to the bolt reservoir.

3) The air bleed jet is screwed in from the bottom. This passage has several holes. Clean the corrosion from the threads with a 3/8-24 tap and then clean the drilled holes. The most difficult and also the most critical is the lower hole connecting to the idle passage. Use care when cleaning the idle passage because the secondary idle jet is at the bottom of the vertical portion of the hole and is not removable. Use a length of music wire to clean the idle jet at the bottom of the hole and be sure the wire goes into the hole. You can't see it; you must do it by feel. The cleaning wire will go about 1/4 inch past the jet to the bottom of the passage, where dirt frequently collects. Reach through the idle bleed hole with a bent wire. If testing shows that the unit does not idle, check this passage. It may not be clean enough.

4) To check if this passage is clear, place a drop of food coloring into the idle jet hole and blow air from the top. If a colored stain appears in the area of the removed air bleed jet, the passage is clear. If not, the plug will have to be removed to get to the clogged area. The plug to remove is the lower of the two in the choke passage. Drill the plug out and tap the hole with a 6-32NC just deep enough to install a 1/4 inch long round head screw. To clear the passage requires a four inch long drill. Since the material is soft, the drill can be made from 1/8 inch rod by grinding the end. If it seems clean, test again with the food coloring. If it is clear, the coloring will squirt out the air intake, so be careful of where the stain blows. It's hard to get off. Insert the screw into the tapped hole with some sealant and the next time cleaning will be easier.

5) Using high pressure air, blow into all the passages from both directions to dislodge any dirt particles.

6) The gasket you will need between the upper and lower units is no longer available on the commercial market. It is easy to make using the old mechanics' ball peen hammer technique. Use the bottom unit for the template and tap gently to cut the pattern. DO NOT cut a hole in the gasket for the blind hole. Cut to the outline including all the other holes and set the gasket aside.

6) Install the air bleed jet with a gasket at its top end.

7) Install the secondary venturi with the countersunk screw jet, using the countersunk lock washer.

8) Install the two threaded plugs at the bottom of the air bleed jet, using a gasket on the hex plug and sealant on the other.

9) Install the power jet screw plug with sealant.

10) Install the gas adjust valve seat with a gasket and sealant to prevent turning.

11) Install the gas adjust valve with the needle backed off to prevent bottoming as it is tightened.

12) Install the choke shaft and plate using two round head screws.

13) Install the choke driver and arm using a lock washer and nut.

14) Install the idle jet tube. Tighten finger-tight only.

**Final Assembly**

A single bolt is used to hold the parts together as in the Zenith, but this bolt is also a fuel seal.

1) Prepare the 3/8-24 by 3 inch bolt with a metal washer and a gasket.

2) Place the large gasket on the face of the upper unit.

3) Put the lower unit in place, being careful to align the projections sticking up from the upper unit.

4) Install the bolt using sealant and tighten.

5) It may be good advice to protect your effort by installing an in-line fuel filter in your fuel line to keep this carburetor clean.

**Tools and Materials**

| | |
|---|---|
| .016 Music Wire | 1/2 Wrench |
| Gasket paper | 5/8 Wrench |
| Screwdriver | 6-32NC Tap |
| 3/8-24 Tap | 1/8 x 4" Drill |
| 1/8 Pipe Tap | Sealant |
| 13/32 Wrench | |

ON RESTORATION by Matt Joseph

**"Brake Actuating Systems" — Cont. from page 9**

"tandem" designs, two separate pistons work in the same bore with the rear one bearing against the front one through the medium of a stiff coil spring. One or more seals are used to separate the two pistons. If one of the separate hydraulic sub-systems loses integrity, the brake push rod still activates the other.

*TO BE CONTINUED NEXT MONTH*

DEPARTMENT OF OBSCURE AND OFTEN WORTHLESS INFORMATION

The Morse Chain Company was launched in the 1880s by Frank and Everett Morse in Trumansburg, New York. The firm originally made bicycle chains, but very early Frank Morse began to experiment with a new type of rocker chain which was the beginning of the product that was to become in the auto industry the famous Morse Silent Chain.

Morse was convinced that the chain driven camshaft would reduce the raucous clatter of the early timing gears, but it was not until 1912 that the first Morse Silent Chain was used on the Cadillac car. Chains had been used previously but they had a tendency to stretch and throw off the timing. Morse's chain eliminated this difficulty.