



*The
Home Fires*

THE
HOMES
OF
THE
NATION

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1878-1880

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“God rest you all that linger here”

See note on page twenty-five

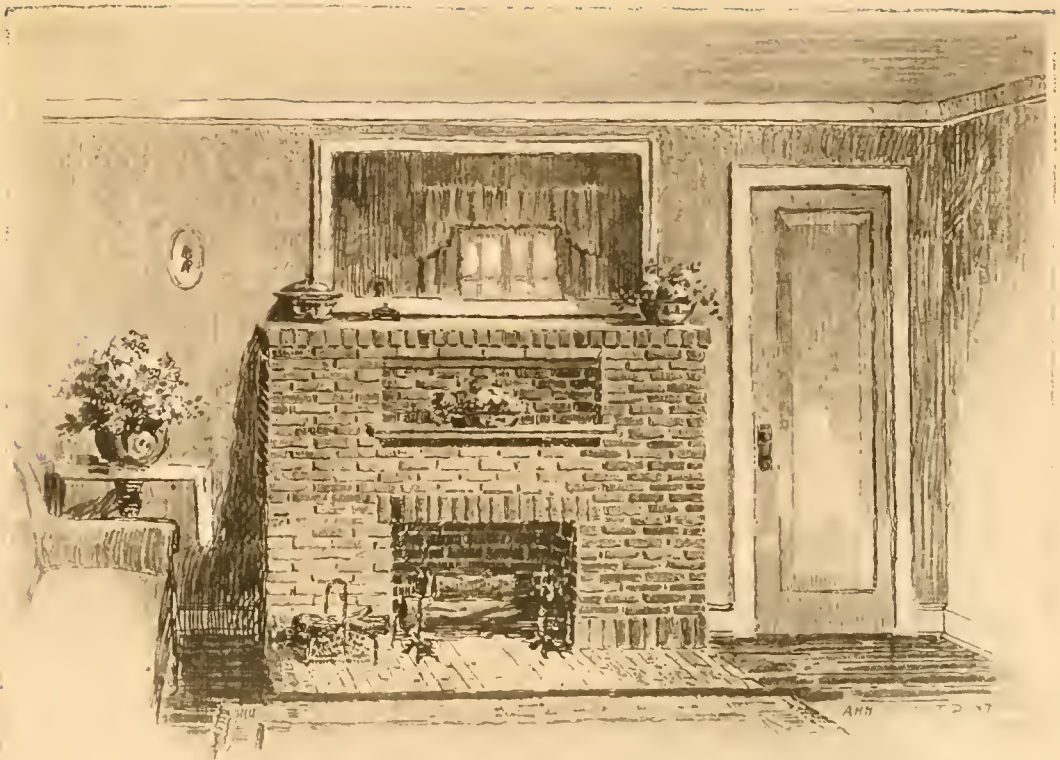
The HOME FIRES

*A few suggestions
in Face Brick
Fireplaces*



Price Fifty Cents

AMERICAN FACE BRICK ASSOCIATION
130 NORTH WELLS STREET
CHICAGO



You are Welcome Here

Fireplace No. 11

Designed for American Face Brick Association

Width of facing	7' 2 1/2"	Projection of hearth	1' 4"
Width of opening	7' 0"	Height of brick hearth	3' 9"
Height of opening	2' 1 1/2"	Width of mantel	0' 11 1/4"
Height of shelf	5' 0"		

Face Brick required: Breast 350 H. 100 75 B. 1000 Hearth and lining 125



THE HEARTHSTONE

THERE is no one material thing in the home that has so many varied aspects or so much meaning for us as the hearthstone. Sidney Smith used to say: "The fire is a live thing in a dead room." And, indeed, it does seem to respond to and express every human mood. It crawls and runs, or leaps up and dances to the stately rhythm of the minuet or to wild, unbridled, bacchantic measures; it rejoices and laughs with us, and, although it cannot be said to weep, it at any rate darkens, cowers, and sinks into seeming accord with our sad memories or melancholy reflections.

We never tire of watching its elfin flames in mad pursuit of one another, playing tag over the burning logs, or sedately tripping along like timid maidens up the church aisle. We love to hear them purr and hum as they lull us to a delightful mood of indolent reverie, or crackle and roar as if sounding drums and trumpets to heroic action.

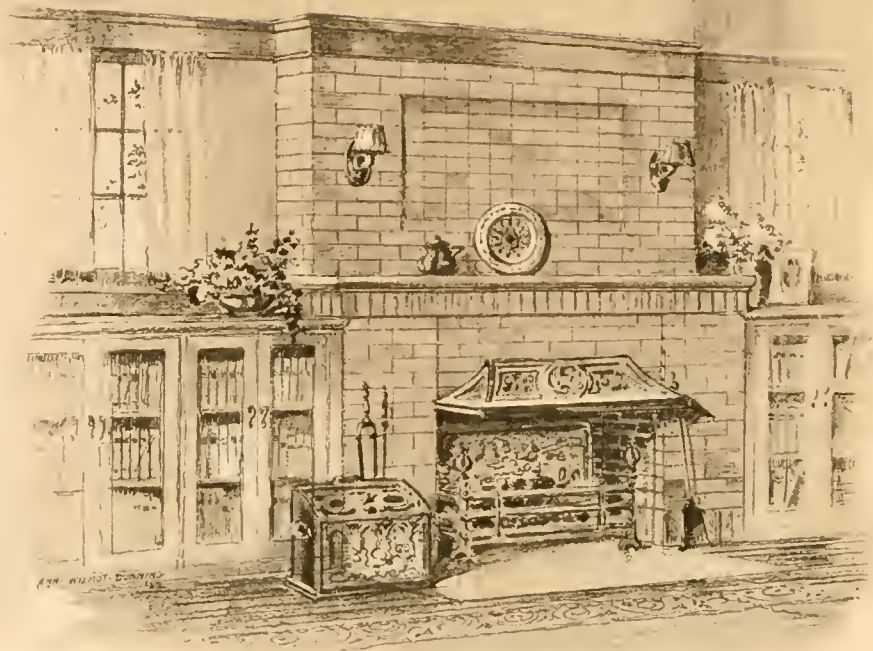
But aside from idle fancies, nothing equals the fireplace in making the room cozy and homelike. Modern heating systems may adequately solve the problem of regular and even temperatures, but there is nothing especially genial or inviting about them.

But around your genial fireplace, reminiscent as it is of human fellowship from before the days when history began, your friends find an inviting kindness that unlocks the heart and incites the fancy to all manner of happy thoughts, intimate confidences, and friendly converse. And what can be more delightful than to see the happy children crowding around the glowing embers to toast marshmallows, pop corn, or roast chestnuts!

On the strictly practical side, while the fireplace, except in very moderate climates, will make little effect on the winter's cold, it will be exceedingly welcome in the early days of spring and late days of autumn. From every point of view, aesthetic, sentimental, and practical, every house, no matter what it is built of, should have at least one good fireplace where family and friends may foregather in happy converse.

And what other material is there which is so good or appropriate for the construction of the fireplace as brick? Having stood the test of flame in their making, they defy it in their use. The feeling that the roaring fire on the hearth beats harmlessly against the enduring brick, as the sea beats in vain against a granite headland, gives a sense of security and satisfaction.

Then, on the artistic side, not only do the small convenient brick units permit a great variety of designs that fit admirably into the scale of the room, but the color and texture of the brick allow the widest choice of decorative motives to harmonize with the interior color scheme, as the lady of the house may choose, and the interior decorator will find in face brick a medium that readily yields any result at which he aims.



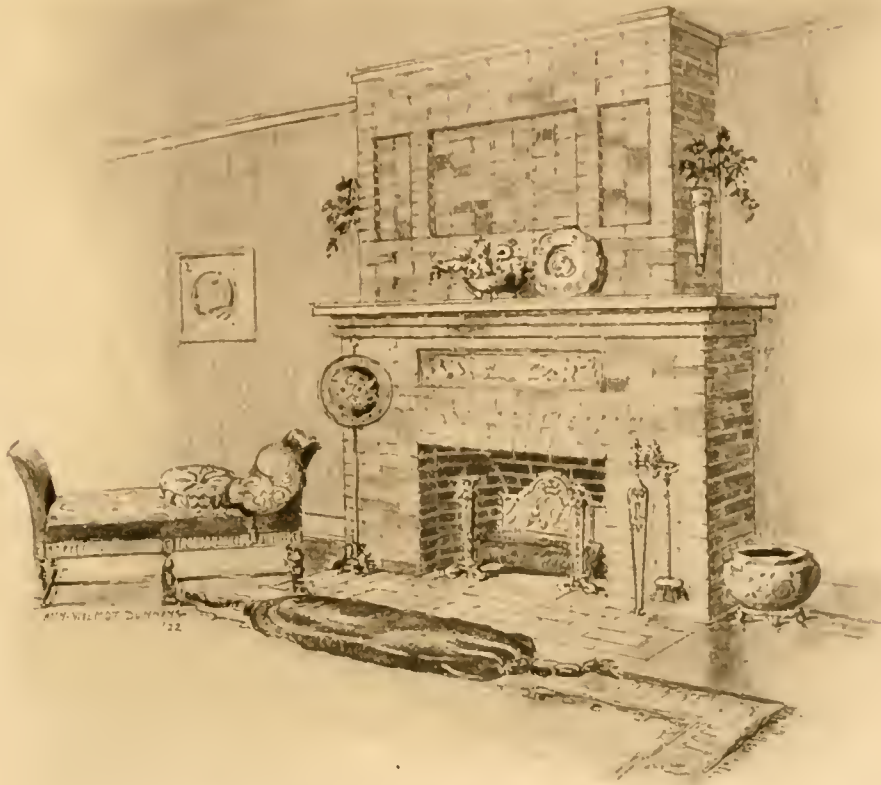
A clear fire, a clean hearth, and good cheer

Fireplace No. 12

Designed for American Face Brick Association

Width of facing	6'-2"	Total height	7'-0"
Width of opening	3'-5½"	Projection of hearth	1'-9"
Height of opening	2'-4"	Depth of back hearth	1'-9"
Height of shelf	4'-1"	Width of joint	0'-¼"

Face Brick required: Breast 300, Hearth 50, Back hearth and lining 125



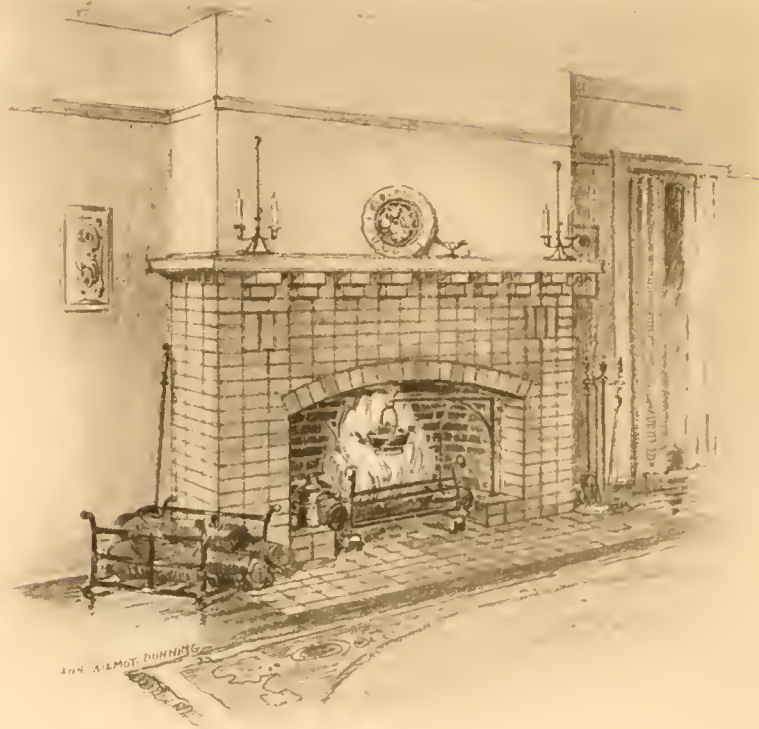
Where Friends Meet, Hearts warm

Fireplace No. 13

Designed for American Face Brick Association

Width of facing	5'-10"	Total height	9'-0"
Width of opening	3'-1"	Projection of hearth	1'-3 1/2"
Height of opening	2'-3 1/2"	Depth of back hearth	1'-9"
Height of shelf	1'-9 1/2"	Width of joint	0'-1/4"

Face Brick required. Breast 370, Hearth 40, Back hearth and lining 120



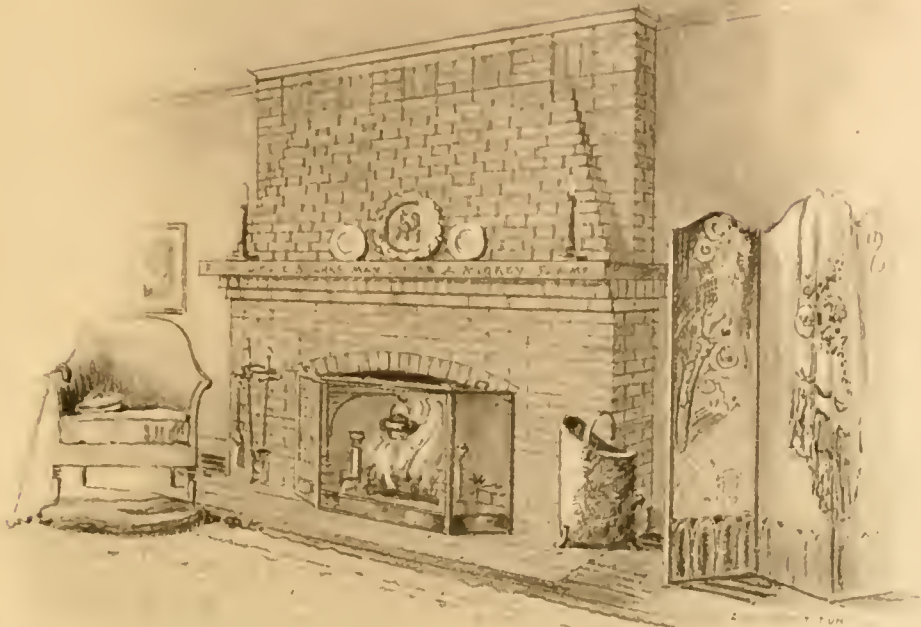
Our fire is your friend

Fireplace No 14

Designed for American Face Brick Association

Width of facing	6'-0"	Projection of hearth	1' 3"
Width of opening	4'-0"	Depth of back hearth	1'-9"
Height of opening, top	2'-0 $\frac{1}{2}$ "	Width of joint	0' 1 $\frac{1}{4}$ "
Height of shell	4'-9"		

Face Brick required: Breast 200, Hearth 60, Back hearth and lining 150

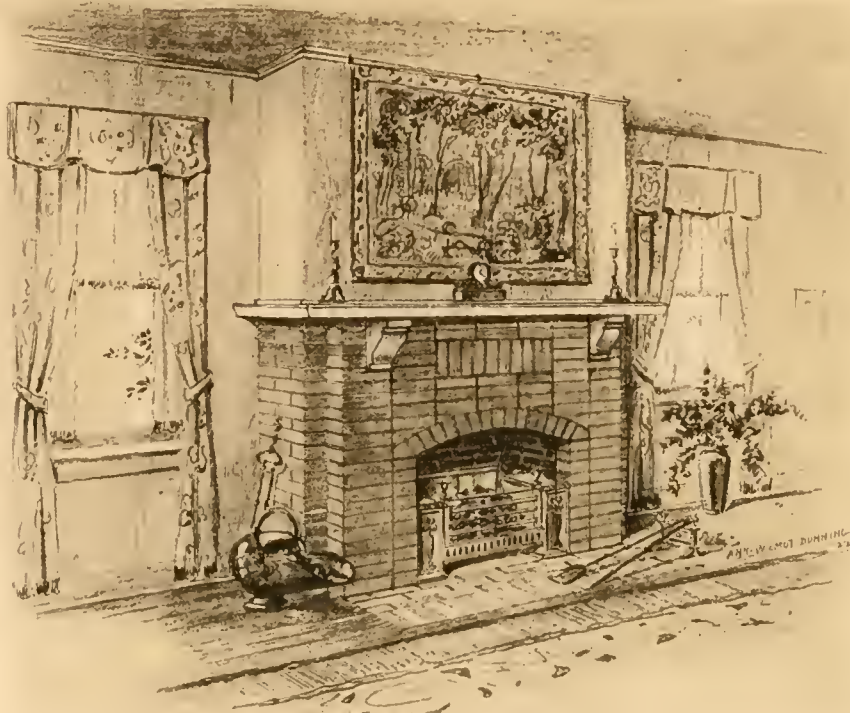


From little sparks may burst a mighty flame

Fireplace No. 15

Designed for American Face Brick Association

Width of facing	7'-2"	Total height	9'-1"
Width of opening	4'-2"	Projection of hearth	2'-1/2"
Height of opening top	2'-9"	Depth of back hearth	1'-9"
Height of shelf	4'-9"	Width of joint	0'-1/4"
Face Brick required	Breast 550. Hearth 75, Back hearth and lining 160		



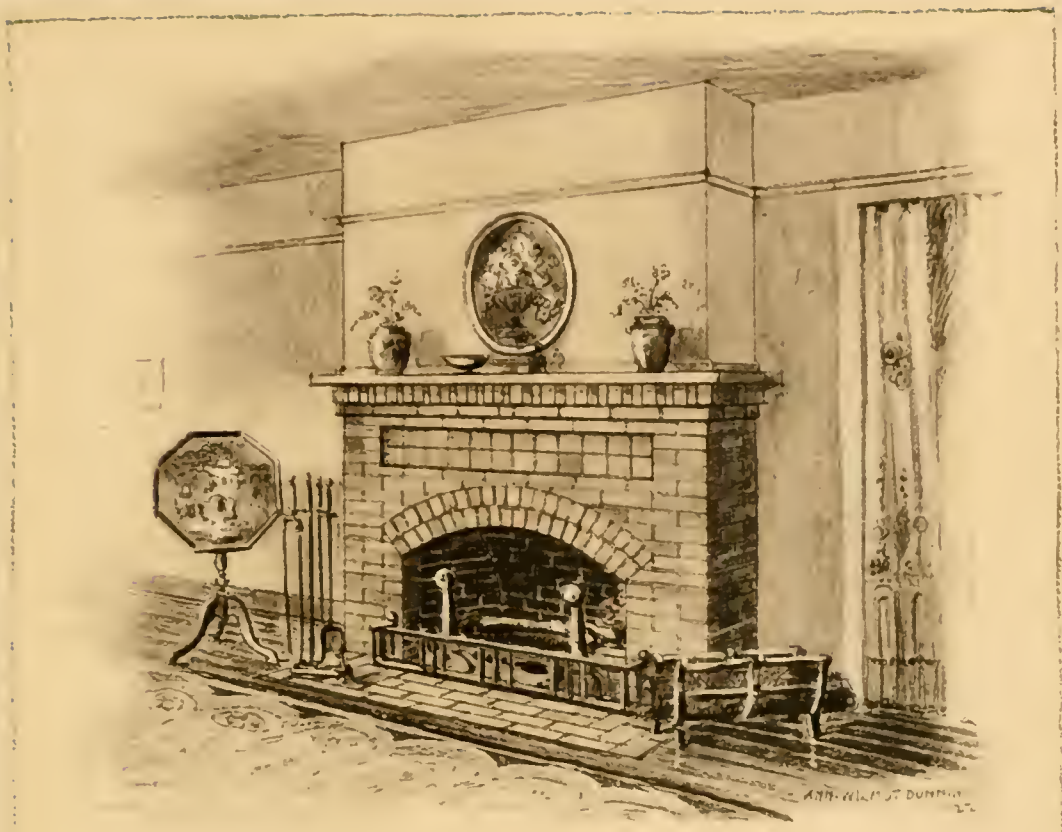
To God Faith, to Friends Hearth

Fireplace No. 16

Designed for American Face Brick Association

Width of facing	5'-6"	Projection of hearth	1'-4"
Width of opening	2'-9"	Depth of back hearth	1'-9"
Height of opening, top	2'-4½"	Width of joint	0'-¾"
Height of shelf	4'-7"		

Face Brick required: Breast 200, Hearth 50, Back hearth and lining 120



Good cheer and a bright fire

Fireplace No. 17

Designed for American Face Brick Association

Width of facing	5'-6"	Projection of hearth	1'-8"
Width of opening	3'-5 1/2"	Depth of back hearth	1'-9"
Height of opening, top	2'-3"	Width of joint	0'- 1/4"
Height of shelf	4'-8"		

Face Brick required: Breast 210, Hearth 50, Back hearth and lining 125



A friendly fire where cronies meet

Fireplace No. 18

Designed for American Face Brick Association

Width of facing	6'-10"	Total height	6'-10"
Width of opening	3'-4 $\frac{1}{2}$ "	Projection of hearth	1'-8 $\frac{1}{2}$ "
Height of opening	2'-3 $\frac{1}{2}$ "	Depth of back hearth	1'-9"
Height of shelf	4'-5"	Width of joint	1'-1 $\frac{1}{2}$ "

Face Brick required: Breast 320, Hearth 70. Back hearth and lining 125



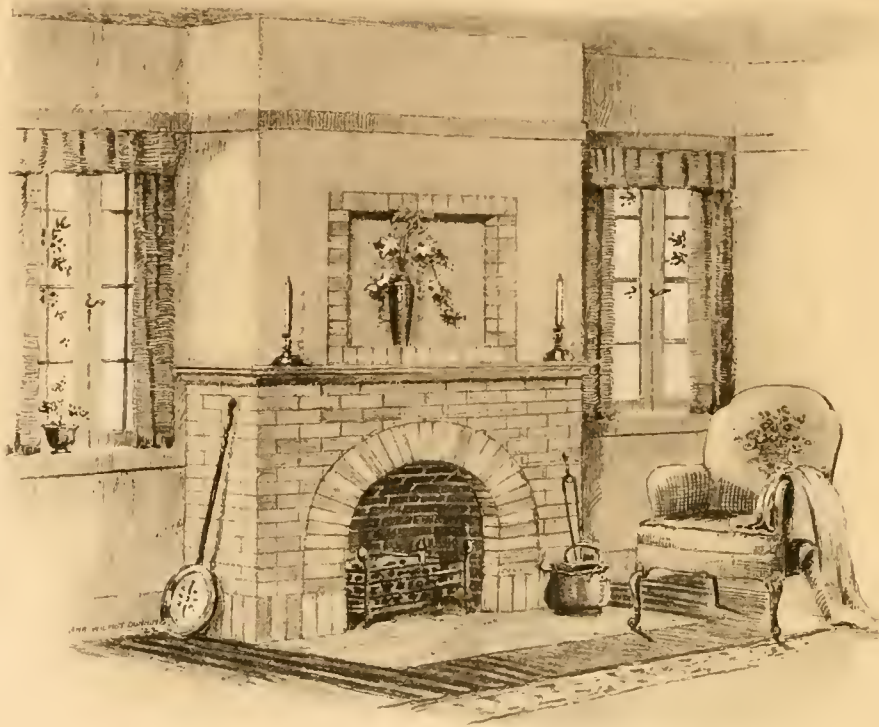
East, West, Home's Best

Fireplace No. 19

Design for American Face Brick Association

Width of facing	5' 3"	Projection of hearth	1' 4"
Width of opening	2' 1"	Depth of back hearth	1' 9"
Height of opening	2' 4 1/2"	Width of joint	0' 1 1/2"
Height of shelf	3' 4 1/2"		

Face Brick regular, Breast 150, Hearth 60, Back hearth and lining 120



Here Friends are Welcome, all others Secure

Fireplace No. 20

Designed for American Face Brick Association

Width of facing	5'-6"	Projection of hearth	2'-1"
Width of opening	2'-9"	Depth of back hearth	1'-9"
Height of opening	2'-6"	Width of joint	0'- $\frac{1}{4}$ "
Height of shelf	4'-0"		

Face Brick required: Breast 190, Hearth 80, Back hearth and lining 130



Shut in from all the world without
Content to let the northwind roar

Fireplace No. 21

Designed for American Face Brick Association

Width of facing	5'-4"	Total height	9'-3 $\frac{1}{2}$ "
Width of opening	3'-5 $\frac{1}{2}$ "	Projection of hearth	2'-0"
Height of opening	2'-7 $\frac{1}{2}$ "	Depth of back hearth	1'-9"
Height of shelf	4'-3 $\frac{1}{2}$ "	Width of joint	0'- $\frac{1}{4}$ "

Face Brick required: Breast 340, Hearth 75 Back hearth and lining 140



Fire purifies gold and consumes dross

Fireplace No. 22

Designed for American Face Brick Association

Width of facing	5'-8"	Projection of hearth	1' 6"
Width of opening	3'-12"	Depth of back hearth	1' 3"
Height of opening	2'-11 $\frac{1}{2}$ "	Width of joint	6'-1 $\frac{1}{2}$ "
Height of shelf	4'-2"		

Face Brick required: Breast 125, Hearth 50, Back hearth and Lining 100



Each man's chimney is his Golden Milestone

Fireplace No. 23

Designed for American Face Brick Association

Width of facing	6' 0"	Projection of hearth	1' 4 1/2"
Width of opening	3' 3"	Depth of back hearth	1' 0 1/2"
Height of opening	2' 1"	Width of joint	0" 1/2"
Height of shell	4' 3"		

Face Brick require: 1 Breast 110 Hearth 65, Back hearth and lining 115



Where there's hearth room there's heart room

Fireplace No. 24

Designed for American Face Brick Association

Width overall	6'- 0"	Height of shelf	5'-0"
Width of facing	4'-11"	Projection of hearth	1' 6"
Width of opening	2'-10 $\frac{1}{2}$ "	Depth of hearth	1'-9"
Height of opening, top	2'-10"	Width of joint	0'- $\frac{1}{2}$ "

Face Brick required: Breast 100, Hearth 50, Back hearth and lining 120



Now for wise counsel, a good story, or a merry jest

Fireplace No. 25

Designed for American Face Brick Association

Width overall	6' 4"	Height of shelf	4' 6"
Width of facing	5' 2 $\frac{1}{2}$ "	Projection of hearth	1' 4 $\frac{1}{2}$ "
Width of opening	3' 2 $\frac{1}{2}$ "	Depth of back hearth	1' 9"
Height of opening	2' 6"	Width of joint	0' 1 $\frac{1}{2}$ "
Face Brick required Breast 60, Hearth 60, Back hearth and lining 100			



The fire burns bright on one's own hearth

Fireplace No. 26

Designed for American Face Brick Association

Width of facing	4'-11"	Projection of hearth	2'-1"
Width of opening	2'-10 $\frac{1}{2}$ "	Depth of back hearth	1' 9"
Height of opening	2'- 6 $\frac{1}{2}$ "	Width of joint	0'- 1 $\frac{1}{2}$ "
Height of shelf	4'- 6"		

Face Brick required: Breast 160, Hearth 65, Back hearth and lining 125



Warmth and cheer attend you here

Fireplace No. 27

Designed for American Face Brick Association

Width overall	6'-0"	Height of shelf	4'-6"
Width of facing	4'-9 $\frac{1}{2}$ "	Projection of hearth	1'-4 $\frac{1}{2}$ "
Width of opening	2'-9 $\frac{1}{2}$ "	Depth of back hearth	1'-9"
Height of opening	2'-3 $\frac{1}{2}$ "	Width of joint	0'- $\frac{1}{4}$ "
Face Brick required	Breast 95, Hearth 50, Back hearth and lining 120		



Friend, this Hearth is Yours

Fireplace No. 28

Designed for American Face Brick Association

Width of facing	5'- 7 1/2"	Total height	7'- 0"
Width of opening	2'- 10 1/2"	Projection of hearth	1'- 4 1/2"
Height of opening	2'- 9"	Depth of back hearth	1'- 9"
Height of shelf	4'- 2 1/2"	Width of joint	0'- 1/2"

Face Brick required: Breast 345, Hearth 60, Back hearth and lining 125



A wee bit ingle, blinkin' bonnily

Fireplace No. 29

Designed for American Face Brick Association

Width of facing	6'- 4"	Projection of hearth	1'- 4 1/2"
Width of opening	2'- 10 1/2"	Depth of back hearth	1'- 0"
Height of opening	2'- 10"	Width of joint	0'- 3 1/2"
Height of shelf	4'- 6"		

Face Brick required: Breast 190, Hearth 45, Back hearth and lining 125

Additional Fireplace Mottoes

Hospitality, Kindness, and Good Faith Greet You Here

My fires light up the hearths and hearts of men

Longfellow

Grande Chere et Beau Feu

Good cheer and a bright fire

Old French

Light your fire and never fear,
Life was made for love and cheer

Henry Van Dyke: "The Hearth-stone"

Where glowing embers through the room
Teach light to counterfeit a gloom

Milton: "Il Penseroso"

Behold how great a matter a little fire kindleth

St. James 3:3

Fireside enjoyments and home-born happiness

Cowper

Fairness and kindness are yours at this hearth

Come, Friends, we'll rest in friendly converse here awhile

Better a wee fire to warm ye
Than a big fire to burn ye

Scotch Proverbs

While I was musing, the fire burned

Psalms 39

Let the world wag, here we take our ease

Where there's room in the heart
There's room at the hearth

Adapted

Here bide a wee in friendly converse

Courtesy, truth, and honour meet here

We are met here to say and hear the best

Commit thy thoughts to me and I will talk with thee
 To be here together is a goodly thing
 In my light and warmth let friends foregather
 Let my glowing embers warm your heart to all the world
 Here in sweet discourse, we while away the hours
 May these genial flames light the mind and warm the heart

A world of care shut out
 A world of love shut in

In this safe anchorage, find welcome and good cheer

When the fire burns, the heart rejoices

A clear fire, a clean hearth, and good cheer

Adapted from Charles Lamb: "Chat on Whist"

Where Friends Meet, Hearts warm

On Old Fireplace in Wales

From little sparks may burst a mighty flame

Dante: "Paradise"

Au Dieu Foy, aux Amis Foyer

To God [our] Faith, to Friends [our] Hearth

Old French

A friendly fire where cronies meet

Scotch

Shut in from all the world without

Content to let the northwind roar

Whittier: "Snowbound"

Each man's chimney is his Golden Milestone

Longfellow: "Golden Milestone"

NOTE: The frontispiece drawing, facing the title page, shows Fireplace No. 10 designed by the American Face Brick Association, and the specifications are as follows:

Width of facing	4' 11"	Projection of hearth	1'-4 $\frac{1}{2}$ "
Width of opening	2' 10 $\frac{1}{2}$ "	Depth of back hearth	1' 9"
Height of opening, top	2'-10"	Width of joint	0'- $\frac{1}{2}$ "
Height of shell	4'- 9"		

Face Brick required. Breast 150. Hearth 50. Back hearth and lining 125



ENCLOSED PORCH, *East Hampton, L. I.*

F. E. NEWMAN, *Architect*

PROPER FIREPLACE CONSTRUCTION

HAVING selected the design you want, the color and texture of the brick, and, what is also very important, the color, kind, and width of mortar joint, you are ready for the following pages in which we show you the correct methods for constructing a successful fireplace. We furnish the working drawings of any of the preceding fireplace designs for one dollar. All the dimensions given are based on the use of standard sizes and shapes of brick laid with a quarter or half-inch mortar joint as indicated in connection with the illustrations. If you wish to use a larger joint you can easily calculate the difference thus made by counting the number of joints. In fact, you can easily draw the entire fireplace for yourself by following the methods of construction we advise, and determine the dimensions by counting the number of brick and joints, taking the standard size of face brick to be approximately 8 inches in length, $2\frac{1}{4}$ inches in height, and from $3\frac{3}{4}$ to $3\frac{7}{8}$ inches in width, always counting in the width of the mortar joint you want. To be absolutely accurate, however, you should take the exact measurement of the particular brick you intend to use and, adding the chosen joint, get your unit for calculating dimensions.

If you find the dimensions of the design you want a little too large or too small for the space you have, send us the exact dimensions you want your fireplace to fill, the size of the brick and the width of the mortar joint you prefer, and we will indicate on our drawings what is to be done to make such changes. This does not mean that we will make new designs. However, you can easily change the dimensions for yourself, by units of one brick in height and a half brick in breadth, always taking into consideration the mortar joint.

We suggest, as you will see, a number of mottoes which may be inscribed in various ways on some part of the fireplace. If the mantel shelf is heavy enough, the inscription may be placed on the edge. Perhaps an oak panel bearing the motto may be used to replace two courses of brick in the chimney breast, or, in similar manner, plaster may be used and tinted any color to harmonize with the brick or trimmings.

Location and Proper Construction of Fireplace

The location of the fireplace in the room is of great importance to its enjoyment. As it is the most ornamental feature of the interior of the house, it should be given a prominent position, but it should not be in the line of travel through the room, near the entrance door, or where a cross draft sweeps it. The far end of the room is one of the best locations. If placed on the broad side of the average room, care should be taken to see that it does not reduce the practicable width of the room and force the rug over the hearth. If placed on an outside wall, it is better not to have large flanking windows, as that would mean facing too much light whenever the fireplace was used during the day.

The one serious fault in a fireplace is a poor draft which results in smoke pouring into the room. This fault may be avoided by the proper construction of the fireplace and chimney. With a good draft you not only avoid a smoky chimney but you constantly get fresh air which is being drawn into the room from the outside, thus making very perfect ventilation. Next to a good draft, as a fundamental necessity, is the desirability of getting the maximum of heat which also is secured by the proper construction.

A Good Draft

A good draft depends upon the proper relation of fireplace opening to the size of the flue, the chimney height, and the position of the throat which determines the important matter of the smoke shelf. Whatever the size of the fireplace, the actual inside area of the flue should be approximately, but never less than, one-tenth of the area of the fireplace opening, except possibly where, because of a strong draft due to an exceptionally high chimney, the flue area may be somewhat reduced. Each fireplace should have its own individual flue,

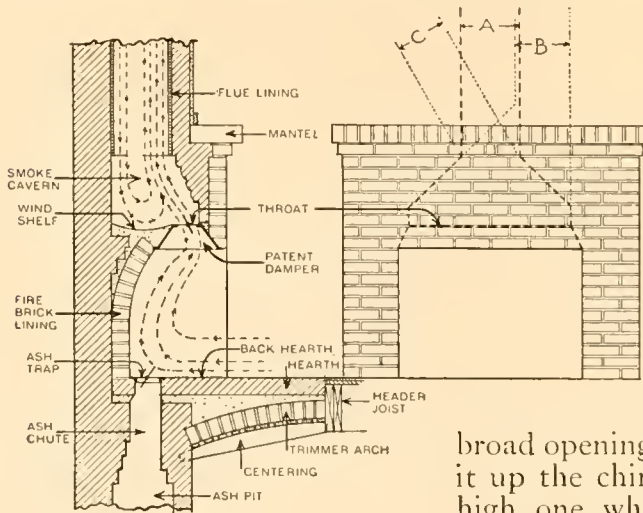


Fig. 1

broad opening will catch the smoke and direct it up the chimney better than a narrow and high one which is frequently used for coal grates. With arched openings, take their average height as the top line. For your convenience, we give you a table of commercial flue linings, showing inside areas with which you may compare a tenth of your opening area. As you are not likely to find the exact correspondent size, use the lining which in net area is next above the actual tenth of the fireplace opening, except in the case already mentioned where a few square inches less in area will make no essential difference.

Much depends for a good draft on the throat which is the narrow opening above the fire for the escape of smoke and gases into the flue. The ideal form of a fireplace

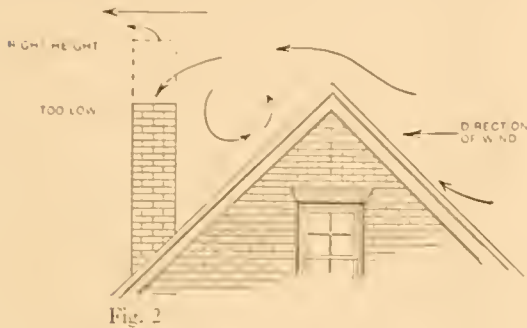
carried full size to the top of the chimney, without connections of any kind from other sources, and the chimney should be carried at least one foot above the highest point of the roof. Nor should the chimney, so far as possible, be overtopped by nearby clumps of trees or neighboring buildings which may cause strong eddies in the wind to drive down the chimney. See Fig. 2. For wood-burning fireplaces a low

broad opening will catch the smoke and direct it up the chimney better than a narrow and high one which is frequently used for coal grates. With arched openings, take their average height as the top line.

COMMERCIAL FLUE LININGS

OUTSIDE DIMENSIONS	INSIDE AREA
8½ x 8½ inches	52 square inches
8½ x 13 inches	80 square inches
13 x 13 inches	126 square inches
13 x 18 inches	169 square inches
18 x 18 inches	240 square inches

would be a cone with all sides tapering toward the apex which immediately joins the bottom of the flue. To approach this ideal in practice, the back of the fireplace is curved forward beginning from a point a little less than half



way from the hearth and extending to the top and front of the fireplace opening, with which it forms a long, narrow outlet for the smoke, about 4 inches wide, known as the throat. See Fig. 1. This forward curve of the back throws the smoke and flame forward to the throat, and at the same time forms a shelf above which is very effective as a means for deflecting any down drafts in the chimney, as may be seen from the illustration. The rear wall of the

fireplace should never be straight with the throat at the rear, as down drafts would be sure to blow smoke and dust into the room.

It is generally best to place a damper in the throat, completely filling it, for regulation of the draft. There are two types of dampers in use, one a simple flat damper, and the other a patent combination of damper and throat, sometimes known as a dome damper, shown in Fig. 1. The flat damper fills the opening of the throat which should be not less than four inches above the top of the fireplace opening. The patent dome damper is so constructed as to make in one piece a lintel for the brickwork at the top of the fireplace opening and a smooth, sloping surface, back and front, up to the throat, in which is snugly fitted the damper. This patent combination gives a perfectly formed throat and provides a means of regulating the draft by a lever attached to the damper and extending to the front or side of the fireplace, or by an arm or a pair of chains immediately under the top of the opening, easily operated by a poker. Our designs are arranged for this type of throat and damper. Especial care should be taken in laying up the brickwork above and around the damper so as to leave no openings for leakage of air.

Immediately above the damper and on the sides, *but not on the back*, the brickwork should be narrowed in by corbeling to the size of the flue, at an angle of not more than thirty degrees to the vertical. The cavity thus formed is called the smoke chamber or cavern and is extremely important as a temporary reservoir for smoke in case a contrary gust of wind shuts off the draft or drives down the chimney. Thus the smoke shelf and cavity serve the double purpose not only of deflecting the usual down currents of air and turning them back up the flue but of preventing smoke from being forced into the room by gusty winds.

While it is not necessary, it may be desirable to clip the corners of the corbeled brick to facilitate the movement of the smoke. For like reasons, the smoke shelf may be covered with a concave bed of cement as shown in the illustration. In any case, do not try to make the upright surface of the chamber smooth with plaster, as in time the plastering will fall off, due to the action of the heat.

The flue should always be started on a line with the middle of the fireplace and run vertically as shown at A, in Fig. 1. It then may be jogged over to the desired location on the floor above. If, on the contrary, the walls of the smoke chamber are drawn over to a flue on one side of the chimney as at B, or the central flue, in its first section, is run at an angle as at C, the result will be an uneven fire, as it will burn better on one side than on the other.

Maximum Heat

Once having secured a good draft the next most important thing about a fireplace is to develop a maximum heating capacity. Aside from the kind of fuel used, two simple principles of construction are required to get the most heat from the fireplace, the curving forward of the back, already described, and the splaying of the sides. The amount of splay depends on various circumstances, but on an average it will be sufficient if it narrows the back hearth three inches on each side. The forward curving back naturally throws the heat forward toward and through the opening and the splayed sides are at such an angle as to reflect the heat into the room in the same way.

The ideal fire, of course, is that of wood because of its cleanliness, its sweet odor, and its variety of flame formations. With a wood fire the ash should be allowed to bank on the hearth to a considerable depth, in which glowing embers may be safely kept through the night. A guard, however, should be provided to prevent vagrant sparks from shooting into the room.

If coal is used, a grate or coal basket is placed between or over the andirons, or it may entirely replace them. If the opening is provided with hobs, the coal grate is set between them. Or perhaps, if only coal is to be used, the opening is made rather narrow and the grate snugly fitted into it. The choicest coal to burn, because of its cleanliness and beauty of flame, is cannel, though a number of bituminous varieties make an excellent fire.

For starting or stimulating a blaze, it is convenient to have the conventional bellows or a so-called blower with which, for a moment, to cover all but the bottom of the fire opening. It is well to remember, in starting a fire, that sometimes, on a dull or heavy day, a few shavings or a newspaper burnt on the hearth or near the throat in order to throw a sudden and rapid flame up the chimney will warm the column of cold air in the chimney and start an upward draft.

The Hearth

The hearth may be regarded as divided into two parts, the back and front. The back hearth, as well as the sides and back of the fire cavity, is usually laid in fire brick, although certain face brick, which are made of fire clay, serve the purpose. The brick may be laid flat or on edge. In either case, they should be laid with very narrow joints filled with a fire clay mortar, though pure cement mortar will answer the purpose, if fire clay cannot be procured. The sides and back, where the brick are usually laid flat, should have the same treatment. It is desirable to have an ash trap and chute in the back hearth with a pit and tight-fitting cleanout door in the basement. See Fig. 1. The trap is of cast iron and works on a pivot in the frame so that it is a simple mat-

ter to dump the ashes and clean the hearth. Your wood ashes will make an excellent fertilizer for lawn or garden.

The front hearth is simply an extension of the back hearth beyond the chimney breast and, while serving the purpose of safety, is always developed into a decorative feature. It is generally flush with the floor, although some people prefer to raise the whole hearth several inches above the floor, perhaps surrounding it with a low curb. The front hearth is usually treated in an artistic way by using tile or brick laid in various patterns, on edge or flat, as suggested in our designs. The surface of the hearth should preferably be smooth to facilitate cleaning, and whether raised or flush with the floor may be provided with a fender.

The hearth is supported in two ways, either by a trimmer arch, or by a flat concrete slab. A trimmer arch is simply a brick rowlock arch springing from the fireplace foundation and resting against the header joist as shown in Fig. 1. This arch is built over a wooden centering placed by the carpenter. On top of the arch is laid a bed of mortar or concrete to level up and provide a bed for the finished hearth. If a concrete slab is used, it is laid on the fireplace foundation and on a flat form extended out in front as far as required by the hearth. It should be re-enforced by light iron rods. This construction is commonly used in cheap work. The trimmer arch, which costs only a little more, is the more satisfactory method of support for the hearth. If of brick, the front hearth may be laid at any time during the progress of the work, but when of tile should not be set until after the finished floors are down. The face brick facing of the fireplace may be laid as the work progresses or, if laid later, the rough masonry must be provided with metal ties or other means to effect subsequently the proper bonding of the face brick to the surface.

Chimney and Flue

The construction of the chimney should be given the utmost attention. Reference has already been made to the proper height of the chimney, and the use of each flue for only one fire. Every chimney should be tightly built of solid brick, and, if possible, lined with terra cotta flue linings its entire height. In fireplace flues, this lining should begin, it is important to observe, immediately at the top of the corbeled-in smoke chamber. Care should be taken in setting flue linings to be sure that the joints are well cemented and, at the same time, that all spaces between the lining and brickwork are tightly filled with mortar. Any openings in the joints of the tile lining and brickwork not only check the draft, but are a fire menace. Cement plaster should not be substituted for the flue lining, as it is sure to crack and fall off, carrying with it some mortar from the joints, thus leaving the flue in a dangerous condition. However, where flue linings are not available, a smooth cement plaster made of one part by volume of cement to two of sand may be used, in which case the walls of the chimney should be at least eight inches thick. Perhaps it is needless to say, as something well understood, that no woodwork should be placed against the chimney above the lowest flue opening. It should not be nearer the chimney than two inches. Nor should wooden furring strips be used on the

chimney. It is good practice, when flues are in an outside wall, to make the brickwork on the outside eight inches thick to reduce heat loss and thus improve the draft.

When two or more flues are contained in one chimney, they should always be separated by a brick partition four inches thick called a "withe" and bonded to the outside brickwork as shown in Fig. 3.

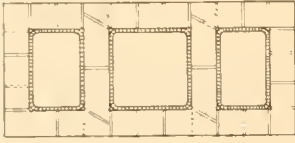


Fig. 3

If offsets are necessary from one story to another, as before indicated, they should be gradual, never more than at an angle of 30 degrees from the vertical. If abrupt offsets occur in flues, soot will soon be deposited, choking the flue and making cleaning almost impossible. Fig. 4. Care should be taken while the chimney is being built that the bottom does not become filled with mortar or brick bats, which in the case of a fireplace flue would seriously obstruct the working of the damper.

Although our plans of fireplaces show the proper size of flue, which is always at least one-tenth the area of the opening, if for any reason you wish to change appreciably the size of your fireplace opening you would better refer to table on page 28 for correct size of flue lining to be used.

If you follow the simple rules which we have here given from the best practice you may expect no trouble from poor drafts and smoky fireplaces.

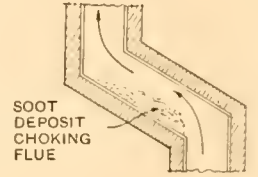


Fig. 4

A FEW EXAMPLES
of VARIOUS TYPES





FIREPLACE IN RESIDENCE, *Ridgefield, Conn.*

GROSVENOR ATTERBURY, *Architect*



SUGGESTION FOR A SUN PORCH
From Residence, Warren, Pa.

A. J. BODKER
Architect



KENILWORTH GOLF CLUB
Kenilworth, Ill.

GEO. W. MAHER
Architect





A UNIQUE COLONIAL TYPE
FOR THE LIVING ROOM
Scarsdale, N. Y.

WM. STANWOOD PHILLIPS
Architect



A QUAIN OLD FIREPLACE
Salem, Mass.



A FRIENDLY WELCOME
TO SMOKING ROOM OR DEN
Ipswich, Mass.

PHILLIP B. HOWARD
Architect



A NEAT AND
ALWAYS FITTING DESIGN
Decatur, Ill.
BROOKS, BRAMHALL & DAGUE
Architects





AN ALLURING CORNER, *Riverdale, N. Y.*

DWIGHT J. BAUM, *Architect*



A SIMPLE AND EFFECTIVE DESIGN, *Ardsey, Pa.*

FRANK J. FORSTER, *Architect*



AN ATTRACTIVE SPOT
IN THE HOME
Marblehead, Mass.

JOHN BENSON
Architect



AN INVITING PLACE TO
FOREGATHER
Riverside, Ill.

LOUIS H. SULLIVAN
Architect





ANOTHER SUN ROOM
 POSSIBILITY
De Kalb, Ill.

CHATTON & HAMMOND
Architects



VERY NEAT PATTERN WORK
Norfolk, Va.

J. G. GRAHAM
Designer





A BROAD AND
DISTINGUISHED TREATMENT
Lake Forest, Ill.
PERKINS, FELLOWS & HAMILTON
Architects



A CHARMING BOND EFFECT
*Nurses Home in Sanitarium
Chicago, Ill.*
OTIS & CLARK
Architects



OAK PARK COUNTRY CLUB

NORMAND S. PATTON
E. E. ROBERTS

CHAS. E. WHITE, JR.
WM. DRUMMOND

Associate Architects



AN UNUSUAL
PATTERN EFFECT
Scarsdale, N. Y.

EUGENE J. LANG
Architect



SIMPLICITY AND DIGNITY
A SCIENCE READING ROOM
Chicago, Ill.

COOLIDGE & HODGDON
Architects



STRENGTH
SECURITY AND COMFORT
Great Neck, L. I.

OSWALD G. HERING
and
DOUGLAS FITCH
Architects



A SIMPLER TREATMENT OF
THE SAME MOTIVE
Wilmette, Ill.

FLINT GEORGE
Architect





AN INVITATION TO A
 GOOD BOOK
River Forest, Ill.

OTTO KRETZER
Designer



THE SKOKIE
 COUNTRY CLUB
Glencoe, Ill.

A. S. COFFIN
Architect





RIVERSIDE GOLF CLUB
Riverside, Ill.

WM. DRUMMOND
Architect



A HOMEY LOUNGE FOR
 EMPLOYEES
 THE KOHLER CLUB
Sheboygan, Wis.

BRUST & PHILLIP
Architect



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