECTRIC SWITCH CHUTES ONLY
 - 21) 194-05B Switch Bracket ELECTRIC SWITCH CHUTES ONLY
 - 22) 15A-ES Electric switch with toggle extension SPDT
 - 23) 15A-ESDT Switch DPDT Alternative to 194-05ES Double Pole Double Throw (Not Shown)
 - 24) 194-TKT-F Tokette Finger NOTE TOKETTE CHUTES REQUIRE A SPECIAL BOTTOM PLATE!
 - 25) 194-TKT-B Tokette Breaker NOTE TOKETTE CHUTES REQUIRE A SPECIAL BOTTOM PLATE!
 - 26) 194-T11N Nut for Corner Screw ON TOKETTE CHUTES ONLY
- NOTE: WHENEVER ORDERING ANY PARTS SPECIFY PART NUMBER AND WHAT COIN OR TOKEN!**

Routine Maintenance

FIRST - NEVER LUBRICATE USING AN OIL PRODUCT, SUCH AS WD40.

Use a silicon based lubricant. Oil will leave a film that will hold dust, dirt, lint and other "scrock" that will affect the sensitivity and function of your mechanism. Silicone lubricants are hydrophobic and so displaces moisture and lubricates the device without leaving a residue. An occasional cleaning with an old toothbrush and warm soap water will remove most grime. Rinse in clear water and re-lubricate. Of course, never submerge units with the electric switch in place.

ADJUSTMENT INSTRUCTIONS FOR MODEL 444 CHUTES



As with any machine, occasional adjustment may be required to compensate for wear, or to fine tune the measuring for the specific token being used. On chutes other than the Lug Tokens, there is a hex nut on the underside of the chute. This secures the fixed measuring button. On the the units that accept lug tokens, there is a compensating device that will allow for some adjustment for wear.

FOR ROUND COINS OR TOKENS OR MONARCH FLAT TOKENS

On the outside edge of the bottom plate is a small slotted screw (#5). To adjust the measuring parameters, slightly loosen the nut (#6) on the bottom, and by turning the small slotted screw into the housing, in small increments, try the token or coin which is giving problems. Watch the latch arm in the designated

opening, where "tip of latch arm" is indicated. When the arm swings aside just as the detent (the hardened steel tooth in the slide's notch) in the slide approaches it. (See illustration) then the gauging is the correct postion. Tighten the gauging button nut. If the tip of the arm has been pushed too far and hits agains the bottom plate edge, then the gauging button is in too far. Tap the nut toward the outside edge and start over. The tip should move aside just in time to allow the notch in the slide to pass.

FOR LUGGED TOKEN CHUTE ADJUSTMENT

Chutes which use lug tokens will not have the gauging button (#4) or the hex nut(#6) on the bottom. Instead there is a slotted screw and lock washer, that secures a measuring bar. The end of this bar projects from the left hand side of the chute, presenting a "loop" appearance. By SLIGHTLY Loosening the screw (#17), and gently tapping the loop (#16) into the chute, while trying the token as above, will compensate for wear. If you over do it, use a small screwdriver in the loop to withdraw the compensator and try again. Once the latch arm is moving as it should, secure the slotted screw, and try the tokens again to assure no shift has taken place.

OTHER ISSUES

If the ratchet spring is stretched or weak, the ratchet will not function properly. The spring will need to be replaced.

Slide Free Plays - Latch arm is either sticking (clean and lubricate) or the small coil spring has popped out or broken, replace the spring. The latch arm may be reached from the bottom. Work it back and forth to make sure it moves freely and returns properly.

**IF you have any questions
Please call us at 800-462-9460**

