

by Richard Charles

Walls within walls

If your home was really your eastle, it would have walls several feet thick and you wouldn't need insulation. But, to save on building materials, space and cost tand because you aren't expecting a besieging army to open fire on you at any moment), you have thin walls that need another wall of insulation inside them.

How do you know if there's enough insulation inside the wall? One obvious way to tell is if you feel the cold striking into the house (which means that heat is leaking out) whenever you go from the middle of a room toward an outside wall in winter. However, if you wait until winter to find that out, you may not be able to retrofit (reinsulate) your walls before the warm weather returns.

Two things you can cheek before winter are the kind of insulation you have in the walls and the way in which the walls have been constructed. With this information, you (or a contractor) can work out the effectiveness of the insulation and, if it is not good enough, what method of retrofitting would work best in your case.

Here's a rough guide: wall insulation should have an R value (resistance to heat passing through it) of at least 12, which equals 4 inches of loose fill insulation or 3½ to 4 inches of batt or blanket insulation containing glass fibre or rock wool. There are, of course, many other types of materials available.

The five basic ways to retrofit walls are with loose polystyrene, blow-in insulation, foamed-in-place insulation, wall renovation, and outside insulation. But, before you take your pick, read on.

Loose polystyrene insulation can be a do-it-yourself job and does not cost much, but you can use this method only if your wall space opens into the attic and goes right down to the foundation. You can test this with a weight on a string that's long enough to go all the way down.

Blown-in insulation means that you get a contractor with special equipment to blow loose fill into a wood-frame wall that is hollow, or almost, but has obstructions that stop you from pouring insulation into it (as above). For this, an access hole must be drifted into the wall space from the outside or inside, or from the attie or basement.

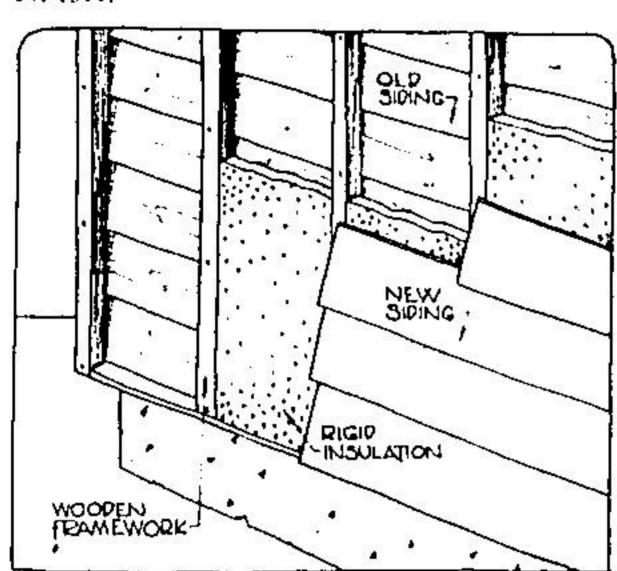
Foamed-in-place insulation is also a job for a contractor who has the proper equipment, and is an option for filling the space inside a wood-frame wall, and also some masonry walls. However this approach should only be taken if the wall has no insulation whatsoever. The foam is ureaformaldehyde and it is injected into the wall space in semi-liquid form. (Make sure any U.F. foam you buy meets Canadian Government Specifications Board quality standards.)

Wall renovation is a good way to insulate if you are undertaking major repnovations anyway. With a woodframe house you can remove the wall board or plaster from the inside and fit the insulation (such as batt or blanket) into the wall space. Another way with either wood-frame or masonry walls is to build a new wall inside the old one and insulate it.

Outside insulation is a good method if you happen to be putting new siding on your home. Polystyrene insulation can be inserted between the old and the new siding.

This is just a quick run-down of ways to retrofit walls and, by omitting the details, has oversimplified the job, However, it is not very difficult, and it repays you in comfort and fuel savings. If you want the full story, see Keeping the heat in (Office of Energy Conservation, Department of Energy, Mines and Resources) which you can get by writing to Box 3500, Station C, Ottawa, Ontario, KIY 4G1.

For information on government grants for re-insulation, write to: Canadian Home Insulation Program, P.O. Box 700, St. Laurent, Quebec, H4L 5A8; or phone collect (514) 341-1511.





Some Common Lawn **Problems and Their Cure**

common problems are not too difficult to cure according to horticultural experts in the lawn and garden section of Canadian Industries Limited.

Here are their suggestions for eliminating mushrooms,

weeks.

bumps; it compacts the soil and impedes root development. Instead, lift the sod and replace the sod and water the

easily by adding an inch of sterilized topsoil per month until the surface is level.

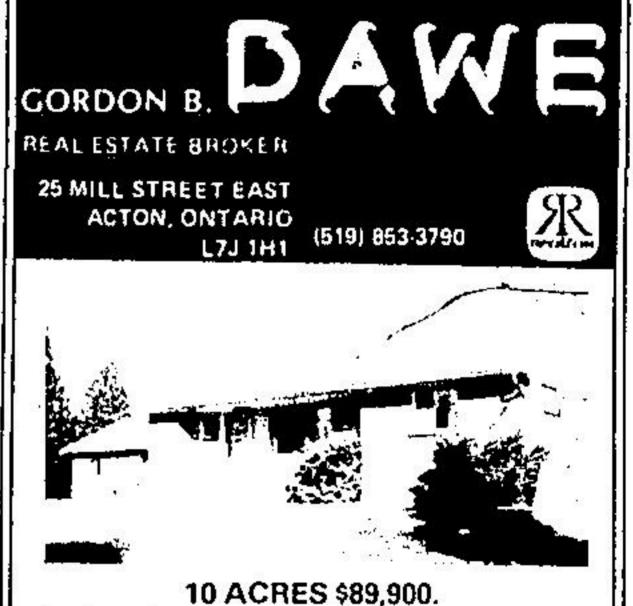
Bare spots result from a month with CIL Tree and months the grass does not respond, re-seed the area with shade-adapted grass.

For bare spots in sunny Don't use a roller on areas, rough up the soil and re-seed, or plant one grass plant per square inch. These

edge of the lawn where the grass is growing vigorously. Once established they will filter out and fill up the bare

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lawn scoop out excess soil. Then

bumps and bare spots.

problem, lift the sod and check for rotting wood. Remove the wood and replace with fresh soil. Then acrate the area, which can be done with a garden fork, feed with CIL Golfgreen, and water regularly for three to four

Hollows can be eliminated

various causes. Bare spots in If mushrooms are a shady areas may result when trees or shrubs rob the grass of food. So for shady areas around trees try feeding once Hedge Feeder. If after two

plants can be taken from the

by Richard Charles Starting at the bottom Warm air rises, so good attic and wall insulation will stop the heat from escaping and keep a home snug right? Only half marks awarded for that answer, because heat escapes in any direction where it finds something cooler; and that has accounted for a lot of cold feet in the history of the human race. A floor laid over a crawl space, open foundation or concrete slab without effective insulation can make life miserable and waste a lot of heating energy. A crawl space may be either heated or unheated, and this determines how it is insulated.

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For a heated crawl space the proper insulating material is extruded polystyrene, a blue material that is also known as "styrofoam". This is not only a good insulator, but it resists moisture, and that's important down under the house, Apply polystyrene insulation to the outside of the wall

of the heated crawl space, It should be at least 2 inches thick, and 3 inches is even better, but this will depend on what your local climate demands and on how much you can invest in insulation. In addition, from the base of the crawl space wall outward you need to lay the same insulation to a width of at least 2 feet all round; and 3 to 4 feet is even better along with the 3-inch thickness.

If a porch, driveway or some other obstruction prevents you from fitting all the insulation to the outside, switch to the inside at that point, but make the outside and inside insulation overlap where they meet, Remember, too, that inside insulation with polystyrene needs a gypsum covering as protection against fire.

If there is no vapour barrier, lay one on the floor of the crawl space and cover it with two inches of sand,

You don't need to insulate heating ducts or pipes that run through the crawl space once you have insulated it.

With a crawl space that must be ventilated and cannot be heated, you have to insulate under the house floor using batt or blanket material, and preferably with a vapour barrier attached (make sure this is on the warm side, which means "up").

Hold the insulation in place with building paper or chicken wire stapled to the joists, or with other supporting material. Cover the crawl space floor with a vapour barrier under two inches of sand.

If heating ducts or pipes run through the unheated crawl space make sure that they are either on the warm side of the insulation, or are insulated separately with hatt or blanket insulation wrapped round them or laid lengthwise. Special batts have a vinyl cover for this purpose, Use tape to hold the insulation in place.

With open foundations, insulate under the floor in the same way as you would an unheated crawl space, but also protect the insulation with building paper or wood against wind, animals and other threats. If the spaces between the floor joists are covered in, you will probably need to have a contractor blow loose insulation into these spaces,

A foundation consisting of concrete slabs should be insulated on the outside as with a heated crawl space, or basement.

The Office of linergy Conservation, Department of Energy, Mines and Resources has a fot more information to help you insulate crawl spaces and foundations. Write for a booklet called Keeping the heat in to llox 3500, Station C, Ottawa, Ontario, KTY 4G1.

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