These proportions shall be measured by volume, and for this purpose 1 cubic foot of cement shall be taken as weighing 90 lb. Cement shall be to British Standard Specification. All lime shall have been properly slaked. Sand shall be clean and have its grains varying in size from fine to coarse, with coarse grains predominating. Mortar shall be mixed in small quantities for immediate use only, with sufficient clean fresh water to render it of good working consistency.

3. *Bonding.*—All brickwork shall be built in English or Flemish bond where practicable, and every wall shall be thoroughly bonded to surrounding walls and piers.

4. *Metal Bonding.*—Metal reinforcement shall be uniformly distributed throughout the thickness of the wall, and shall have an ultimate tensile strength not less than 1,200 lb. for each 4½ in. thickness of wall, and shall have a mechanical as well as an adhesive bond with the mortar.

Transverse bonding-ties for cavity walls shall be of a standard design and so placed that they will tie strongly into the joint of the wall, and will prevent moisture from penetrating from outside to inside walls. The standard tie shall be made of No. 8 gauge wire formed into a figure of 8, 9 in. long and 3½ in. across loops, and shall have a double twist for approximately 2 in., with ends junctioned and turned out at the centre of twist. The whole to be galvanized after fabrication. (See fig. 4.)

5. *Wetting.*—All bricks shall be thoroughly saturated with water immediately before laying, but without free standing surface water at the time they are built into the work.

6. *Laying of Bricks.*—All bricks shall be laid in true level courses, well plumbed, and with all joints completely filled with mortar. Frogs, if any, shall be laid upward and flushed solid with mortar. In placing metal bonding, a mortar bed shall first be prepared and the bonding completely embedded therein.

Metal bonding shall be built into every fourth course in the height of the wall, and additional bonding shall be built in below all window-sills and over all lintels, extending at least 18 in. beyond the opening on each side. It shall have overlapped and locked joints and shall be well tied in round corners and at cross-walls, buttresses, or piers.

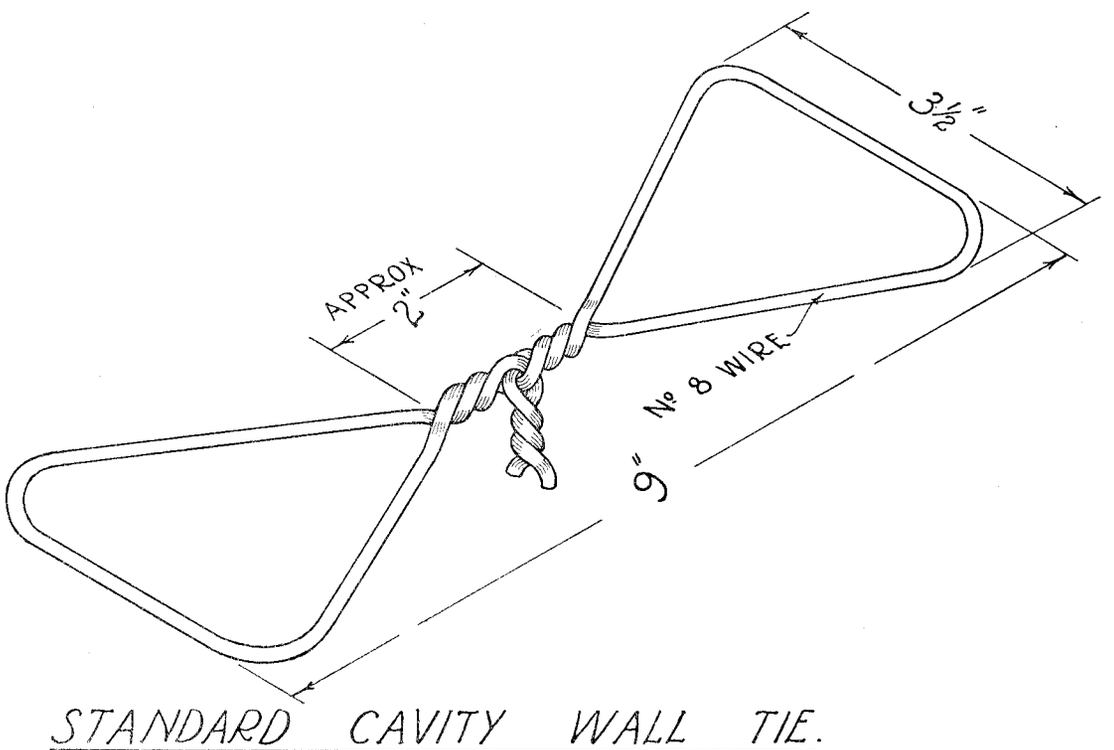

FIG. 4.

7. *Footings.*—All footings of brick walls shall be of reinforced concrete. Where projections or openings occur in walls, footings shall be carried continuously across same. Footing reinforcements shall consist of steel rods so placed as adequately to resist lateral as well as vertical forces. Stepped footings shall be overlapped at steppings. All angles of the footings shall be adequately reinforced, and shall have diagonal reinforcing and splayed corners where necessary.

8. *Bearing-walls.*—All brick bearing-walls and cross-partitions shall have continuous ties at eacn floor and at roof-level. Such ties shall consist of reinforced-concrete bands of the full width of wall, and not less than four courses of brickwork in depth. The amount of steel shall be not less thah 0·8 per cent. of the section of the concrete required under this by-law. It shall be in the form of not less than four rods at the four corners of the band, any additional rods to be placed at intermediate positions in the sides. It shall be hooped at intervals of not more than 12 in. with ¼ in. round steel rod. Where groups of door or window openings are of less distance apart than the width of openings, lintels shall be made continuous over the series. Lintels shall have not less than 9 in. bearing on walls and be properly anchored into same, and where terminating near corners they shall be carried round same and tied into return walls. Where rafters or veranda or other roofs terminate against brick walls, such walls shall have a concrete band reinforced against lateral force. In brick walls no openings shall be placed at a lesser distance than 3 ft. 9 in. from any external angle of walls.