Contents

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10 Interior

Since the majority of the Interior involves cosmetic details which can be subjective our discussion will be limited to overall functionality and types of materials. Aesthetic appeal is not part of a regular Home Inspection.

10.1 Description

The Inspection Report will describe the major surface finishes. Our discussion here will be brief since type and quality of materials is subject to opinion. There are numerous sources available for more detailed descriptions.

10.1.1 Floor Finishes

Wood: Typically hardwood (oak, maple etc.) or softwood (pine, etc). Generally hardwood floors are more durable.

Carpet: Also called textile flooring and available in thousands of types and styles. Carpets are typically made from wool or more commonly synthetic fibers. An underlayment of padding is typically required for comfort and longevity. Carpets insulate our feet from cold floors and therefore provide warmth.

Resilient: The most common types include vinyl and linoleum products. Generally these types of floors can be less expensive and less durable. Recently improved processes have made these floors preferable for use in high end stylish homes – they are also considerably more expensive. These floors are easy to maintain and clean and commonly used in kitchens and bathrooms.

Ceramic Tile: Date back to ancient times and can consist of natural minerals such as clay. Modern methods involve large sophisticated processes with automated equipment. Products are often square or rectangle tiles and when installed require a sturdy (minimal deflection) subfloor to prevent cracking. Ceramic tiles are very durable. These floors are easy to maintain and clean and commonly used in kitchens and bathrooms.

Laminate: Consists of multi-layered synthetic materials. More recently found in homes and often have the look of wood flooring though easier to install and maintain. The floor typically ‘floats’ and requires a thin foam underlayment. It is easy to remove if required. Generally the surface is durable though moisture must be removed immediately to prevent swelling.

Natural Tile: Generally refers to stone, granite, marble etc. This type can be expensive and considered high quality. These floors are easy to maintain and clean and commonly used in kitchens and bathrooms.

Concrete: A mixture of crushed stone, cement and water. Although concrete tile is available, poured in place concrete has become common. Concrete floors are easy to maintain as long as they are sealed (polished) properly.

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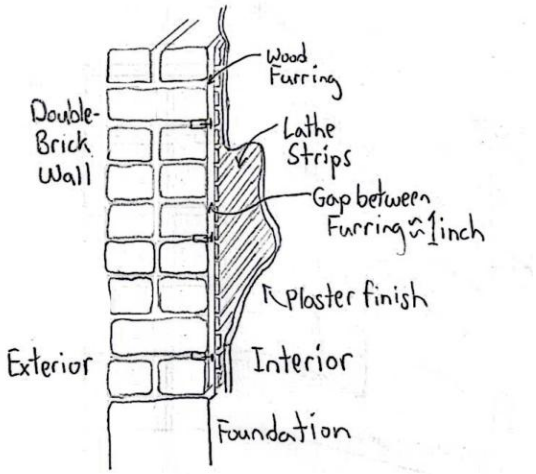
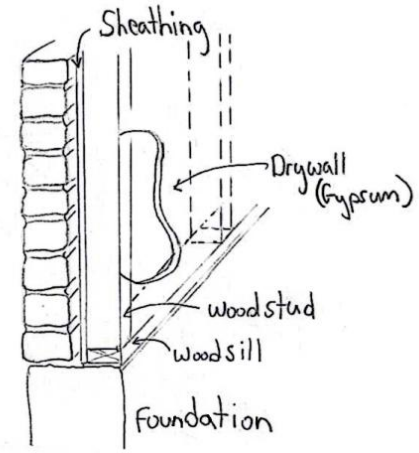
10.1.2 Wall Finishes

The most common types of wall finishes are briefly described below.

Plaster: Lathe and plaster is typically found in older homes. Wood lathe strips are secured to the masonry and/or wood structure then the plaster is doweled on top creating a smooth surface. This method was discontinued by the early 1950's.



Drywall: Also referred to as gypsum board. This material is almost exclusively in use today though in the 1950' and 1960's a combination of drywall panels with a plaster finish was common. Presently panels are secured to the structure and the seams are 'tapped' and finished with drywall compound.



Paneling: Generally refers to wood or composite material. Imitation brick and stone panels are also available.

Brick/Stone: Often installed as a thin veneer and can be made of composite materials (artificial).

Wood: Installed as a panel or tongue and groove strips.

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10.1.3 Ceiling Finishes

The most common types of ceiling finishes are briefly described below.

Plaster: Lathe and plaster is typically found in older homes. Wood lathe strips are secured to the masonry and/or wood structure then the plaster is doweled on top creating a smooth surface. This method was discontinued by the early 1950's.

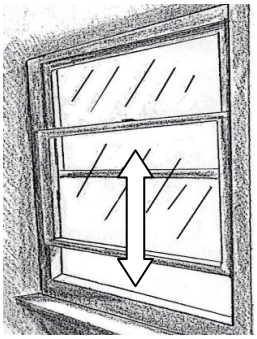
Drywall: Also referred to as gypsum board. This material is almost exclusively in use today though in the 1950' and 1960's a combination of drywall panels with a plaster finish was common. Presently drywall panels are secured to the structure and the seams are 'tapped' and finished with drywall compound.

Paneling: Numerous types of ceiling panels are available. Common types include drop ceiling panels (common in commercial offices) and acoustic tile (common in basements). Panels are often installed for easy access to piping and wiring.

10.1.4 Windows

The following illustrates the more common types of window arrangements.

Fig. 10.1 Single/Double Hung



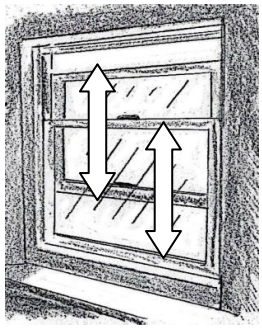


Fig. 10.2 Casement

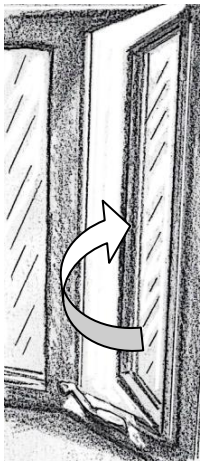


Fig. 10.3 Sliders

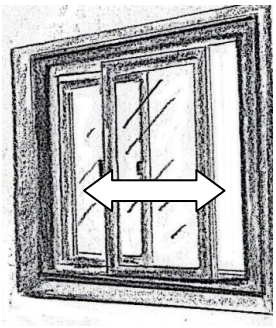
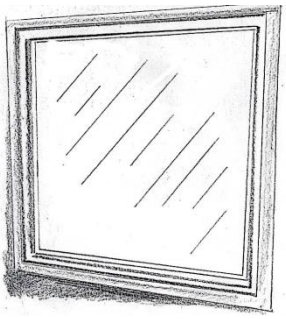


Fig. 10.4 Fixed



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Single Glazing: One glass pane is considered as a **low quality** window since it is more prone to condensation and air leaking. Generally single glaze units are found in homes built up until the 1970's.

Double Glazing: Refers to windows manufactured with two glass panes separated by a spacer (typically 1/2 inch) and hermetically sealed (air-tight). The space between the panes has an inert gas such as argon which acts as an insulator. This makes the window **thermally efficient**.

Triple Glazing: Considered **high quality** and very expensive. Similar to double-glaze windows with an extra pane.

Double and triple glaze windows will often be designated as *energy-star*® which indicates a government approved high quality unit.

Primary Plus Storm: found in older homes predating the 1970's. The primary window is usually wood and the storm window is wood or metal. In older arrangements where the storm window is wood this was replaced with a screen window during the warmer months of the years.

Overall this type of window arrangement is no longer installed mainly due to practical reasons and inefficiency. However for aesthetic purposes are still in use especially for *heritage* designated homes. Sometimes nostalgia will trump practicality as it should.

10.1.5 Doors

Interior: Are generally made of wood or composite materials.

Exterior: Doors designed to keep the elements out and for security as well as aesthetic appeal.

Metal: For use as exterior doors. Sometimes capped with plastic veneer and have an insulated core.

Wood: Can be made of solid wood and/or a composite of MDF (medium density fiberboard) though can have an insulated core.

Sliding glass: Can be typically wood, metal or plastic framed which is most commonly used today.

French: Essentially a door with multiple panes or a single pane.

10.1.6 Fireplaces

Since fire was utilized by humanity fireplaces have been the main source of warmth and food preparation.

Presently many homes in urban areas utilize fireplaces as a secondary form of heating as well as aesthetic appeal. However in rural areas fireplaces are often the main source of heating and preparing food.

Although a regular Home Inspection will include Inspection of fireplaces it is always **advised that a licensed specialist inspect and service a fireplace before using**. This especially applies to wood burning units. Local associations can be found with a list of licensed technicians.

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Masonry: Units built with masonry are designed for burning wood and have been in use since ancient times. Many older homes will have wood burning fireplaces. They have become less common for newer homes.

Fig. 10.5 Examples of Masonry Fireplaces

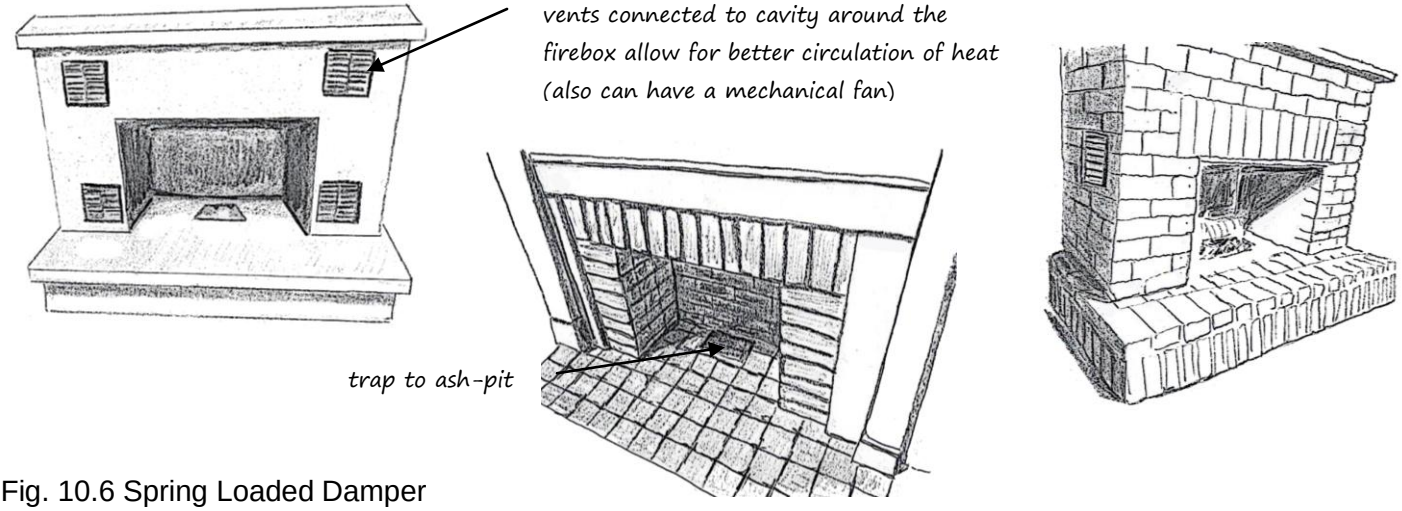
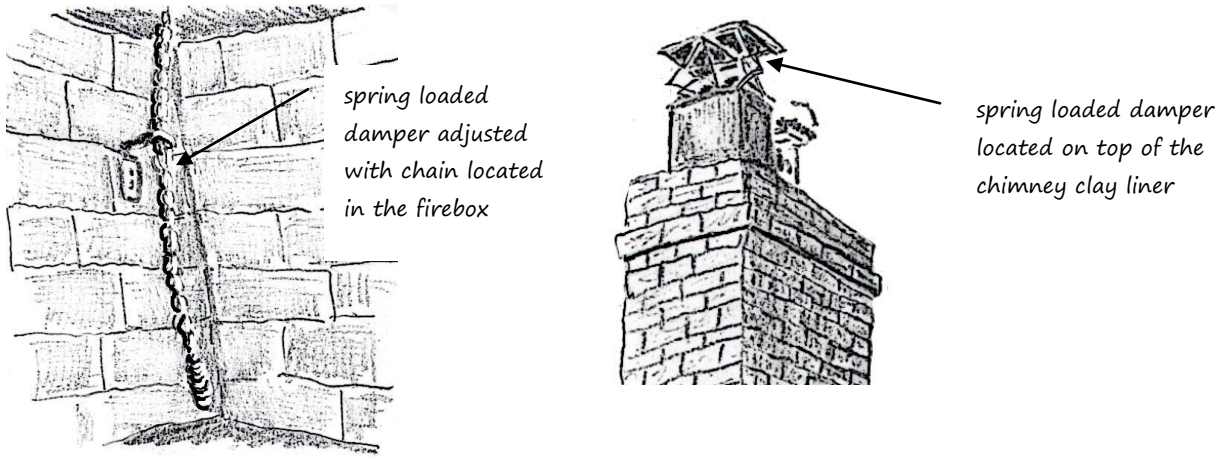
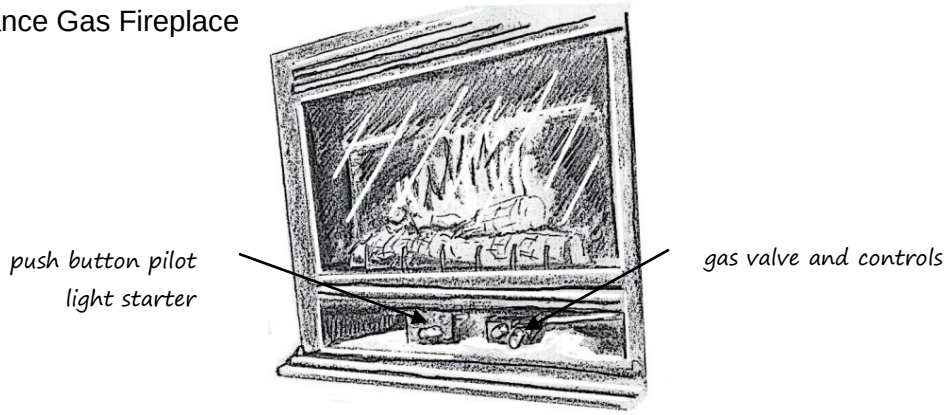


Fig. 10.6 Spring Loaded Damper



Zero Clearance/Factory Built: This type of fireplace is made of metal and designed for use in homes without a chimney. It has the advantage of relatively low cost installation and can be located almost anywhere in the house with a proper exhaust metal liner. They can be **designed for wood or gas**. They are also considered **more efficient** than traditional masonry fireplaces.

Fig. 10.7 Zero Clearance Gas Fireplace



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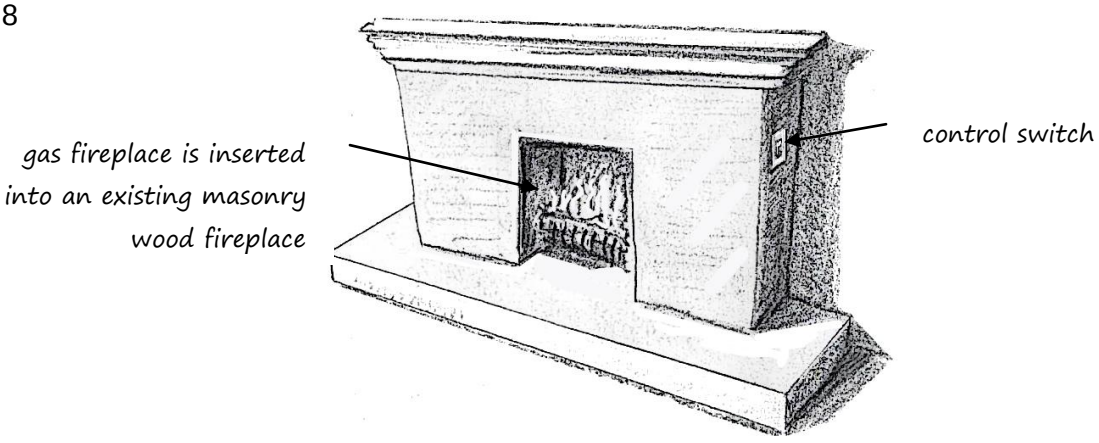
Insert: An insert fireplace can be installed to masonry fireplaces. These are essentially factory built metal units installed in the existing space (firebox). They can be designed for wood or gas. They are also considered more efficient than traditional masonry fireplaces.

Fig. 10.8

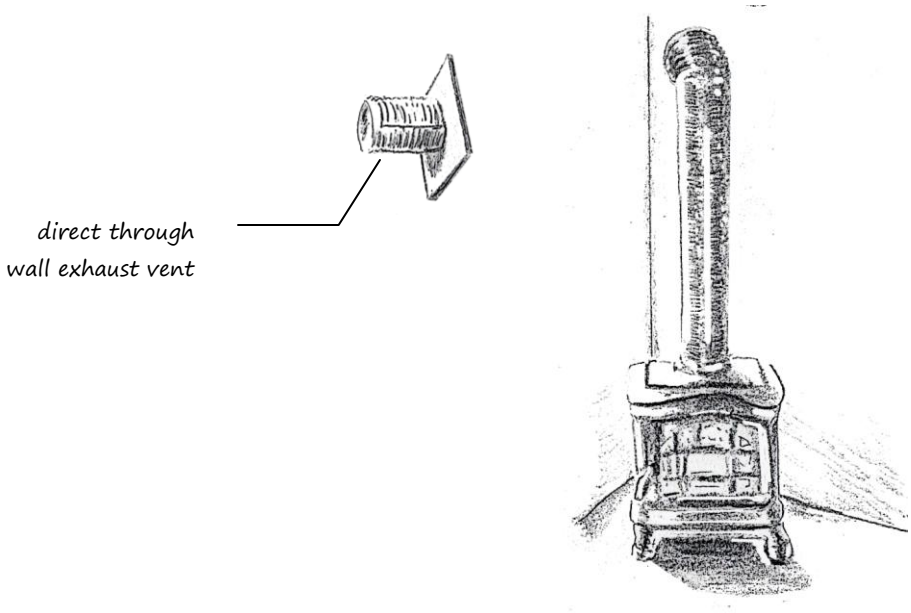


Roughed-In: Typically this is when a flue with chimney is present in case a home owner wishes to install a fireplace:

Wood Stove: These stand alone units are available in a broad range of styles. Special conditions and fire clearances apply for safety purposes. Wood stoves have become less common in urban areas but used more extensively in rural homes. They can be an insurance issue in some areas. As with all wood burning appliances these require further inspection by a qualified specialist. More sophisticated (modern) units are designed with a special catalyst device which improves overall efficiency.

Gas Stove: These stand alone units are essentially an imitation wood stove fueled with natural gas. They have the esthetic appeal of a wood stove without the higher (messy) maintenance and are generally a safer alternative. They can be vented with a metal liner extended through the roof, through an existing masonry chimney with a liner or directly through a wall. Through-wall venting has become more common since a chimney/liner is not required.

Fig. 10.9 Gas Stove



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10.1.7 Fireplace Fuel

Wood: The original type of fuel heat that can be hardwood or softwood. Although both types have essentially the same energy output hardwood burns slower. Firewood can be purchased in units called a cord. This is equivalent to about the volume of 4 ft x 4 ft x 8 ft.
Prefabricated wood logs or pellets are also available which are considered more efficient.

Gas: The most common type is natural gas though units fueled by propane are available. This fuel is considered cleaner and safer to use than its wood counterpart. Since many homes have a natural gas line for a furnace or water heater it becomes relatively easy to utilize this fuel for a fireplace.

Electric: Fireplaces that use electricity have been around for a long time. In the past they were simply electric-resistant coils inside of an imitation fireplace that radiated heat. Recently electric fireplaces have become more sophisticated in performance and appearance so that they are often mistaken for a gas fireplace. They can be installed anywhere in the house as long as a source of electricity is available.

Coal: Although many older homes may still have a coal burning fireplace this type of fuel is mostly no longer in use. Often wood is used in the place of coal as long as it is deemed safe by a specialist.

10.2 Limitations

Items that do not cover a regular Home Inspection include:

- CO Detectors
- Security Systems
- Intercoms
- Central Vacuum
- Chimney Flues
- Elevators
- Drainage Tiles

Often a Home Inspector will be limited by:

- Absence of Historical Clues due to New Finishes/Paint
- Storage/Furnishings in Some Areas Limited Inspection

Generally no comment is made on Cosmetic Finishes

The effectiveness of chimney draw is not determined

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10.3 Observations/Recommendations

10.3.1 Windows/Doors

The purpose of windows and doors are to protect from the elements and for security. As such they should be in good repair. Screens are required for units located above the first floor for safety. Generally single glaze units are considered inefficient and are now being replaced with double glaze units.

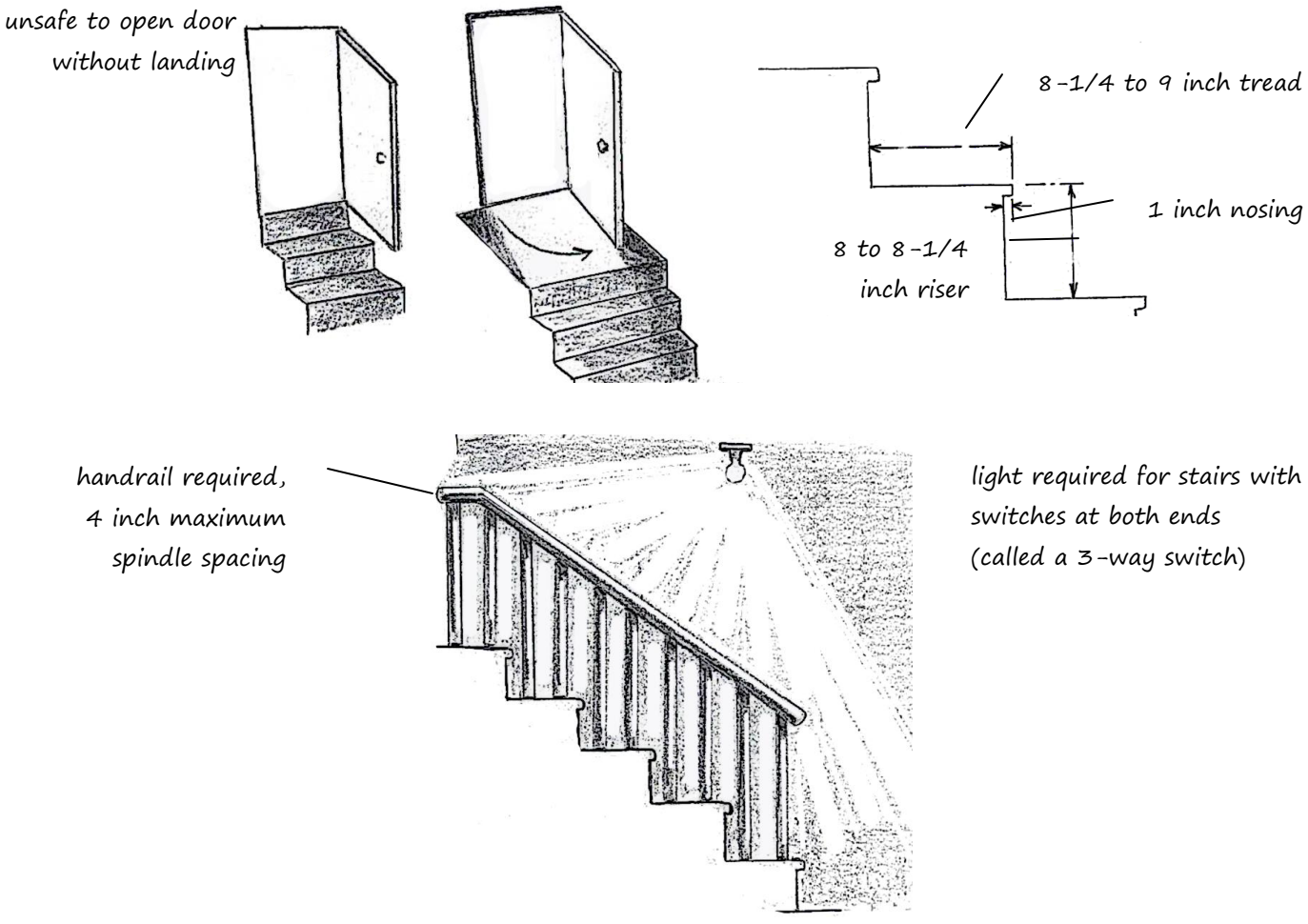
Skylight/Solarium: Since probability of leaking through these types of units is higher annual maintenance is recommended usually with Roof maintenance.

Flashing details around skylights should be in good repair. Caulking details and seams around solariums should be in good repair. Leaking units can cause interior/insulation damage and promote mould growth.

10.3.2 Stairs

Proper installation of stairs is important for safety. General specifications are illustrated below.

Fig. 10.10



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10.3.3 Fireplaces

Solid fuel fireplaces **require inspection by a certified specialist**. All units should be inspected and serviced prior to use. Assuming the fireplace is used on a regular basis chimney sweeping (cleaning) is required approximately 1-per-year to avoid build up of creosote (tar) that can ignite and cause a chimney fire.

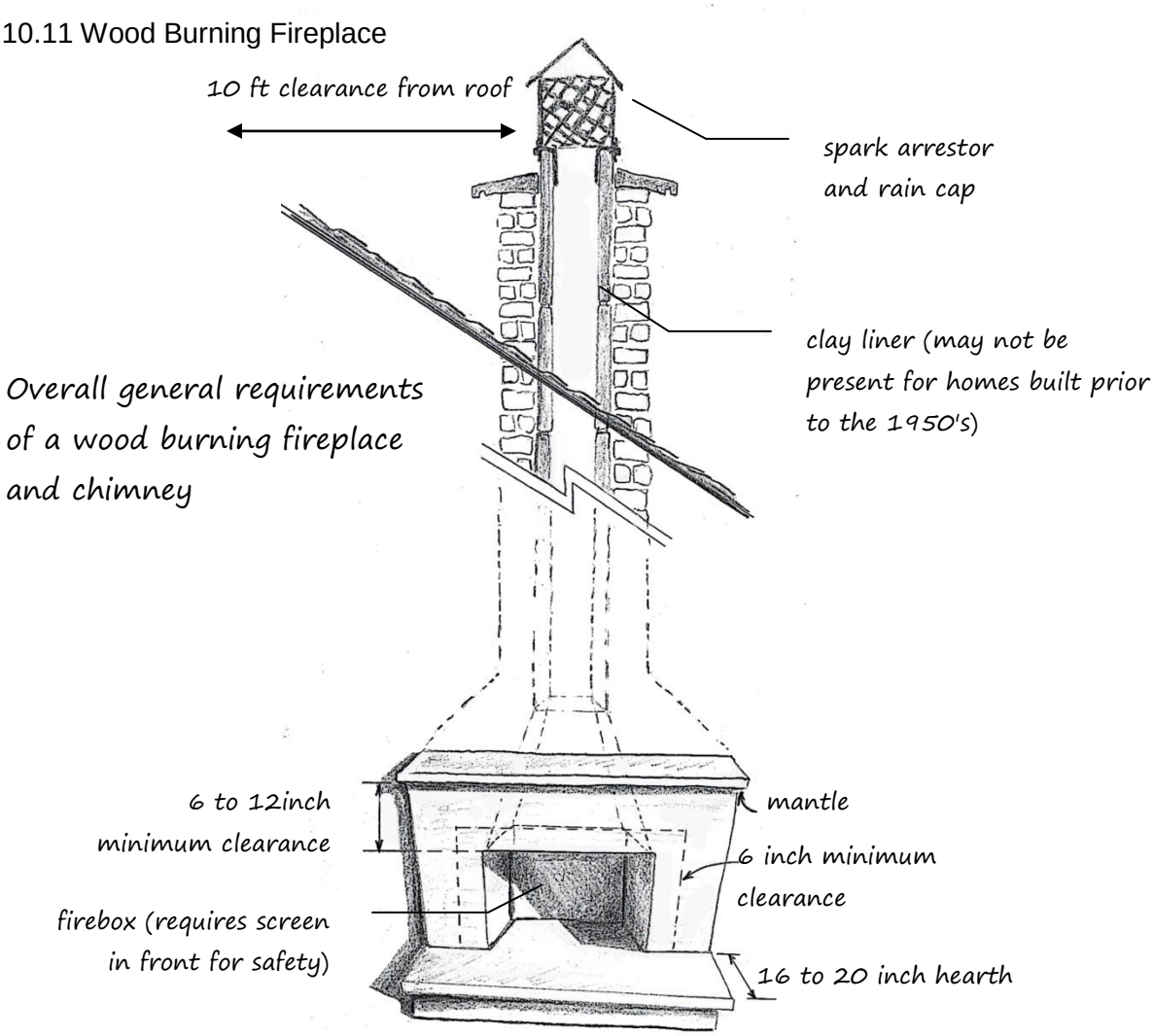
Compliance with clearances must be adhered to prior to use.

For older homes masonry chimneys will often not have a liner. The flue should be inspected and determined if a liner will be necessary.

Gas fireplaces should be inspected annually.

Carbon Monoxide (CO) detectors should be installed in rooms that have fireplaces.

Fig. 10.11 Wood Burning Fireplace



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10.3.4 Basement Leakage

Of all the problems a home owner might encounter basement leaking is perhaps the most feared and agonizing of experiences. Wet basements can damage insulation/finishes/furniture and result in an unhealthy environment for the entire house. It therefore becomes very expensive to remedy.

In most cases it is very difficult to determine if a basement will leak especially when doing a visual examination as are Home Inspections. Using a moisture meter can assist though this has limited use if the basement walls are dry during the time of the Inspection. The same is true for infrared cameras - the conditions must be favourable to detect moisture issues. Incidentally infrared cameras will reveal the temperature on the surface of the wall - it cannot see through the wall as some might believe.

Overall it must be understood that every basement is damp to some degree which is normal if we consider that it is below the ground.

We must also understand the difference between moisture penetrating through the foundation wall from the ground and moisture that develops due to condensation from the basement interior. The presence of a dehumidifier in the basement will help remove moisture in the air that could otherwise condense on the cool surfaces.

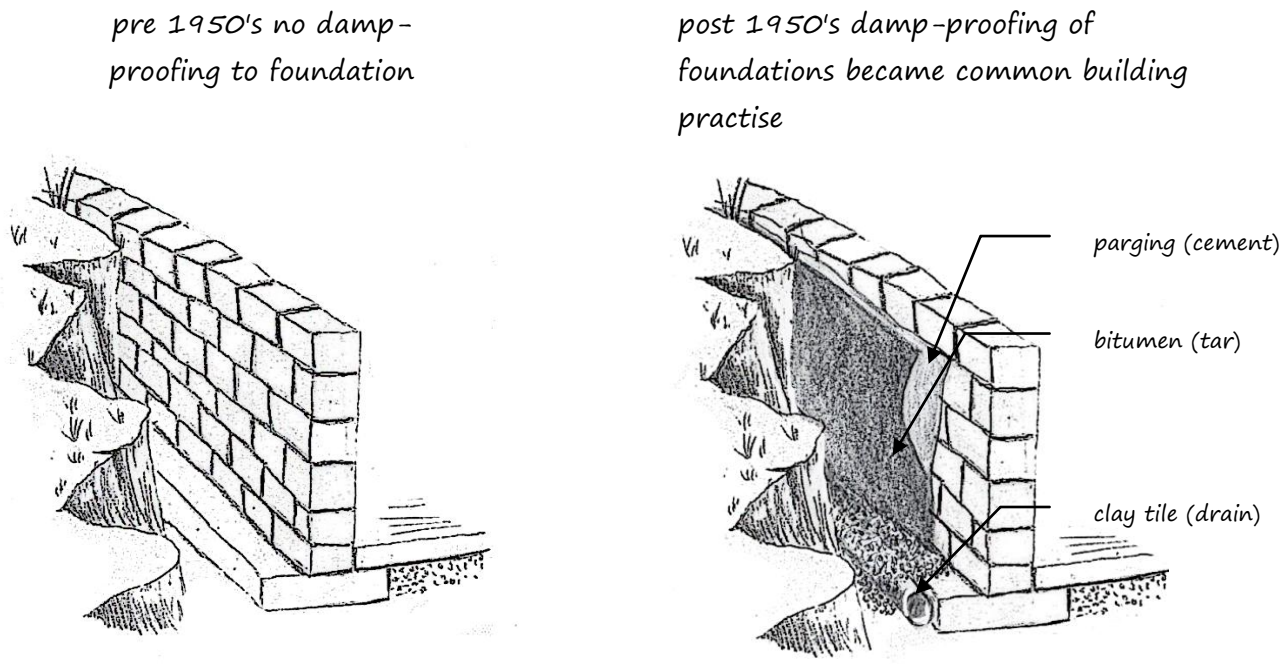
10.3.4.1 ***Damp-proofing (exterior)***

As the name implies this is the application of materials to the foundation that inhibit moisture penetration.

Homes built prior to the 1950's were not damp-proofed typically.

For homes built since the 1950's some form of foundation damp-proofing to the foundation is usually present. Often a layer of thin cement (called parging) was applied to the foundation then a coat of bitumen (tar). A clay drain along the footing was added to collect water and discharge into the sewer system.

Fig. 10.12



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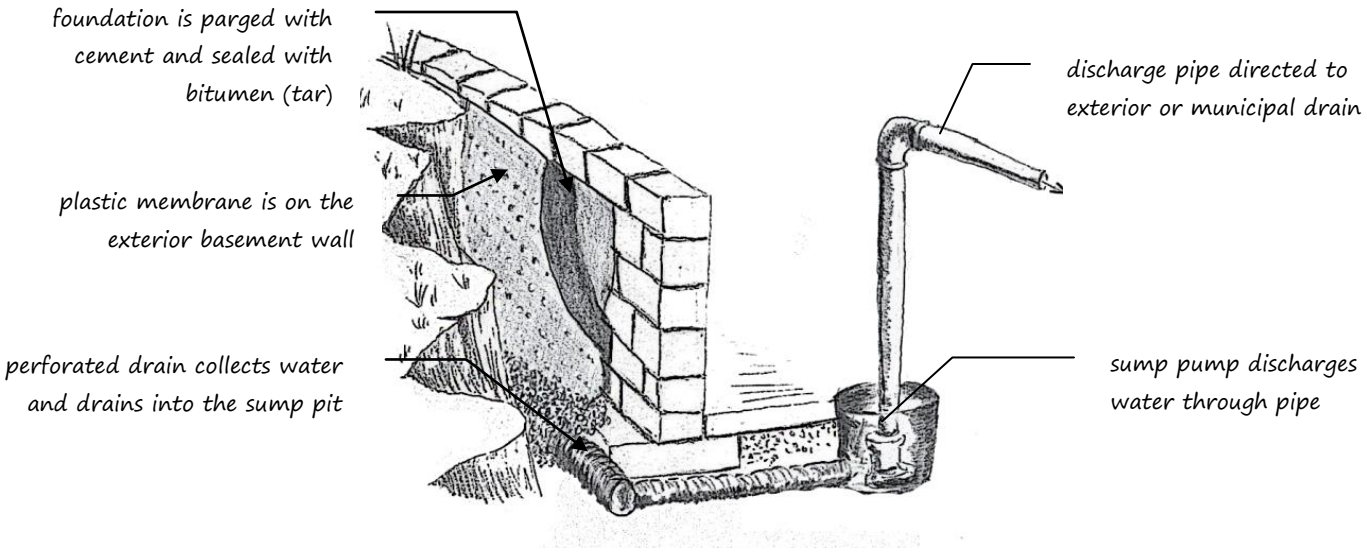
Newer homes built since around the 1990's have also included a damp-proofing plastic which is considered good building practise. This material is often called a Delta^{R} Membrane (a brand name) and can be identified by its dimpled perforations. The perforated drain around the footing is directed into a sump pit which in turn discharges the collected water with a pump to the exterior.

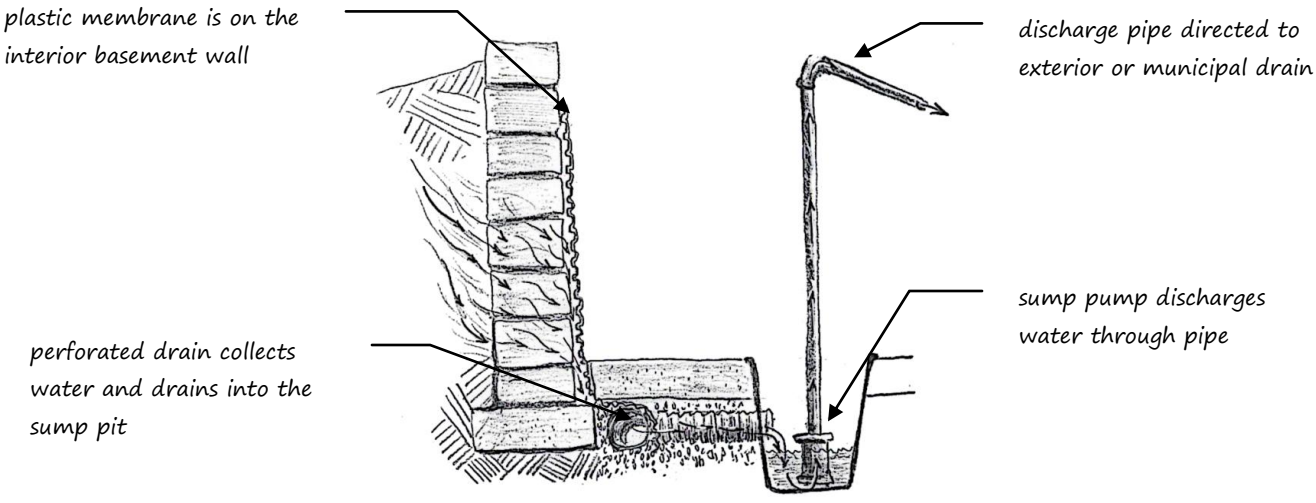
Fig. 10.13 Exterior Damp-proofing



10.3.4.2 *Damp-proofing (interior)*

Damp-proofing from the interior is a viable option when it is not practical or too expensive to excavate and damp-proof a foundation from the exterior. It should be understood that this form of damp-proofing allows the water to penetrate the foundation but then is collected and diverted away. Essentially this is exterior damp-proofing in reverse.

Fig. 10.14 Interior Damp-proofing



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10.3.4.3 *Water-proofing*

Although **damp-proofing is often synonymous with water-proofing** there is a distinct difference. A water-proofing system applies a layer (or layers) of bitumen on the foundation which is covered with a rubberized asphalt membrane often called Blueskin® (a brand name). It is this rubber membrane which is designed to seal the foundation that is the main difference. It is then covered with a plastic dimpled membrane that directs water to the weeping tile as described with damp-proofing.

It should be indicated that a variety of water-proofing methods exist. For example the bitumen can be omitted especially for poured foundations since the wall is one continuous smooth surface void of mortar joints.

10.3.5 Crawlspace Leakage

Similar to basement leakage crawlspace leaking can result in damage to insulation or finished surfaces. Over the long term it can also cause damage to structural wood components and mechanical/electrical equipment if present in the crawlspace.

The same type of damp-proofing options that apply to basements also apply to crawlspace.

10.3.6 Smoke Detectors and Carbon Monoxide (CO) Detectors

These potentially life saving devices are required in all homes. The exception for CO detectors is when there are no combustible appliances in the house.

Each floor should have a smoke and CO detector. Devices are available with duel function.

Smoke detectors should be installed in the central part of the ceiling and having a CO detector in every bedroom is good safety practise.

For modern homes interconnected units has become come building practice. This means if one unit goes off the other units will be activated so that all occupants are alerted.

Life expectancy is generally 5-10 years though you should refer to the owner's manual. Often the expire date is provided with the unit. The battery (for battery operated units) should be replaced 1-per-year.

It is important to refer to your user's manual for specific installation requirements as to where to install your smoke and carbon monoxide detector.

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