INTRODUCTION

In summaries of the performance of primate groups in experimental situations such as those used by Köhler (1959) to investigate the phenomenon of insight, Yerkes & Yerkes (1929), Drescher & Trendelenberg (1927) and Spence (1937) note that the gibbon (Hylobates sp.) is less capable of the solution of such problems than are other genera of the family Pongidae (the anthropoid apes). Harlow et al. (1932) in describing the
inferior performance of a gibbon on a delayed response problem where the “correct” response involved picking up a small cup from a flat surface, state that “conceivably these errors may have been caused by lack of interest and motivation rather than by any intellectual deficiency, as our animal ..... evinced frequently a total indifference to the entire experimental situation” p. 328). Most of the research on problem solving by anthropoids has involved elements (strings, sticks, cups, plaques, etc.) of the problem which were lying on a flat surface during testing. In view of the exclusively arboreal existence of gibbons in nature and their anatomical adaptations for such an existence (especially the elongated digits of the hand, see Fig. 1), it seems that substituting elevated elements in the classical problem settings would be more suited to their sensory and motor capacities and thus optimize the chances of solution and perhaps necessitate a reevaluation of the cognitive capacity of this genus. In the present research, four gibbons were presented with problems, involving strings, which are based on the work of Köhler (1959) but modified so that the string elements of the problems were elevated so as not to be lying on a flat surface.

METHOD

Subjects.

Four gibbons were used in this study. One (LJF) was a young juvenile female Hylobates lar lar, estimated to be about two years old, which was owned by the Department of Anatomy of the University of Chicago and housed in their animal quarters. Another subject (PJF) was an older juvenile female Hylobates lar pileatus, estimated to be about four years old, which had been contributed to the primate collection of the Chicago Zoological Park in Brookfield, Illinois shortly before it was tested. An adult male Hylobates lar lar (LAM) and an adult female H. lar lar (LAF) were also used as subjects. These animals were also owned by the Chicago Zoological Park. Little is known of the history of these animals but it is improbable that they had ever been used in psychological experimentation or that they had had any extensive experience with string.

Apparatus.

The apparatus for all tests consisted, basically, of a flat surface extending out from and perpendicular to the side of a cage and parallel to and slightly above the floor of the cage. The problems were displayed on this surface with the string elements of the problem rising from the surface and extending