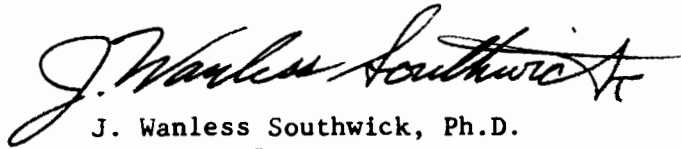


RECORD OF INVENTION

On the inside pages is a drawing and description of my invention which I call a TEACHING AID. Below are the signatures and addresses of two witnesses who examined the drawings, the description, and a working model of my invention and who understand its construction and use.

Date 25 February 1972



J. Wanless Southwick, Ph.D.  
P. O. Box 5  
West Bountiful, Utah 84087

TO WHOM IT MAY CONCERN

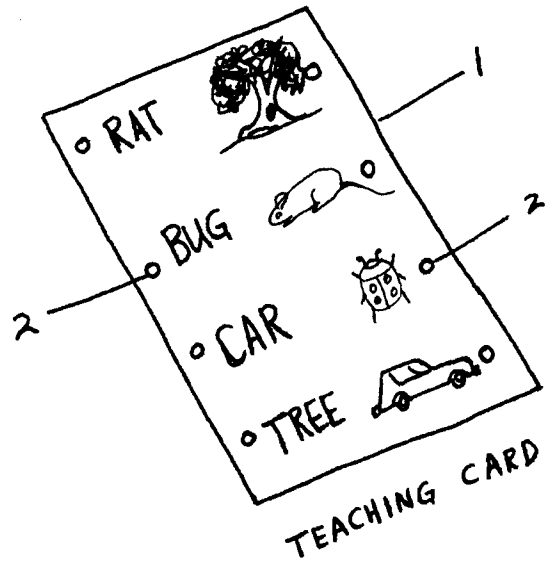
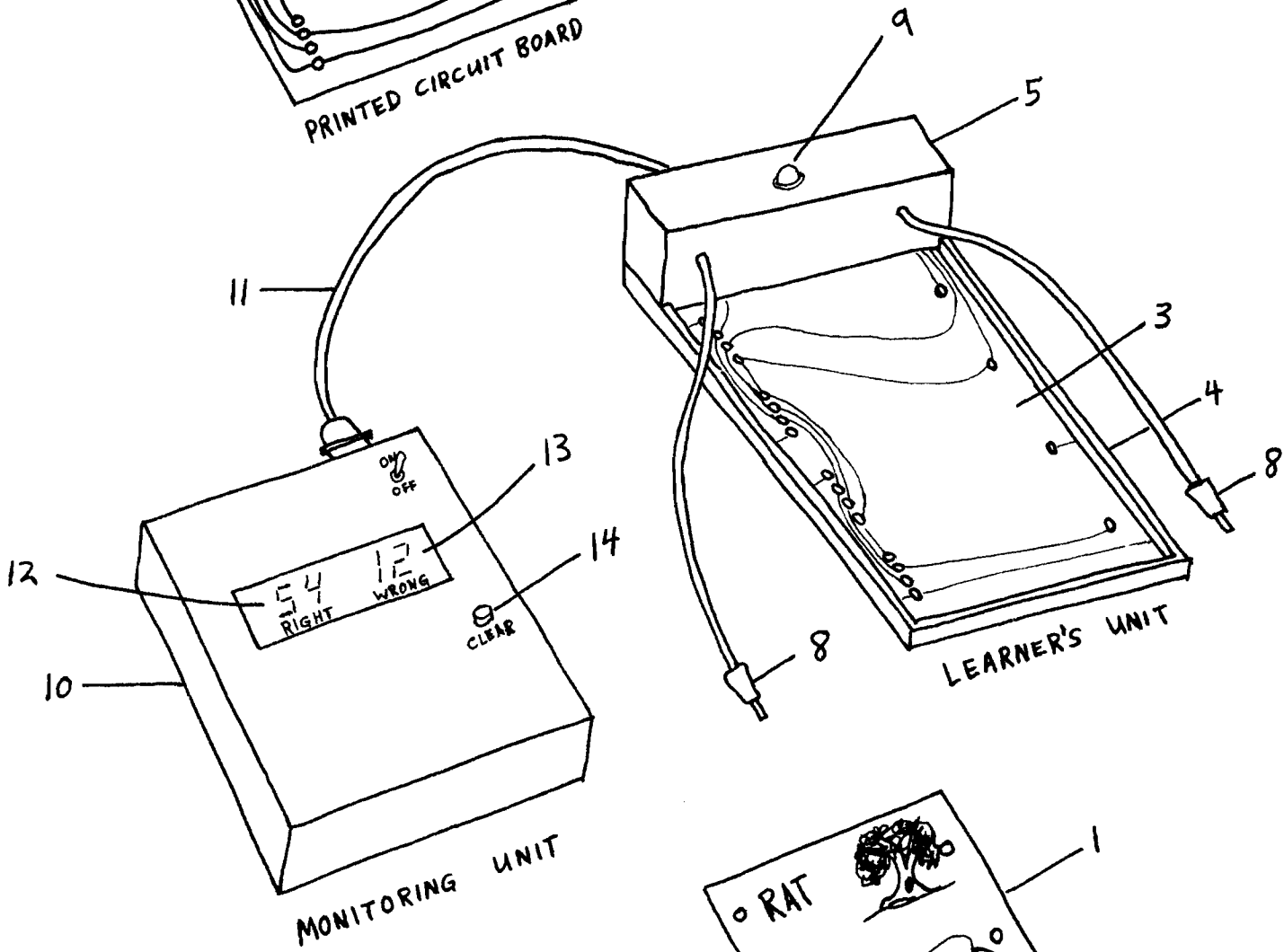
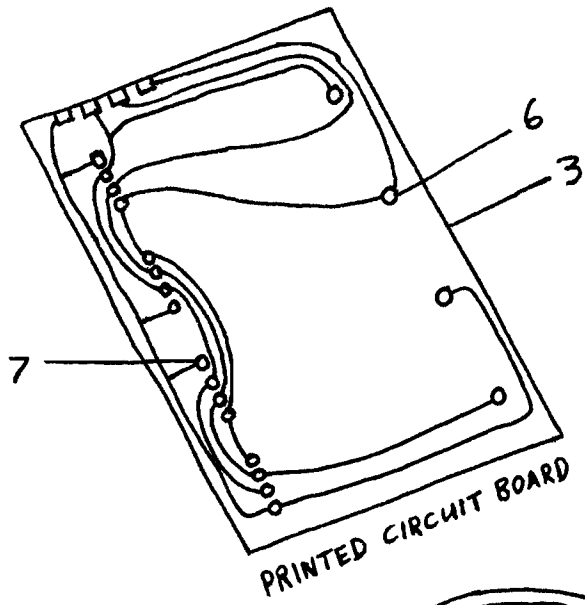
BE IT KNOWN that J. Wanless Southwick has this 25<sup>th</sup> day of February, 1972, disclosed to us the invention which is described and illustrated in this Record of Invention. He calls his invention a TEACHING AID, and has shown us a working model. We fully understand its construction, purpose and use.

Witness: Ronald L. Kilpack

Address 475 No. 660 West Woods Cross, Ut.

Witness: A. Eric Eastman

Address 708 W. 1530 N. Woods Cross, Ut.



"TEACHING AID"

## INTRODUCTION

The device pictured on the left adjoining page, I call a "Teaching Aid." It is designed to assist the teacher by giving the learner a programmed learning activity which can be monitored remotely.

## MECHANICS OF OPERATION

The material to be learned is displayed on a series of cards (1) with holes (2) punched in appropriate locations on the right and left margins. A card is divided into quarters with right and left halves of each quarter being available for matching-type questions. Various arrangements of display materials and punched holes can accommodate matching questions, multiple choice questions, and true-false questions. The skillful teacher can develop an endless variety of card systems.

The learner's unit consists of a printed circuit board (3) mounted in a base unit (4) for support and connected to a probe module (5). The printed circuit board has four round contacts on the right margin (6), each centered near the edge of one of the teaching card's quarters. The left margin of the circuit board has four contacts (7) in each quarter, each of which is connected electrically to one of the contacts on the right margin.

When a card is placed into the learner's unit, it masks the whole circuit board except where holes have been punched over appropriate contacts. When the learner touches his probes (8) to two correct contacts, a light (9) flashes, signaling correctness of the response. Because any right-hand quarter of a card can be programmed as the correct answer for any of the left-hand quarters, the chance of the learner memorizing correct response circuits is practically impossible.

Each response of the learner is recorded remotely on the monitoring unit (10) which is connected by connecting wires (11) to the learner's unit. Correct responses flash a light signal (9) to the student and also causes a counting circuit in the monitoring unit to record one "right" response (12). If the learner chooses an incorrect combination with his probes, the light does not flash and another counting circuit is activated to record one "wrong" response (13) on the monitoring unit. At the end of a learner's activity with the "Teaching Aid," the monitoring unit can be reset to zero on both "right" and "wrong" registers, by pressing the "clear" button (14).

## CONCEPT OF IMPLEMENTATION

The material to be learned is displayed to the learner on cards. The learner responds to the display by using the two probes to choose between possible answers. He receives immediate knowledge of the results of his choices by a flashing light if his choice was right or absence of the light if his choice was wrong. After a wrong choice, he may find the correct answer and thereby compare the correct answer with his previous erroneous choice. The pace at which the learner progresses is controlled solely by the learner's speed.

Results of the learner's activity are recorded remotely on the monitoring unit. The teacher can check the learner's success by noting the number of "right" and "wrong" responses, compared to the number of correct responses possible in the deck of programmed cards used. The teacher can then decide whether the concept taught by the deck was sufficiently grasped and which sequential or supplemental concept should be given to the learner next.

The library of such a system could have a large capacity, limited only by the programming capability. The system is highly adaptable to specific needs. Basic concept programs could be mass produced. The system is simple enough that the individual teacher could produce programmed cards effectively to emphasize special areas. Valuable use may be made of the "Teaching Aid" with deaf students or with retarded children. While the "Teaching Aid" can be used effectively with preschool children, it can also be programmed with questions that can challenge the skill of a college student.

24 February 1972

*J. Wanless Southwick*