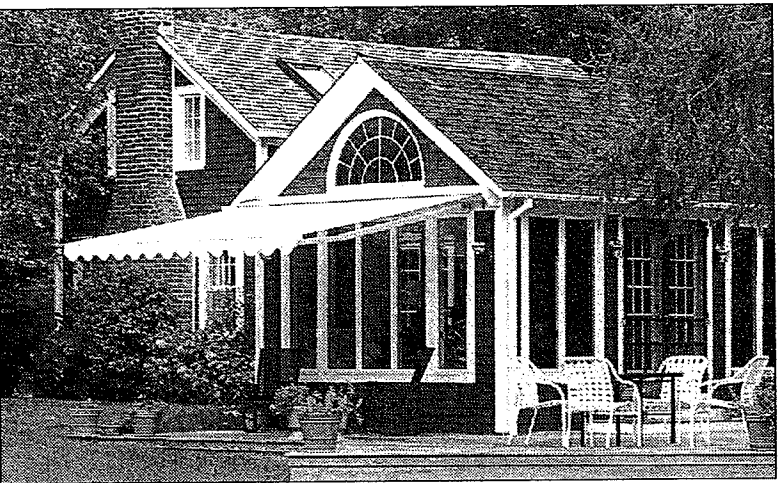


Lateral-arm retractable awning is easy to install, open and close

When it is closed, the fabric rolls up against the wall. Many fabric styles and colors are available.



A retractable awning can be opened to cover anywhere from a few inches to its maximum depth.

By James Dulley
FOR THE INQUIRER

Question: I need a movable awning for sun and rain protection over my deck and windows in summer. I still want a sky view at night and passive solar heat in the winter. What is the best type of awning to use?

— Paul N.

Answer: There are several types of movable awnings available, but the most convenient for your needs is a lateral-arm retractable awning. It's easy to install, open and close, and it is very durable.

The only support for a retractable awning is attached to the house wall, so you eliminate the inconvenience of having awning supports at the outer corners of the deck or patio. The awning can be opened to cover anywhere from a few inches to its maximum depth.

Retractable awnings are attractive, with hundreds of fabric styles, patterns and colors available. When

the awning is closed, the fabric rolls up and is stored against the wall, so it is not continually exposed to the sun's rays or harsh weather. This prolongs the fabric's life and limits fading.

To visualize how a retractable awning works, hold your arms chest high and tight against your chest with your elbows to the sides. Now straighten your arms and imagine them covered with fabric. This is

how a retractable awning over your patio or deck opens and closes.

The lateral arms are spring-loaded at the elbows, with the spring force trying to straighten them. That creates tension on the fabric in the roll on the wall so the fabric stays taut in any open position.

Lateral-arm retractable awnings can be made in sizes from 4 feet to 40 feet wide, with maximum projections of 4 feet to 14 feet. Since you

can open the awning to any depth you wish, it is often wise to get one with a slightly greater projection than you now need.

Even the largest awnings are easy to open and close with a hand crank. For more convenience, an electric motor drive is optional. Just push a button, and the awning opens and closes to any position.

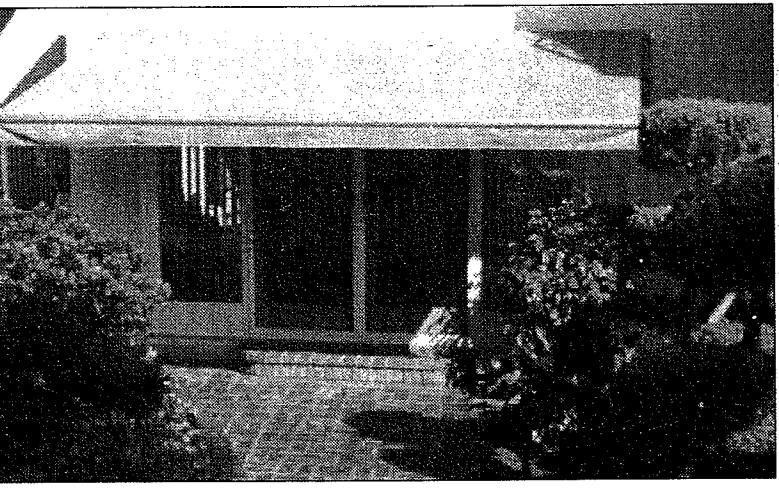
If you can afford it, consider adding a high-tech wind and rain sensor.

If your deck is not against a wall, there is a freestanding retractable awning available. Its easily moved butterfly design extends from the frame on both sides and retracts into a narrow protective hood at the center.

There are also non-lateral-arm awnings that swing down over windows.

Most of the fabrics used on these awnings will offer you protection in the rain. But keep an awning closed in the winter, since the weight of the snow can break the arms.

Q: We want to install a central-vacuum-cleaner system, but we are not sure whether to vent it indoors or outdoors. Does it make sense to suck all that heated or cooled air



The only support for a retractable awning is attached to the house wall, eliminating supports at outer corners of the deck or patio.

outdoors?

A: The central vacuum cleaner in my home vents indoors.

Indoor venting lessens energy waste, as you indicated. Most central vacuum cleaners have high-quality filters, so very little dust and dirt escape back into the air.

If you are installing a central vac because of allergies, however, venting it outdoors might make sense to

provide the best indoor air quality. The heat content of air is relatively low, so the winter heat loss will not be great.

To learn more about retractable awnings, visit www.dulley.com on the Web, or write for Update Bulletin No. 465. Send a stamped, self-addressed, business-sized envelope and \$3 to: James Dulley, 6906 Royalgreen Dr., Cincinnati, Ohio 45244.

— Anita R.

Concerned Engineer 8-1-91



James Dulley
Cut your utility bills

Shady deal puts you on a roll

Awnings cut cooling bills, furniture fading

QUESTION: The sun shines in our sliding patio glass door and in the bedroom windows and really bakes us. Are there any special new types of awnings to use and what size should they be?

ANSWER: Awnings are very effective for blocking the sun's heat from coming in through your windows and doors.

Not only will your air-conditioning costs be lower, but your carpeting, drapes, and furniture will fade less.

There are some new special retractable awnings that are ideal for patio doors.

In addition to shading your sliding glass door, these awnings provide a cover for your patio.

They are available in widths up to 40 feet and project out from your house up to 12 feet.

The tough acrylic fabric cover is supported by strong metal arms that are attached to the house.

When you crank the retractable awning open, an elbow joint in each arm straightens extending the awning out over your patio. It is totally supported from the house wall with no supports at the end.

When you retract the awning, the fabric cover rolls up on a spring-loaded roller and the support arms are hidden flush against the wall.

For easier operation, you can get an electric motor and controls.

You can also get special sun and wind sensor controls to automatically open or retract the awning depending on the weather conditions.

You can use either fixed aluminum or fabric awnings for your bedroom windows.

These are fairly easy to remove in the winter if you want to get the maximum amount of sun for passive solar heating.

The proper size of an awning is dependent upon our area's latitude (about 39°) and the height of the window.

Also, the higher the awning is mounted above your window, the bigger the awning must be to give complete shading.

You can determine the correct awning size by simply holding a long stick out from the top of your window where the awning will be attached. Angle it at the angle of the awning.

Attach clothespins at several positions. By watching where the clothespins shadows fall on your window, you can determine the required size of the awning.

There also are F-factor charts that you can use to determine the proper awning size. They show two numbers for each area's latitude — one factor is for the proper size on Aug. 21 and one