less courageous and ingenious; while the fascination of making something unassailable by time should allure and hold the ambition of the true craftsman. Let us hope that the future of the art will justify our present expectations of its success!

BEATEN METAL WORK by Amalie Busck

The last century saw the adaptation of machinery to the production of nearly all material needs. The machine now makes almost automatically the thousand articles used in the daily routine of life. While the making of objects by the thousand has given the world more leisure, it has also filled it with the tawdry and the commonplace. Therefore, the change has been regarded with contempt by many of artistic temperament, who characterize it as commercialism, as artistic retrogression. But in spite of all inventions, it has been proven impossible entirely to supersede the handicrafts, by means of which the finest work in wood, stone, and metal is still done. The individual craftsman of the past is now the skilled laborer of our great factories and workshops, and his skill is no doubt equal, if not superior to that of his similar of the past, while his facilities are greater. But the conditions of his life are paralyzing. He works against time; not for individuality; not for varying form, and lines of beauty which would develop his artistic sense. Skilled workmanship is his pride. Number and uniformity are his aim and ambition. It is useless to decry these conditions. They are not necessarily permanent. An outside influence,—
Repoussé work in copper from the Basck Studios, New York
Copper Shield, sixteen inches in diameter
From the Busch Studios, New York
the so-called amateur,—is gradually becoming a force. He is not yet so skillful a workman; but because he is aiming persistently at technical excellence, because he is guided by his artistic capacities, he is destined to raise the crafts to their former position beside the arts.

The meaning of the present tendencies is plain. It is shown by the fact that the younger generation of those who are artistically inclined do not regard music, poetry, painting and sculpture as the only worthy mediums of expression.

Among many other materials possessed of artistic possibilities, the metals have been recognized as capable of being made to express great beauty of form and color.

As yet, little is doing by the artist himself in casting metal and in the heavier process by which wrought iron is produced; the artist supplying for the one the model in clay, and for the other usually the design only. Under the maintenance of so complete a division of labor, perfection is, of course, impossible. But at present, many difficulties, financial and technical, stand in the way of a closer co-operation.

Beaten work, as applied to some of the softer mediums, such as gold, silver, copper, brass and bronze, is now executed by the artist himself. But even here, difficulties are met, since it is not to be supposed that craftwork will be simply a revival of the old methods. For while the craftsman of the future must possess equal, if not greater skill than the workman of the past and present, yet will he fail in the requirements of his age, if he shall not avail himself of the most advanced mechanical and mediumistic devices.

"Handwork" is a survival, and is much in danger of becoming a fetish. Effect, fitness of the purpose to the medium, and honest workmanship are the ends to be pursued. And many results are best, if not alone, attained by hand-tools. An object wrought by
hand may properly awaken admiration in the minds of those patrons of the arts and crafts who have never used the tool, and seen and felt the tough metal soften, move, and take form beneath the hammer. The patron may have artistic capabilities, and may appreciate all the beauties which texture adds to form, but it is only for the craftsman that the word “hand-made” can have its full significance.

In this division of modern work lies the principal difficulty of developing artistic handicraft. The worker with innate mechanical ability must recognize his probable incapacity as a designer of merit. The production of things “hand-made” is not legitimate or worthy craftwork, and offers no improvement upon the skillfully wrought articles turned out by our firms. The aim must be beauty, and the conception can come from the artist alone. Co-operation is essential, and this statement can not be too insistently made. At the present time, craftsmen,—from the “artistic” heads of some of our best known and most pretentious firms down to the individual workers in metal, wood, bookbinding, and other mediums, are devoid of any knowledge of construction, or of the principles of the adaptation of design.

Before modern craftwork can attain distinction, artistic motive must be the incentive in each object wrought. Unskilled or “barbaric” workmanship may be overlooked, or even necessary. But to have no aim beyond that of skilled workmanship is to be uninteresting, which is unpardonable. On the other hand, the designer can not meet the requirements of metal-work, without some practical knowledge of technical methods and of the peculiarities and limitations of his medium.

The technical points necessary to be understood in metal work are neither numerous nor difficult to be understood. Yet it is only by experiment that the worker can attain to a full appreciation of the
quality of the medium which should always be expressed in the design.

After a short experience in the workshop of a coppersmith, or a jeweler, in which one can gain the principles of soldering and brazing, a general idea of the use of special tools, and learn to give the hammer-blow that stretches, or that thickens the metal, the beginner may himself set up a small shop and devote himself to the increase of his skill; a process in which he will incidentally discover not only new difficulties, but also possibilities which he has never suspected. The little workshop is an essential factor in the education of a designer, even if he have at his command the facilities of the fully-equipped workshop of a commercial house, in which he may perfect his more pretentious efforts.

The fittings of the little workshop may be elaborate or simple, according to the choice of the worker. A great many anvils, lathes and forms may be used with advantage; yet it is also possible to produce good results by limiting these fittings to a few steel hammers and wooden mallets, a sand-bag, a pitch-bed, a number of wooden blocks, and a set of steel outlining and raising tools, the number and forms of which vary with almost every new design; so that it is best for the worker to supply or make them according to his needs.

The earliest repousse metal which has come down to us is in bronze; the metal being beaten into the design, which was cut on the face of wooden blocks. Later, the wooden blocks were discarded for softer materials, which did away with the necessity of carving the design. The beds of resisting mediums now in use are: lead, the sand-bag, and a mixture of pitch. Burgundy pitch is superior to the tar mixture which has been commonly used, because it is cleaner, less sticky, and more easily removed from the surface of the metal. The consistency of the pitch-bed is easily changed to meet the requirements of differing cases, by melting, and by adding
plaster of Paris, or lard. Lead, on account of its greater resistance, is used under narrow line tools to give sharper definition, by holding back the metal on either side of the point directly under the tool. But pitch is sufficiently resistant for copper up to eighteen gauge, and further, it has the advantage of holding the work securely: for the metal is laid on hot, and pressed down until every part is in contact with the resisting medium. The pitch is then cooled and holds the metal firm and flat.

The pieces of copper repoussé illustrated in this paper are good examples of what may be done with very simple means. The designs have been worked out entirely with steel and wooden tools in the pitch-bed and on the sand-bag. Machinery has been used only in turning the edges of the fire-place front, in a ponderous press, such as may be found at any coppersmith’s.

The means for attaining the best results in metal-work, as well as in any of the other crafts, were concisely formulated by William Morris, when he said:

“We must diligently cultivate in ourselves the sense of beauty, skill of hand, and niceness of observation, without which only a makeshift of art can be got.”