

the turmoil in the Middle East are raising the chances that a European war could be avoided. It is becoming increasingly possible to envisage a world nuclear war fought primarily upon American soil.

I am not predicting that a world nuclear war will certainly occur, nor am I predicting that one will begin in the near future. It is, however, prudent to notice that the events of the past few months represent a very credible scenario of those events which might occur prior to a surprise nuclear attack upon the United States.

## SHELTER FURNITURE

The furnishings of a civil defense shelter designed to resist significant levels of nuclear blast should consist solely of hammock beds and hammock chairs. Fixed furniture of the ordinary type has three disadvantages. First, it is an inefficient use of shelter space. This is a consideration even if the shelter is not designed to resist blast. Second, it provides hard corners and surfaces upon which people may be injured if they are thrown off balance. Third, it does not provide good shock isolation for the occupants.

Beds, chairs, and partitions (such as for the toilet area) made entirely of cloth overcome these disadvantages. They are efficient in use of space, cannot cause impact injuries, and provide substantial shock isolation for the occupants.

In fact, the 200 psi limit in blast resistance of our standardized recommended shelter design is largely based upon shelter furnishings. The shelter itself could easily be improved for higher resistance. However, the simple shock isolation afforded by hammock beds and chairs, the flexible plywood floor, and the minimum of dangerous objects in the shelter is insufficient above 200 psi. Without these precautions, even though the shelter itself would afford protection, injuries and deaths may be experienced by occupants at much lower blast levels. The elaborate shock protections for overpressures above 200 psi which are used in very specialized military installations are too expensive for use in most shelters.

Most Americans would not be located in areas receiving 200 psi or even 100 psi. However, even at the more probable levels of 10 psi to 50 psi, soft shelter furnishings might save many lives. If, for example, a shelter door were open during the passage of a lower pressure shock wave, the shelter furnishings might become a lethal jumble of flying objects. There is a considerable difference between being hit by a fabric hammock as compared with a wooden bedpost. People can survive remarkably high sudden pressure increases, but they can easily be killed by flying shelter components. All shelter beds and chairs should be of the hammock type.

Nuclear War Survival Skills gives detailed instructions for making expedient bedsheet hammocks and chairs. These can be made in a few minutes without stitching, and they work very well. Since most Americans have a relatively small amount of money to spend for civil defense preparations, most shelter furniture in private shelters should be made from bedsheets or equivalent fabrics in exactly the manner described in Nuclear War Survival Skills.

The materials and labor to manufacture a special purpose shelter hammock will cost at least \$50. This is the price of a six-months supply of food for one person. You will be quite