GROWING PLANTS WITHOUT SUNLIGHT

by

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It was desired to determine whether energy from the sun could be conducted over wires. Therefore in 1931 an apparatus was constructed as shown in Figure 1. A shelf was built about six feet above ground on the south side of the house where it was exposed to full sun. In a part of the adjacent basement, from which all light was excluded, another shelf was built. On the basement shelf were placed eight wooden boxes, each box being four inches long, two inches wide and three and one half inches deep. (See Fig. 2). The bottoms of these, with the exception of #8 were covered inside with aluminum foil, which was grounded with a copper wire to a water pipe. The box tops, again excepting #8, were likewise covered inside with aluminum foil, which was connected in each box by about eight feet of black rubber insulated copper wire to an individual plate on the outdoor shelf, various compositions and sizes of plate being used. This arrangement placed each box in a species of circuit, as shown in Figure 3.

In these boxes was put half an inch of fine soil, on which were laid oat grains of uniform size, ten to the box, in two carefully spaced rows. These were then covered with five eights of an inch of fine soil (see Fig. 2). The boxes

were irrigated with equal amounts of water, and were kept continually in darkness except for flashlight examination when being watered.

Very few seeds failed to germinate and the failures showed random distribution. Shoots appeared in all boxes at approximately the same time. The experiment was terminated when the tallest plants were about three inches high. Growth results were as follows:

Box No.	Sun plate	Box plates	Growth results
1.	2x4 bronze scr.	2x4 Al.	All plants in these boxes showed approximately uniform growth, looked normally green & sturdy
2.	2x4 Al. sheet	"	
3.	2x4 Galv. iron	"	
4.	4x4 Al. plate	"	These plants outgrew those in boxes 1-3
5.	4x8 "	"	
6.	8x8 "	"	These plants were green and sturdy but looked burned.
7.	8x16 "	"	
8.	none	none	First joints normal, subsequent joints very thin and anaemic and drooping. No green color.

These results appear to prove that a definite energy from the sun, necessary to the sturdy growth and green color of plants, can be conveyed over an insulated copper wire. It is also indicated that for best results the size of the accumulator plate exposed to the sun should not be less than that of the distributor plate over the plants, and not more than twice as large. If the accumulator plate is too smaller, the plants show deficiency symptoms, and if it is too large, the plants appear burned.

Obviously the energy that reaches the plants over the wire is not sunlight, because no known form of light can

travel over a wire. Also it is not unreasonable to suppose that this energy may be some form of "frequency" of the X-energy to be discussed in the following papers. If so, the above results indicate that plants might be used to detect and measure X-energy. Therefore further experiments of this nature should be undertaken to determine (1) what substances are conductors, insulators and transmitters for this energy, (2) how far it resembles electrical energy: i.e. how it reacts to choke coils, resistances, air gaps, condensers, amplifiers, timing devices, etc., (3) whether it can be used as a carrier for specific "frequencies": e.g. the X-energy from drugs, etc., (4) whether it is sufficient, without ordinary sunlight, for all normal plant life: i.e. to bring plants to full maturity, (5) whether sources of X-energy can be found, other than sunlight, which will promote the growth of plants.

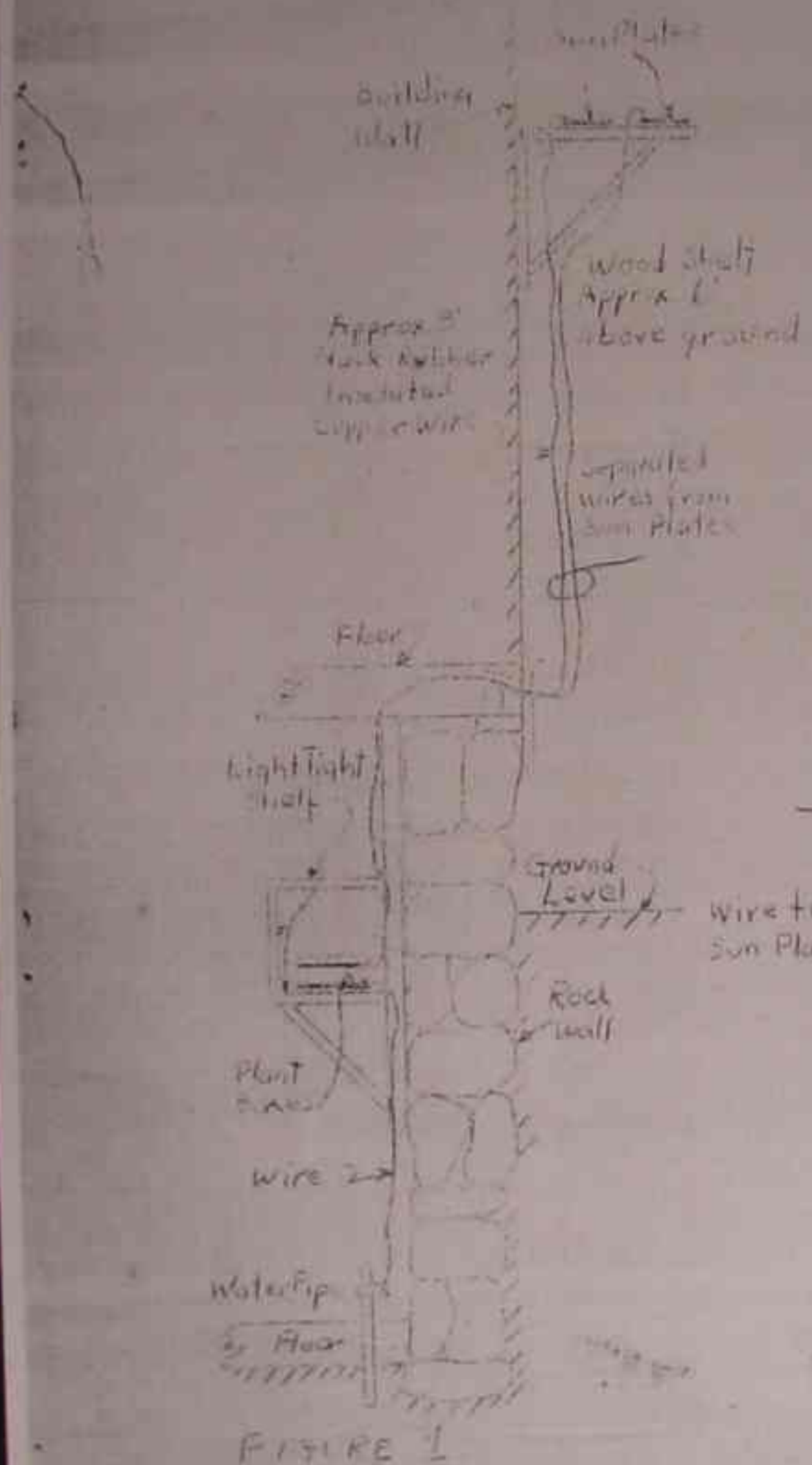

FIGURE 1

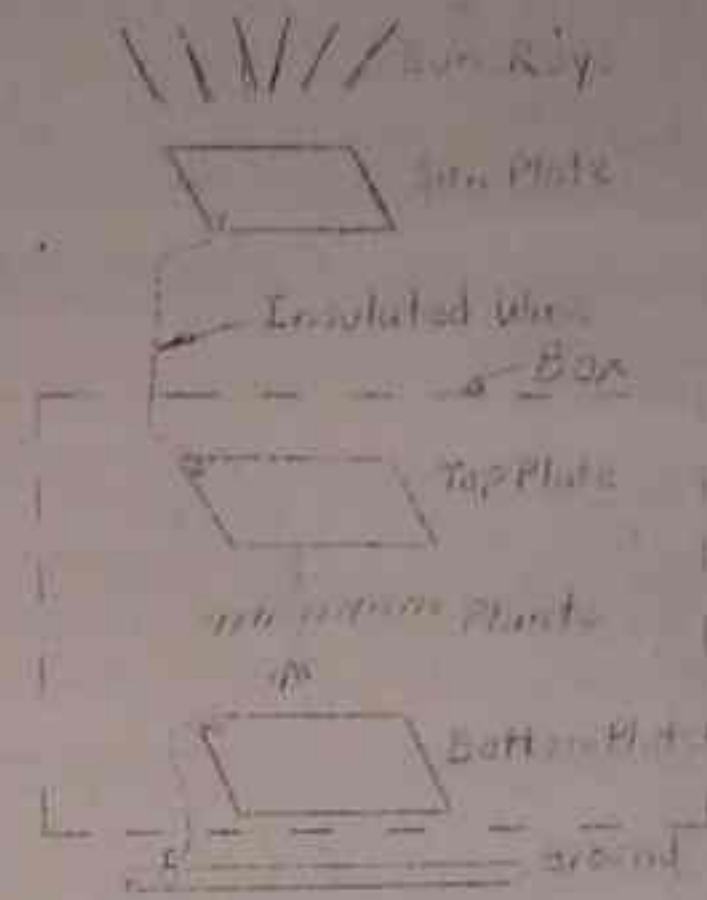

FIGURE 3.

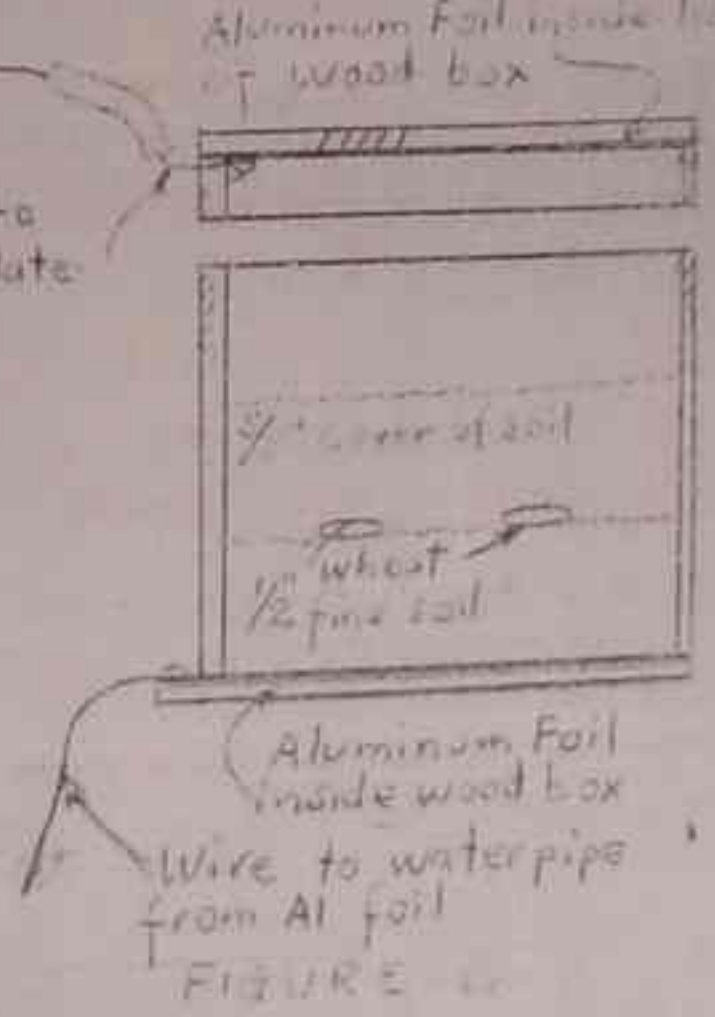

FIGURE 2