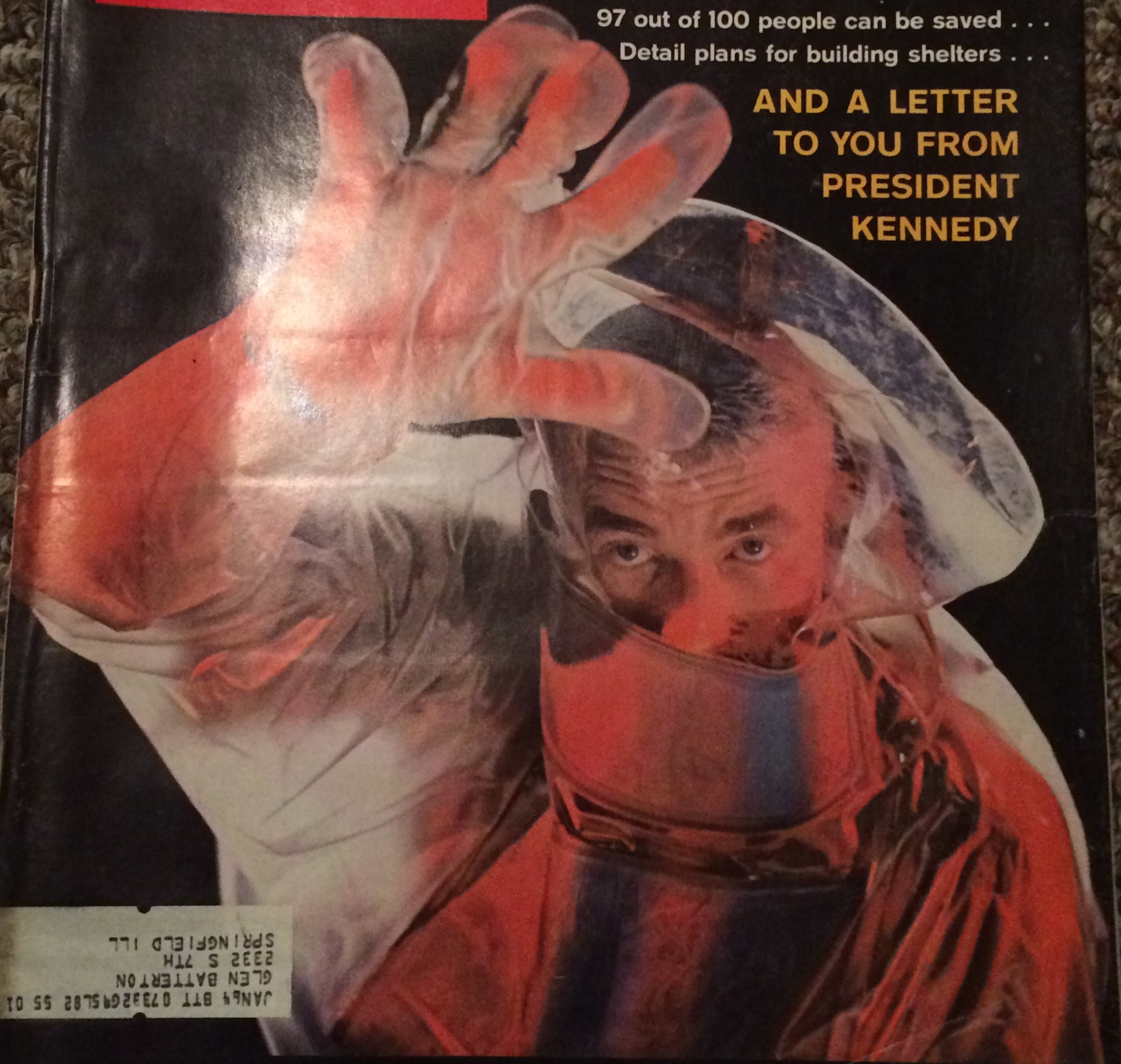


LIFE

HOW YOU CAN SURVIVE FALLOUT

97 out of 100 people can be saved . . .
Detail plans for building shelters . . .

AND A LETTER
TO YOU FROM
PRESIDENT
KENNEDY



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CIVILIAN FALLOUT SUIT

SEPTEMBER 15 · 1961 · 20¢

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September 15, 1961
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A 21-year-old rocketeer builds a bird
and gets it test-fired by the Navy

A Rising Young Rocketeer

Marshall Kriesel at the age of 21 is an extraordinary young missileman. And he is one of a host of little-known Americans who are worth meeting because they are destined to be movers and shapers in our country. Marshall's rocket masterpiece is an 11-foot liquid fuel missile, the most sophisticated ever built by an amateur. It was so good the Navy put on a full-dress test firing (*above*) at its China Lake, Calif. range to test its efficiency. The missile will co-star with Marshall in a half-hour movie, introduced by President Kennedy, encouraging student science in schools.

The missile, named *Labor of Love*, began five years ago in Marshall's bedroom in Owatonna, Minn. Before it was finished the project had usurped half his brother's room, the base-

ment, den and garage. Marshall also formed a company, Cosmodynamics Research Laboratories, and built two electronic computers which his younger brothers found invaluable for homework. Next to his work bench was tacked the motto: "If it works, it's obsolete."

Enrolling at the University of Minnesota, he worked on the bird in his room. He had no time for dating, except once. "I took out a girl," he explained, "who typed some specifications for me; she wouldn't take money for the job so I had to go out with her."

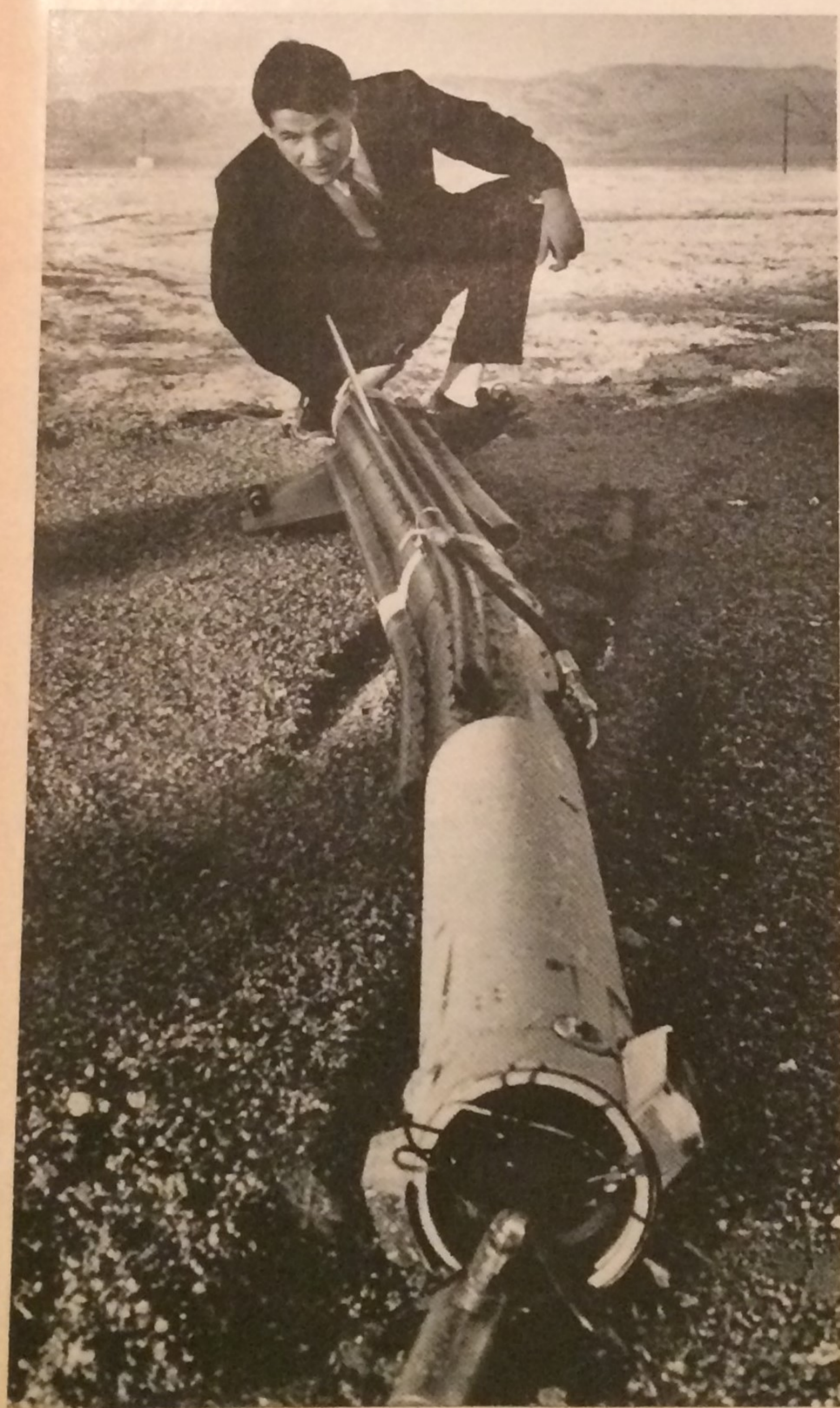
After the successful firing of his missile, Marshall said, "It's been like a noose around my neck, and now it's out of my system. Some people hang crossed swords over their mantle; I'll have a missile hanging in the attic."

Before test firing, Marshall Kriesel and a scientist check out Marshall's missile. In his mouth is a pin he will insert to prevent an erratic launching.

PANY
PEOPLE WORTH MEETING CONTINUED



In the basement at home, Marshall checks missile with self-built gear. Below, after China Lake firing, he inspects rocket. Aerodynamic instability limited flight to 500 yards, but, far more important, all its 1,800 parts worked perfectly. The Navy was so impressed it hired Marshall for a summer job. This fall he will work part time for Minneapolis-Honeywell.



What scientific discovery will John Coffman help make - at 16?

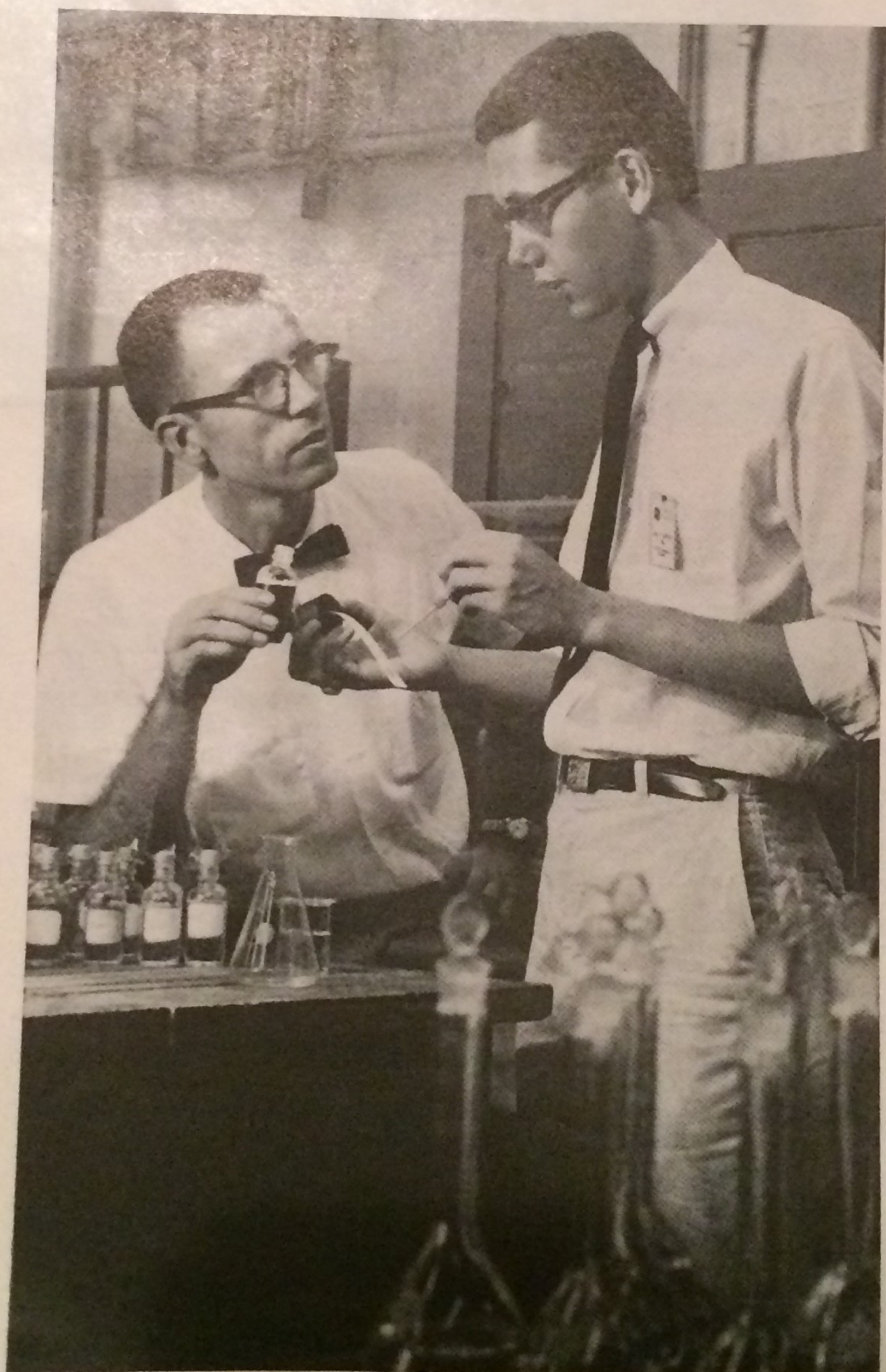
Nobody can tell yet — not even scientists at the General Electric Research Laboratory. But the fact is that within the next year or so, John Coffman could make a significant contribution to science.

It happened this way. John was one of 20 high school juniors, all outstanding in science, who were invited by the General Electric Foundation to spend the summer at Union College, Schenectady, N. Y. The young people had a chance to use the latest equipment and to work under Union professors and scientists from the nearby General Electric lab. John teamed up with Dr. Donald Wilkins of General Electric on experiments in ion exchange, which he is continuing in Baltimore during his senior year of high school. The teamwork is continuing, for Dr. Wilkins believes John's research might soon lead to completely new processes for analyzing materials.

The purpose of the program is to encourage America's gifted young people to explore careers in science by giving them the opportunity to participate in basic research. It is a promising new advance in U.S. education.

Progress Is Our Most Important Product

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**A MESSAGE
TO YOU FROM
THE PRESIDENT**

The White House
September 7, 1961

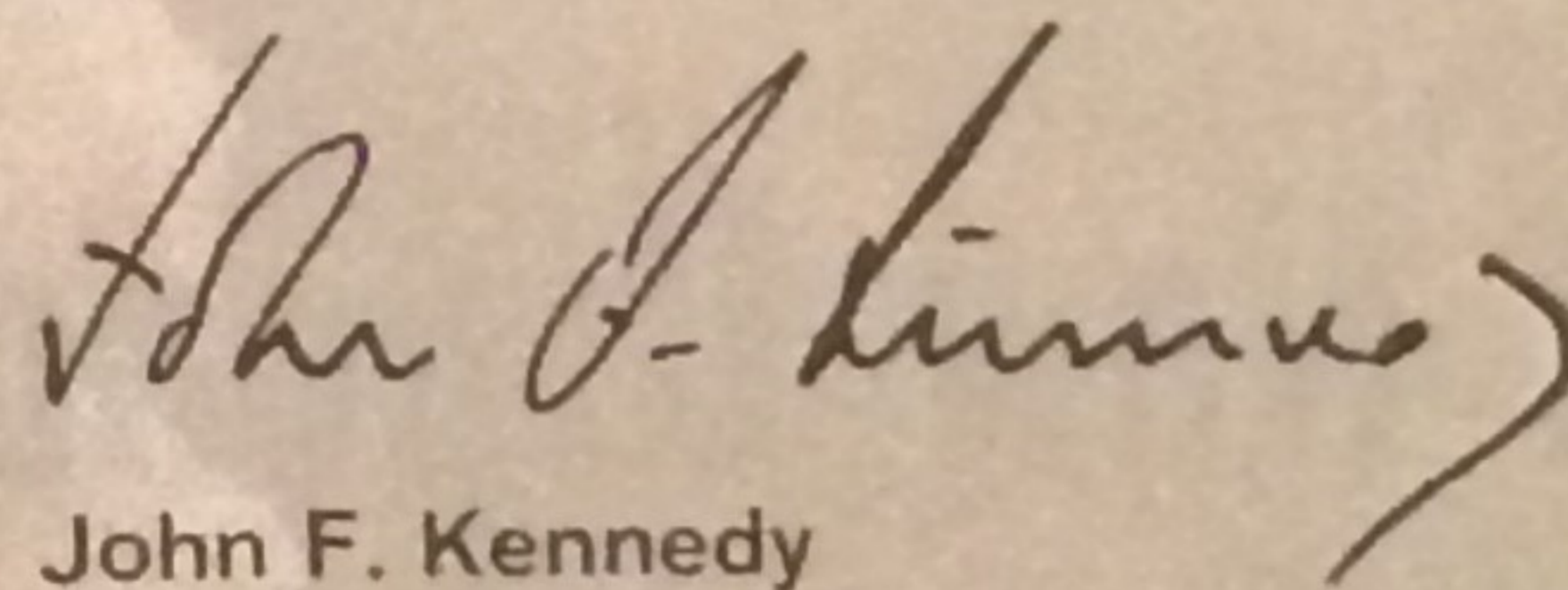
My Fellow Americans:

Nuclear weapons and the possibility of nuclear war are facts of life we cannot ignore today. I do not believe that war can solve any of the problems facing the world today. But the decision is not ours alone.

The government is moving to improve the protection afforded you in your communities through civil defense. We have begun, and will be continuing throughout the next year and a half, a survey of all public buildings with fallout shelter potential, and the marking of those with adequate shelter for 50 persons or more. We are providing fallout shelter in new and in some existing federal buildings. We are stocking these shelters with one week's food and medical supplies and two weeks' water supply for the shelter occupants. In addition, I have recommended to the Congress the establishment of food reserves in centers around the country where they might be needed following an attack. Finally, we are developing improved warning systems which will make it possible to sound attack warning on buzzers right in your homes and places of business.

More comprehensive measures than these lie ahead, but they cannot be brought to completion in the immediate future. In the meantime there is much that you can do to protect yourself—and in doing so strengthen your nation.

I urge you to read and consider seriously the contents of this issue of LIFE. The security of our country and the peace of the world are the objectives of our policy. But in these dangerous days when both these objectives are threatened we must prepare for all eventualities. The ability to survive coupled with the will to do so therefore are essential to our country.



John F. Kennedy

Fallout Shelters

**YOU COULD BE AMONG THE 97% TO SURVIVE
IF YOU FOLLOW ADVICE ON THESE PAGES . . .
HOW TO BUILD SHELTERS . . . WHERE TO HIDE
IN CITIES . . . WHAT TO DO DURING AN ATTACK**



ORGANIZED SAFETY. In a suburb of Boise, Idaho (pop. 35,000), families who have incorporated and bought shares for \$100 each line up outside community shelter which is dug into a hill. It has

dormitories, power plant, kitchen, hospital and decontamination showers. Here the families file in to deposit emergency rations. U.S. government put up \$122,000 of cost in return for using shelter as test.

A New Urgency, Big Things To Do—and

The President's letter to all Americans—printed on the preceding page—emphasizes the urgency which could be felt across the nation last week. As the warlike rattle rolled out of Moscow and as small amounts of fallout from the daily successions of Soviet nuclear tests floated over the U.S., the people woke up to the fact that they ought to be doing something to protect themselves.

This was a new idea. For years, most people have had the fatalistic idea that it was no use trying to do anything about protection against a nuclear bomb. If the blast did not kill them, they felt, radiation certainly would. The man down the street with a backyard shelter was considered odd. But he is actually a solid, sensible man—and a responsible citizen.

If the enemy attacks, he will probably aim first at military targets like missile and SAC

bases. Large cities and industrial centers, which do not have the capacity to strike back, will be secondary targets. If a military-objective attack should come now to an unprepared nation, 45 million Americans—a fourth of the population—would die. Some would die in the blast. But the greatest danger to by far the greatest number would come from fallout, the deadly cloud of radioactive dust and debris which would blow across the land.

Hundreds of miles from the target, people would come into contact with destructive fallout, which they could not necessarily see, touch or smell. They could get enough on their skin to cause burns and sickness. Fallout might also contaminate their food and water and damage their vital organs.

But if Americans took precautions against fallout the mortality could drop sharply.

About five million people, less than 3% of the population, would die. This in itself is a ghastly number. But you have to look at it coldly. Unprepared, there is one chance in four that you and your family will die. Prepared, you and your family could have 97 chances out of 100 to survive.

Basically, fallout protection consists of covering your body, food and water so the radioactive particles cannot contaminate them. If you have sufficient shielding between you and the fallout you are safe. You should be prepared to take cover for at least two weeks.

Obviously, this will not always be easy to do. What if you are in a city like New York? Though some notable steps have been taken (*above*), most cities are far behind in their preparations for fallout protection. People must know instantly where to go. But your



CITY CONFUSION. Near Times Square in New York, old signs with opposite arrows point to traditional bomb shelters, basements of office buildings. They would provide fallout cover, but neither is properly stocked or equipped.

What You Must Learn

chances of surviving fallout in a big city would be good. If you are in a large apartment house or office building you could either go to the basement or stay in an inner corridor on one of the middle floors.

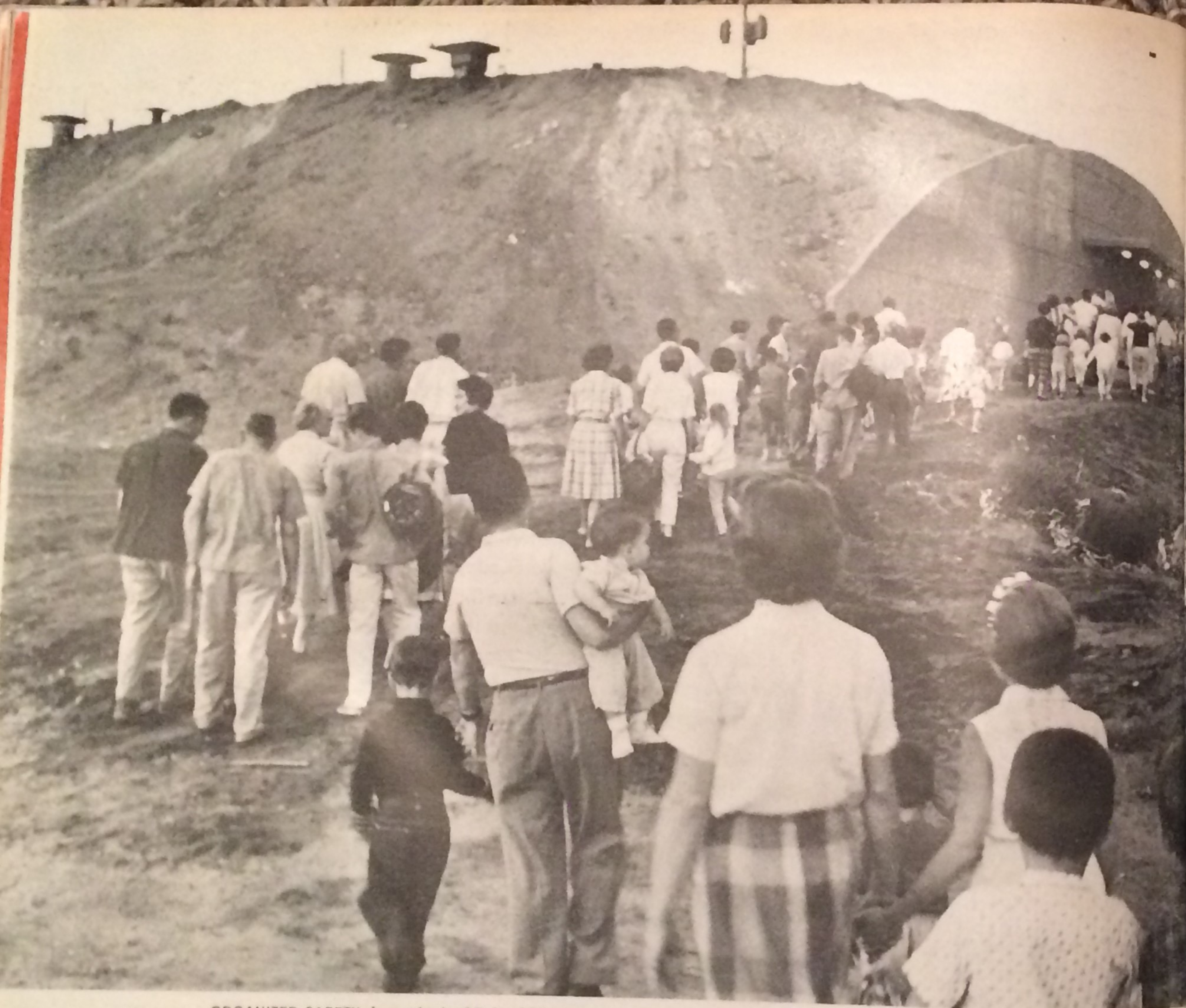
A subway system or any city tunnels offer an excellent shelter. Wherever you live or work, you should try to keep a portable supply of water ready. You can live for several weeks without food, but not without water.

It is likely that any attack will come at night while you are at home—so the enemy will have daylight to prepare for the retaliation. (When it is midnight in New York, it is 8 a.m. in Moscow.) If you own a home, you can build a family shelter there. No civilian shelter will stand up against a direct or nearby blast. And the 97% survival figure is the optimum, based on good protection and some warning.

There is no guarantee that any of your defenses—or even the nation's defenses—will be adequate if the enemy attacks all-out with complete surprise. But they will increase your odds. And every family shelter will contribute to the nation's total deterrent. For if the U.S. is so well prepared that it cannot be knocked out, the enemy may never attack.

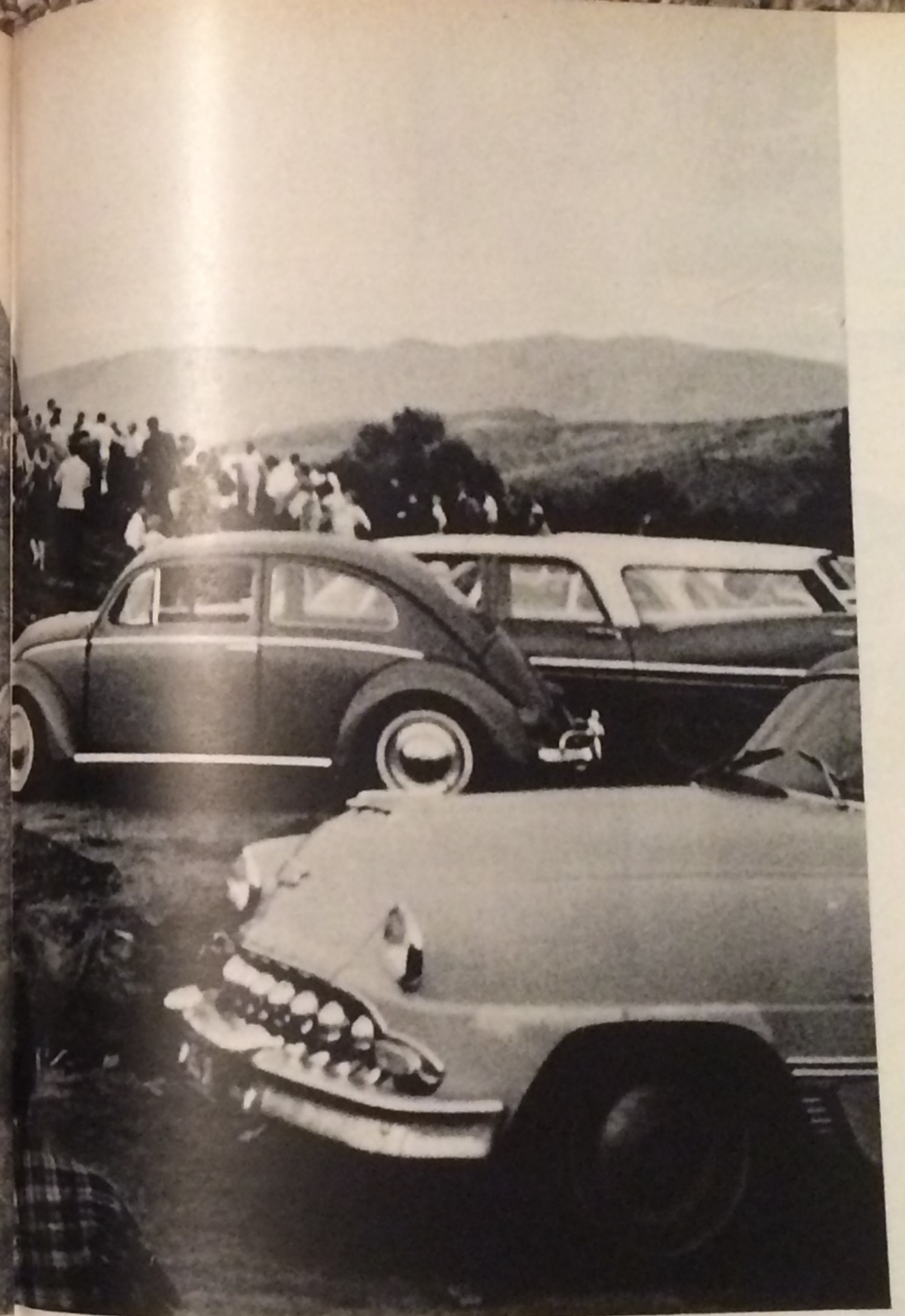
Fallout preparation will take effort, money—and time. On these pages, LIFE shows practical ways in which you can protect yourself and your family and a rundown on what to do in an attack. If you want a rudimentary shelter, you can dig a cave in a hillside or build wooden double walls in your basement, filling them with earth. But good shelters can be built at modest expense. The next six pages give detailed plans for three types, based on information in official Civil Defense publications.



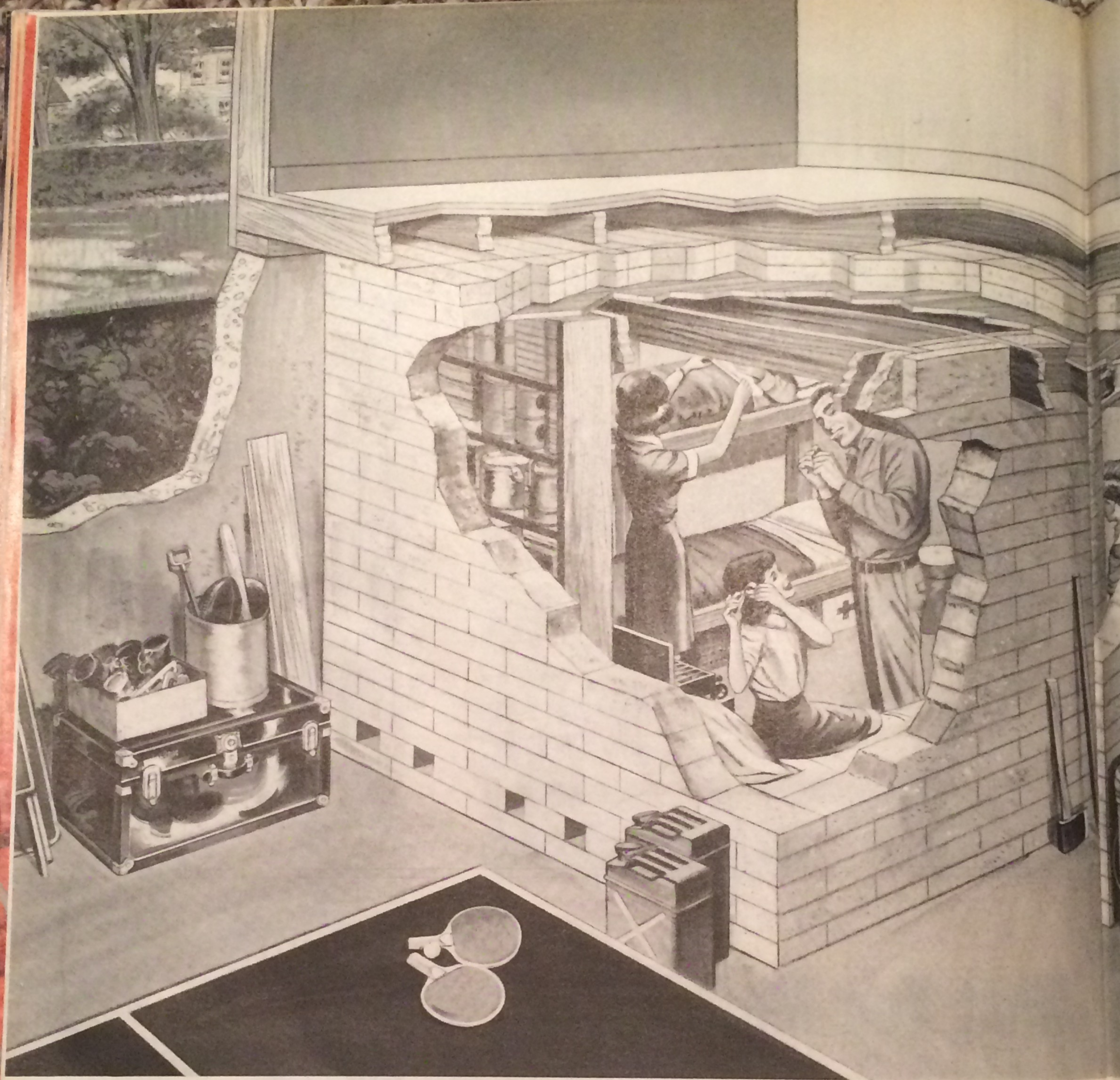


ORGANIZED SAFETY. In a suburb of Boise, Idaho (pop. 35,000), families who have incorporated and bought shares for \$100 each line up outside community shelter which is dug into a hill. It has

dormitories, power plant, kitchen, hospital and decontamination showers. Here the families file in to deposit emergency rations. U.S. government put up \$122,000 of cost in return for using shelter as test.



CITY CONFUSION. Near Times Square in New York, old signs with opposite arrows point to traditional bomb shelters, basements of office buildings. They would provide fallout cover, but neither is properly stocked or equipped.



Simple Room in Basement Built with Concrete Blocks

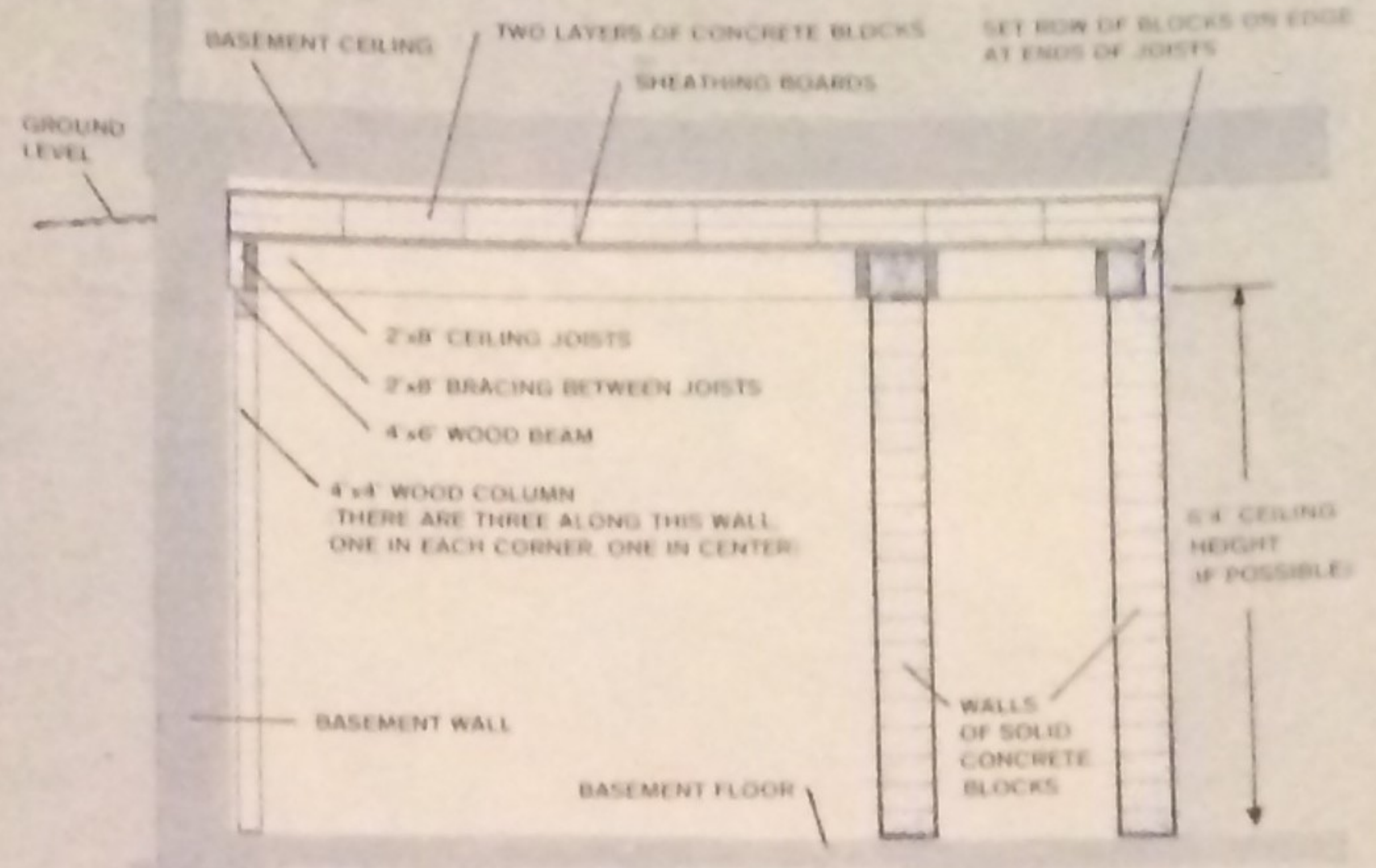
One of the simplest and least expensive ways to build a shelter is to wall off part of the cellar with concrete blocks. The drawing above shows such a shelter in cutaway form. The plans on the opposite page explain how it is put together. First, you pick a corner where there are no windows, mark your dimensions on the floor and put down a layer of wet mortar at least $\frac{3}{8}$ inch thick to hold the first row of cement blocks. Build up layers, consulting a how-to-do-it book or manufacturer's pamphlet on best way to apply mortar. Use a level diligently to keep layers

straight and even. Leave four ventilation holes in second layer. Stop when you are within 16 inches of the ceiling to leave room for shelter roof. Build baffle wall (next to the garbage cans above) to the same height as other walls. Baffle will stop most radiation, which behaves like light and does not go around corners, from entering the shelter door.

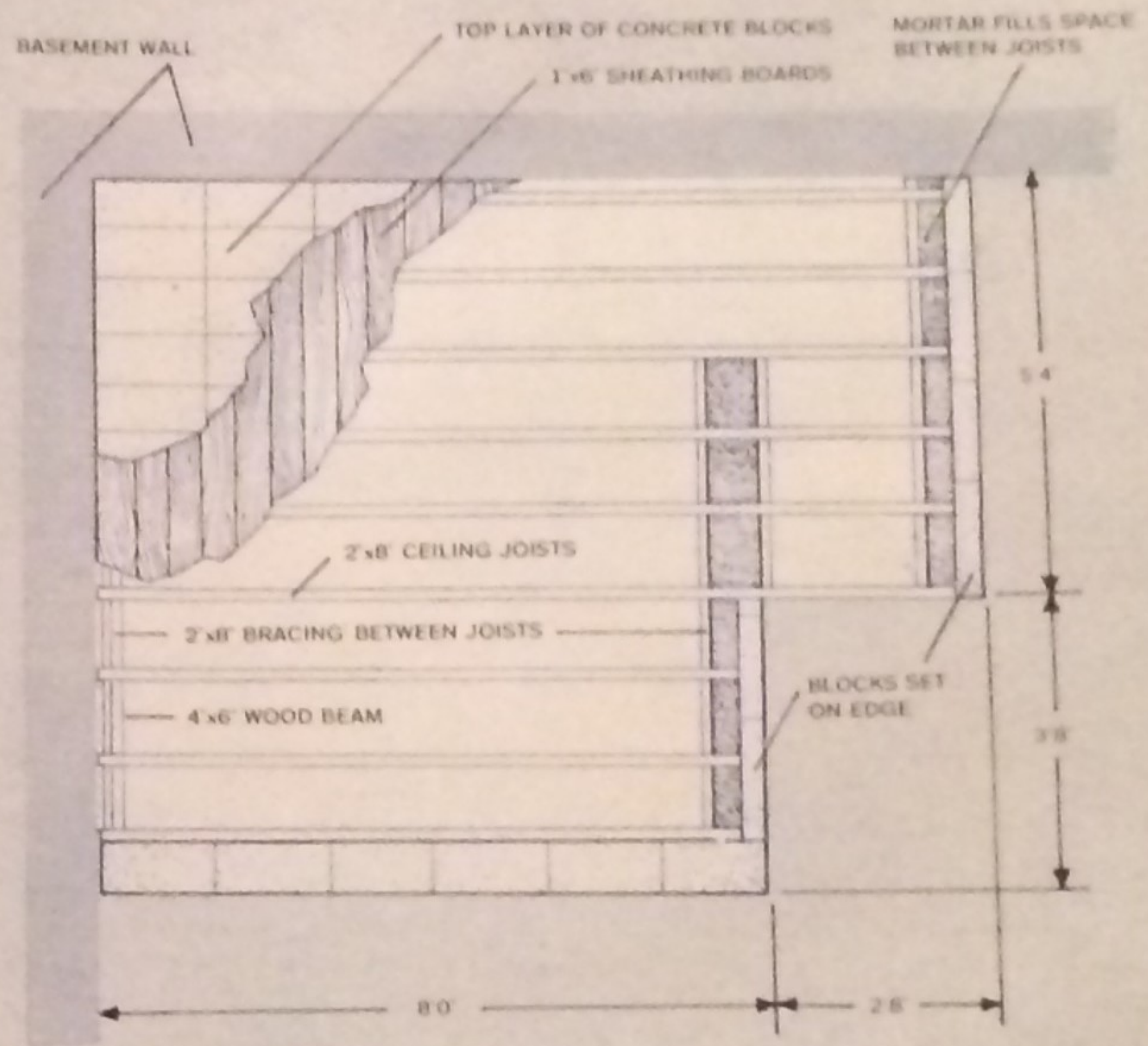
Place three upright 4"x4" posts against one basement wall (wall at left in drawing, above). Nail a 4"x6" beam across the top of them. When mortar is dry lay the ceiling joists on edge with 12½ inches between their centers and with one end of each joist resting on the beam and the other end resting on the block wall, 4 inches from the outer edge. On remaining 4 inches, put blocks laid on edge to form top layer of walls.

Nail the first planks of one-inch sheathing across the beams. Stack two layers of concrete blocks, unmortared, on top of sheathing. Move forward a foot or two at a time, adding sheathing and blocks until the roof is completed.

The materials for this shelter should cost no more than \$200. It offers



SIDE VIEW. Cutaway of basement shelter shows how roof is supported by joists which are laid on edge from beam at left to block walls. The beam is supported by three 4"x4" posts which are placed in the center and at each end of the wall. Height of the ceiling can be adjusted to the dimensions of cellar.



TOP VIEW. This cutaway shows shelter roof of concrete blocks laid on top of one-inch sheathing. All joists are held apart by 2"x8" bracings. The baffle wall protects a 2'4" entry which needs no door. Wall shields the shelter and also helps to hold up the portion of the roof which covers the open passage.

List of materials you will need

- 500 solid concrete blocks, 4"x8"x16"
- 12 bags of prepared mortar mix, one cubic foot per bag
- 3 support posts 4"x4"x5'10"
- 1 beam 4"x6"x8'4"
- 6 joists 2"x8"x10'4"
- 3 joists 2"x8"x7'8"
- 3 lengths 2"x8"x8' for bracing
- 95 board feet of 1"x6" sheathing boards
- 3 pounds of 16-penny nails
- 3 pounds of 8-penny nails
- Posts, beams and joists should be of Construction Grade Douglas Fir

Bricks can be used in place of blocks to construct this shelter. In this case the walls and the roof should be 10 inches thick to provide the same protection as the 8-inch blocks.

no protection against blast, but it would reduce radiation to at least 1/100th of what it is outside. The shelter requires no air blower, since the family would breathe air circulating through a fairly well-protected basement. In periods of safety, which would be announced over the radio, the family could dash out of the shelter for extra water cans (next to ping pong table above) or to use the pails outside. The large one is for garbage, which should be wrapped in thick paper. The smaller pail is for human waste, which should be deposited in cans or plastic bags and sprinkled with disinfectants and deodorants until it can be buried. A camping toilet can be bought for \$8.95.

One word of warning: if a nuclear warhead should hit within 10 to 15 miles of you, the house might catch on fire or be blown down around you. For this reason some people prefer to place their shelter outside, as far from the house as possible. Aside from that possibility, the shelter above is a good one. The materials listed at right are measured for this shelter. Any change in dimensions will require some new measurements.

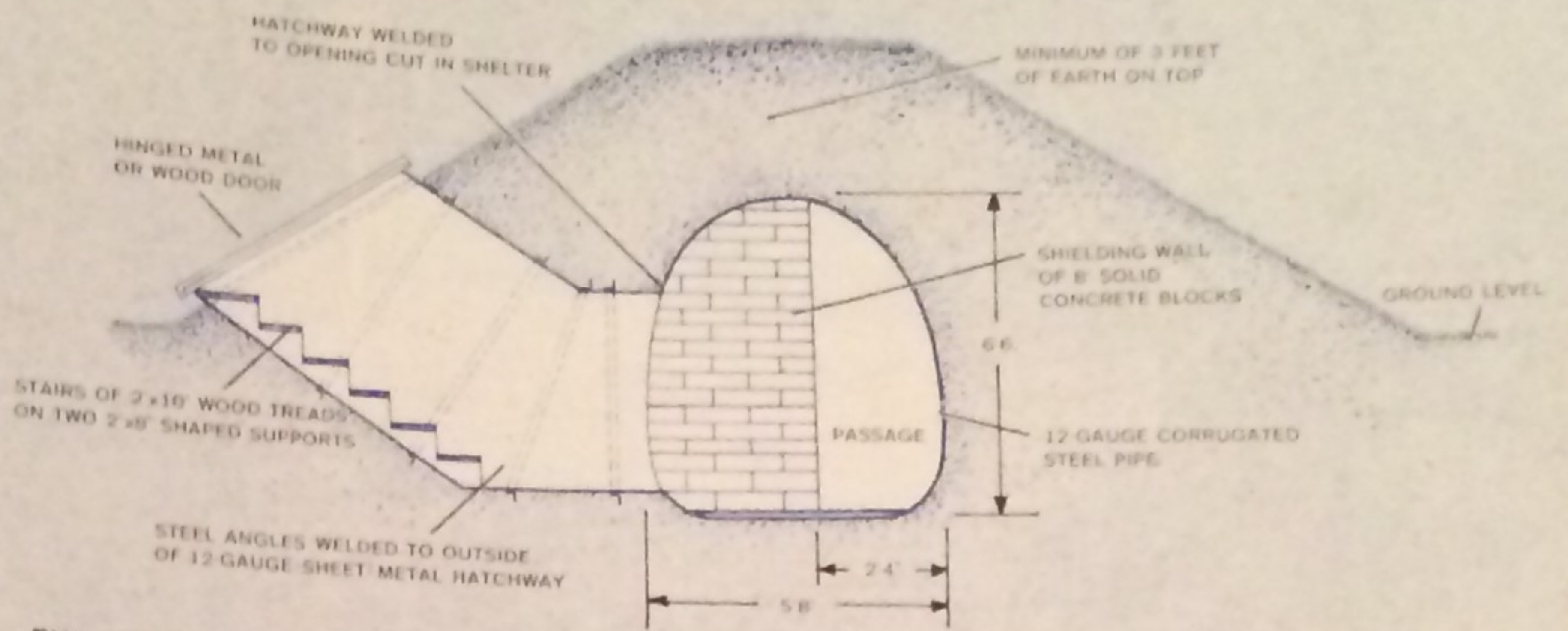


Big Pipe in the Backyard under Three Feet of Earth

If you have no basement—or decide not to use it—you can dig in outside and construct a reinforced concrete bunker in the ground, then cover it up with earth. But reinforced concrete requires the services of a contractor since it must be mixed, poured and cured with precision to make it safe. An easier and less expensive backyard shelter is shown here. It consists of a section of galvanized corrugated steel which almost any

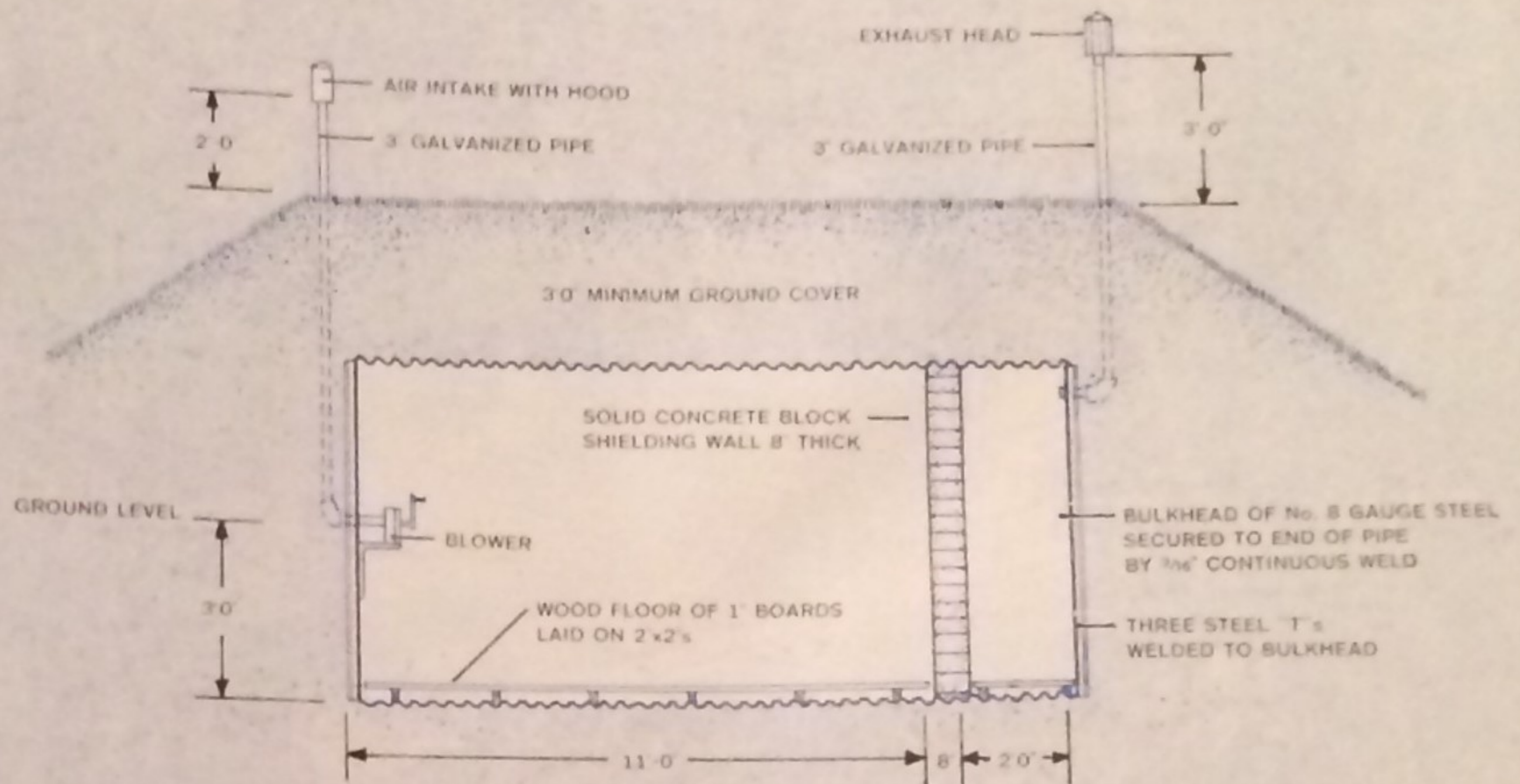
steel distributor can provide because it is of a standard type and size used in road underpasses. The pieces for the hatchway would have to be cut to order. The shelter should be closed in at both ends with steel bulkheads and fitted with the entrance before being buried. A wall of cement blocks jutting more than halfway across the width of the shelter entrance serves as a shield against any radiation which might get in through the entrance hatch.

Although you can do much of the work on this shelter yourself, you will probably want to hire a contractor to dig out the hole in your yard with a bulldozer and to cover up the shelter when you are ready. You will also need the services of a welder to seal up the ends and help construct the entrance. Materials for this shelter cost approximately \$700. The fees for the welder and the bulldozer might run to another \$150. The completed shelter would reduce radiation to less than 1/1000th



END VIEW. This cutaway shows construction of hatchway which is welded to shelter and wall

which closes off part of passage as baffle against radiation. Doorway should jut above ground level.



SIDE VIEW. Intake and exhaust pipes are installed at opposite ends. Dirt is graded so embankment

slopes one foot for every horizontal 18 inches. Steel Ts welded to bulkhead strengthen the pipe.

List of materials you will need

- | | | |
|---|---------------------------------------|---|
| 1 preshaped metal pipe 5'8" wide, 6'6" high, 13'8" long | 2 bags prepared mortar mix | 16 lin. ft. of 3" galvanized pipe |
| 2 oval bulkheads of No. 8 gauge sheet metal | 1 2"x10"x14' for 2' steps | 1 air intake hood with 14 sq. in. of screen inside |
| 6 steel Ts 2½"x2½"x6'6" (5.5 lbs. per ft.) | 1 2"x8"x14' for step supports | 1 exhaust head with screen |
| 1 metal or wood door | 90 board ft. of 1" boarding for floor | 1 hatchway made of 140 sq. ft. of No. 12 gauge sheet metal which can be cut and welded to prescribed size and shape |
| 50 solid concrete blocks 4"x8"x16" | 8 2"x2"x6' lengths to support floor | |
| | 1 centrifugal blower | |
| | 2 3" galvanized elbows | |

Another way to provide an entrance for this shelter is to run a steel tube straight down through the embankment into one

end of the shelter. It would have a hinged cover on top and a ladder inside and would reduce the cost as much as \$100.

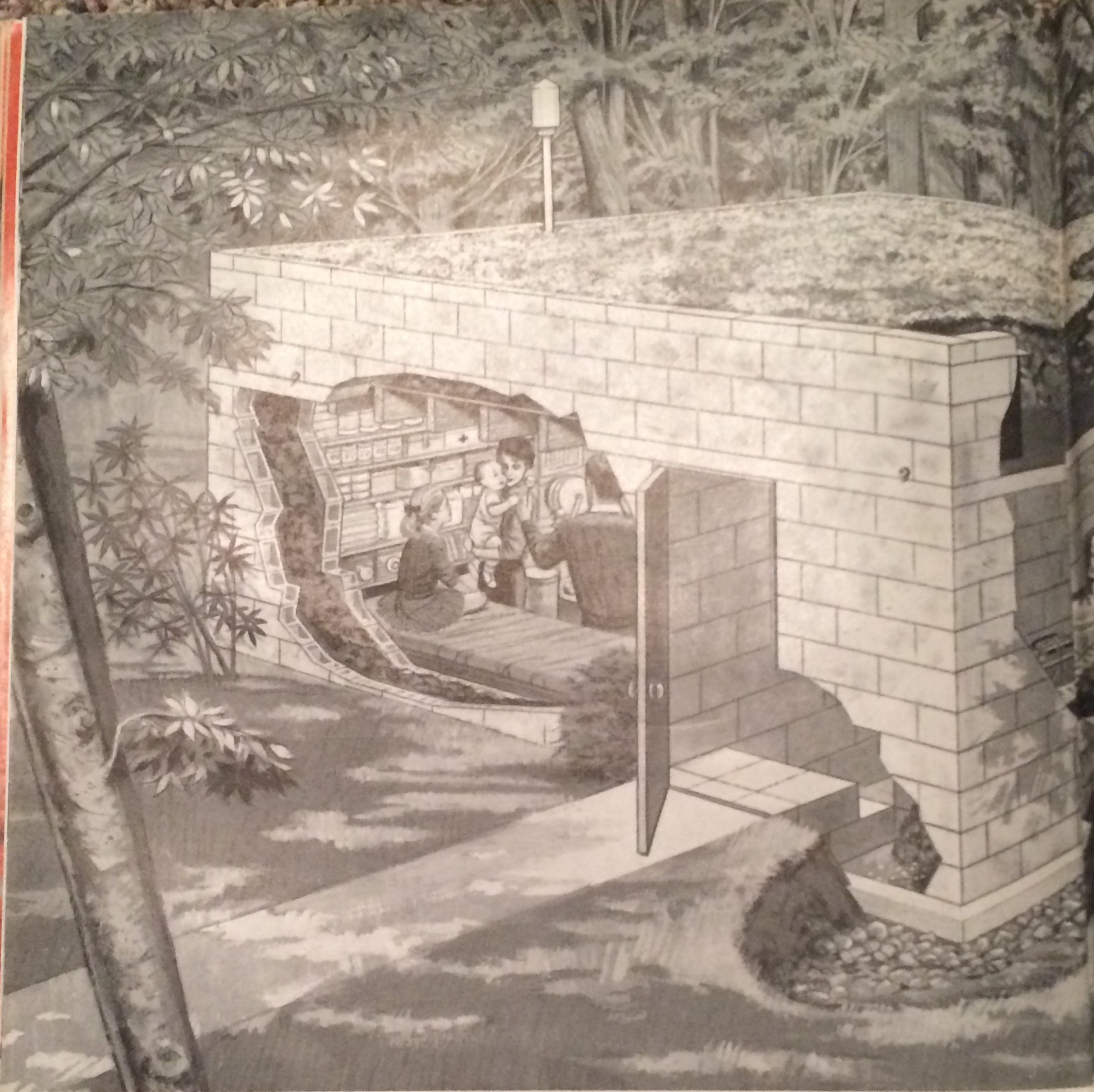
of what it was outside. And it would even give fairly good protection against nuclear blasts several miles away.

You can bury a fallout shelter like this as deep as you want—completely underground, or only part way as shown here. A high water level or the presence of rocks on your property might prevent you from digging deep. You should pile at least three feet of earth on the shelter which will act as a shield and absorb radiation. The shelter should be watertight to keep out seepage from any rainfall which might have become contaminated by fallout. One way to do this is to bury a thick sheet of polyethylene plastic over the shelter to drain away seepage. Then place earth over and around the shelter, tamping it well. Plant the top with sod to keep it from washing away in a heavy rain and exposing the shelter to radiation.

As in any outdoor shelter, you must be more self-sufficient than you

would be in a basement. You must provide your own fresh air and take pains to see that it is not contaminated. The best way is to install an air intake pipe at one end of the shelter and an exhaust pipe at the other. A hand-powered blower—the electricity might go out—is attached to the intake pipe to pull air in. Vents on top of both pipes should be topped by screens to filter fallout. Both pipes should have at least one elbow bend in them to keep out radiation.

The hatch, which the man above is closing, should be sealed as soon as everyone is inside to keep the pure air in and the contaminated air out. The entire family can take turns working the blower. A family of six sealed up inside a shelter will need a minimum of 18 cubic feet per minute. With an average blower capable of providing 60 cubic feet per minute, they need turn the crank only a few minutes at a time every hour or so. Motor-run blowers are available, but your power may go out.



A Double-walled Bunker for Safety above Ground

In rocky or watery areas where you cannot dig down far enough to sink a metal shelter, the shelter shown here provides a good solution. It is put together from double walls of concrete blocks built on a footing of reinforced concrete. The gap between the walls is filled with well-tamped earth or gravel. The roof supports a 28-inch pile of bank-run gravel which should be packed down tight and can be topped off with a layer

of grass. Sheets of roofing felt, set in tar, line the top and walls of the roof, turning it into a pan which will catch water and drain it off at the corners through small pipes.

Here again a baffle wall forms a corridor between the outer entrance of the shelter and the safe inner sanctum. The outside corridor is stocked with some of the family's needs—closed cans of drinking water, emergency tools and tightly sealed pails for garbage and human waste. Extra concrete blocks should be stacked up in the corridor to help block the outside door against radiation. A blower mounted near the commissary shelves sucks in fresh air, and a pipe jutting up at the far right serves as an outlet.

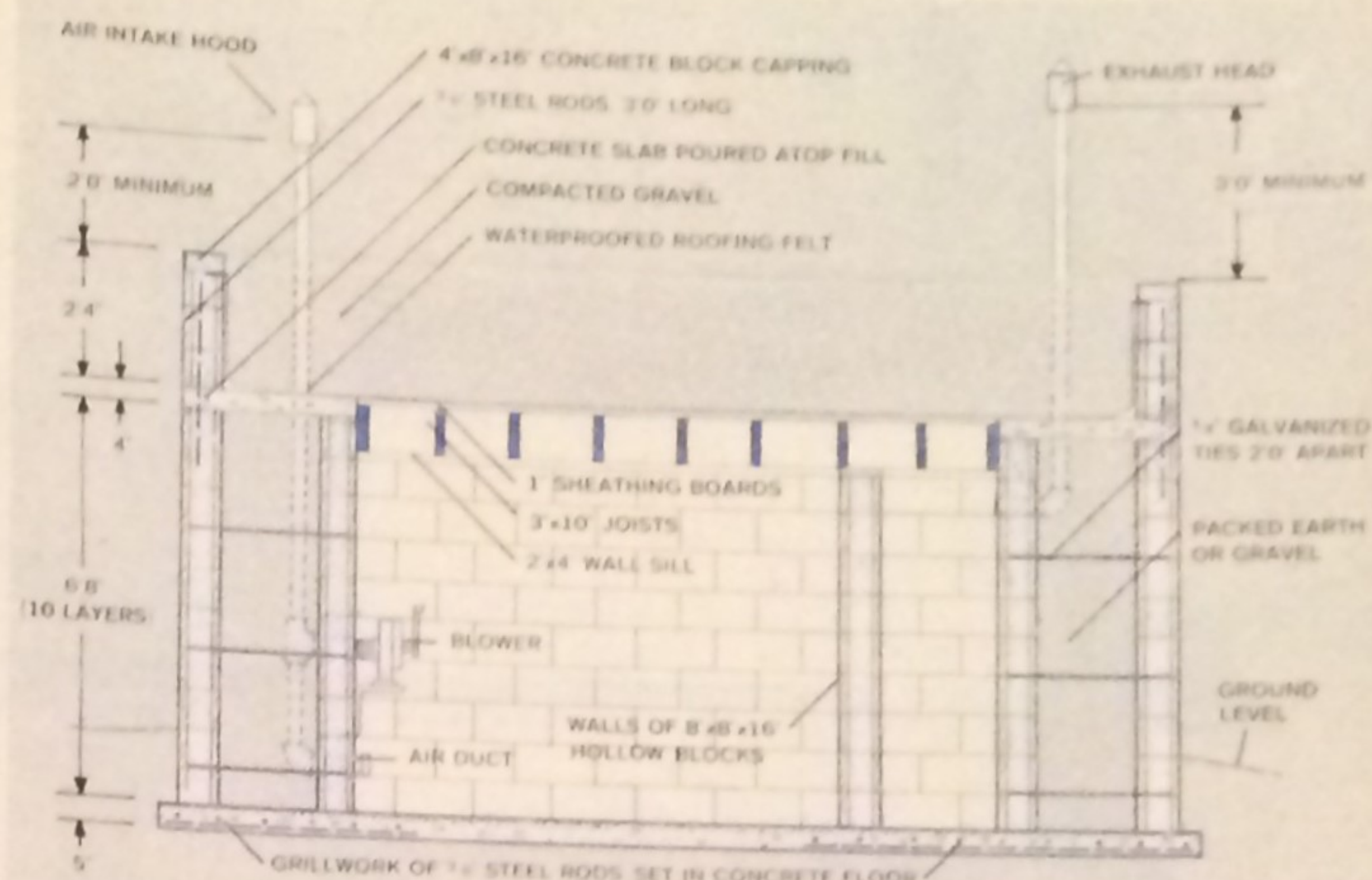
Except for the concrete floor, the shelter could be built by any enterprising do-it-yourself family. The blocks can be hollow to save effort in laying them. But the cores should be filled with mortar, sand or



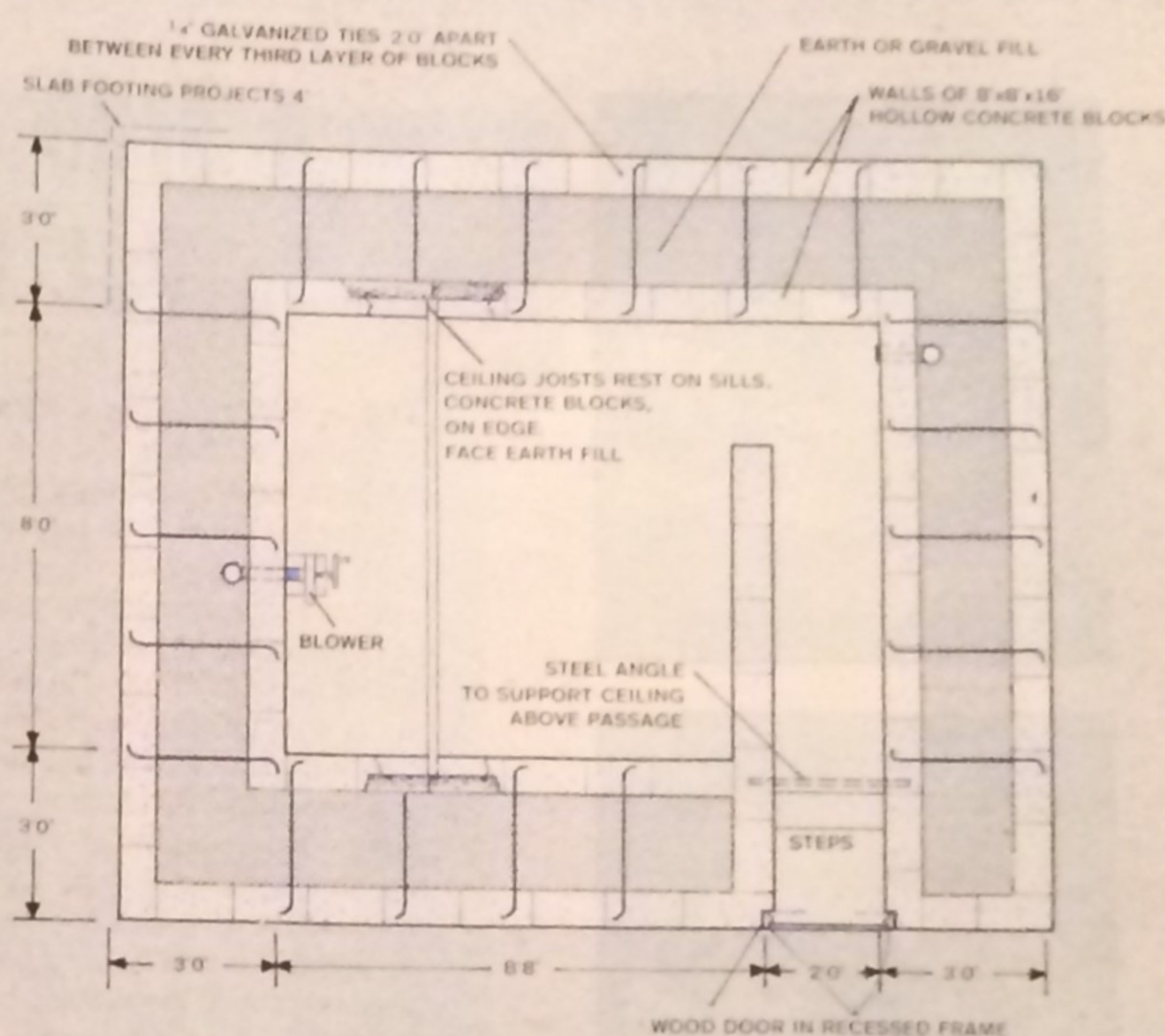
WELER

plain dirt to add to the shielding. There are a few other tricks to know. The blocks should be laid two or three layers at a time to make it easier for you to tamp down the earth which fills them. Steel ties should be placed between the two walls at regular intervals while the mortar is still soft to hold them together. Take care when tamping the earth or gravel that you do not crack the mortar. You should tamp the fill down about four inches at a time. If you use gravel fill, tamp it down in 8-inch layers. In cold climates, where fill might freeze and crack walls, make entire wall from blocks.

The materials needed for this shelter, which provides almost complete protection against fallout, run to about \$700. Contractor's fees would run the cost higher if you decide not to build it yourself. One contractor in Florida, for example, is building a similar model, complete with bunks, shelves, a blower and a chemical toilet for a total of \$2,195.



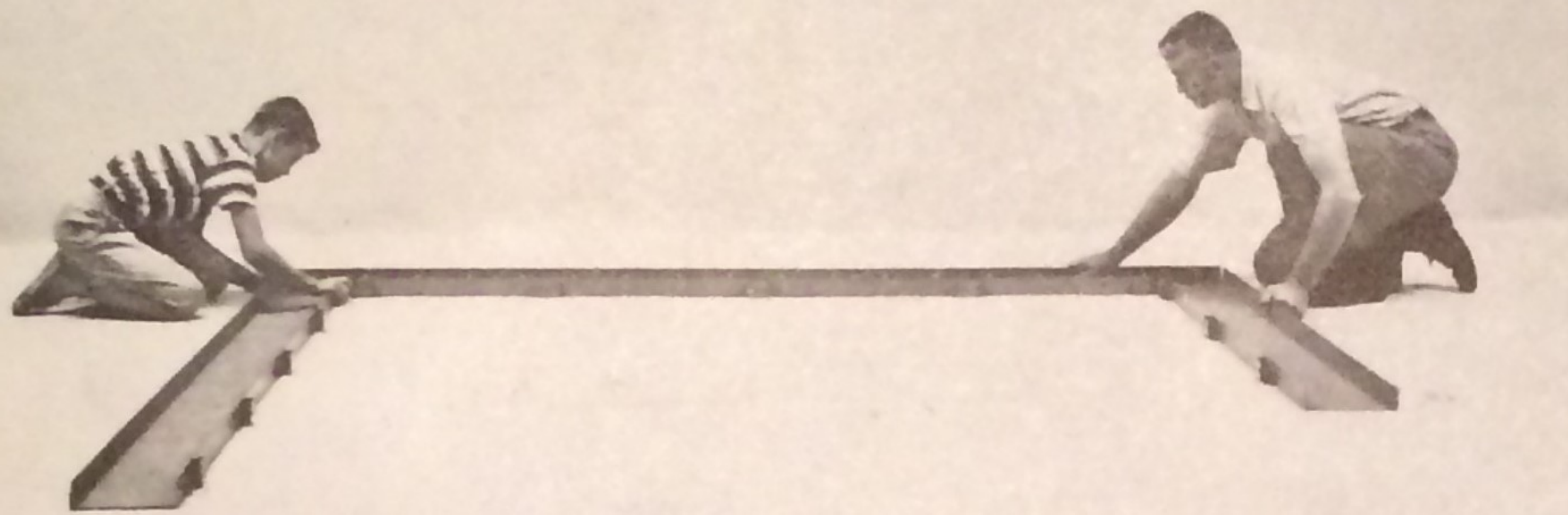
SIDE VIEW. Thick layer of waterproofing which lines the roof is folded up along sides and tucked under the top layer of concrete blocks to anchor it down. Reinforcing rods in floor form criss-cross pattern of 9" squares. Exhaust is higher than intake so that as used air rises, it will not be sucked in by intake.



TOP VIEW. Here one of nine joists supporting the roof is shown. Each end rests on a 2"x4" sill placed atop block wall. Smaller solid blocks set on edge at each end of the joists keep earth fill from entering shelter. Blocks around door are chipped away so frame can be recessed to give the door extra width.

List of materials you will need

- | | |
|--|--|
| 914 hollow concrete blocks, 8"x8"x16" | 300 sq. ft. of 3-ply roofing |
| 60 solid blocks, 4"x8"x16" for top row and at ends of joists | 1 steel angle (3/8"x3 1/2"x3 1/2") 2'8" long to support wood roof over passage |
| 6 cu. yds. of concrete for floor and slab over filled walls | 60 wall ties, 1/4"x3'3" bent on both ends |
| 9 joists, 3"x10"x8'8" | 740 lin. ft. of 3/4" reinforcing rods |
| 2 lengths for bracing, 2"x10"x10' | 1 centrifugal blower |
| 2 lengths for sill, 2"x4"x10' | 18 lin. ft. 3" galvanized pipe |
| 120 board ft. of 1"x6" sheathing | 2 3" galvanized elbows |
| 3 lbs. 16-penny nails | 1 3" galvanized pipe tee |
| 3 lbs. 8-penny nails | 1 3" galvanized cap |
| 1 door with frame and hardware | 1 air intake hood with 14 sq. in. of screen inside |
| 32 cu. yds. of earth fill | 1 exhaust head |
| 18 cu. yds. of gravel for roof | |

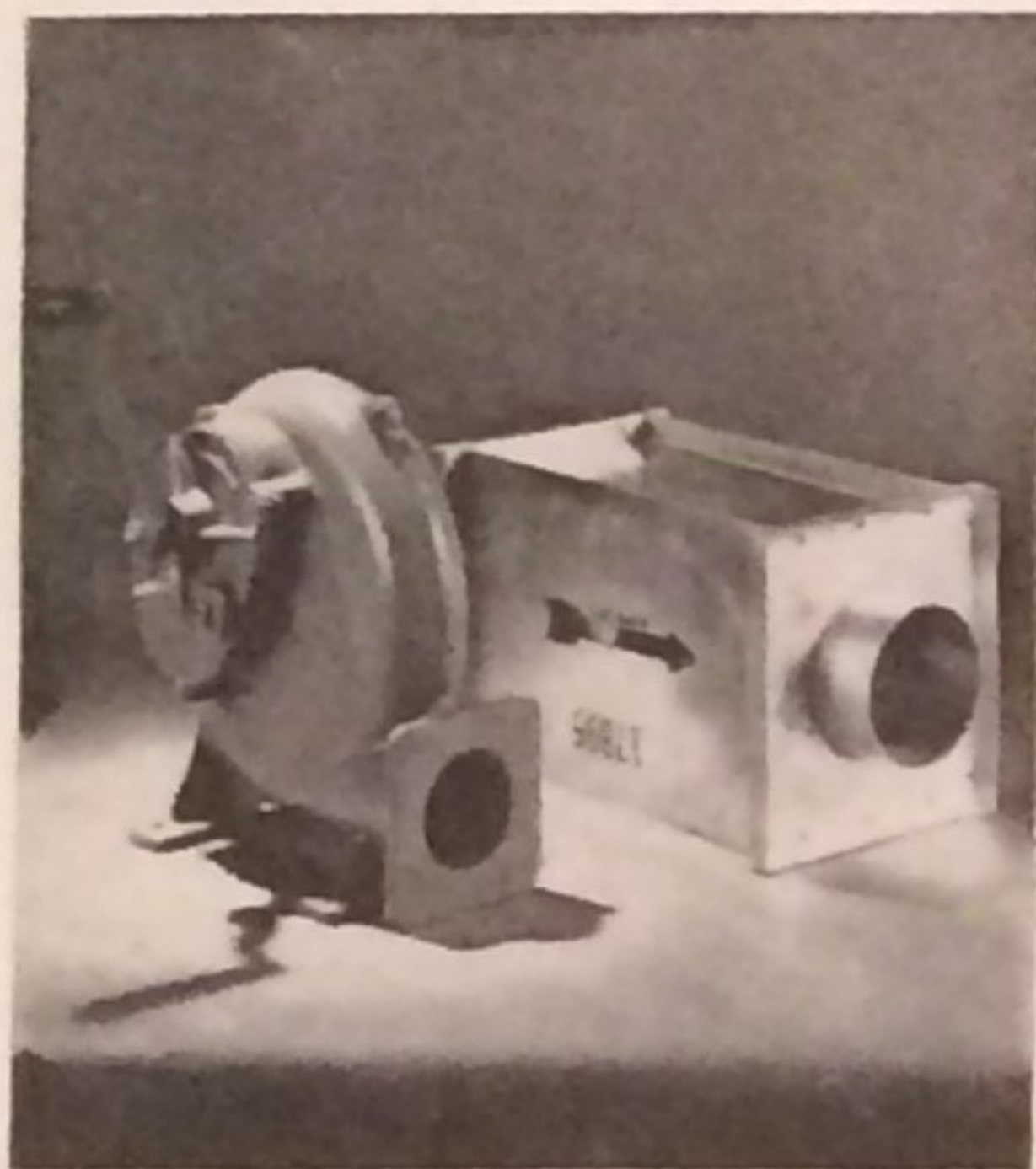


LAYING FOUNDATION. Art Carlson, a New York plumbing contractor, and his son Claude, 13, start work on Kelsey-Hayes shelter by pushing

together three prefabricated steel sections which form outline of shelter. Open area in front would fit against basement wall. Gap at right is doorway.



ERECTING WALL. With end piece of hollow wall in place, Carlson and his son start next segment by anchoring pieces which they will bolt together.

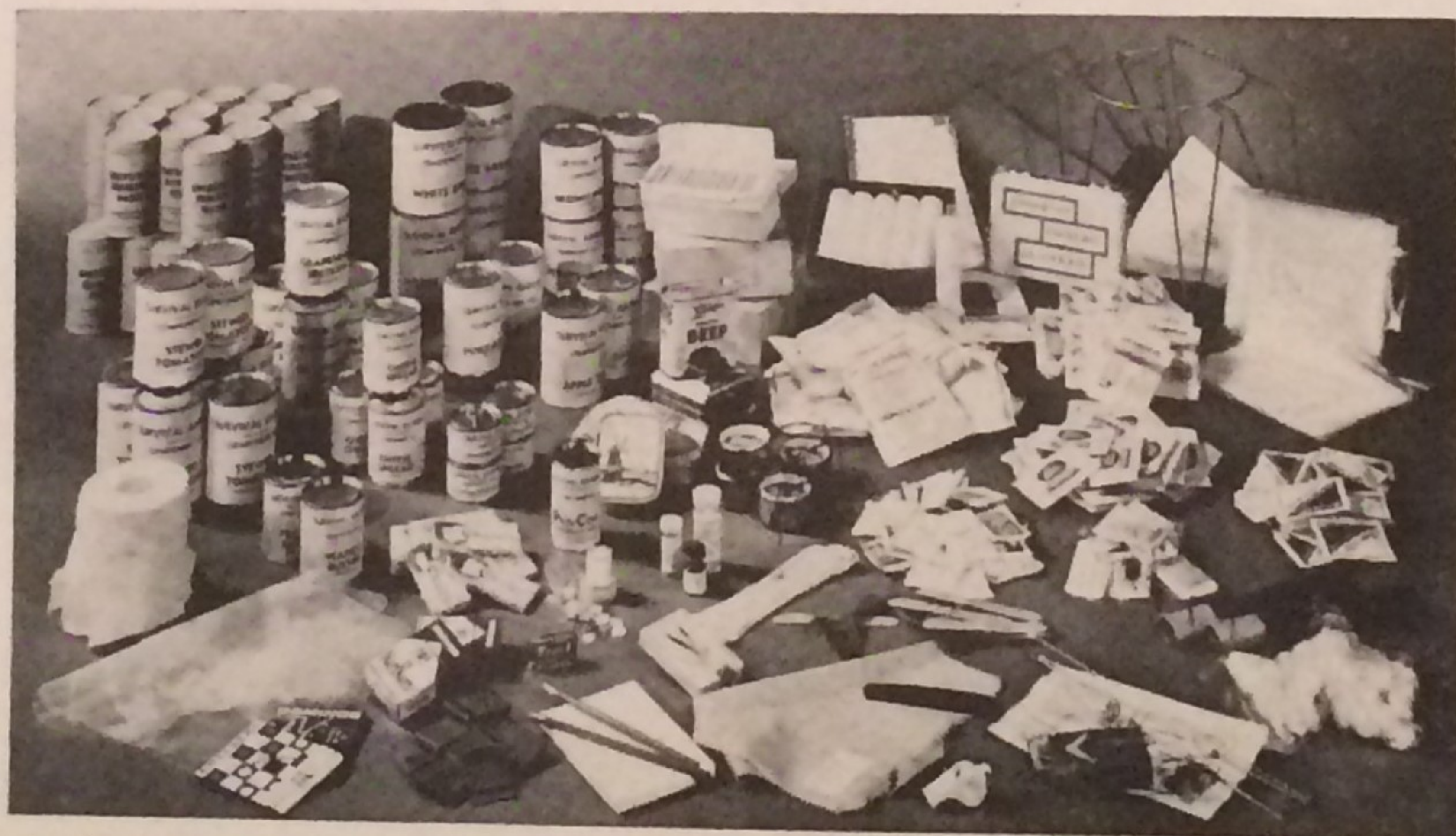


CATALOGUE OF EQUIPMENT. Accessories for use in fallout shelters include: at top, air-blower (\$74) and filter (\$55); center, a 14-day supply of Multi-Purpose Food, water and vitamins (\$8.98); bottom, meters for measuring radiation and recharging

A \$700 Prefabricated Job to Put Up in Four Hours

U.S. manufacturers are hitting the market with all kinds of survival gadgets, including prefabricated shelters. Some are ill-conceived models which might be both unsafe and uncomfortable. There is one good check on fly-by-night shelter engineers: you can get an FHA-insured loan for your fallout shelter—with no down payment—provided it meets Civil Defense specifications. One shelter which does is shown above and to the right. Designed for the basement, it consists of 73 prefabricated steel sections which can be delivered to your home for under \$700. The Kelsey-Hayes Company of Detroit which thought it up is now turning out 5,000 copies of it per month, and Sears, Roebuck and Co. will make it available in some stores this fall.

Choosing a shelter and putting it up is only part of your problem. Next comes the question of what to put in it. A variety of equipment is on the market (left and below). A plastic suit to protect your skin and clothing from radioactive dust (see cover) sells for \$21.95. But you do not have to buy any of them. All you really need is a two-week stock of covered, nonperishable foods—canned goods are best—and a supply of water. The water must be covered to keep it safe. It would form algae if stored in bottles, but you could tap the hot-water heater if you ran out. And you can buy water in cans too.



device (\$24.95). One company has assembled a survival kit (above) which provides two people with food and water, plastic coverings for hands and feet, candles, games, matches, canned heat, a wire camping toilet seat with plastic bags, all for \$79.50.



e of hollow wall
rt next segment
ll bolt together.



LINING UP PANELS. Carlson puts section of back wall in place as Claude comes up with next piece. The shelter can be erected within four hours by two men using only a screwdriver and a wrench to assemble 73 separate pieces.



RAISING THE ROOF. With walls and door frame in position, the Carlsons place hollow section of ceiling next to crossbar. Each section of wall and roof will be filled with sand and gravel to add to strength and shielding of the shelter.



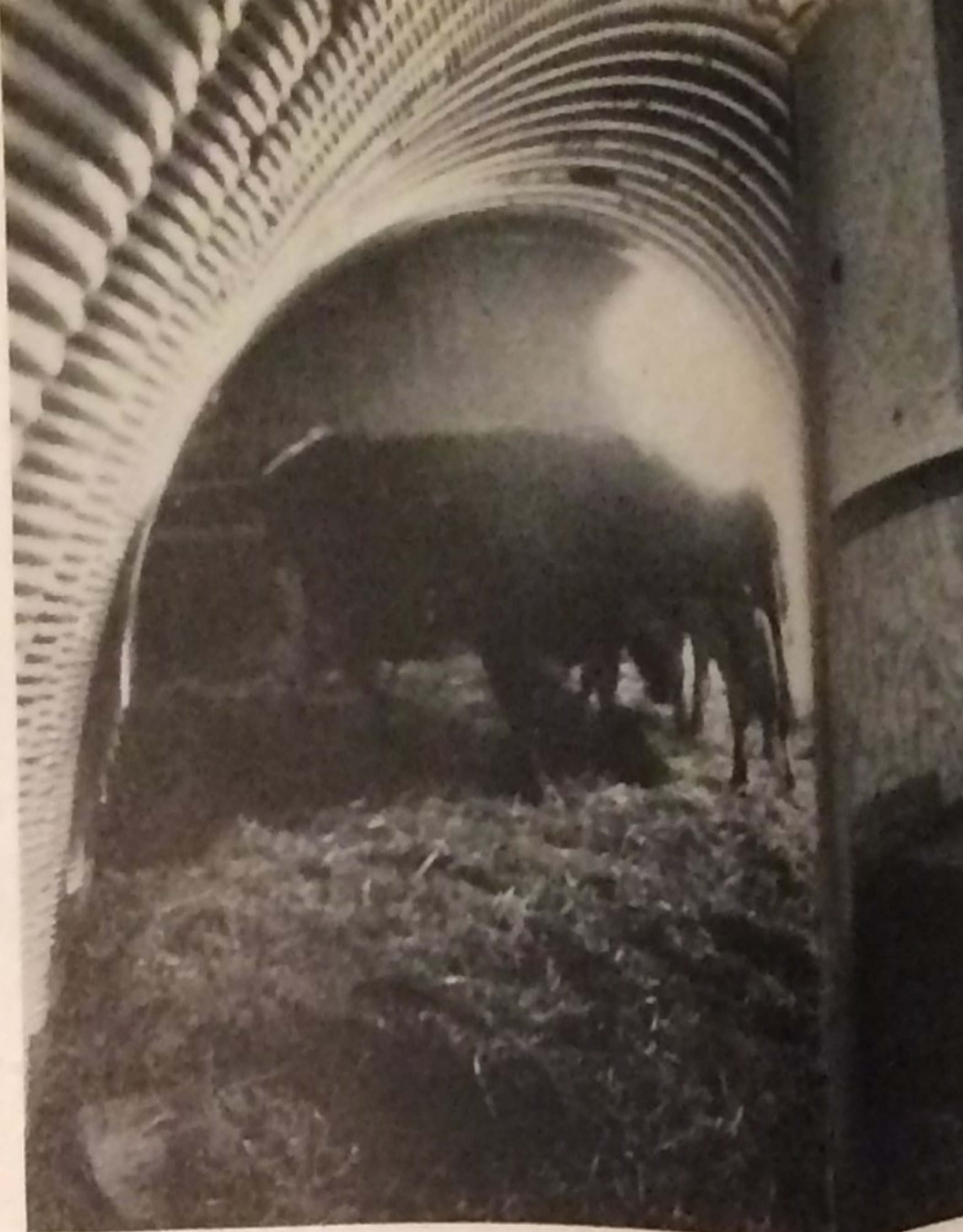
Family in the Shelter, Snug, Equipped and Well Organized

Inside the Kelsey-Hayes shelter which he and his son have put together (*pictures at top*), Art Carlson and his family demonstrate how a family might divide the responsibility for making it safe and livable. Here Carlson shows a table full of equipment which he would care for. It includes emergency tools like shovel and pick for digging out through debris, a fire extinguisher, first aid kit and bottled gas stove for cooking. Mrs. Carlson sits next to the larder of canned foods and the supply of water which she will keep fresh by frequent changes. Daughter Charlene (*left*) is in charge of bedding for the folding cots and fold-up bunks. Son Claude looks after the candles, flashlights, transistor radio and a fresh supply of batteries. Daughter Judy is the shelter librarian with a stock of books and games to help pass the time. The shelves also contain paper napkins, cups and plates, toilet tissue, cooking utensils, and changes of clothing for everyone. The inside walls of the shelter are painted bright colors to add a note of cheerfulness and increase illumination.

Pioneers of Self-Protection in Barnyard and Patio

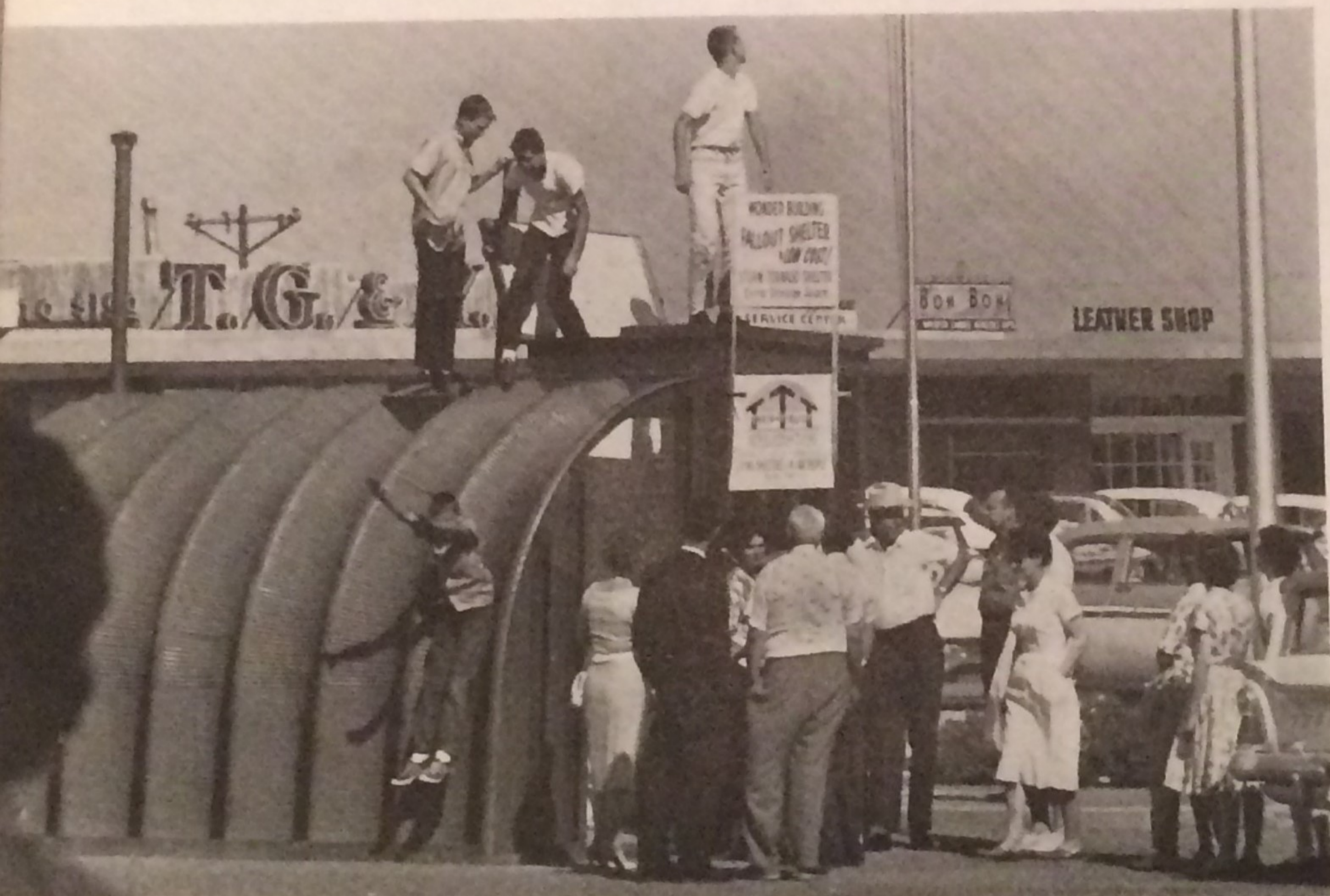


ATTRACTIVE ADDITION. In Orlando, Fla. Doug Bartholow built concrete-block shelter as annex to his house. Here family relaxes in patio as Mrs. Bartholow tends garden on roof.

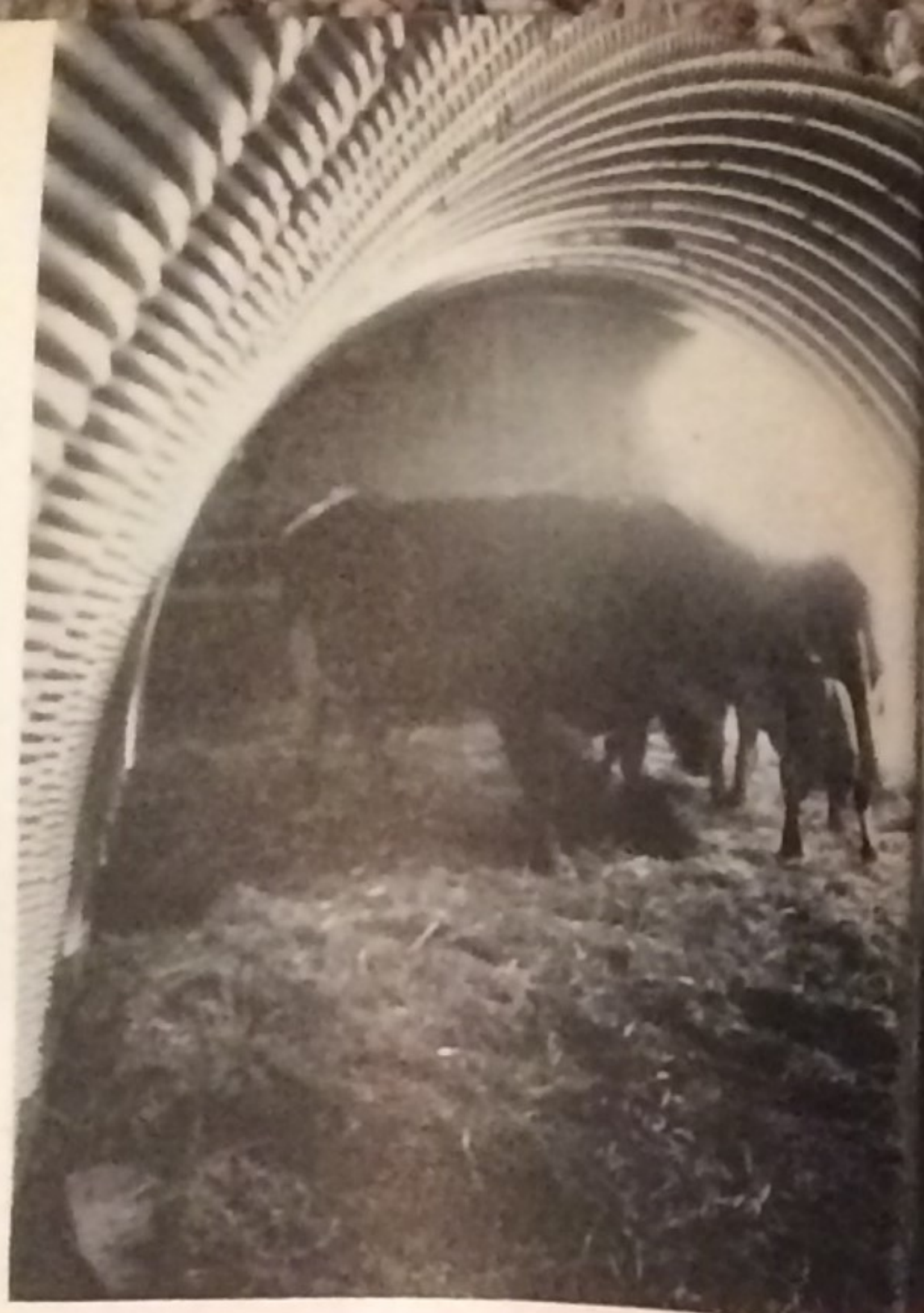


DOWN ON THE FARM. In above-ground corrugated steel shelter on Marius Pedersen farm near St. Charles, Ill., cows feed behind partially filled

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UP FOR SALE. At a shopping center in Amarillo, Texas, boys make a slide of roof of \$1,000 shelter which was designed by the Wonder Corporation for burial in the owner's backyard.



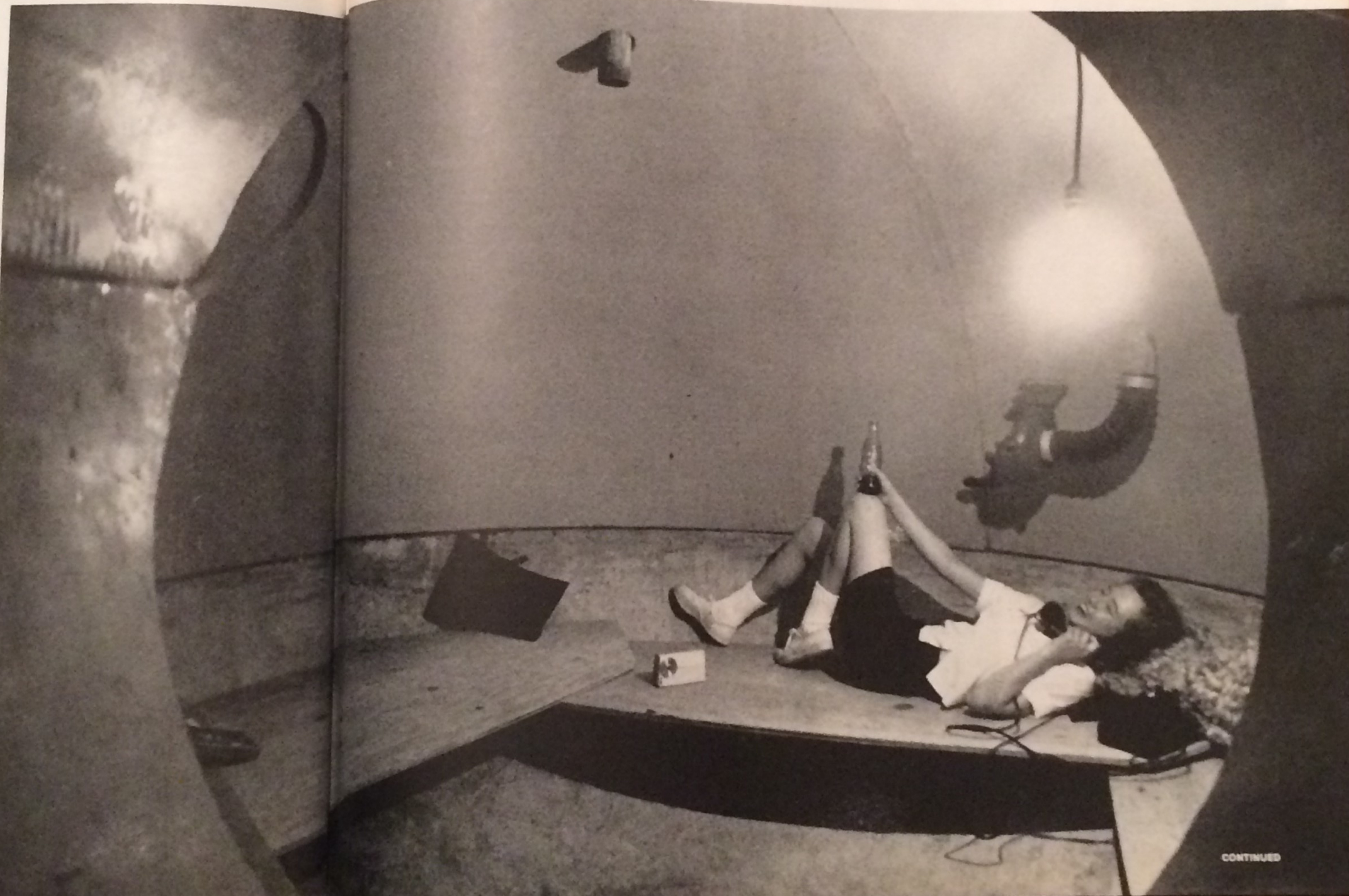
DOWN ON THE FARM. In above-ground corrugated steel shelter on Marius Pedersen farm near St. Charles, Ill., cows feed behind partially filled



bulkhead of hay (left) while family tries out its own quarters in front of partition. A major U.S. problem is to protect livestock for breeding after attack.

LIFE UNDERGROUND. In her family's backyard shelter in Vega, Texas, Amelia Wilson settles down on a bunk for a chat. At the moment shelter

is her clubhouse. But the air-blower directly above her is ready for serious work, and the pipe jutting out of the ceiling is exhaust to clear the air.



CONTINUED

Rundown of things to remember in case attack should come

The standard Civil Defense signal for an alert is a steady 3- to 5-minute blast of a siren or whistle. The warning to take cover is a 3-minute period of short blasts or a wailing siren. If an attack should come, however, the first warning you may get could be the flash itself. Your first move should be to close your eyes and bury your head in your arms or clothing to block out the light. The flash may last for several seconds, so keep covered until it begins to dim.

The shockwave will come next. Take cover so you will not be knocked down. If you are in a car, roll down windows to avoid flying glass and lie on the floor. Try to count the seconds between the flash and shockwave. This will help you estimate how far away the bomb has hit and how long you have to find better cover before the fallout can reach you. To get the distance of the blast in miles count the seconds and divide them by five. The fallout would travel at a minimum speed of a mile in three minutes.

Wherever you are, try to reach a radio—preferably a battery radio since the electricity may be out—and tune it to 640 or 1240 on your dial, which are the Conelrad frequencies for emergency instructions. If you have a shelter, go to it immediately. If there seems to be time, you should turn off all electrical appliances so they will not start a fire if subsequent blasts damage your home. Close windows and doors. Shut off your furnace or heaters and gas lines. Close your chimney dampers to keep out dust. Turn off the inlet valve to your water heater so that the water supply will be cut off before it becomes contaminated. Fill available tubs and utensils with water. Water from underground reservoirs and deep wells will be safe, uncontaminated by fallout. Remember that water will probably be needed not just for drinking but for washing off fallout dust.

Rogers Cannell, civil defense expert at Stanford Research Institute, emphasizes the importance of having you and your family ready with a rehearsed plan for survival so that each member knows exactly what to do. Unless advised to do so you should not try to evacuate, for you may only move from a relatively safe area to one where fallout is greater. Your children should remain at school—unless they are advised to the contrary—and comply with the school survival plan rather than risk exposure by heading for home.

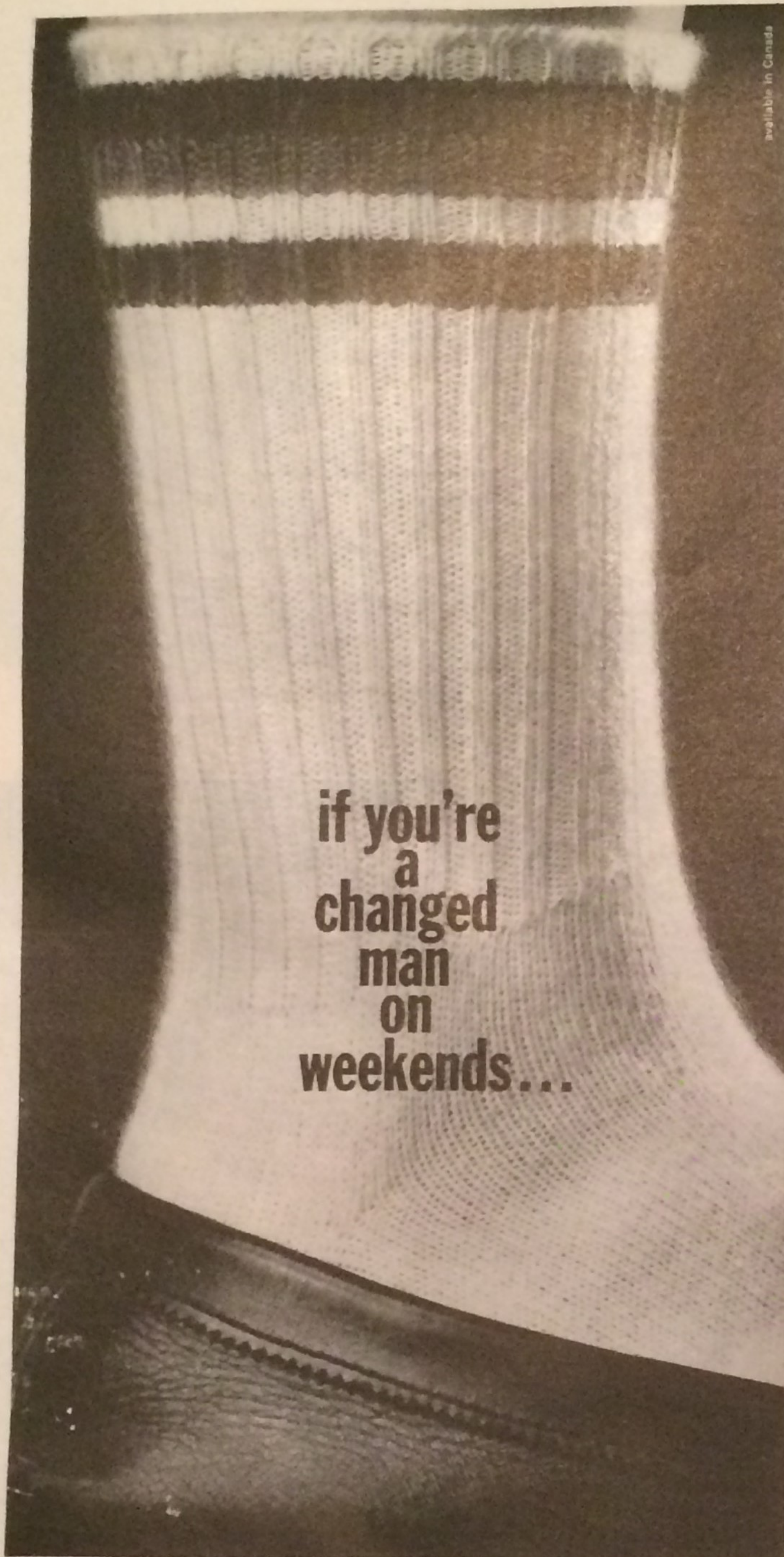
If you have no shelter and there is an hour or so left before the fallout is due to reach your area, you can block up the windows of your basement with one foot of earth, and take shelter there under tables on which you have piled books and magazines for extra shielding. You should also get together a supply of food and water and take it to the basement with you.

If you think you have been contaminated by fallout, remove all your clothing as soon as possible and wash off your skin and especially your hair. You may eat canned or packaged food (after washing off the container) and even fresh fruits and vegetables, provided you peel them first. The best first aid for radiation sickness—whose symptoms are nausea, fatigue and fever—is to take hot tea or a solution of baking soda to combat the nausea and aspirin for the fever. You can recover from a mild case of radiation sickness just as you recover from a cold. It is not contagious.

Radiation loses its deadliness rapidly. It is only 1/10th of its original strength seven hours after an attack. After several days you may be able to leave your shelter to pick up extra supplies of food and water. In any event, before your family leaves the shelter you should wait for official instructions over the two Conelrad frequencies.

SPECIAL OFFER TO 'LIFE' READERS

"Fallout Shelters," 24-page booklet to serve as a permanent reference of material in this story, is being prepared. To order your copy, send 25¢ for handling to LIFE, Fallout Booklet, Box 666, Radio City Station, New York 19, N.Y. Orders of 10 booklets or more may be placed by organizations and civil defense units at 15¢ per copy.



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