

First Aid for Frozen Pipes

A properly constructed and heated house is safe from plumbing freeze-ups even during the most severe cold snap—unless the heating system breaks down or is knocked out by a power failure. Then no home is immune. If heat is not restored promptly, indoor temperatures will drop precipitately and you must act quickly to keep pipes from freezing and bursting (right). Even in an otherwise well-built house, pipes that run through an unprotected crawl space, basement, laundry room or garage can freeze during exceptionally cold weather, especially if the room is drafty.

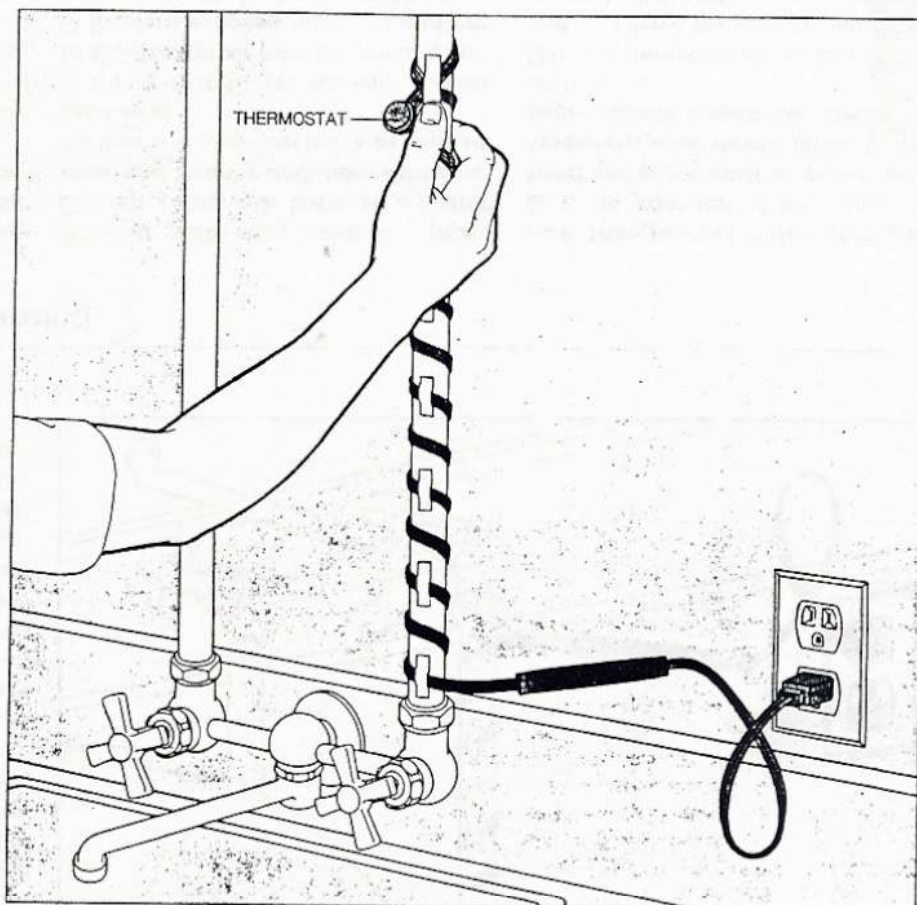
If pipes do freeze, the first sign may be a faucet that refuses to yield water. But all too often, the freeze-up is announced by a flood from a break. Water expands about 8 per cent in volume as it begins to freeze, generating pressure that splits pipes, especially where expansion is impeded by joints or bends. Ice may form throughout a long straight section of supply line before it meets an obstruction and cracks the pipe; thus, the entire length of pipe that supplies a stopped faucet should be considered suspect, both for ice blockages and leaks.

When you prepare to thaw a section of pipe, keep the affected faucet open to let vapor and melting ice run out. Then turn off the water supply once you have located the leaks and marked them for repairs (pages 18-19). After temporary patches have been applied to the damaged areas, open the main shutoff partway; the movement of water through the frozen section of pipe will aid the thawing process. The surrounding area should

be guarded against water damage (box, page 19) in the event that any other leaks have gone undetected.

Electrical heaters of one kind or another are generally safest for thawing. However, freeze-ups often occur during power failures and in such a case you are likely to have to use the flame from a propane torch.

Electric heating tape. Wrap the tape in a spiral around the frozen pipe, allowing about six turns per foot, and leaving at least half an inch between each turn. Secure the spiral with masking tape about every 4 inches. Some electric heating tapes come with built-in thermostats and can be left permanently plugged in: when the temperature drops toward the freezing point, the thermostat automatically activates the tape and warms the pipe.



How to Keep Pipes from Freezing

There is only one sound way to prevent freeze-ups in an unheated house: drain the entire plumbing system as described on page 17.

For pipe protection in other circumstances, you can choose from several methods—both electrical and nonelectrical, temporary and permanent.

□ If power is available, plug in an electric heater or heat lamp, or hang a

100-watt bulb near vulnerable pipes.

□ Keep a door ajar between a heated room and an unheated room with pipes so that the unprotected area will receive heat.

□ Set an electric fan on your furnace to blow warm air over basement pipes.

□ Insulate exposed pipes. In addition to thermostatic heating tape, there are wrap-on and snap-on types of insula-

tion that protect vulnerable pipes.

□ If no commercial insulation is at hand and pipes must be protected immediately, wrap several layers of newspaper loosely around the pipes and tie with string.

□ If the temperature suddenly drops and you have no time to install insulation, turn faucets on to a trickle; this will retard freezing.

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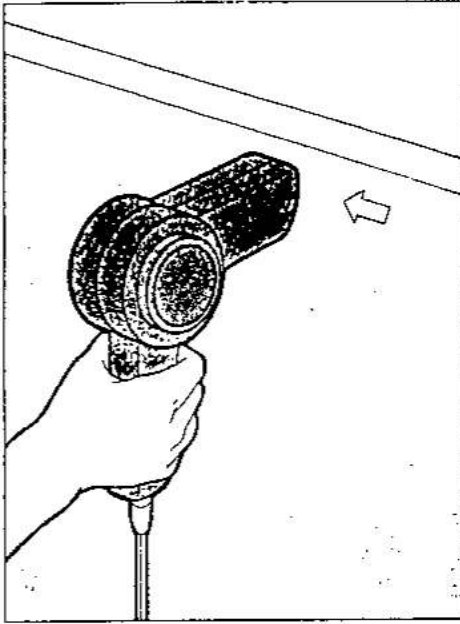
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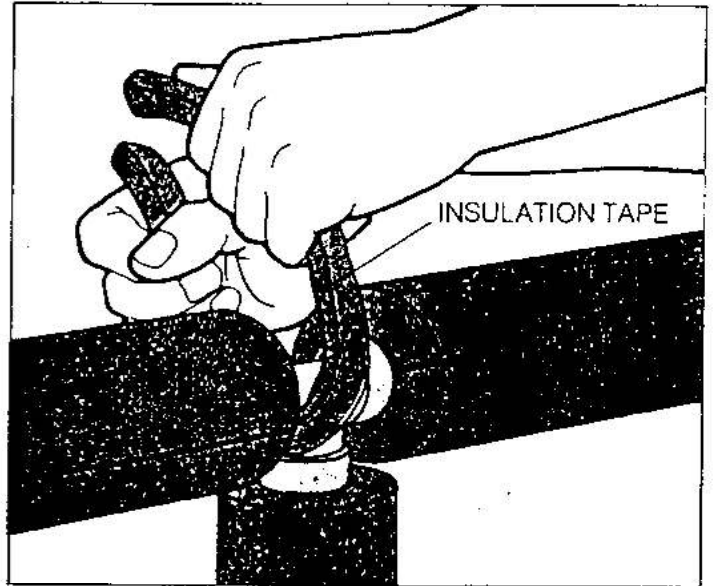
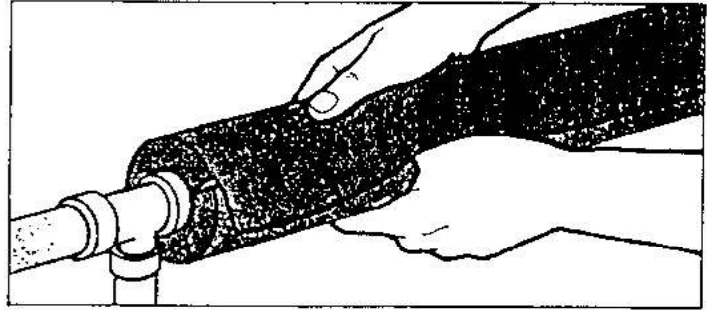
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Sleeves for Piping

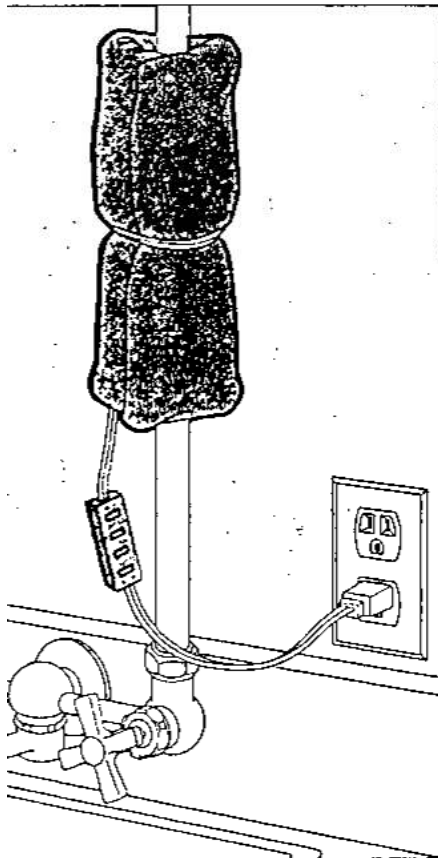
Hair drier. If you have electricity, an appliance that blows warm air—a hair drier or a tank-type vacuum cleaner with the hose set into the outlet end—can be used in the same fashion as a propane torch, although it will work more slowly.



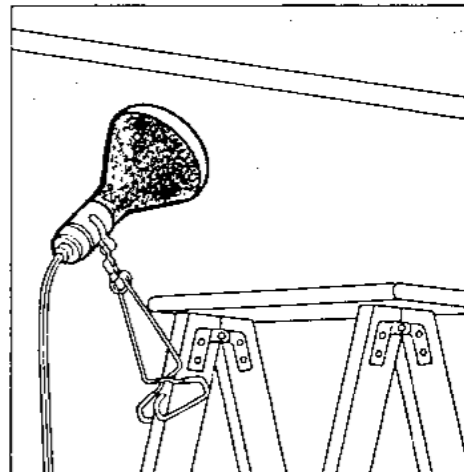
1 A close-fitting sleeve. Clean the pipes, scraping off any rust and sealing all leaks, however small. Cover the pipes with lengths of cylindrical pipe insulation and glue the lap down tightly. To make short sections of insulation, cut the insulation with a utility knife or a handsaw.



2 Taping the fittings. Cover the pipe fittings with insulation tape $\frac{1}{4}$ inch thick. Be sure to cover the fittings completely: no part should be exposed to air. To complete the job, wrap both the pipe and the fittings in aluminum foil.



Heating pad. Wrapped and tied around the pipe near the faucet, an ordinary heating pad melts ice slowly but effectively. Leave it in place until water stops dripping from the faucet. Move it to thaw another section.



Heat lamp. If the suspected ice blockage is behind a wall or otherwise out of reach, set an electric heat lamp nearby. Keep it at least 6 inches from the wall to avoid scorching paint or wallpaper. For greater flexibility in handling, you can screw the bulb into the socket of a portable work lamp. Pipes that disappear into the ceiling can also be thawed with a heat lamp; hang the lamp directly below the frozen section.