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Disposing of Scrap Systematically

The Crompton & Knowles Loom Works Makes Discarded Material Over Into Other Useful Articles—Scrap Committee Formed

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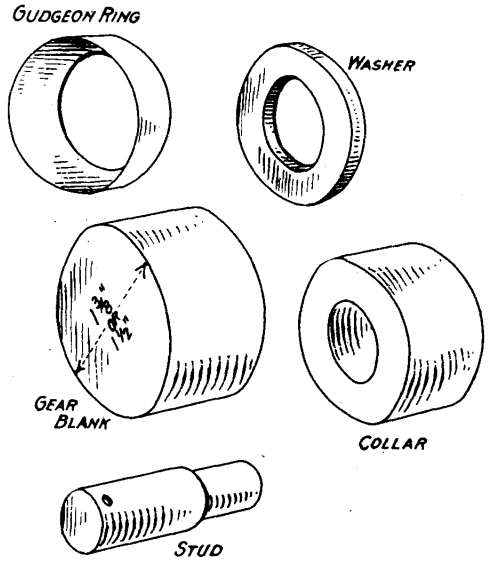
SELLING waste material as such only when it cannot be made over into another useful article is the recent policy of the Crompton & Knowles Loom Works, Worcester, Mass., which has created a department especially for the economical disposal of waste.

In 1917 this company established within its organization a scrap committee for the purpose of devising means of utilizing to better advantage large quantities of steel and wood scrap accumulating from time to time. Since the committee's inception it has become an important adjunct to the organization as a whole, its field of activity having been materially widened to include anything that can be classified as scrap.

The committee is composed of a representative body of departmental foremen and executives, who are in



Gudgeon Rings Were Produced from Short Pieces of Scrap Pipe. Though not so shown in the sketch, one end of the ring is a very thin edge, while the other end is about ⅛ in. thick. Washers were made from rusted flat steel scrap. Gear blanks, collars and studs were made from short pieces of cold-drawn steel

direct contact with such materials that are used in loom construction from which there results a certain percentage of scrap. Each member has a certain class of material to cover. The principal items are wood, cold-drawn steel, hot-rolled steel and iron, tool steel, pipe and miscellaneous items such as sandpaper, glass rods, solder, etc. The activities of the committee are not limited to material alone, however, for obsolete machine tools, motor trucks, and, in fact, anything becoming inefficient that is owned by the corporation comes under the jurisdiction of this committee, as well. The chairman of the committee is a member of the purchasing department, who is in a position to determine the relative value of articles recommended to be manufactured from scrap material, compared with prevailing market prices.

The committee meets the first of each month and the chairman calls on each member separately concerning scrap produced during the previous month for which he is responsible. A report is then submitted as to the quality of the scrap on hand according to classification. Each class is then considered separately to determine whether or not the salvaging of the respective articles would be advantageous, and at the same time the chairman ascertains the relative value of the material under discussion so that the committee may decide intelligently as to final disposition.

The object in view at all times is to consider the salvaging of all such materials that can be fabricated further and used as a part toward construction of looms or otherwise. During 1920 when materials, especially iron and steel, were costly and difficult to obtain, many hundred dollars' worth of scrap material was salvaged. In addition, greater care in working up material developed throughout the various departments in this large plant, thus resulting in an additional saving.

Salvaged material is properly cared for in stockrooms, where men in charge are familiar with department raw material requirements. When requisition is made at the stockroom for material it is the duty of the one in charge there to apply salvaged material whenever possible. The labor charge of working up salvaged material naturally is larger than it would be otherwise, but not sufficiently so to more than offset the saving in raw material costs. Workmen much prefer not to handle salvaged material, consequently there is the tendency to eliminate it as much as possible.

In the company's foundry a Make-Every-Ton-Count-Committee is incorporated to work in conjunction with the main plant reclaim committee. Its purpose is to make every piece of casting from a mold count for something. The day of workmen carelessly throwing castings against other hard substances, and large percentages of breakage, has passed. The welding department is materially reduced as a result. Not only is breakage much smaller, but better castings have resulted, thereby increasing the efficiency of the foundry organization.

Ways of disposing scrap materials are varied. It is not always possible to net the company a profit, especially on falling markets, but instances cited here illustrate the resourcefulness of committee members in the early part of last year. Previously, wood scrap was sold to employees at a nominal price representing a loss to the company, or was consumed in the boiler department. The committee classified the scrap, selling four cars of ash butts at 4c. per ft., netting a profit,

and apple wood butts to manufacturers of handles. Such accumulations of wood pieces that cannot be further used are sold to employees during the summer months at a small price which barely covers the cost of handling.

The committee is at present considering whether or not it would be profitable to invest in a machine for separating shavings from sawdust, there being a ready market for the latter. Worn out sandpaper rolls yield 4-in. to 6-in. strips, which are cut into convenient pieces for general hand purposes. Short pieces of glass rods are sometimes used to advantage in the production of Jacquards, while scrap paper is sold at prevailing market prices. Solder, accumulating in the emery wheel department, is reclaimed and used in babbitting boxes and in lead hammers. All used files are sent away and recut at a cost of less than 15c. each. Last year the company saved about 25 per cent in its file purchases by using recut files, and, in, addition, disposed at a good price of recut stock after worn out.

At one time there was an accumulation of several thousand pounds of rusted flat steel scrap on hand. From this a supply of washers was obtained at comparatively little expense and at a period when deliveries of washers were uncertain. Obsolete sizes of high-speed tool steel and of high-speed steel drills and reamers have been converted into usable sizes, 1 in. to 1½ in. Short pieces of cold drawn steel, nothing less than 14 in., are stored in separate racks according to size. When possible, they are used in the production of studs and collars. Pieces 1½ in. and 1 15/16 in. in diameter sometimes are used in making upright shafts, and pieces 1¾ in. in diameter welded and used for bottom shafts. Short pieces 1⅜ in., 1 3/16 in. and 1½ in. in diameter commonly are utilized in making gear blanks and collars, while pieces 1 15/16 in. in diameter have been welded and used for girts for worsted looms.

The company annually consumes a considerable tonnage of pipe. Its disposition of smaller sized scrap pipe offers an illustration of the thoroughness of the committee's methods. It decided gudgeon rings could be produced from 1¾-in. and 2-in. short pieces in place of malleable iron rings, when conditions warrant, to considerable advantage. In 1920 there resulted a saving of 1.31c. each and 3.08c. each on the No. 37 and No. 47 rings, respectively, in that these were produced from short pieces of pipe, as against the purchase price of malleable iron rings.

Salvaged pieces of 2-in. channel iron are used for reinforcing and repairing transportation platforms for shipment of looms. Interesting problems come up before the committee, which are outside its jurisdiction, and assigned to proper plant executives or committees.

It should not be construed that the reclaim committee permits indiscriminate working up of salvaged material to the detriment of manufacturing costs.. As a matter of fact working up costs, as related to raw material and scrap material prices, constantly are compared by members of this committee with a view to determining the most advantageous manner of disposing of property. If, for instance, the market for gear blanks is such that it is cheaper in the end for the company to buy from outside interests rather than work up salvaged cold drawn steel stock, scrap material is sold at going prices. Care also is taken not to overstock on products derived from salvaged material. Whether the committee can save money for the company this year is problematical, due to liquidation of raw material markets in general. It nevertheless is serving its purpose, for ways and means are being constantly studied and put into practice whereby waste is eliminated as much as possible, which, of course, means a saving to the Crompton & Knowles Loom Works.