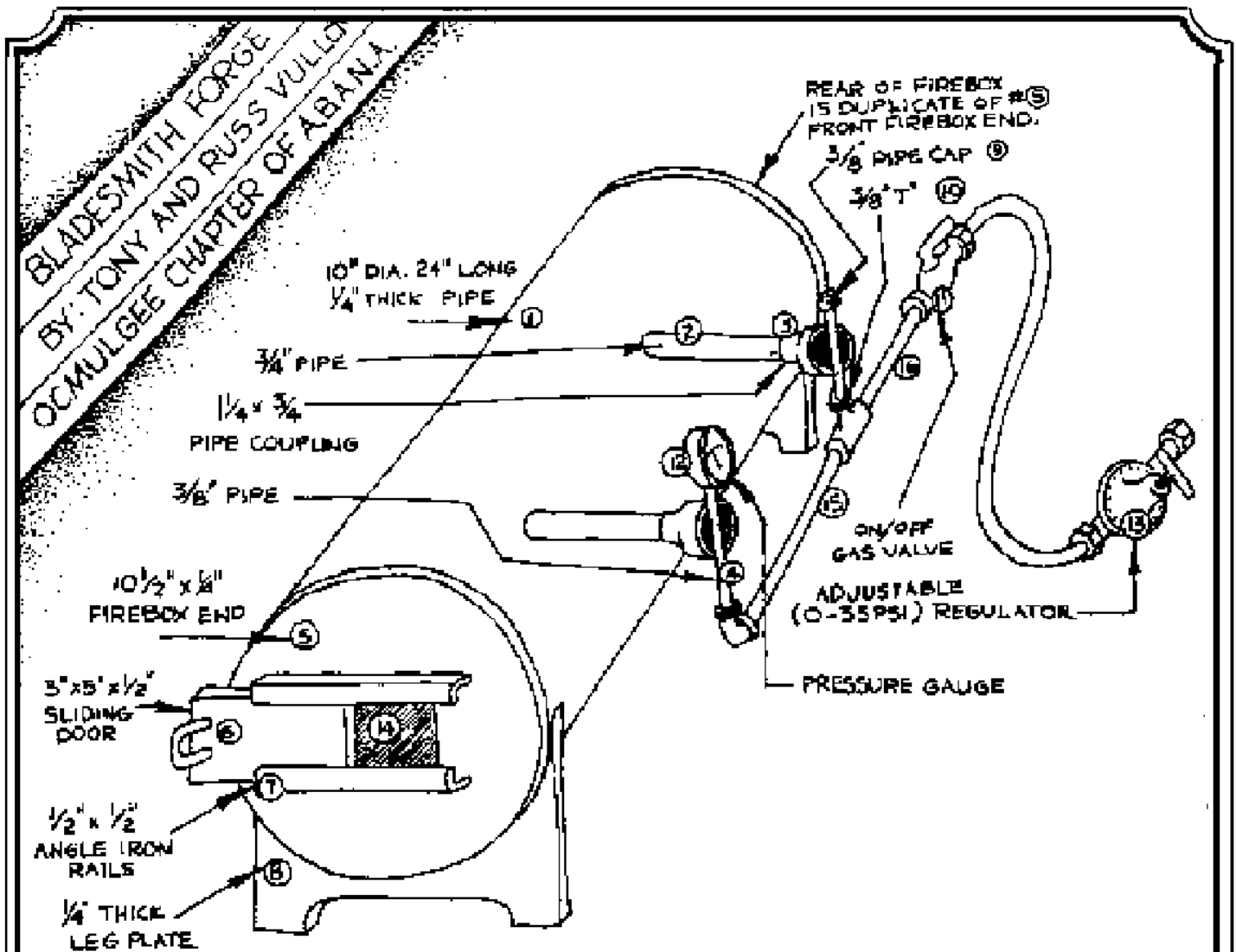


GAS PIPE FORGE

Plan 2



Parts List

- | | |
|-----------------------------------|--------------------------------------|
| ① Firebox pipe 10" x 24" | ⑨ 3/8" pipe cap |
| ② Burner pipe 3/4" x 8" (2 pcs.) | ⑩ 3/8" pipe tie |
| ③ Coupling 1/4" x 3/4" (2 pcs.) | ⑪ Shut off valve (3/8") |
| ④ Gas Jet pipe 3/8" x 4" (2 pcs.) | ⑫ Pressure Gauge (0-50 psi) |
| ⑤ 1/4" plate Firebox End (2 pcs.) | ⑬ High pressure regulator (0-35 psi) |
| ⑥ Door 5" x 5" x 1/2" (2 pcs.) | ⑭ 1" x 24" x 13" of Kaco-wool |
| ⑦ Door Rails 1/2" angle 6" x 5" | ⑮ 3/8" x 7" Pipe |
| ⑧ Legs (2 sets) | ⑯ 3/8" x 12" Pipe |

ILLUSTRATED BY:
[Signature]

CONSTRUCTION OF THE GAS PIPE FORGE PLAN 2

AN EASY TO BUILD, EFFECTIVE PROPANE FORGE.

(Based on a design by Hans Peot)

By: Russell Vullo

The forge that I recently completed (with bladesmithing in mind), is 24" long and built of 10" diameter pipe. The two burners were constructed by screwing a 1-1/4"x 3/4" Pipe coupling to a piece of 3/4" pipe about 8" long. Across the large end of the coupling, which forms a venturi, a piece of 3/8" pipe that is drilled with a .040 hole is tack welded. The drilled hole which is aligned so that it is pointed down the center of the 3/4" burner pipe, serves as a gas jet. These two burners are then welded into the 24" pipe that forms the firebox at such an angle as to cause the flame to travel in a circular path around the outside perimeter of the firebox. This circular path causes the heated gas to re-circulate within the firebox adding to the effectiveness of the forge. A 2" layer of Kao-wool is then installed inside the firebox before the 2 ends are welded on (the ends are also covered in a layer of kao-wool). The ends are provided with access openings of 4x4" prior to welding in place. Sliding doors are made of 1/2" plate and ride in rails made by welding 1/2" angle iron to the firebox ends. Along with some plumbing, an on off valve, and a pressure gauge (with a 0-50 psi range) completes the parts list. A high pressure (35psi) regulator will be needed for your tank.

The forge reaches welding temperatures quickly and works very well in the manufacture of cable damascus. I found that the flux eats the Kao-wool about like gasoline eats styrofoam, making a ceramic or firebrick bottom a necessity if you intend to use flux in the forge. It will generate forging temperatures at about 5 psi which will use up a 20 lb bottle of propane in about 8 hours. Welding temperatures result when the forge is supplied with 15-20 psi.

The forge is very quiet, especially at the lower pressure settings. The only unpleasant thing about the forge is the amount of radiant heat that you must contend with (and the propane bill you have to pay).

The design of this forge allows for working from either or both ends. It would probably cost in the neighborhood of \$100 or so to build. (Mine was somewhat less as I used salvaged materials wherever possible.)

AS WITH ALL ASPECTS OF BLACKSMITHING, THERE ARE DANGERS INVOLVED IN BUILDING AND OPERATING THE FORGE DESCRIBED IN THIS ARTICLE. IF YOU CHOOSE TO USE THIS INFORMATION YOU DO SO AT YOUR OWN RISK!!! Be especially careful in lighting the forge. (I light mine by turning the gas OFF, inserting a flaming wad of paper on the end of a stick then slowly opening the gas valve.

From: fulwood@ix.netcom.com (Donnie and Martha Fulwood) Subject: Gas Forge Plans from OBG

Donnie Fulwood, Editor

Ocmulgee Blacksmith Guild Chapter of ABANA (Georgia)