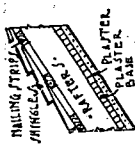
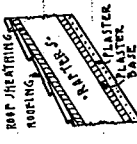


TABLE 12. COEFFICIENTS OF TRANSMISSION (U) OF PITCHED ROOFS^a

Coefficients are expressed in Btu per hour per square foot per degree Fahrenheit difference in temperature between the air on the two sides, and are based on an outside wind velocity of 15 mph.

TYPICAL CONSTRUCTION	TYPE OF ROOFING AND ROOF SHEATHING	INSULATION BETWEEN ROOF RAFTERS	No.	TYPE OF CEILING (Applied Directly to Roof Rafters)									
				No Ceiling (Rafters Exposed)	Metal Lath and Plaster (½ in.)	Plaster Board (¾ in.) and Plaster (½ in.)	Wood Lath and Plaster	Rigid Insulation (½ in.)	Rigid Insulation (¾ in.) and Plaster (½ in.)	Rigid Insulation (1 in.) and Plaster (½ in.)	Corkboard (1½ in.) and Plaster (½ in.)	Corkboard (2 in.) and Plaster (½ in.)	
	Wood Shingles on Wood Strips ^a	None	1	0.46	0.30	0.29	0.29	0.22	0.22	0.21	0.16	0.10	
		Bright Aluminum Foil ^b	2		0.22	0.21	0.21	0.18	0.17	0.14	0.11	0.089	
		1 in. Flexible ^c	3		0.13	0.12	0.12	0.11	0.11	0.092	0.078	0.069	
		2 in. Flexible ^c	4		0.086	0.083	0.083	0.076	0.075	0.068	0.060	0.054	
		3½ in. Rock Wool ^d	5		0.063	0.062	0.062	0.058	0.058	0.053	0.048	0.044	
	Asphalt Shingles, Rigid Asbestos Shingles, Composition Roofing, or Slate on Wood Sheathing ^e	None	6	0.56	0.34	0.32	0.32	0.24	0.23	0.17	0.13	0.11	
		Bright Aluminum Foil ^b	7		0.24	0.24	0.24	0.19	0.18	0.14	0.11	0.098	
		1 in. Flexible ^c	8		0.13	0.13	0.13	0.11	0.11	0.095	0.080	0.071	
		2 in. Flexible ^c	9		0.088	0.087	0.087	0.087	0.079	0.078	0.070	0.062	0.056
		3½ in. Rock Wool ^d	10		0.065	0.064	0.064	0.064	0.060	0.059	0.054	0.049	0.045

^aComputed from factors marked by * in Table 2. Nos. 6 to 10, inclusive, based on ½-in. thick slate.^bBased on 1 in. by 4 in. strips spaced 2 in.^cFigures based on two air spaces. Insulation may also be applied to under side of roof rafters with furring strips between.^dRoofing felt between roof sheathing and slate or tile neglected in calculations.^eAssumed 3½ in. thick based on the actual width of 2 in. by 4 in. rafters.^fSheathing assumed ½ in. thick.^gAir space faced on one side with bright aluminum foil.

CHAPTER 5. HEAT TRANSMISSION COEFFICIENTS AND TABLES

TABLE 13. COEFFICIENTS OF TRANSMISSION (U) OF DOORS, WINDOWS, SKYLIGHTS AND GLASS WALLS

Coefficients are based on a wind velocity of 15 mph, and are expressed in Btu per hour per square foot per degree Fahrenheit difference in temperature between the air inside and outside of the door, window, skylight or wall.

A. Windows and Skylights

DESCRIPTION	U
Single.....	1.13 ^{a, c}
Double.....	0.45 ^a
Triple.....	0.281 ^a

B. Solid Wood Doors^{b, c}

NOMINAL THICKNESS INCHES	ACTUAL THICKNESS INCHES	U
1	25/32	0.69
1 1/4	1 1/16	0.59
1 1/2	1 5/16	0.52
1 3/4	1 7/8	0.51
2	1 7/8	0.46
2 1/2	2 1/8	0.38
3	2 7/8	0.33

C. Glass Walls

DESCRIPTION	U
Hollow glass tile wall, 6 x 6 x 2 in. thick blocks, wind velocity 15 mph, outside surface; still air, inside surface.....	0.60
Still air, outside and inside surface.....	0.48

^aSee Heating, Ventilating and Air Conditioning, by Harding and Willard, revised edition, 1932.^bComputed using $C = 1.15$ for wood; $f_1 = 1.65$ and $f_2 = 6.0$.^cIt is sufficiently accurate to use the same coefficient of transmission for doors containing thin wood panels as that of single panes of glass, namely, 1.13 Btu per hour per square foot per degree difference between inside and outside air temperatures.It is probable that the values of U for these two types of roofs will compare favorably.

The thicknesses upon which the coefficients in Tables 3 to 13 inclusive, are based are as follows:

Brick veneer.....	4 in.
Plaster and metal lath.....	3/4 in.
Plaster (on wood lath, plasterboard, rigid insulation, board form, or corkboard).....	1 1/2 in.
Slate (roofing).....	1 1/2 in.
Stucco on wire mesh reinforcing.....	1 in.
Tar and gravel or slag-surfaced built-up roofing.....	3/8 in.
1-in. lumber (S-2-S).....	25/32 in.
1 1/2-in. lumber (S-2-S).....	1 1/16 in.
2-in. lumber (S-2-S).....	1 5/8 in.
2 1/2-in. lumber (S-2-S).....	2 1/8 in.
3-in. lumber (S-2-S).....	2 3/8 in.
4-in. lumber (S-2-S).....	3 1/8 in.
Finish flooring (maple or oak).....	1 1/16 in.

Solid brick walls are based on 4-in. hard brick (high density) and the remainder common brick (low density). Stucco is assumed to be 1-in. thick on masonry walls. Where metal lath and plaster are specified, the metal lath is neglected.