

# Solar heated home is project of Ric Symmes

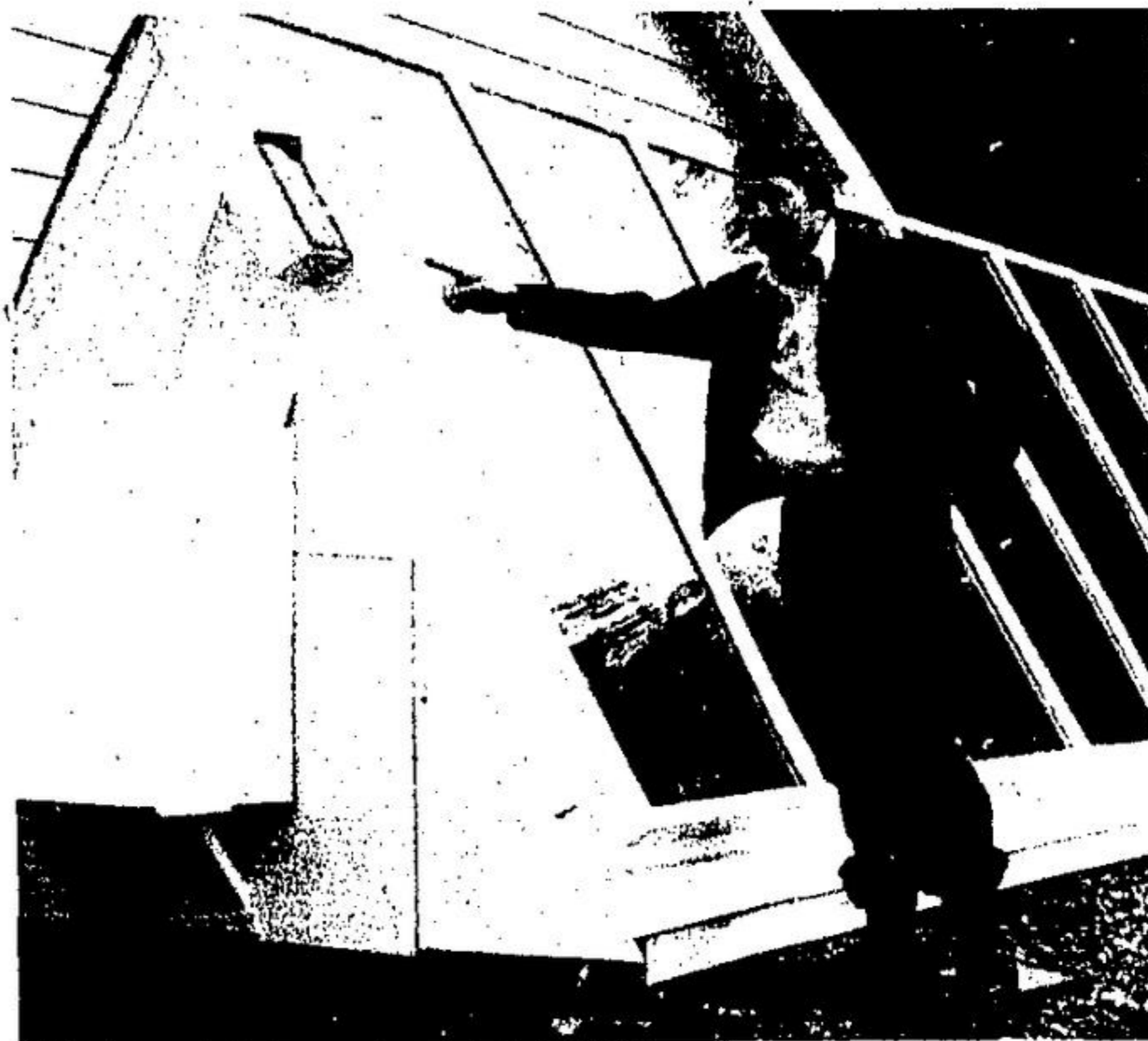
By Chris Morton  
When friends and neighbors visit Ric Symmes home near Ballinacree, they are startled at first. Then they ask what it is.  
Is it the ultimate version of a greenhouse? Perhaps a coop for a special variety of hen? Finally somebody takes a wild guess and suggests it might be some kind of solar receptacle and the mystery is solved.  
"Exactly!" said Symmes, standing beside the exclusively hot air solar collector, connected to the southwest wing of his rural home, located between the 10th and 11th Lines.  
Motivated by the rising costs of home heating coupled with a sincere interest in conservation and the belief everyone should do something to curtail their energy consumption, Symmes decided to build an alternate heating system.  
The present unit which was momentarily completed one week ago, operates on a heat transfer basis. "I attempted

to make a start on a practical unit that should pay for itself in 10 years," said Symmes.  
"This system differs from most that employ either high water storage tanks that are designed to carry heat from season to season, or the 'catch-can' method which only produces heat with adequate sunlight.  
"The storage tank system, in my opinion is unsatisfactory as it costs considerable money to install and studies suggest it is not economically feasible for a moderately priced home."  
"The obvious disadvantage with the 'catch-can' system is that it is most efficient under sunny bright conditions. Another difficulty stems from the fact that only 30 percent of the daylight in the months of December, January and February are usable," explained Symmes.  
Despite the lack of technical data in Canada about solar heating, Symmes was able to construct his present unit largely from information

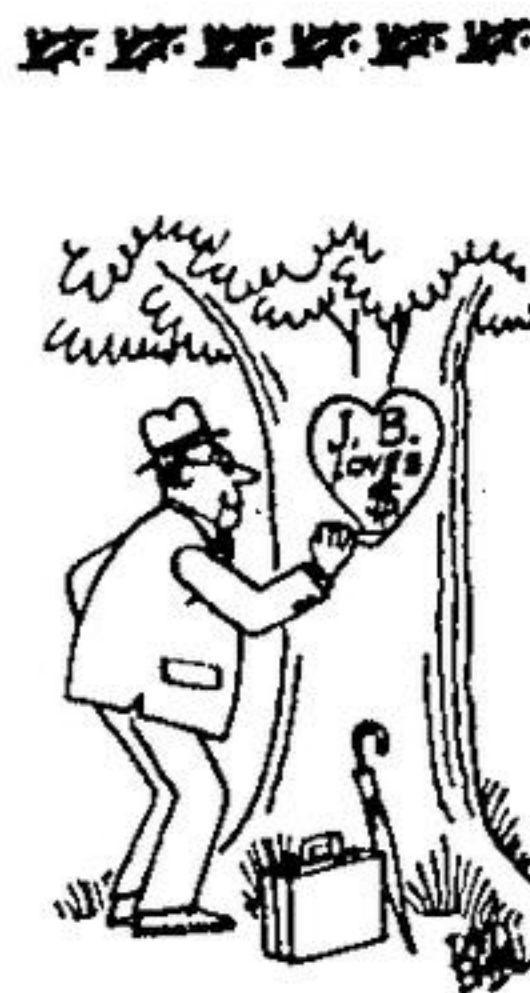
obtained from a book on an international solar heating conference available at Ontario Hydro.  
The unit operates on the basis of heat exchange. The flat glass plates at the front are backed by sheets of black aluminum. On the upper corner is a self-starting thermostat encased in a black box. Washed stones spread along the foundation act as the principle heat receptacles.  
When in operation the stones are heated to anywhere between 170 and 225 degrees (F.), depending on the intensity and duration of the sunlight. A fan connected to the thermostat blows air over the hot stones—which retain the heat—into a house heating duct and recycles returning cooler air from an outflow duct.  
"The thermostat automatically shuts the entire system off when the rock pile is cooled down to 85 degrees," said Symmes.  
Like many existing units, Symmes had originally built a water transfer system but

through trial and error discovered it created more problems than it solves. "During the first year of operation the water carrying tubes corroded and leaked out to turbulence."  
"I spent \$1250 on the materials used, which I might add, are readily obtainable. I acquired 300 sq. ft. of partially defected glass removed from used patio door units, water washed stones from a nearby quarry and special caulking that would withstand high temperatures."  
Because of the lack of information about solar energy in Canada, there are no proven stock designs for homes. What there are of designs are not appropriate for homes already built.  
"Installing a solar collector should not be the first priority in a house. Proper insulation combined with double-glazed storm windows in an attempt to prevent needless heat loss are of primary importance, other wise you are practicing false economy," cautioned Symmes.  
"Although it is not immediately known, I expect this unit to heat about 25 percent of my home this winter. It is not economically wise to construct a system that will provide over 75 percent of a home's heating requirements. Installation of a large unit creates surplus heat, resulting in lower efficiency."  
It is also important to have a back-up oil or electrical heating system for supplementary use.  
According to Symmes, flat plate collectors have been around for years and used extensively in Israel, Australia and Florida to heat water.  
"Probably the greatest barrier to widespread solar heating has been the throw-away price of fossil fuel," said Symmes. "However, this is rapidly changing. As soon as energy prices really go up the opportunity will be there."  
There is also tremendous inertia in the building trade. People look at the initial costs of solar collection and not the long-term operating costs. With solar heat initial cost is high but would reduce operating costs substantially.

Essential to low cost solar collectors is mass production. At this time there haven't been any mass produced units sold in either Canada or the U.S.  
"It is encouraging to note that a company in Weston is now engaged in the full-time production of solar panels."  
Symmes, who is General Manager of the edible oils and dairy division at Canada Packers in Toronto, and chairman of the Sierra Club of Ontario, a very influential conservation organization, had been doing a number of experiments in alternating energy before construction of the solar collector.  
During the summer he built a savonius rotor-barrel watermill which was designed to pump water. He is currently debating how to heat water either by solar collector, as is done in many parts of Florida, or with the aid of a windmill-resistance heater.  
"And if the present unit lives up to my expectations, I intend to expand it next year. Believe me if I can do it anyone can!"



HOW TO BEAT the high cost of energy? Ric Symmes, at his home near Ballinacree, has invented an alternate heating system which is a kind of solar receptacle. Here, Ric shows the thermostat encased in a black box which responds to the angle and intensity of the sun and activates the unit accordingly.



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WITHOUT ANY stock designs, Ric Symmes has put considerable effort into creating a unit that is functional and aesthetically pleasing.

## Wolves killing sheep in Erin

Erin township council has paid more than \$800 to owners of sheep killed by wolves during the past month.  
Commenting on the amount of the damage, Reeve Donald Matheson said that the ravaging of sheep has been township-wide rather than localized and that in many instances the reports of the inspector investigating were particularly gruesome.

## \$4,000 in treads in two weeks

A \$4,000 item for new tires bought within the last two weeks caught the eye of finance committee chairman Harry Levy Monday.  
"It just surprises me there are so many tire replacements," councillor Levy said.

The committee asked the treasurer and purchasing agent to check with works department in determining if Halton Hills has a tire maintenance program.

### TOWN OF HALTON HILLS COMMERCIAL REFUSE PICKUP WARD I

Commercial refuse normally gathered in Ward I on Thursday, December 25th, 1975 will be picked up on the morning of Wednesday, December 24th.  
Further refuse normally gathered Thursday, January 1st, 1976 will be picked up Friday, January 2nd.

THANK YOU DEPARTMENT OF PUBLIC WORKS

## Creative playgrounds in north

Creative playgrounds are flourishing in North Halton and more are on the way.  
The new type of school playground was first started two years ago at Pineview School and quickly spread to Howard Wrigglesworth, Harrison and Park in Georgetown, Speyside and M. Z. Bennett Schools.  
Halton Board of Education official Herb Pilles said the schools and parents meet and plan the creative playgrounds and then the parents supply the materials like tires, rail road ties and barn beams. At several schools the playgrounds have been built by students working on Opportunities for Youth projects, while at other schools the parents and pupils have built the playground themselves.

With 15 creative playgrounds already in operation in Halton, another nine are planned, including an extra five in North Halton at Glen Williams, Brookville, Fairview, Percy W. Merry, and J. M. Denyes Schools.  
A special sub-committee of the board's outdoor education committee, which takes care of creative programs, asked Halton Board of Education, Thursday, to consider settling up a budget to take care of maintenance of creative playgrounds.  
In addition the board was asked to give its support for further development of creative playgrounds in the region and the committee recommended it should continue to help parents and teachers at schools where the special playgrounds are planned.

## CHRISTMAS GREETINGS

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The Acton Free Press



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### ACTON CHAMBER OF COMMERCE ANNUAL GENERAL MEETING

Monday, January 19

at the

Band Hall

• DINNER MEETING •

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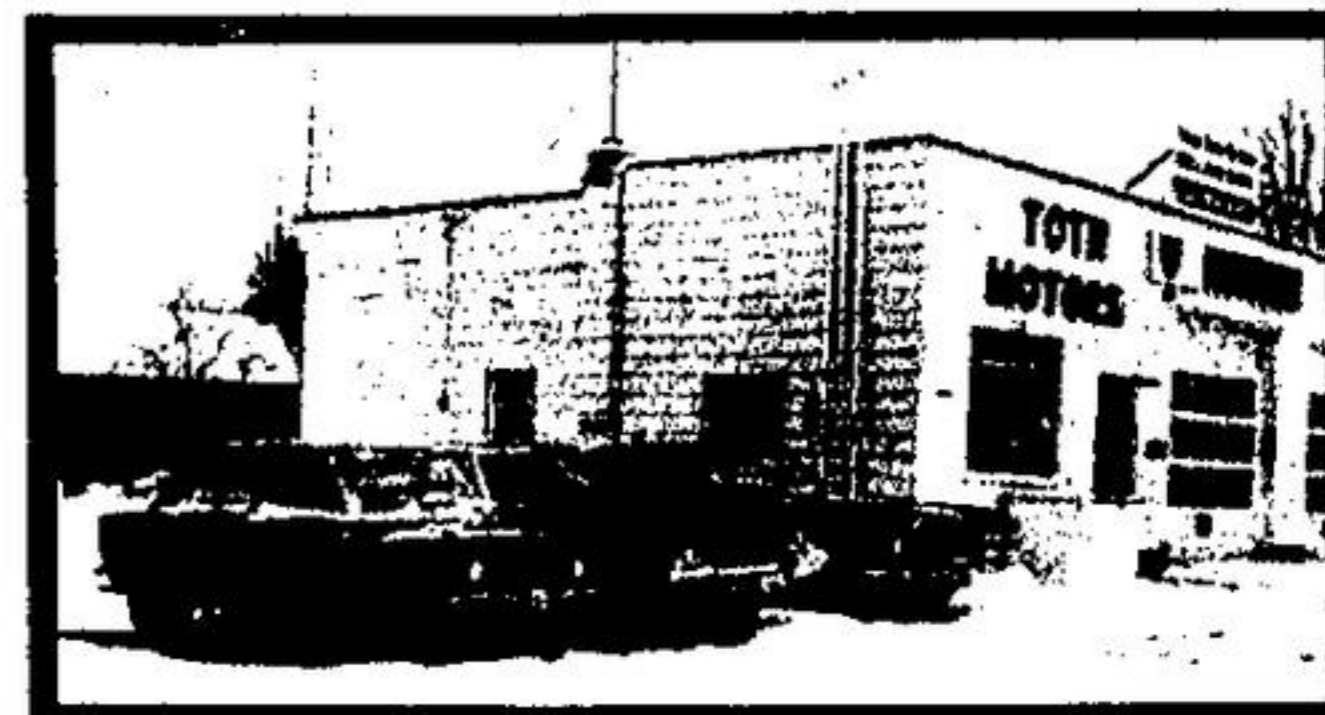
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