SCIENCE:

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Communications will be welcomed from any quarter. Abstracts of scientific papers are solicited, and twenty copies of the issue containing such will be mailed the author on request in advance. Rejected manuscripts will be returned to the authors only when the requisite amount of postage accompanies the manuscript. Whatever is intended for insertion must be authenticated by the name and address of the writer; not necessarily for publication, but as a guaranty of good faith. We do not hold ourselves responsible for any view or opinions expressed in the communications of our correspondents.

Attention is called to the "Wants" column. All are invited to use it in soliciting information or seeking new positions. The name and address of applicants should be given in full, so that answers will go direct to them. The "Exchange" column is likewise open.

PLAYING CARDS FROM JAPAN.

THE history of playing cards, their introduction into Europe from the East by the gypsies or by the home-returning Crusaders, the change and development they underwent while being adapted from the cards of the Orient and altered into those that are familiar to our eyes, have been dwelt upon by numbers of writers; but the cards used in Japan have not been mentioned in any of the best known histories, although they are more distinctly original than any others, and they show no marks of the common origin which the Italian, Spanish, German, French, Hindu, and Chinese cards display.

The Japanese cards, we learn from a paper by Mrs J. King van Rensselaer, in the "Proceedings of the National Museum" (Vol. XIII, No. 836), are oblong, and are made of pasteboard. The backs are painted black, with none of the checkered dotted marks which usually decorate European cards. The designs seem to be stencilled, and are brightly and appropriately colored, and then covered with an enamel or varnish, which makes them quite as slippery as our own. They are very much smaller than our cards, being a little more than two inches long by one broad.

Forty nine in number, they are divided into twelve suits of four cards in each suit. One card is a trifle smaller than the rest of the pack, and has a plain white face not embellished with any distinctive emblem, and this one is used as a "joker." The other cards are covered with designs that represent twelve flowers or other things appropriate to the weeks of the year. Each card is distinct and different from its fellows, even if bearing the same emblem, and they can be easily distinguished and classified, not only by the symbolic flowers they bear, but also by a character or letter that marks nearly every card, and which seems to denote the vegetable that represents the month. The only month that has no floral emblem is August, and that suit is marked by mountains and warm-looking skies.

January is represented by pine trees, which, on two of the cards, are shown against a lurid sky; the third one has a grayish background, that throws the trees into strong relief, and the fourth has a setting sun flecked with light clouds, the pines barely indicated in front of it, and the greater part of the card covered with the figure of a huge white-bodied, red-eyed stork.

February displays as its emblem a plum blossom, the four cards devoted to this month bearing its flower in various positions.

March has a red cherry blossom, and April the hanging tendrils of the wistaria vine. On one of the cards of this suit is a wee yellow-bird, which is flying across its surface under a crimson cloud.

For May there are beautiful blue iris springing from long spiky leaves. One card shows in one of its corners part of a dock or pier, and also the water, out of which the flower is lifting its lovely head.

June is represented by blood-red peonies, over one of which two yellow butterflies are hovering.

On July's cards star-shaped leaves, some yellow, some red, and some black, are scattered over their surfaces. These leaves resemble those of our gum or liquid amber trees, but they bear the Japanese name of *hägi*. On one of the cards belonging to this suit a deer is represented standing under the branches of this strangely-hued tree. This is the only figure which recalls in any way the emblems used on cards belonging to other nations, as on one of the Chinese cards is found either a deer or else Chinese characters which have been translated to mean "This is a deer."

August is represented by four pictures of grass-covered mountains, in three of which they are sharply defined against a clouded blue sky, and in the fourth the sun, looking hot and sultry, beams down on a treeless hill. Three birds fly across the sky on one of these cards.

September bears the Mikado's flower, a yellow and red chrysanthemum; October, a maple tree with red or yellow leaves; and on one card is a yellow boar trotting off towards the symbolic tree.

November shows on one of its cards a willow sharply outlined against a leaden sky. The willows on a fellow-card look windtossed, and a long-tailed bird skims across the sky. A third card is covered with inky clouds, torrents of rain, and strange zigzags resembling forked lightning. The fourth card of this suit bears a quaint figure of a man rushing through the storm under the willow trees and dropping his sandals in his haste, his head covered with a huge yellow umbrella. Streaks of lightning surround the little figure, and the storm of rain is well depicted in the picture.

December bears the imperial Japanese plant *kiri*, and over one of these flowers hovers a beautiful red-crested silver-winged pheasant.

An infinite variety of games are played with these cards, as there is a shade of difference in each one of each set, and in some games each has a separate value. The favorite game in Japan at present is very like cassino, in which any card of a set may take any other, but all have their own values in the final count.

HEMP CULTIVATION IN THE PHILIPPINE ISLANDS.

THE Manila hemp plant, which is very similar to the banana or plantain, thrives best in soil composed of decayed vegetable matter, the principal districts in the Philippine Islands in which it is cultivated being reclaimed forest land. The yield, according to Mr. Gollan, British consul at Manila, is more abundant on hilly land than on low lying flat ground, and the volcanic nature of the soil of the islands seems to be particularly adapted to the growth of the plant. The production is chiefly in the southern districts, where the rainfall is greater than in the vicinity of Manila. The trees suffer severely from excessive heat and drought. The custom in the Philippines is, after clearing the land, to plant small plants of about three feet high, leaving a space of from two to three yards between, the young shoots which spring up later around the parent stems filling up the intervening space. The ground is carefully cleaned and weeded at least twice a year.

As a rule it takes about three years to produce a full crop, but in a favorable soil a crop of about one-third the full production would be available in two years after planting, the second crop the following year would yield about two-thirds, and by the fourth year a full crop would be obtained. The trees are ready for cutting when the first shoots begin to be thrown out. When the trees have matured and are ready for cutting, they are cut down about a foot from the ground, and layers are stripped off the trunk. These layers are then cut into strips about three inches in width. The strips are then drawn between a blunt knife and a board, to remove the vegetable matter from the fibre, which latter is placed in the sun to dry. As soon as it is thoroughly dried it is ready for the market.