

no case shall the short cross section dimension of a rectangular flue be less than two-thirds the greater dimension. See Appendix 6.

When gas is the fuel used in a heating furnace, boiler, or automatic hot water heater, the flues shall be of the same size and construction as required for stoves and ranges using other fuel. Vent flues where required for other domestic gas burning appliances may be of smaller size, but not less than 10 sq. in. Such flues shall be made of fire clay or its equivalent not less than 1 in. thick with joints properly designed to effect a permanent seal, and the surrounding masonry walls may be omitted. Metal vent flues are not permitted.

23. Smokepipe intakes to flues shall always enter the chimney through the side and shall consist of fire clay or metal thimbles securely set in the chimney wall with mortar, or the intake may be cast in concrete. Such openings shall be at least 18 in. below wooden lath and plaster or other combustible ceilings, or open joists. Neither the intake pipe nor thimble shall project into the flue. No woodwork shall be placed within 6 in. of the thimble. The thimble shall be surrounded by metal lath and plaster for a space of at least 6 in., or an open space of that width shall be provided on all sides. See detail sketch Plate I.

24. All mortar used in chimney construction, except as specified for fire brick in Par. 19, shall be cement mortar proportioned as follows: two bags of Portland cement, not less than 188 lb., and one bag of dry hydrated lime, 50 lb., thoroughly mixed dry. To this mixture shall be added three times its volume of clean, sharp sand with sufficient water to produce proper consistency. When dry hydrated lime is not available, 1 cu. ft. of completely slaked lime putty may be substituted for 50 lb. of dry hydrate. In case of such substitution, the mixing of lime and cement shall be very thorough. Dry hydrate should always be used in preference to lime putty.

25. After a chimney has been completed, all flues shall be thoroughly cleaned and left smooth on the inside.

26. All flues to which heating furnaces or boilers are to be connected shall be subjected to a smoke test before acceptance, but the test shall not be made until the mortar has thoroughly hardened. The method of test is to build a smudge fire at bottom of the flue and while the smoke is flowing freely from the flue, close it tightly at the top. Escape of smoke into other flues or through the chimney walls indicates openings that shall be made tight before the chimney is accepted. The test shall be made by the contractor in the presence of the building inspector or other official having jurisdiction, and of the owner or his representative.

SECTION 2. WOODWORK AROUND CHIMNEY

1. No wooden beams, joists or rafters shall be placed within 2 in. of the outside face of chimneys, whether the same be for smoke, air or any other purpose. No woodwork shall be placed within 4 in. of the back wall of any fireplace. See Plate III, Fig. 2, and Plate IV, Fig. 4.

2. All spaces between chimneys and wooden joists or beams shall be filled with loose cinders, loose mortar refuse, gypsum block, or other porous incombustible material to form a firestop. See Plates I, III and IV.

The incombustible material shall be supported by strips of sheet metal or metal lath set into the brickwork and nailed to the wooden beams, form-

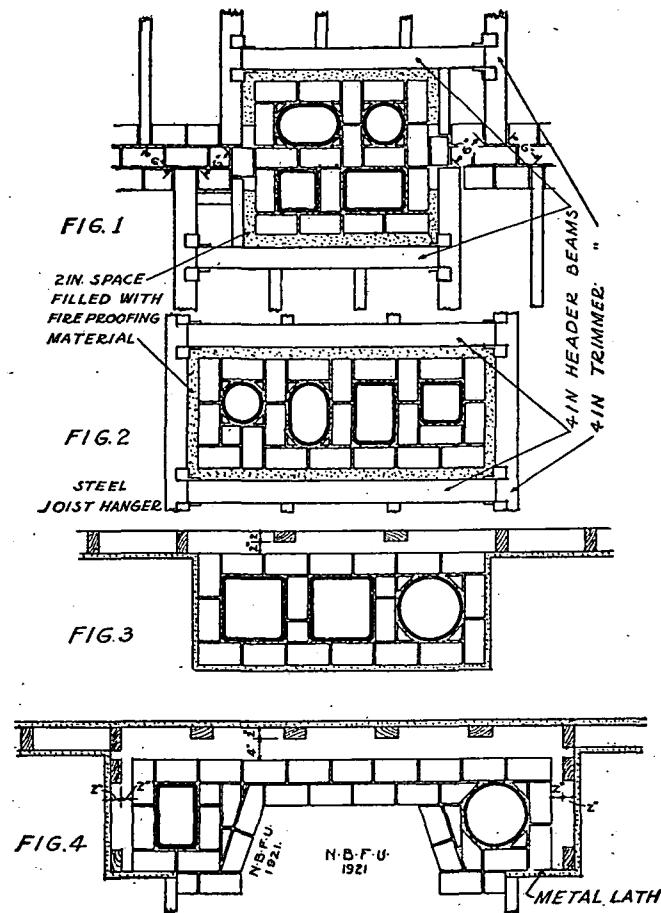


PLATE IV.

Fig. 1.—Floor framing around chimney in a party wall, to secure proper space between ends of floor joists.

Fig. 2.—Ordinary floor framing around a chimney. All timbers 2 inches clear of brickwork and space filled with fireproofing material.

Fig. 3.—Stud partition across back of a chimney showing proper method of arranging studs.

Fig. 4.—Stud partition across back of a fireplace and around the ends of the chimney breast, showing proper arrangement of studs. Method of fire-stopping this space is shown on chimney section, Plate I, also in Fig. 2, Plate III.