will hold the blocks apart. The burrs may be removed by careful use of a No. 3 cut file.

15. Great care must be used when working on the mold faces so that edges of the cavities are not dulled.

16. If the screw pins, that hold blocks to handles, become worn they may allow the handle to bear against the bottom of the block slot and cause the mold to stand open on one end. To correct this, remove the handles and observe the worn spot where they bear on the block. File the handle at this point until pressure is restored to center of the block on the screw pin.

17. If mold is allowed to rust, the cavities may be cleaned by revolving a bullet, coated with fine grinding compound, in each cavity.

18. Abuse, in the form of the wire brush, probably ruins more molds than any other form of mis-use. Never, under any circumstances, use a wire brush on any part of a mold.

19. Every mold is tested, by actual use, and then the final adjustments are made. The sample, accompanying the mold, was made in it. Please examine the sample carefully and check closely before using the mold. We cannot exchange used molds for any reason other than our guarantee covering workmanship and material.

HENSLEY & GIBBS
2692 E Street
San Diego 2, California

Hensley & Gibbs
Bullet Molds

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Directions

1. All oil should be cleaned from the mold before it is heated. Use gasoline or other solvent. Wipe all solvent from the blocks and cavities. Any residue left on the mold will form carbon. This carbon will cause gas for a long time and prevent the casting of full sharp bullets.

2. Place mold alongside pot to warm while the alloy is melting. Use care not to over-heat the mold. Do not dip mold into molten metal to quickly heat it.

3. Always close the mold gently. If the heated mold is roughly slammed closed the dowels will be injured and spoil the alignment. While holding the grips firmly rap the mold lightly once on one side. This seats the dowels "home" and prevents alloy from running between partly open blocks. To operate the sprue cutter and to rap the mold closed use nothing other than a light wooden implement. (We can supply the proper weight wooden mallet for each size mold).

4. The dowel pins, in a new mold, are quite tight and if the mold is over-heated they may bind and not allow the mold to quite close. If the pins seem to stick, and the mold opens with a "snap," close the mold gently, give it a light rap on one side and hold up to the light and observe whether much light shows through between the blocks. (In the larger molds a bit may show without harm as one can see through a vary small space when looking against the light). If the mold is standing open

it is only necessary to drive the dowels back into the block very slightly as they are made to be adjusted in this manner. They are so adjusted, by us, after heating and testing the mold and this treatment is usually not needed unless the mold is grossly over-heated. As wear occurs the dowels should be driven out a bit to adjust for the wear.

5. A pouring dipper with tube-snout that fits the bevel hole in sprue cutter plate should be used with molds having individual pouring holes. We can supply a suitable dipper having an off-set shank that is vary handy to use. Hold dipper horizontal and the mold sideways and contact mold and snout of dipper firmly together. Now turn both together so the dipper is uppermost. This puts alloy into mold under pressure and fills out clean sharp casts. Pressure time should be varied, according to temperature, until good results are obtained. Remove dipper, leaving a puddle of molten metal in the sprue hole to feed the shrinkage of the bullet.

6. Allow time for metal to set and harden and then strike sprue cutter with the wooden mallet. (Here you can tell whether the mold and/or the alloy is at correct casting temperature. If the sprue hardens almost instantly it is too cold. If it takes more than 3 to 5 seconds to harden then the mold or the alloy is too hot).

7. After casting for awhile, especially when working fast, the mold blocks may become too hot and, although the metal on sprue cutter appears to have set, upon cutting it off the bullet will be found to be still soft and the semi-molten metal dragged across the top of the mold. Now, with the bullets still in the cavities (to prevent water getting in) the mold may be quickly plunged into hot water for only an instant. Properly done this will keep the mold at correct casting temperature even when working at top speed. Long, heavy bullets require more time to set than do short light ones.

8. The ratio of mold temperature to temperature of the molten alloy is important. The alloy should be considerably hotter than the mold. If the mold is worked too hot there is less shrinkage in the bullet and it may not fall freely from the cavity. If the mold is cooler and the metal hotter, more shrinkage occurs and the bullet will drop out easier.

9. Our four, six, eight (.44 and .45 cal.) and ten cavity (.38 cal. and smaller) are all equipped with the fast pouring, trough-type sprue cutter plate. For pouring these molds use only an open pouring dipper. We can supply these in proper size, made of stainless steel and designed for the purpose. The tube-snout pouring dipper will not pour a stream heavy enough for good results with this type of pouring plate. Pour a good, heavy stream of alloy from a slight height and move the dipper rapidly from one hole to the next. Vary the height of pouring and the speed of progress from one hole to the next until good results are obtained. With practice, this is the most rapid method of producing good bullets.

10. It is probably easiest to make good bullets if only new tin and new lead are used for the alloy. However, if scrap lead pipe, plumbers lead or sheet lead is used, usually no trouble will be had. Tin in the form of scrap pipe is good. The local junk dealer is usually the source for these. Linotype metal may be used in place of tin for hardening the alloy. Linotype metal used just as it is makes an excellent rifle bullet alloy. Lead cable covering may be used if the soldered ends are cut off and discarded. A very small amount of this solder (not to be confused with tinners solder) will spoil a whole pot of alloy. Old storage battery lead may be used to harden the alloy if it does not make the alloy too hard or too large a bullet because of its high antimony content. When lead alloys are repeatedly re-heated or when bullets are recovered and used a number of times the alloy becomes short and brittle. This may be mixed with good lead to restore proper hardness.

11. If used frequently and the climate will allow the mold may not need oiling to protect it from rust. Usually if stored in a wooden container (and not wrapped in cloth or paper) a mold may be left unoiled. This is left to the judgment of the user. Where protection is needed only a light oil should be used. Do not use wax, tallow, grease, or anything that can not be readily cleaned from the mold before heating. Never oil the mold when it is hot.

12. Do not tighten the sprue cutter plate screws so there is any bind. The plate must be left free to swing of its own weight. Tightening the screws will cause endless trouble by holding the blocks apart and will sooner or later cause either the screws or the plate to break.

13. Do not dump bullets from the mold directly into the pot of molten metal as the splash will cause flakes of metal to cling on faces of mold and hold the blocks apart. Lead flakes should be removed, using a sharp knife or razor blade. The flakes should be picked off rather than scraped off so the lead is not rubbed into the mold block.

14. After considerable use, and especially if direction No. 3 is not followed burrs may form around the dowel holes. This