

# Instructions for Casting the Pewter Forend Cap

Pouring a pewter forend cap is easy, and will give you a perfect fit. But there are a few do's and don'ts to observe:

1. The material selected for making the dam (form) must be able to withstand the moderately high temperatures, must not solder itself to the pewter, and must not give off gas which will wreck the job. This eliminates plastics, painted metal foils, metallic tapes (the gum boils), tin cans, and anything dampened. The material must be dry. We prefer about three layers of light cardstock, preferably with little or no printing. Cereal boxes are okay.

2. Preparation must be made to avoid leaks. The barrel must fit the octagon mortise well. If the ramrod hole has been drilled (probably should be), then it must be plugged. We sand a slight taper onto a dowel rod, lay the edge of a piece of aluminum foil (not plastic coated) along the rod and tape it in place. Using a tiny amount of Scotch Magic® tape. Make about 3 smooth wraps around the rod. Insert the wrapped end into the hole, turning it in the wrapped direction to keep the foil (not plastic coated) along the rod and tape it in place using a tiny amount of Scotch Magic tape. Make about 3 smooth wraps around the rod. Inset the wrapped end into the hole, turning it in the wrapped direction to keep the foil smooth. It must fit snugly, to avoid leaks into the rod hole. The foil allows us to twist the rod in reverse, and withdraw it. Filling the ramrod hole can be a catastrophe, if the metal leaks into the lock, trigger or tang bolt mortise. We have observed cases where the stock had to be smashed to retrieve the lock, trigger, and tang after metal had leaked and bonded the items in place. Check your work.

3. Your foundation work must be complete and properly done. Try to pour a thin muzzle cap with a large supporting wood as thick as possible, and it should extend to within about 1/8" of the front of the forend cap. Heavy caps with thin wood tend to break in hard service. We have seen successful forend caps poured around two wood screws installed in the face of the forend, with no shelf at all. But we don't recommend this unless your stock is too short for a proper wood support. A thin metal cap over a thick wood support is ideal.

The rear edge of your forend cap should be examined carefully. It is square and even when viewed from all angles? It will be difficult to fix after the pour. Make a smooth wall for the metal to abut. While cutting this rear wall, we remind you that sharp corners are "break points". Consider filing a small radius on all inside corners, except the upper edges, where the radius will show. This may help avoid cracks that can occur years later.

4. Normally two anchor points are used, one on each of the diagonal flats. Each anchor point is a hole through the support shelf, which has been slightly countersunk on the barrel side. Metal flows through the hole, fills the countersink, and freezes to anchor the cap in place. The barrel serves as a heatsink to help draw away heat, allowing the metal to freeze, without charring the wood.

5. After you have the barrel securely fitted and pinned, keyed, or clamped in place, and the ramrod hole plug installed, you must cut and form a dam for the metal. This dam to fit the top three flats perfectly, as it will be tedious to file away any metal that surrounds the barrel!

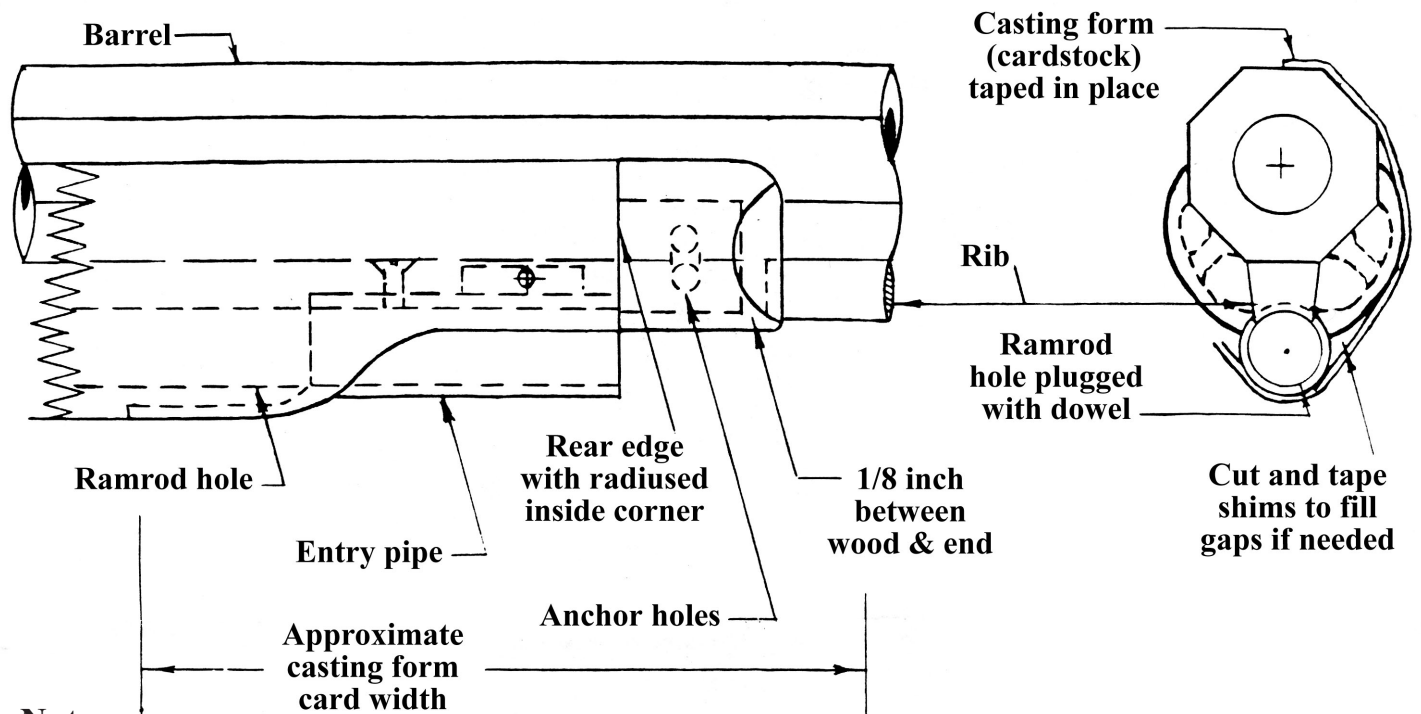
Your cardboard form should be wrapped around the forend, starting at a point about an inch below the bottom of the forend cap, and extending about a half inch above its top. Begin by taping one edge to the top flat, wrapping it securely, about two or three wraps. Tape the edges and bottom with several layers of tape. We use a wide masking tape. The gum gives off gas when heated, so we only use it in places that won't come into contact with the hot metal, or when insulated by two or more layers of cardstock.

6. Melt the pewter alloy in suitable container. We recommend a clean small iron skillet, or bullet pot. A pint size plumber's ladle is ideal, but nearly any pot will work. The alloy contains lead, so avoid using any

utensils that are used for cooking. Melt the alloy on your kitchen stove, hot plate, or camp stove. This alloy melts easily, but splashes will damage vinyl tile, countertops or linoleum. Cover your floor and counter tops with heavy cardboard, if you must work in the kitchen. Be careful - a damp spoon inserted in this pot will cause it to explode and throw hot metal in all directions. Open the window, or turn on the exhaust vent. Position yourself to avoid breathing heavy metal vapors.

7. Check the temperature of the metal before pouring. If any metal is still solid, then the pot is far too cold. If you pour with metal that is too cold, you will get wrinkles in the forend cap. If the metal is too hot, it may char the wood, and melt the gum of the tape that holds the form in place. Watch-out!

Insert a common round maple toothpick into the hot metal. If it chars instantly, allow the metal to cool further. When you can insert it for about 5 seconds with only a slightly cooked (not scorched) appearance, then pour it into the form at once. Fill the form, but don't allow it to run over. Be careful!



**Note:**

Formed steel ramrod entry pipe (if used) is normally attached with one or two pins through the mounting lug. Cast or turned pipes are often attached with one or two screws from within the barrel channel.

The rib may overlap the forend cap slightly, eliminating any possibility of a gap. The rib must fit flush against the barrel (no hollow), and be filed smooth, with no undercut. Bright steel may solder to the pewter. Touch any bright steel with instant gun blue, before casting.

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