

The wood and metal shield, used as the heading for this article, was made in the Hobby Shop by Bartholomew Mandel

BY ISAAY STEMPNITZKY

NO man can be considered to be well rounded if his interests are completely locked up in his business or his profession. Some people take their work so seriously that they lose their perspective and sense of humor; others may use their work as a means to escape certain obligations. No matter how satisfying an individual may find his occupation, however, he always has, or should have, some additional energy left to devote to creative activities which are just as essential to his happiness as is a successful business or profession. A nice balance between creative avocational and professional activities is necessary to develop a complete and emotionally wholesome social being.

In a sense, hobbies and avocations are one of the most effective forms of insurance against boredom. During the past few decades there has developed a steadily growing awareness in civilized society of the importance of recreation in general and of hobbies in particular. Before man's ingenuity had developed technology to its present high level, his work often furnished him a means to express his individuality. Today, however, work has lost this creative significance for very many people who seek an activity which will serve their need for self expression in much the same way as pride of workmanship served the need of earlier craftsmen. Hobbies fulfill this requirement.

Hobbies serve all manner of purposes for different people, and may satisfy multiform needs in the same individual at various times. Both physically and emotionally, hobbies complement the daily occupation of an individual. They compensate for environmental monotony, satisfy the need for new experiences, and provide escape from reality. Hobbies serve as a means to discharge aggressive drives, satisfy the need which most people have of belonging to a group whose members have common interests, or, alternatively afford excellent sources of solitude for the individual.

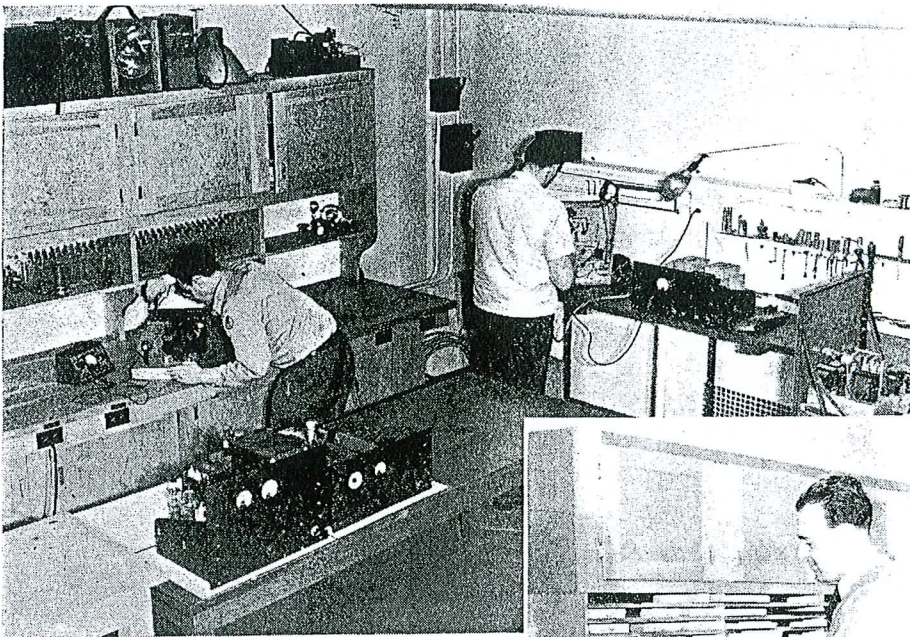
It matters not what hobby one chooses, in most cases, but the most beneficial hobbies are probably those which provide a lifelong appeal, and can be taken up at any time. Some persons find satisfaction in binding books,

building telescopes, or grinding gems; others, in painting, photography, carpentry, etching, or carving. Still others delight in magic, gardening, or even reading, mathematics, or astronomy. Indeed, in the selection of a hobby, there is no accounting for taste. Recently, the newspapers carried a story about a Chicago butcher who took up whittling after shop hours. He devoted four years in converting a plank of wood 18 feet long and 22 inches wide into a 350-foot chain. Full of pride upon completing the self-assigned task, he wrapped the chain around himself and had photographs made for posterity.

Although the primary value of a hobby lies in the development of personality, frequently it has proved to have appreciable commercial value as well. More than one person has turned a hobby into a means of making a living when economic reverses overtook him. With a population whose average age is increasing, so that more and more persons are able to retire, the outside interests developed through hobbies make the transition to retirement pleasant and something to anticipate rather than to fear.

In the belief that hobbies form an essential part of a well-rounded education and should be part of the normal activities of every individual, the M.I.T. Hobby Shop was established to provide for "all students of the Institute the means for doing such work as they desire in order to make their spare time useful and pleasurable." It thus provides an opportunity for students to develop interesting and useful avocations, even though they may have had no experience in any hobby. In fact, one of the most important functions of the Hobby Shop is to encourage students to participate in avocations which may be new to them. Another important function is to provide students with opportunity to work with their hands, and thus to lend additional practicability to the more theoretical courses which form a major portion of the academic work at M.I.T.

The Hobby Shop is primarily and predominantly an activity for, of, and by M.I.T. students. Under certain conditions however, membership in the Hobby Shop is also open to the M.I.T. staff and Alumni who, as stu-



A job-printing press and a good stock ▶ of type of various sizes and fonts are available for students who are interested in printing as a hobby. Shown practicing this hobby are Eduardo H. Armanino, '48, master craftsman, operating the press, while Richard V. Baum, '48, foreman of the Hobby Shop, makes corrections in type which has been set. In the background is the optics and lapidary room where students may grind and polish lenses, such as those for reflecting telescopes, or may exercise their talents in the grinding and mounting of gems.



◀ Radio and electronics are popular hobbies with many Technology students who derive much satisfaction in building, testing, and using radio receiving and transmitting equipment, recorders, measuring equipment, or any of the many gadgets to which electronics so well adapts itself. In the radio shop, Daniel D. McSwiney, '49, checks the electrical performance of a finished rectifier-power supply while Robert D. McCadden, assistant superintendent of the Hobby Shop, completes the wiring of an audio amplifier.

dents, were members of the Hobby Shop. Management of the Hobby Shop is entirely by students but full-time craftsmen and a Faculty advisory committee are available to students who may desire instruction or guidance in their projects or in the administration of the Shop.

The M.I.T. Hobby Shop was organized in the fall of 1937 by a group of undergraduates, in co-operation with the Technology Museum Committee under the guidance of Arthur C. Watson who was then its chairman. A room in the basement of Building 2 was set aside for the Hobby Shop, and equipment was donated by many departments of the Institute. The original workshop had a floor area of about 350 square feet and, in addition to the more necessary hand tools, contained a bench lathe, a woodworking lathe, a circular saw, a jig saw, a drill press, and a grinder. By the end of its second term, the Hobby Shop had grown sufficiently to be able to assemble a good-sized exhibit for the Open House activities in the spring of 1938.

During the early growth of the Hobby Shop, many ingenious articles were built for the hobbyists' own use; a few of them fell into the category of co-operative activities, and some projects were even subsequently displayed in the halls of the Institute as a part of permanent exhibits. These projects include a mechanized exhibit of mathematical models built by Edmund B. Hammond, Jr., '40, under the guidance of Professor Raymond D. Douglass, '31, of the Department of Mathematics, an

exact replica of the first telephone instrument of Alexander Graham Bell, and a carefully detailed model of a glass factory and one of a pottery factory, both of which are on permanent display. During these early days, the lack of funds did not deter the hobbyists; odd pieces of lumber were transformed into a row of bins for tools and a few odd pieces of worthless pipe showed up later as legs of a shop bench. When an alarm was sounded because of the scarcity of knives, five old hacksaw blades were transformed into most respectable-looking knives of assorted sizes and shapes. In order to provide pleasanter surroundings than those offered by bare walls decorated by pipes, George Y. Yevick, '42, painted a mural which he donated to the Shop.

While devoting a considerable amount of time and effort to the building of the Hobby Shop, the first members found time to make some of the most interesting and unusual projects the Shop has ever seen. One imaginative fellow made a "perpetual motion machine" which almost appeared to disprove the laws of thermodynamics.

During the early part of World War II, the Army Specialized Training Program at the Institute brought a large attendance of enlisted men to the Hobby Shop. Many of them were skilled craftsmen and their work (which included construction of everything from a pair of candlesticks to a full-sized bed) compared very favorably with high-quality commercial products. "I am one of

those people," wrote Jack J. Hinman, 3d, 9-46, Lieutenant Commander, United States Navy, "who finds it relaxing and pleasurable to work with his hands in spare time, as a rest from work on the books. If I had been here long enough to fix up a house, I know the Shop would have been a source of real savings."

The Hobby Shop's contribution to the war effort included the construction of a large number of airplane models which were subsequently used by the armed services in the instruction of airplane recognition. The major project under this category was a relief map (four feet by six feet) of the defense area of Australia, where Allied forces were battling the Japanese. The relief map, made under the guidance of Mr. Watson, was completed in two months and sent to the United States Military Academy at West Point.

In the fall of 1946, the number of civilian members at the Shop was sufficiently large to begin a new organization. Officers were elected and various committees were set up to study the needs of the various departments of the workshop. Most of the original tools and machinery, which were already used equipment when donated by several departments of the Institute, have been in constant use for nearly 10 years and will be replaced as soon as funds become available. The used equipment donated to the Hobby Shop has proved to be excellent material as projects for reconditioning. A 14-inch Reed lathe, for example, donated by the Machine Tool Laboratory, had to be adapted to the existing facilities at the Shop. Among other things, a new type of drive and speed-changing mechanism was designed and made at the Shop by one of the master craftsmen. An old drill grinder, recently donated by the Mechanical Engineering Department, solved the difficult problem of sharpening tools, after it was completely reconditioned by an enthusiastic hobbyist. Existing machines are constantly being enriched with new and useful attachments — products of the imagination and skill of some of the members. One of the members, for example, has designed, constructed, and installed an unusual type of vacuum machine to recover, filter, and feed the lubricating oil used in the milling machine.

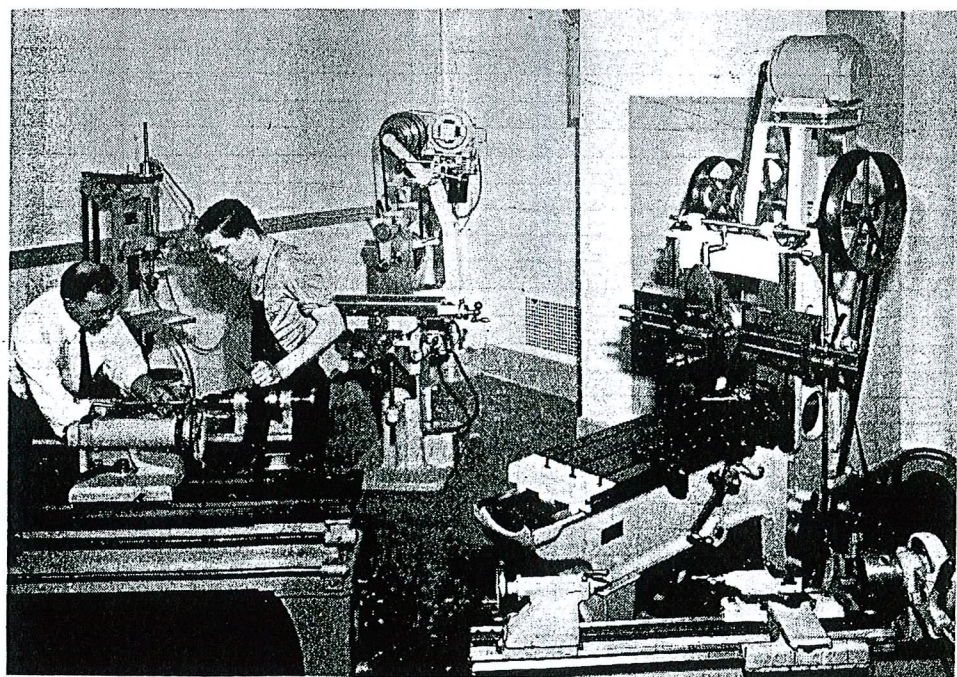
Joseph F. MacAllister, the present superintendent, has been associated with the Hobby Shop since 1942. A highly skilled craftsman himself, Mr. MacAllister has helped many of the Shop members to develop their creative abilities to points of really fine craftsmanship, and by keeping abreast of the activities in the hobby work, he has introduced many new and interesting hobbies. It is interesting to note that more than two thirds of the newcomers do not have the most rudimentary knowledge of the use and care of even the simplest and most common of tools. These students are taught the fundamentals of the use and care of tools before they are permitted to make use of any equipment. Some students who take too seriously the old saying that "all work and no play makes Jack a dull boy" are promptly given a lecture on the true meaning of the adage.

Recently the Institute has allocated additional space for the much needed expansion of the Hobby Shop. Bookbinding, gem grinding, lens making, glass blowing, foundry work, woodworking, and metalworking, all of which were formerly crammed into one room, three bays in size, have now been redistributed, allowing more floor space for each activity. Although the newly allocated room is adequately lighted, the former section of the Shop is very much in need of better lighting, and fluorescent fixtures will be obtained as soon as funds become available.

In spite of limited facilities, the Hobby Shop has seen the completion of many interesting projects. A few of these, such as an arc-welding machine built from an old General Electric pole transformer, and a dielectric-heating machine which not only glues wood but broils hamburgers as well, were made for the membership in general. Individual projects range from printing personal Christmas cards to rebuilding an old Rolls-Royce and even completely furnishing a home. One of the models presented at the recent Fisher Body Contest was made at the Hobby Shop, and it brought to Charles M. Jordan, '49, a prize of \$4,000.

Students who use the Hobby Shop are made acquainted with the various machines (*Concluded on page 460*)

The machine shop is ► provided with lathes, drill presses, and milling machines for almost any kind of metal work, and some of these are shown here. Under the friendly and able guidance of Joseph F. MacAllister, Hobby Shop superintendent, Richard A. Poirier, '50, learns a few pointers on precision of measurements as applied to lathe work. Although not illustrated, a photographic darkroom, wood-turning and carpentry shop are also available for student use.



WHAT IS DEMOCRACY?

(Concluded from page 458)

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M.I.T. HOBBY SHOP

(Concluded from page 443)

which are available for their use, and are also required to abide by certain rules which have been established for their safety. Any member of the student body is eligible to become an ordinary member of the Hobby Shop. Those who demonstrate an enthusiasm and willingness to further the objectives of the Hobby Shop may be elected journeymen after having been an ordinary member for at least one term. After at least another term, journeymen may be elected to master-craftsmen membership. Master craftsmen are entitled to all rights

and privileges of the Hobby Shop, including election to the position of foreman, who is responsible for the safe and proper conduct of the workshop. The Hobby Shop is open to master craftsmen at any time, provided that at least two members are in the Shop; at no time is the Shop open to a single individual. Officers of the Hobby Shop include: a student foreman, assistant foreman, secretary, and treasurer, who are responsible for the management of the Hobby Shop.

The Hobby Shop is also open to members of the staff and to Alumni upon application and payment of annual dues of \$3.00, except that alumni membership is restricted to former Shop members. In thus opening the membership to others beyond full-time students at the Institute, it is understood that the facilities of the Shop are primarily for students; other members are expected to recognize the preferential status of students. Since the *raison d'être* of the Hobby Shop is recreational, projects are expected to be of the student's own choice and initiative rather than the "assigned" type or theses for which the student is expected to make use of the departmental shops.

During its 10 years of existence, the Hobby Shop has grown from a workshop of about 350 square feet to one nearly eight times as large, while the attendance has jumped tenfold during the last year alone. The great enthusiasm shown by the membership in its devotion to the upbuilding and progress of the Hobby Shop proves the soundness of the principle on which it was established: the expression of one's creative impulses by means of a hobby contributes as much to the happiness of a student as does a high cumulative rating.



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