

alcohol (that is the alcohol present in greatest quantity in beer, wines and spirits), produces protracted sleep in the dog, but the animal awakes in his normal condition. Methylic alcohol (which is present in small quantities in methylated spirit, but not in beverages) produces in the dog, restlessness, giddiness, and broken sleep. It is further stated that a dog may be dosed with ordinary (ethylic) alcohol or any higher alcohol (*i.e.*, one containing more carbon and hydrogen to the same quantity of oxygen) for a year without any evil consequences, whereas doses of methylic alcohol produce death in a few weeks.

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### Notes on Art.

#### THE BURLINGTON FINE ARTS' CLUB.

##### EXHIBITION OF JAPANESE LACQUER AND METAL WORK.

(Continued.)

LAST week we considered the lacquer, in this wonderful little exhibition, and will now turn to the metal-work. It is not so very many years since the main characteristic of Japanese Art was considered to be its grotesqueness. We remember, for instance, even Mr. Ruskin, in the course of a celebrated lecture, setting a picture by Gustave Doré, side by side with a Japanese battle scene, and appealing to both as examples of work which gloried in the representation of human suffering. People were slow to realize the merits of Japanese Art, and to see the wonderful fidelity with which it renders flowers and foliage, and certain natural forms, for the Japanese realize, even in their metal-work, the saying of S. Gregory of Nyssa, "How beautiful are the imitations of beautiful things, when they preserve visibly the impress of the prototype." Space is, however, limited, and we must, with the aid of the catalogue, proceed with the work before us.

It is claimed that the Japanese possessed the art of working in metals as early as the first century of our era; but there is undoubted evidence that as early as the seventh century, "proficiency had been attained in the artistic manipulation of bronze, which might arouse the envy of the best workers in metal of to-day." In England, we are familiar with works in pewter, bronze, brass, copper, gold, silver, and in certain alloys or mixtures of gold and of silver with each other, and with other metals; but the Japanese have used for centuries a series of alloys of great complexity, and of a singular range of tint, so that the art metal-worker, has almost the painter's palette at command.

There are, however, two main characteristic alloys of which we, in this country, know little. These are *shakudo*, which is copper, containing from two to six per cent. of gold, melted or alloyed with the copper, so that it is thoroughly incorporated with, and forms part of, the mass; and there is *shibuichi*, literally "one-fourth," which should contain one-fourth of silver, and three-fourths of copper, but is often composed of half copper and half silver. Now these alloys are not used with the bright surfaces, obtained by polishing; that is in the way an English goldsmith or silversmith would use the precious metals—far from it, they have a distinct coat or *patina* given to them, or they gradually acquire

this coating, which is durable, by wear. In order to make this clear, we must ask our readers to remember, or to observe, what happens to the bright part of a copper coal-skuttle, or the polished lid of a copper tea-kettle when it is exposed to the atmosphere. It does not long preserve its polished surface, but gradually tarnishes, and there is a stage at which this natural tarnish on any article of polished copper is a brilliant red. Ultimately, it is true, it passes, by slow gradations, to purple and brownish black. The Japanese avail themselves of the fact, that copper and its alloys will assume a brilliant range of tints. They seldom trust to natural tarnishing, "or oxidation," but hasten the process and produce certain tints at will, by the aid of a few "pickling" solutions. The nature of these solutions cannot be described here; they will be found in the catalogue of the Exhibition, or in lectures which Prof. Roberts-Austen has from time to time delivered before the Society of Arts. Let us then accept the fact without further explanation, that *shakudo*, the copper with a little gold in it, can have a brilliant deep purple imparted to it, *shibuichi* an exquisite silvery-grey, copper a brilliant red, or varying shades of brown; and let us see what use the Japanese artist makes of these materials.

He builds up for us very exquisite compositions in coloured metal work, much as a Florentine uses coloured marbles and precious stones, often imitating one material in another with a reckless disregard of convention which is as striking as his skill. Nothing seems beyond him; he will make a metal band in black *shakudo* so closely resemble leather as to defy detection by sight, and to compel investigation by touch. He will paint, in metal, the blues, greys, and yellows of a tom-tit's head and breast; he will mimic the sheen on the back of a gold fish or depict the reds and browns of a decaying maple leaf. Go and look at the work set out for you in cases I. to VII., and more particularly the sword hilts in the wall cases I., II., and III. It is difficult to select examples where so many are beautiful, but perhaps the reader would do well to look first at case III., row 1, No. 44, a sword-hilt representing five rats in different metals running round the circle. Examine these sword hilts carefully; see the way that delicate foliage is wrought in bronze, and the effect heightened with gold; look at the elaborate tracery sawn out of solid iron with saw cuts so fine that the thickness of a sheet of paper will hardly pass into them (case III., Nos. 1—26); see how iron is encrusted with drops of silver (case III., row 2, No. 26; or case I., row 1, No. 65), or how various metals are blended into a mottled surface (case III., row 5, No. 5), or how fifteen layers of metal are cut through to show the different colours (case III., row 5, Nos. 9, 11—15). Try and realize how much labour is involved in the faithful imitation of Tagayasan-wood from China (case I, series 6, No. 29), or, if you prefer more modern work, turn to case VI. and see, in No. 19, a coolie (in *shibuichi*) trying to capture under his hat (in brass) the Thunder god (in red copper with gold and *shakudo* inlays, on a cloud of *shibuichi*).

It is really beautiful, but it is just possible that you may, with the best will in the world, fail to appreciate all this; and if it is so, you had better go to the nearest silversmith's and ask for a piece of modern "presentation plate," and see what you think of that.

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