Table II. Comparison of Building Laws

Materials	Boston, 1926	New York, 1927	Philadelphia, 1929	Chicago, 1928	Denver, 1927	San Francisco, 1928
	Allowable pressure, lb per sq in					
Granite	830	1 000	....	600	800	400
Marble	550	600	....	....	500	....
Limestone	550	700	....	400	500	....
Sandstone	415	400	....	400	400	....
Rubble, coursed	....	140	....	200	140	....
Rubble, ordinary	....	110	70–140	100	....	....
Hard-burned brick. Lime mortar	110	110	95	100	90	100
Hard-burned brick. Lime and cement mortar	200	160	200	175	130	140
Hard-burned brick. Portland-cement mortar	275	250	250	200	170	200
Stone concrete, 1 : 2 : 4	450	500	400*	400	400	750
Stone concrete, 1 : 2½ : 5	360	400	....	350	....	....
Stone concrete, 1 : 3 : 6	290	....	....	300	....	....
Hollow T.-C. block	150 gross	100 gross	80 gross	350 net	80 gross	....
Hollow concrete block	100 gross	75 gross	80 gross	....	80 gross	....
Grout-Neat Portland cement	830	1 000	....	....	....	....

... ultimate strength may be used

stories high.

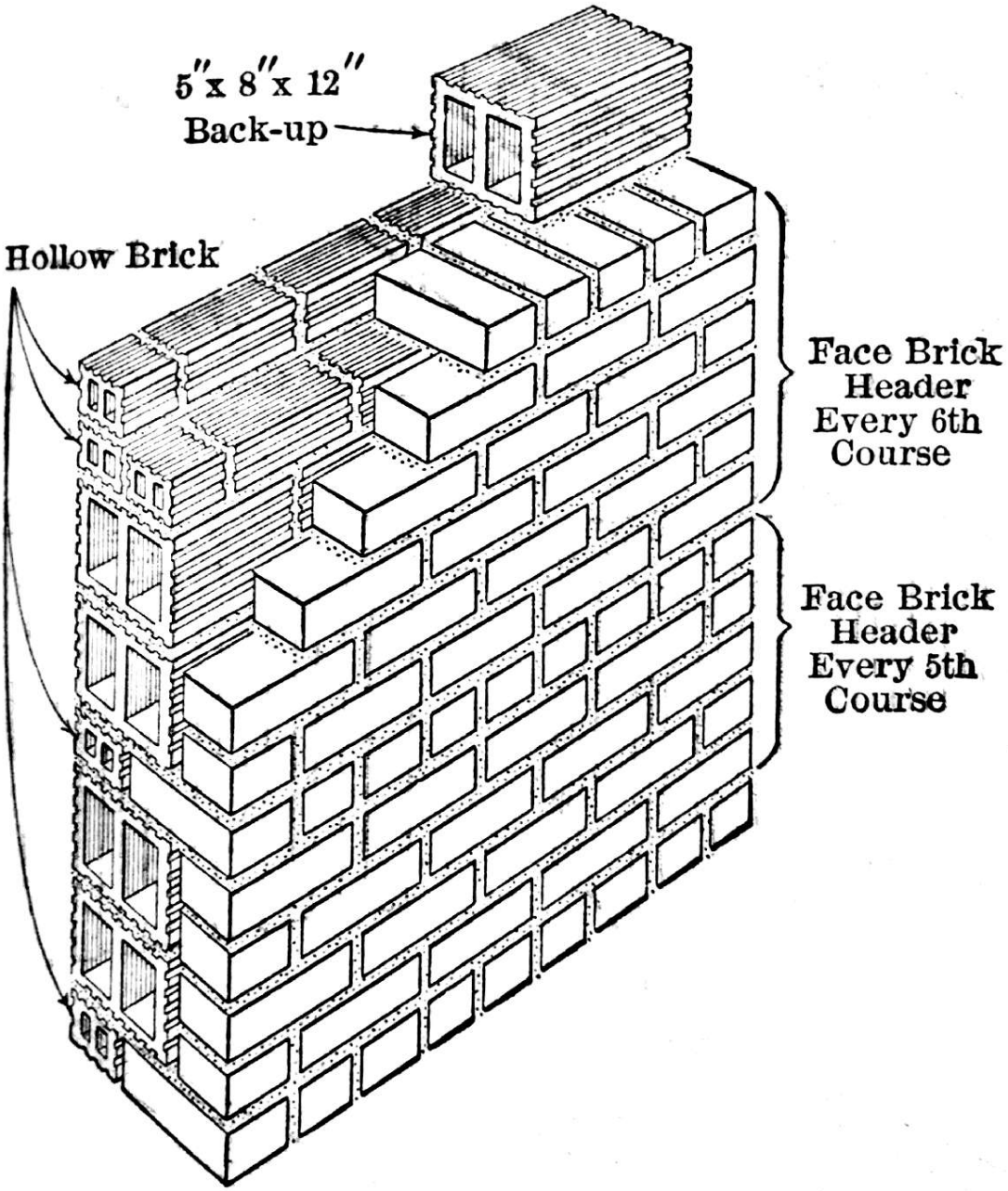
Walls of Hollow Terra-Cotta Blocks. Exterior bearing walls of hollow terra-cotta block are now permitted by the majority of Building Codes, but they are generally limited to four stories or about 40 ft in height. The walls should be from 8 in to 12 in thick, depending upon their height and loads, laid in cement mortar, with each tile extending through the wall. The New York Building Law of 1926 specifies hollow block walls of residences outside the fire limits to have a thickness of not less than 8 in for the uppermost 20 ft, 10 in for the next lower 10 ft, and 12 in for the next lower 10 ft. The tile should be hard burned and dense so as to be impervious to moisture, or if of semi-porous quality should be veneered on the outside with brick or stone or covered with at least $\frac{3}{4}$ in of cement stucco. The building codes do not generally permit party walls to be of hollow clay tile or blocks.

The use of both hollow terra-cotta and hollow concrete blocks has greatly increased of late years, especially for residences, garages and light manufacturing and retail store buildings. Many special shapes have been patented and put on the market which have various advantages as to bonding, insulation, strength, or ease of fitting and laying. Setting the blocks with the hollow spaces or cells horizontal is called SIDE CONSTRUCTION, and with the cells vertical, END CONSTRUCTION. End construction is considered as capable of bearing greater loads, but this advantage is offset in side construction by the better bed presented for the horizontal mortar-joints and greater ease in laying. Special tiles are required for sills and window-jambs and, in side construction, for corners also, so that the ends of the cells will not be exposed.

Party Walls. There is much diversity in building regulations regarding the thickness of party walls, although they all agree in that such walls should never be less than 12 in thick. About one-half of the laws require that party

Fig. 119. Back-up H
Brick, Two Cell

structural-clay product, back-up the ... of necessity be either SIDE OR END-CONSTRUCTION, depending upon whether the cells are laid horizontally or vertically. The selection of the method of construction depends upon the comparative efficiencies of the two types. It is claimed by some th HORIZONTAL cell or SIDE-CONSTRUCTION will insure dry walls, owing to th that the moisture when condensed will not run down through the ve cells and accumulate at the floor-line, and better and easier constru



Twelve-inch brick veener load bearing wall, using 5"×8"×12" back-up materi backing and hollow brick to provide header bond

Fig. 120. Back-up Hollow Brick Veneer Faced Walls