# **Technical Data**

# Hamilton Watch Company

LANCASTER, DENNSYLVANIA

INDEX T. D. 127

 $\begin{array}{c} 2000\text{--}11\text{--}1\text{--}40 & \text{Revised} \\ 10\text{M}\text{--}2\text{--}8\text{--}41 & 500\text{--}11\text{--}22\text{--}43 \\ 500\text{--}5\text{--}21\text{--}46 \end{array}$ 

#### **SUBJECT:**

## Grade 992B - New 21 Jewel Lever Set Railway Special

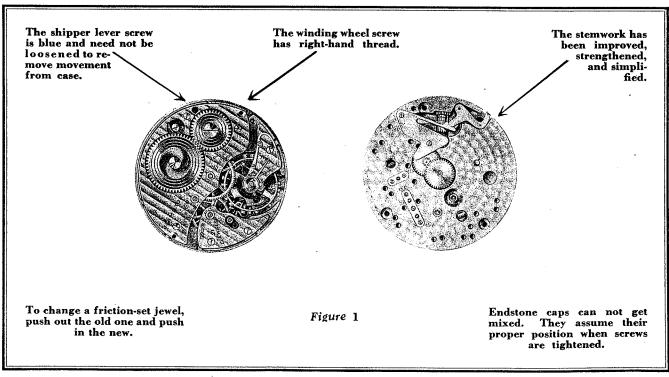
Ten years of direct research, and nearly fifty years experience in manufacturing high-grade watches exclusively have gone into the design and construction of the Hamilton 992B Railway Special — America's finest and most accurate railroad watch.

This is a completely new movement from winding arbor to balance wheel, and its parts are not interchangeable with those of previous 992's.

992B is a 16 size, lever set movement with 21 friction set ruby and sapphire jewels. It is adjusted to temperature

and six positions. All parts — with exception of the hairspring — are perfectly interchangeable. In addition to major technical advances (fully described in this data sheet) other changes have greatly simplified the problems of cleaning, repairing and adjusting.

Winding and setting mechanism has been designed for increased strength and ease of handling. The shipper lever is held in position by a screw that comes through the pillar plate from the back of the movement and is threaded into the lever. This screw is blue for identification and need not be loosened or removed before taking



the movement from the case. The winding wheel is mounted on a steel shaft and is held in position by a screw with a right-hand thread. This change in design standardizes the screws in this movement. All screws have right-hand threads. Furthermore, this winding wheel construction provides smoother action by steel bearing on nickel-silver, and prevents grease from working its way up onto the movement. The winding arbor, when in place, is surrounded by the pillar plate and is held in position by a clip which can be removed by lifting it straight up with tweezers. This unique feature in stemwork design makes possible the removal of the barrel bridge without disturbing the winding mechanism.

and bridges The hole jewels cannot get mixed or lost and the endstone caps are all of different shapes so that they can easily be returned to their original positions.

Hamilton's new white Elinvar hairspring is introduced for the first time in the 992B. Self-compensating for changes of temperature, protected against the effects of residual magnetism, and resistant to rust and corrosion, the new Elinvar hairspring has the hardness and elasticity of tempered steel. The chances of damaging the hairspring or of disturbing fine adjustments have been reduced to a minimum. The two-piece balance staff, identified by the blue hub, can be changed without destroying trueness or poise of the balance.

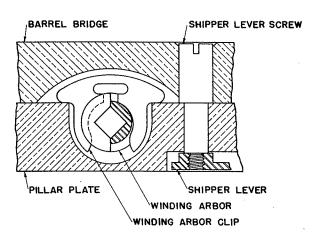


Figure 2

Friction jeweling in this movement contributes its share to accuracy of location of train and escapement parts, and ease of handling when being assembled. To replace a broken jewel, it is only necessary to push the old one out and the new one to the proper depth.

All the jewels have been standardized. When cleaning the movement remove the endstone caps and wash the hole jewels without removing them from the pillar plate To regulate the 992B, one full turn of the regulator screw will change the rate approximately fifteen seconds per day. One full turn of two meantime screws on the balance wheel will change the rate about three seconds per hour.

Caution — When ordering repair parts for this new 992B Railway Special, use material catalog numbers listed on the back page of this sheet. If you order parts without catalog number, be sure to specify new grade 992B.

#### REMOVING TRAIN OR CAPPED JEWELS

Broken train or balance jewels may be removed by driving out the entire setting as illustrated in Fig. 3, using a standard staking set with a flat face punch smaller in diameter than the setting to be removed.

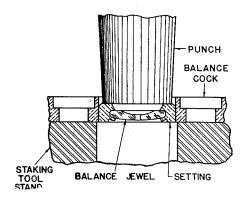


Figure 3

#### REPLACING TRAIN JEWEL SETTINGS

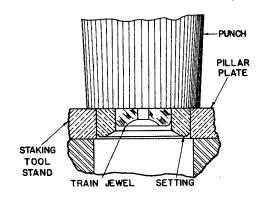


Figure 4

All train jewels with settings should be replaced by driving the setting into the plates or bridges from the inside as illustrated in Fig. 4. A flat face punch with a face diameter larger than the complete setting should be used first as illustrated. This will permit driving the face of the setting flush with the plate or bridge surface immediately surrounding the setting. All lower jewels are set correctly when flush. For proper end-shake the center and third upper jewels should be pushed .004" below flush, and the fourth upper should be pushed .014" below flush by using a punch smaller in diameter than the setting, as shown in Fig. 3.

The escape, pallet and balance upper and lower jewels should be driven in place from the outside using a flat face punch larger in diameter than the setting and driving the jewel and setting flush with the surface of the endstone cap recess, as shown in Fig. 5. This establishes the hole jewel in its proper position so that the endstone will lay flush and parallel with the hole jewel.

#### REPLACING CAPPED JEWELS

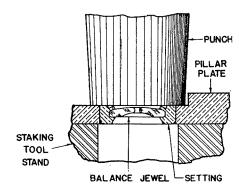


Figure 5

### HAMILTON WATCH MATERIALS

Grade 992B — 16 Size — 21 Jewels

Description — All jewels are in friction settings. All upper settings are gold. Center wheel is round arm, gold. Third and fourth wheels are round arm, gilt. Escape wheel is steel

Cat.	D <sub>-</sub> -t <sub>-</sub>	Cat.	
No.	Parts	No.	Parts
609	Arbor-barrel	644	Roller-small
610	Arborpallet	481	Screwbalance
511	Arbor—winding	482A	Screw—balance meantime
601A	Balanceand hub	<del>†</del> 495	Screw—banking
512	Balance—and staff	645	Screw-bridge and balance cocl
513	Balancecomplete	646	Screw—bridge, pallet
514	Barrel	647	Screwcase
515	Barrel—and arbor	. 648	Screw—click
516	Click	649	Screwdial foot
517	Clip—winding arbor	650	Screw-jewel, balance upper car
518	Clutch	6093	Screw—jewel, balance lower car
387A	Collet—hairspring	6093	Screw-jewel, escape upper cap
519	Endstone-balance upper cap	6093	Screw—jewel, escape lower cap
520	Endstone—balance lower cap	1366	Screw—jewel, pallet upper cap
521	Endstone—escape upper cap	6093	Screw-jewel, pallet lower cap
522	Endstone—escape lower cap	651	Screw—lever, shipper
523	Endstone—pallet upper cap	518	Screwregulator
522	Endstone—pailet lower cap	652	Screw—spring, regulator
504A	Hubbalance	6096	Screw-spring, setting cap
524	Jewel—balance upper and lower	1798	Screw-stud, hairspring
525	Jewel—center upper	653	Screw-wheel, ratchet
526	Jewel-center lower	654	Screw-wheel, winding
527	Jewel—escape upper	655	Spring—click
527	Jewel—escape lower	656	Spring—clutch lever
528	Jewelfourth upper	675	Spring—hair
529	Jewel—fourth lower	534B	Spring-main-Str. 151/2 MM
530	Jewel—pallet upper	657	Spring—regulator
527	Jewel-pallet lower	658	Spring—setting cap
528	Jewel—third upper	659	Staff-balance
529	Jewel-third lower	660	Staff-center and pinion
531	Jewel—pallet stone—right	677	Stud-hairspring
532	Jewel—pallet stone—left	661	Wheelcenter
179	Jewelroller	662	Wheel—center, staff and pinior
578	Lever-clutch	663	Wheel-center, complete
579	Lever—shipper	664	Wheel-escape
533	Pallet—and fork	665	Wheel-escape and pinion
534	Pallet—fork and arbor	666	Wheel—fourth
535	Pin—banking	667	Wheel—fourth and pinion
536	Pinion-cannon	668	Wheel-hour
537	Pinion—escape	6042	Wheel-minute
38	Pinion—fourth	669	Wheel—ratchet
539	Pinion—third	670	Wheel-setting
540	Pinion—winding	671	Wheel—third
541	Regulator	672	Wheel-third and pinion
542	Rollerlarge	673	Wheel-lower winding
543	Roller—and pin	674	Wheel-winding

\*Used to serial No. C4048 †Began with serial No. C4049

For Prices See Retail Material Price List