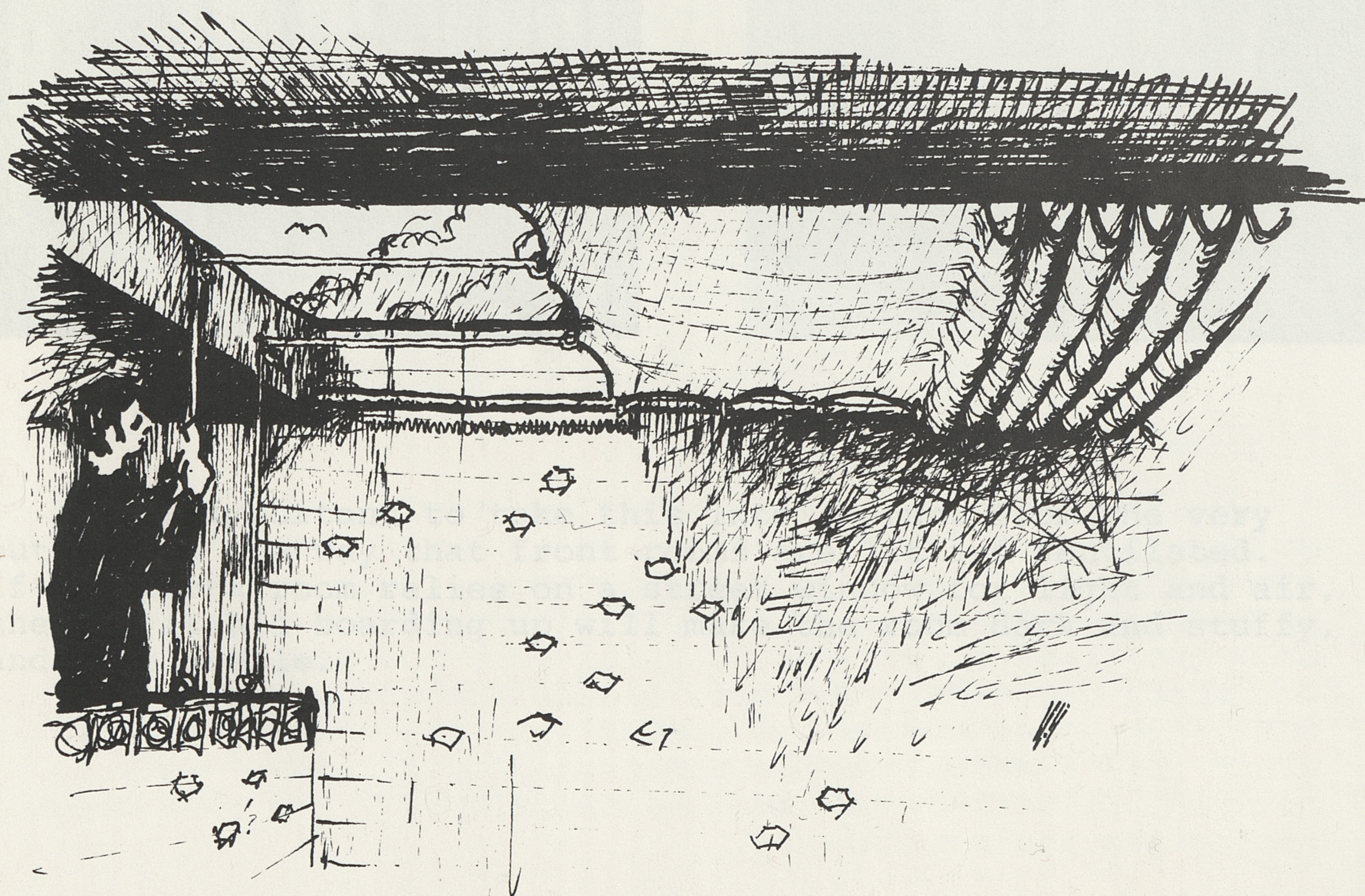


## TRANSLUCENT OPENING PATIO ROOF

THE PROYECTO EXPERIMENTAL HOUSE, can be completely sealed against wind, cold, and dew, by dacron sailcloth covers on the front patio and kitchen patio. The dacron sailcloth is translucent, and does not stretch or mildew. It is fastened to the roof on one side, and has snap fasteners on the opposite side. On the other two sides, it has rings sewn into it: these rings run on a pair of parallel rods. A person can open and close the cover, or set it to any desired opening, by pulling cords just like those that control conventional draw-curtains. The sailcloth has wires sewn into it at one





meter intervals, perpendicular to the rods, thus creating a tension structure which resists wind loads and prevents tearing and sagging.

Since the house can be completely sealed by this cover, the windows which open into patios have no glass or moving frames in them. For visual privacy, the windows can be closed by curtains.

#### THE GENERAL PATTERN IS:

##### Context:

Any patio house, in a warm climate without rain.

##### Solution:

Patios are covered with a translucent lightweight cover, which can be rolled back in hot weather, and closed in cool weather. The windows which open into these patios need no glass, only screens or curtains.

##### Problem:

In a warm climate, houses need large openings in summer, and good protection against cold in winter and at night. Yet windows are very expensive. In many houses, especially in low cost houses, the cost of the windows makes it impossible to create the proper relationship between indoors and outdoors.

As a result, the house is unresponsive to the year-round change in climate. This is particularly serious in low cost houses. Newly built low cost houses in Lima, for example, are so tightly budgeted that they often have far too little window area: they are unbearably hot in summer, and dark and gloomy all year round.



It is possible to solve this problem, in a patio house, by roofing the patios with movable, translucent covers. With such covers, the whole house - patios and rooms together - becomes a sealable envelope. Climate control, instead of including rooms only, includes the whole house, inside and out.

In hot weather, the patio covers can be rolled back, and the breeze blows through the house. In cold weather, the patio covers are closed, thus sealing the house - and the patios become usable too. In Lima, for example, there is a winter dew (garua) which normally makes patio floors damp and cold for eight months in the year. The cover on the patios will keep them dry and warm, and will triple their useful life.

If patios are small, the patio roofs can be made of low cost materials like the dacron sailcloth described above. They eliminate the need for windows almost entirely. The windows which look into patios give light to rooms and may be curtained, for visual control - but since the cold is kept out by the patio covers, there need be no glass in the windows, and no expensive moving parts.