What Philately Teaches

1899

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Edited by

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The Rebel Stamp Dealer

Latest edition at : www.stampmarket.com

What Philately Teaches

By way of preface, I wish to say, that I have prepared this paper with the hope of interesting those who are not stamp collectors and my endeavor will be to indicate some of the interesting and instructive things that may be learned by those who follow this fascinating pursuit. Much that I have to say will be ancient history to philatelists, but I trust they will remember that this is not especially intended for them and pardon any dryness in it, in view of its intent.

Stamp collecting, as pursued to-day, has become something more than an amusement for children. It affords instruction and mental relaxation to those who are older and more serious.

On the title page of every stamp album and catalogue should be inscribed the old latin motto: "*Te doces*" thou teachest, for it is certainly an instructor and affords much intellectual entertainment.

In connection with this motto we have a little philatelic joke from the orient. In one of the Chinese treaty ports a stamp has been issued which bears the motto. We find them on the tea chests, written in excellent Chinese, and, even if we do not read the language, we cannot doubt that they refer to the *tea doses* which the chests contain.

By some, philately has been called a science. Perhaps it hardly merits so exalted a title but it opens for us a wide field for research, in which we may find many curious, interesting and instructive things. It trains our powers of observation, enlarges our perceptions, broadens our views, and adds to our knowledge of history, art, languages, geography, botany, mythology and many kindred branches of learning.

Philately embraces the whole earth and likewise the whole earth is sometimes embraced within the limits of a postage stamp. As an example of this, witness the recent effort of our Canadian cousins in celebration of the achievement of the long-desired ocean penny postage, at present an inter-colonial rate of the British Empire, but some day to be an international rate.

The motto is a trifle bombastic and suggests the Teutonic superlative; "So bigger as never vas," and the "Xmas 1898" reads like the advertisement of a department store: "Gents pants for Xmas gifts." But we must admit that the stamp is a pretty conceit, in spite of these defects and of the ambition of the artist, which has spread the "thin red line" over territory that has not otherwise been acquired.

In addition to the things to be learned from the pictorial part of stamps, there are other things which attract the attention of the thoughtful and bring with them knowledge that is both interesting and valuable. The mechanical part of stamp making may be studied with much profit and entertainment.

Considered in all its aspects, philately is even more instructive than matrimony. You will remember the elder Weller's views on the latter subject: "Ven you're a married man, Samivel, you'll understand a good many things as you don't understand now; but vether its worth while going through so much to learn so little, as the charity boy said ven he got to the end of the alphabet, is a matter o' taste. I rather think it isn't." This reproach cannot be applied to philately. It teaches even the unwilling and careless.

In the effort to fill the spaces in their albums they must learn what varieties they are lacking and in what these differ from other and similar varieties. Thus some knowledge must be gained, even if unsought. To the studious and the careful, in this as in other things in life, the greatest benefits naturally accrue.

In my remarks this evening I shall endeavor to touch upon a few subjects which are quite certain to attract the attention of any one who takes up stamp collecting with any degree of earnestness and thoroughness. That these subjects open up other fields for interesting and profitable study will be readily apparent.

Let us take a postage stamp and consider it. Aside from the name of the country whence it emanates and the expression of value, what do we find in it to study? First the design, next the means by which the design was prepared and placed upon the paper, thirdly the paper upon which the stamp is printed, and lastly the finishing touches of gum, perforation, etc.

In the early days of stamps most countries made their own and they were, in some degree, an indication of the artistic progress, or want of it, in a country. But we have changed all that and to-day all effort seems to be directed toward producing artistic and attractive stamps. Sometimes this is due to national pride and occasionally it is intended to draw attention to the resources and natural wonders of a country.

As an example of the latter, here are the marvelous pink terraces of New Zealand, which were, unfortunately, destroyed by volcanic disturbances a few years ago. But too often, we fear, these picture stamps are produced merely with a view to their ready salability to collectors.

More frequently than not, these brilliant labels are the product of a distant country and are no longer indicative of the artistic status of the country by which they are issued. For example, a late issue from the Tonga islands but made in London.

Indeed, the wilds of Africa, the distant islands of the Pacific and the tumultuous republics of Central America far outshine the cultured countries of the old world in their postal stationery.

The designs of stamps may suggest many things: the power of nations, the march of history, the glory of victory, the advance of civilization, art, industry, natural resources, scenic grandure, the dead and storied past, the living breathing present.

The majority of stamps bear a portrait, usually that of a sovereign. The stamps of our own country present a portrait gallery of our great and heroic dead, for by law the faces of the living may not appear on our stamps or money. This is the reverse of the rule in monarchical countries, where the portrait of the reigning sovereign usually adorns the postal issues.

The likeness most frequently seen on postage stamps is that of her most gracious Majesty the Queen of England.

For more than half a century her portrait has adorned the numerous stamps of Great Britain and the British Colonies, beginning in 1840 with a beautiful portrait—painted by an American, we may be proud to say—the portrait of the girl queen, wearing her coronation crown, and continuing, until to-day she wears a widow's veil beneath the crown of the Empress of India.

In the issue by which Canada commemorated the sixtieth year of Her Majesty's reign the two portraits are happily combined.

Following the lead of Europe and America, other countries have placed the portraits of their rulers on their stamps and from this custom we may gain some slight information on the subject of ethnography. Hayti, Tonga, Samoa, Siam, Liberia, Holkar, etc., have shown us types of other races than the Caucassian.

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One of the stamps of Congo is adorned by a couple of natives in local full dress which appears to be much on the order of that of the lady in the ballad who wore a wreath and a smile. Japan has placed on her stamps the portraits of two heroes of her late war with China. Guatemala has the head of an Indian woman.

The stamps of British North Borneo have the arms of the company with two stalwart natives as supporters and a similar device is used by the British Central Africa Co.

The stamps of Obock show a group of natives. The picture is entitled "the missionary at dinner with the native chiefs." For further particulars of the missionary enquire within.

Another large group of stamps have numerals of value as their distinguishing feature. As examples of this we find, the early issues of Brazil and Hawaii, many stamps of Sweden, Netherlands, Denmark, etc., as well as the postage due stamps of many countries, including our own.

In other countries only inscriptions are used. This is especially the case with the Native States of India, in some of which as many as four languages are said to be employed on one stamp. These are interesting for their crude and curious designs but are not popular with collectors, probably because of our inability to read them.

Afghanistan has varied the idea by placing on her stamps a tiger's head surrounded by a broad circle of inscriptions. Owing to the short comings of native art the tiger is more often droll than ferocious.

The method of cancellation used in that country is crude but effective. It consists in cutting or tearing a piece out of the stamp. Needless to say, it is not popular with stamp collectors.

Jhalawar, one of the Native States of India, has also varied the monotony of inscriptions by the addition of a sort of jumping-jack figure. By some writers this is claimed to be a dancing dervish and by others a Nautch girl.

As pictured on the stamp the figure does not present the sensuous outlines which have always been

attributed to those delectable damsels. Bossakiewicz, in his *Manuel du Collectionneur de Timbres Poste* says: "A dancing nymph, belonging to the secondary order of Hindu divinities and known as an *apsara*." Here is a problem which the next convert to philately may undertake to solve. You see there are still worlds to conquer, in spite of all the inky battles that have been waged by philatelic writers.

The first stamps of Uruguay bear the inscription "diligencia" (stagecoach), thus plainly indicating the method then employed for transporting the mails. On some of the Venzuelan stamps is the word "escuelas" (schools), a portion of the revenue from this source being devoted to the maintenance of the state schools.

The animal world has been thoroughly exploited by designers of stamps and many curious products have they shown us. This creature with the fine open countenance hails from North Borneo but it is said that similar creatures have been seen by earnest philatelists after an evening of study

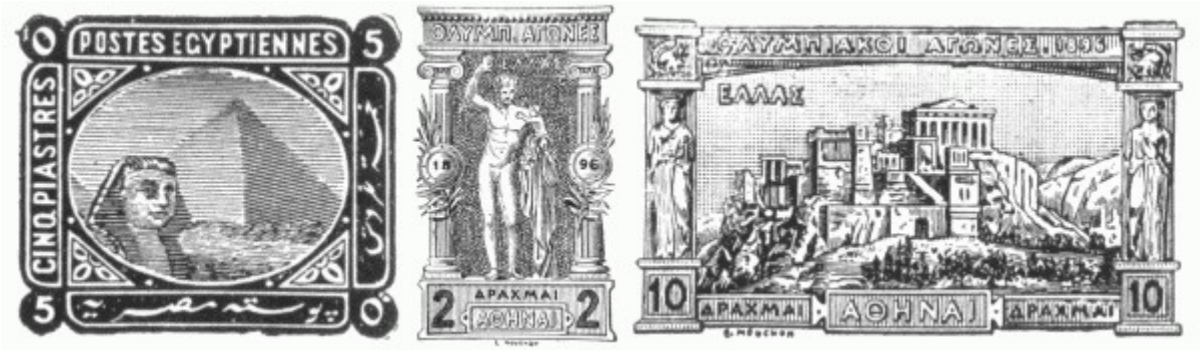
in the billiard room of the Collectors Club, followed by a light supper of broiled lobster and welsh rarebit.

Very familiar to collectors are the camel of Obock and the Soudan, the Llama of Peru, the sacred quetzal of Guatemala—the transmigrated form of the god-king of the Aztecs—the lyrebird and Kangaroo of New South Wales. New Foundland has pictured the seal and cod fish, Western Australia the black swan, Liberia the elephant and rhinocerous, and New Zealand the curious bird called the apterix, which is wingless and clothed in hair instead of feathers.

Tasmania shows us her animal freak, the platypus paradoxus, the beast with a bill, first cousin to our tailors and butchers, all of whom are beasts with bills. Our own country has added to the philatelic "zoo" by placing a herd of cattle on one of the Trans-Mississippi issue. That it is a pretty picture cannot be denied but the connection between cows and postage stamps is not obvious.

New Foundland, Nova Scotia and New Brunswick have adorned their stamps with the heraldic rose, thistle and shamrock of the British Empire. Japan, ever artistic and ever a lover of the beautiful, has placed on her stamps the chrysanthemum, both as a flower and in its conventionalized form as the crest of the Imperial family. And Nepal has the lotus, sacred to Buddha. Brazil has shown us the brilliant constellation of the Southern Cross which sparkles in the tropic sky.

Many nations have used their coats of arms as appropriate decorations for their postal issues. On the five shilling stamps of Malta we find the Maltese cross, emblem of the Knights of St. John and reminiscent of the crusades.



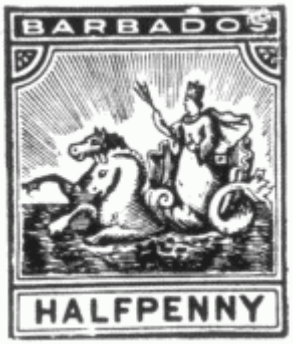
Egypt has her sphynx and pyramids; Greece an artistic series of pictures of her famous statues and ruins. Fiji shows a pirogue, the native canoe, rudely shaped from a tree trunk and hollowed out by fire. Labuan has a piratical looking native dhow.

The stamps of Rhodesia and the Congo Free State depict the advance of civilization on the dark continent. History is sumptuously illustrated in the series of stamps issued by our Government to commemorate the 400th anniversary of the discovery of the new world by Columbus and to celebrate the settlement and growth of the great west.

Portugal also has celebrated, in an elaborate issue of stamps, the voyage of Vasco da Gama to India. Other countries have been quite too ready to do likewise until we have feared we were in danger of being drowned in the flood of commemorative and celebration stamps, many of which we felt were designed to replenish an empty treasury rather than to honor the glorious deeds of the past.

Quite a number of stamps have allegorical designs. One of the most beautiful examples comes from St. Vincent. Familiar figures to philatelists are those of Peace and Commerce on the stamps of France, Hope with her anchor on the issues of the Cape of Good Hope and Britannia on several of the British Colonies.

The stamps of British East Africa bear a flaming sun and the legend "light and liberty," typical of the light of civilization and progress now dawning upon that part of the world. And on one of the late issues of Portugal is a beautiful allegory of the muse of history watching Da Gama's voyage to the East.



From allegory to mythology is but a step. Greece has long displayed on her stamps the winged head of Mercury and Uruguay has given us a dainty picture of the messenger of the gods. The late issues of Barbados have a picture of Amphitrite, the spouse of Neptune, in her chariot drawn by sea-horses. The handsome stamps of the United States, intended for the payment of postage on newspapers and periodicals bear the pictures of nine of the goddesses of Grecian mythology.

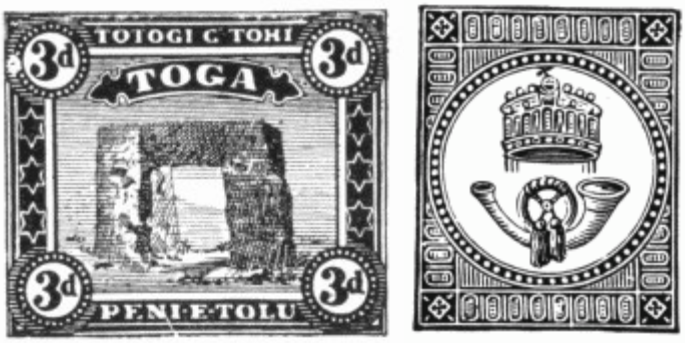
The stamps of China, Shanghai and Japan introduce subjects from oriental myths. This is not a pussy cat in a fit or trying to dance a *pas seul* on the end of its tail. It is one of the most venerated of the Chinese dragons. One of its provinces is to guard the sacred crystal of life. It has a human head, the wings of a bird, the claws of a tiger and the tail of a serpent.

One of the stock arguments advanced in favor of philately, by those who think it needs other excuse than the entertainment it affords, is that it teaches geography. This is undoubtedly true, and, as if in support of the argument, several countries have given us what might be called map stamps.

Of late years, it has become customary for countries to exploit their attractions by issues of "picture" stamps, many of which show views of local scenery.

One of the first in this line came from North Borneo, showing a view of Mt. Kimbal, a celebrated volcano of the island. Congo has given us two pictures which are microscopic gems of art. The first is a view of the railroad crossing the Mopoxo river and the second the Falls of Inkissi. British Guiana has recently shown us two of her natural wonders, Mount Roraima, a great table-topped mountain, and the Kaiteur Falls. New Zealand has an extensive series of views, one of the most striking of which is Mount Cook.

Among the latest of these attractive issues is one from Tonga, which includes a picture of a wonderful work of the pre-historic inhabitants of those islands, a tri-lithon, believed to have been erected as a burial place and monument of a chieftain. In its arrangement and massive simplicity it is suggestive of the Druidic ruins of other lands.



Crowns and post-horns figure on many stamps and both are significant of the authority and purpose of these seemingly trifling bits of paper. An interesting combination of these two emblems is found on one of the newspaper stamps of Hungary. In this case the crown is not merely a creation of the artist's fancy but the historic crown of Saint Stephen, the "iron crown of Hungary," so called because it has within its rim an iron band said to be made from one of the nails of the cross.

In all these subjects of thought I have mentioned only a few examples under each head. The number might be multiplied many times, did I not fear to weary you.

But, turning from the purely pictorial side, let us consider the material side of stamps and the various methods employed in producing them. The design having been selected, it becomes necessary to reproduce it in some form suitable for making stamps in large quantities.

In a general way we may divide stamp printing into two classes: printing from metal plates and printing from stone, or lithography. The first class contains two grand sub-divisions.

In the first of these sub-divisions the lines to be reproduced are sunken below the surface of the plate. This is known as *taille douce* or line engraving. It is also called copper plate and steel engraving. The copper plates for our visiting cards are familiar examples of this style of work and our national paper currency presents very beautiful and elaborate results of the process.

The second sub-division is known as typography or surface printing. As its name indicates, the lines to be reproduced are at the surface of the plate, the other parts being cut away. A newspaper is an example of typographical printing, the term being applied to designs made up from type, as well as to specially prepared plates.

I need not suggest to you how wide a field for thought and exploration this subject of engraving opens to us, leading as it does directly into the world of books, pictures and art. But at present we must confine ourselves to the subject as applied to postage stamps, save for a brief consideration of its origin and history.

The art of engraving owes its origin to the Florentine goldsmiths of the fifteenth century. They were accustomed to ornament their work with incised lines which were filled with black enamel. A design thus filled with enamel was called a *niello*, a derivative of the word *nigellum* (the most black). The brass and nickel signs with black letters, which we find at the doors of business houses, are modern forms of *nielli*. While making a *niello*, the artist naturally wished to see how the work was progressing and if any alterations were required. It was not desirable to put the enamel in the design because it was difficult to remove.

To avoid this an impression of the work was taken in clay, from which a sulphur cast was made. The lines of the cast were filled with lamp black. Thus a copy of the work was obtained which reproduced its coloring and showed the condition of the engraving. A more simple process was discovered later.

This consisted in filling the lines of the engraving with a thick ink and pressing a sheet of damp paper against them. Sufficient pressure was used to force the paper into the lines and take up the ink on its surface. This was the beginning of line engraving and plate printing. The process was at first employed for the preservation and duplicating of designs for goldsmith's engraving and afterwards for the sake of the work itself.

It was not until the next century that the process assumed a leading place in the world of art. If it were not going too far away from our subject we might study the early engravers and their work with much profit and entertainment. But it is our purpose to consider the subject only so far as it applies to postage stamps.

Until the early part of the present century copper was practically the only metal used for engraving. Only a limited number of impressions can be taken from a copper plate because it wears rapidly, and it is not suited to such work as the production of postage stamps.

About 1830 the way was found to make steel of sufficient softness and fineness of grain to be available for engraving. To-day annealed steel is almost exclusively used for this purpose. Annealed steel is steel which has been softened without being decarbonized.

The surface is carefully ground and polished to a mirror-like brightness. Any work which is to be reproduced many times, such as postage stamps and parts of bank-notes, is made on small pies of steel called dies.

If the design to be used is in the shape of a drawing or engraving, a sheet of gelatin may be laid over it and the outlines traced with a sharp-pointed instrument.

More often a photograph is taken on a ferrotype plate and the outlines scratched into the plate. These outlines are filled with vermilion. A piece of paper is then laid on the plate and the two passed through a hand-press. This is called "pulling" an impression.

While the ink of the impression is still moist it is sprinkled with powdered vermilion to strengthen the lines. The block of steel is then covered with an etching ground (a composition of asphaltum, wax, resin and ether) and the impression is transferred to this.

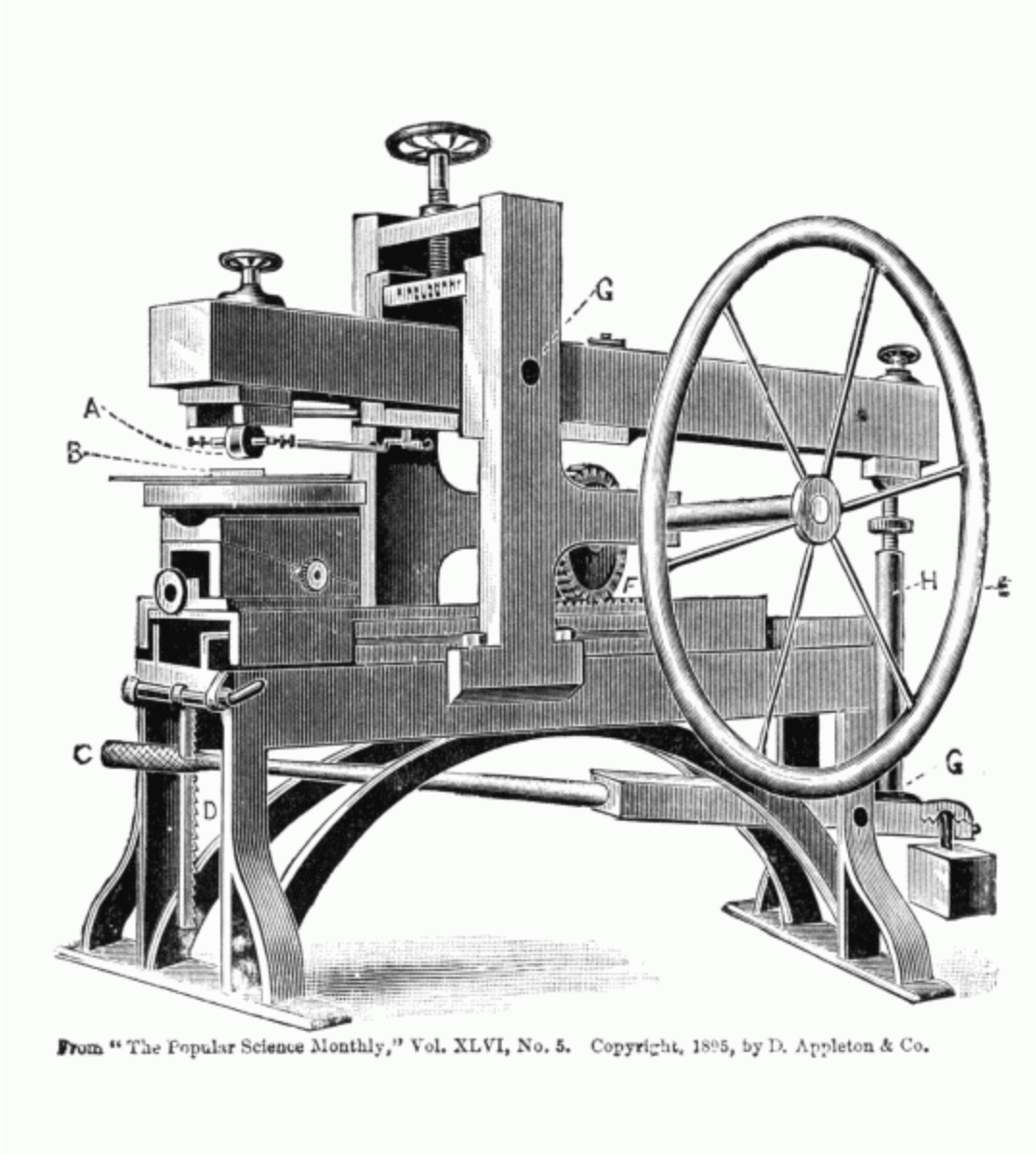
The outlines are cut through the etching ground and bitten into the steel with acid. The coating is then removed from the block and the artist proceeds with the engraving.

The mechanical details and various methods of engraving are highly interesting but time will not permit their discussion.

An engraver is seldom expert in more than one style of work. Each makes a specialty of some branch, portraiture, lettering, scroll-work, etc. For this reason several engravers are usually employed on each die for a postage stamp. And in this inability of one individual to do all styles of work equally well lies one of the great securities against counterfeiting.

In the course of making a die, proofs are usually taken and these are much prized by collectors.

The die being finished, it is placed in a bath of cyanide of potassium and heated until the vessel containing it is red hot. This process occupies from fifteen minutes to half an hour for dies but may take as much as an hour for a large plate. The die is then transferred to a bath of oil, to cool and temper it. By this process it is thoroughly hardened.



From "The Popular Science Monthly," Vol. XLVI, No. 5. Copyright, 1895, by D. Appleton & Co.

In the case of postage stamps, where it is desired to exactly duplicate the design many times on a plate, recourse is had to transfer rolls. A transfer roll is a piece of soft steel, in shape a cross section of a cylinder. The edge is sufficiently wide to receive an impression from the die. We show you here a picture of a transfer press.

From each side of the roll projects a small pin or trunion. These pins form an axle for the roll and by them it is held in the carrier of the press. A is the roll in the carrier.

The die is placed on the table or bed B. The roll is held against the die with a pressure of many tons, obtained by compound leverage. By means of the wheel, E, and the connecting pinion and rack, the bed, carrying with it the die, is moved back and forth under the roll. This is called "rocking" and by it the soft steel of the roll is forced into the die and a reverse impression of the design is obtained.

The roll is then hardened and, by a reversal of the process, impressions from it are transferred to the steel plate from which the stamps are to be printed. The plate is, of course, soft at first and is hardened after the required number of designs have been transferred to it.

This process is so perfect that the most delicate lines of the die are repeated with absolute fidelity on the plate. When many plates of a stamp are likely to be needed, it is customary, in order to avoid risk of wear or damage to the original die, to make duplicate dies, called transfer dies, and from them the necessary rolls to make the plates.

The plates are made with great care. They are touched up by hand and subjected to close scrutiny and the work is often gone over a number of times before the result is pronounced satisfactory. Incidentally any guide lines and marks used by the transferrer are removed by burnishing. In the older issues of United States stamps, such lines and dots are frequently found on the stamps but the later issues are very free from them.

Plates that have become worn are "re-entered," that is to say, the transfer roll is applied to the plate in the original position and the lines thus sharpened and deepened. If, by any mistake in making or re-entering a plate, the roll is incorrectly placed and then changed to the correct spot, a double impression of some of the stronger lines will result.

This is called a "double transfer" and sometimes, though wrongly, a "shifted die." These double transfers are quite common in the United States stamps made before 1861 but are scarce in the late issues, either because the work is now more carefully done or because any mistakes have been corrected. Such a correction is effected by turning the plate on its face on a hard substance, hammering on the back until the surface is driven up smooth and then entering the design anew.

A number of very delicate machines are used as aids to the engraver, though much more for bank-notes and large pieces of work than for postage stamps. These are called ruling machines, medallion rulers, cycloidal and geometric lathes. Ruling machines are used to make the backgrounds of portraits, the shadings of letters and similar work.

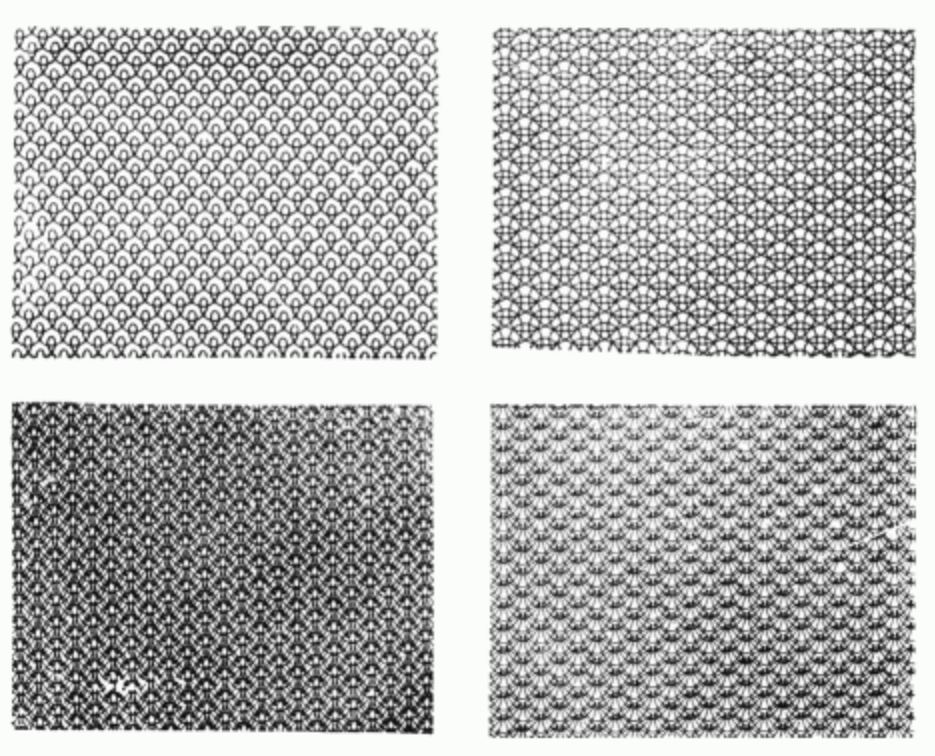
Here is a very pretty example of ruling, in the so-called "coin" stamp of New South Wales. These machines rule either straight or curved lines. They can be adjusted to rule several thousand lines to an inch, but that is only done for microscopical work, not for engraving.

The general principle of a medallion ruling machine is a rod, fixed on a pivot, at one end of which is a pin which is drawn across a medallion, while at the other end a graving point traces a corresponding line on the steel. The large stamps issued in the United States in 1865, for the payment of postage on newspapers and periodicals, are examples of this work.

Cycloidal ruling in its simplest form resembles a series of loops. It is produced by a fixed point which is held against a plate while the latter is moved in a circle and, at the same time, forward.

By altering the size of the circle and the speed of the forward movement a great variety of results are obtained. By cutting one series of loops over another, lace-like effects are produced.

The process is still further varied by the use of eccentrics.



The geometric lathe is a most delicate and complicated machine. By means of elaborate attachments very involved and eccentric motions are given to the plate under the graving point and extremely complicated and beautiful designs are produced. I think we are all familiar with these from the examples on our national currency. Geometric lathework was used on a number of the United States stamps of the issue of 1861 and also on the $5,000 revenue stamp.

The work of this machine is regarded as a great safeguard against counterfeiting. The most skillful engraver would have difficulty in imitating the simplest designs produced by it. The machines are too expensive to be obtained by anyone but a government or a great banknote company and there are very few men who thoroughly understand operating them. A turn of a screw or a variation of a single cog will change the result entirely.

Finally the work of the lathe is often reversed, so that the line which is cut by the graver and should print in color prints white, and vice versa. It would not be possible to imitate this by hand engraving.

Printing from line-engraved plates is largely done by hand presses. The ink used is very thick. When black it is made of finely pulverized carbon, mixed with oil.

Colored inks are composed of zinc white and dry colors, ground in oil. The colors are animal, vegetable or mineral. The latter cause the plates to wear out rapidly. Green is an especially destructive color. In recent years aniline colors have been largely employed. They afford an elaborate range of shades and color combinations which are most puzzling to describe. Soluble inks are much used by the leading English firm of stamp printers. They are very sensitive to water and are regarded as one of the best preventatives of the cleaning of used stamps.

Beautiful results are obtained by printing stamps in two colors. Of course, this necessitates the use of two plates for each design. This also gives rise to some interesting varieties, caused by one part of the design being printed upside down. Such oddities are scarce and are highly valued by philatelists.

When a plate is to be printed from, it is first warmed, then the ink is applied and rubbed into the lines with a pad. The surface of the plate is wiped off with a cloth, then with the hand and lastly, polished with whiting. A sheet of dampened paper is next laid on the plate and the whole is passed under the roller of a press, which forces the paper into the lines of the plate, where it takes up the ink. When the plate is deeply engraved the ink seems to stand up from the surface of the paper in ridges and some times we find corresponding depressions on the backs of the stamps.

The sheets are then dried, gummed and dried again. They are now so much curled and wrinkled that they are placed between sheets of bristol board and subjected to hydraulic pressure of several hundred tons which effectively straightens them out.

The second process of printing from metallic plates is called typography. The plates for this process are the exact reverse of those engraved in *taille douce*. Instead of the design being cut into the plate, it is on the surface and everything else is cut away. Hence, the term "surface printing." This form of engraving is also called *épargné* engraving, because the parts of the plate which bear the design are *épargné* (preserved.)

The dies for typographical plates are cut in wood or steel, usually the former. They are reproduced by two methods, stereotyping and electrotyping. In the former process casts of the die are taken in papier maché or plaster of Paris. From these casts other casts are taken in type-metal. A sufficient number of these casts are clamped together or fastened to a backing of wood and thus form a plate.

This process is not much used for stamps. It may interest you to know that most of our large newspapers employ this process. The type-set forms are, of course, flat. From them papier maché impressions are taken and bent into a curve, so that the casts made from them will fit the cylinders of the printing presses.

In electrotyping, an impression is taken from the die in wax or gutta percha. The surface of this impression is coated with powdered plumbago. It is placed in a solution of sulphate of copper and, by the action of a galvanic battery, a thin shell of copper is deposited on it. This shell is backed with type-metal and is then ready for use. A number of these elecrotypes may be fastened together and electrotyped in one piece.

There is also a photographic process for making typographical dies. This is said to be used in making the stamps of France and her colonies.

Stereotypes or electrotypes of single stamps are called *clichés*. In making up a plate it sometimes happens that a *cliché* is placed upside down. The result, after printing, is a stamp in that position. This is called a *tête bêche*. We illustrate here such a stamp and another which is semi *tête bêche*, i.e., turned half around instead of being entirely inverted. Like all oddities these are prized by stamp collectors.

The triangular stamps of the Cape of Good Hope and New Foundland are so arranged in the plate that half of them are *tête bêche* to the other half. The same is true of the stamps of Grenada of the issue of 1883.

Another form of typography is found in stamps which are composed of printer's type and ornaments. These are usually called "type-set", to distinguish them from stamps produced by the normal process of typography. Stamps made in this manner are often of a high degree of rarity, having been produced in remote parts of the world, where facilities were limited and the use of stamps restricted.

To this class belong the stamps of the first issues of British Guiana, Hawaii and Reunion, which rank among the greatest philatelic rarities. We show you here a number of type-set stamps. The first was used in the Hawaiian Islands, in payment of postage on letters between the different islands.

There are a number of plates of these stamps, of different values, and each containing ten varieties. The second stamp was issued by the postmaster of Petersburg, Va., in the early days of the war of the rebellion and before the postal service of the Confederate government was in working order. The third was used in the city of Guadalajara, Mexico, in 1869, during the war between France and that country. It was made from the cancellation stamp in use in the post office, the usual date being replaced by the value. The stamps were struck by hand on sheets of paper which had been previously ruled into squares with a lead pencil. The fourth stamp is one of the Reunion stamps previously mentioned. There were eight stamps in the setting, four having a central device like the stamp shown, and the other four being of a different design.

It is interesting to remark that most of these type-set stamps show an evidence of their provisional nature and the stress under which they were made, in the paper on which they were printed. It was usually writing paper, such as would be found at a stationers at that period. Some of the rare type-set stamps of British Guiana were printed on the paper used for lining sugar barrels.

The stamps of the first issue of Shanghai supply an unique variety in typographed stamps. In these stamps the central design is cut upon a block of ivory and the surroundings are set up from printer's type and rules.

The stamps were printed one at a time upon a hand press.

The value, in both English and Chinese, was changed as required, and it is recorded that on occasions the different values were produced literally "while you wait." Under such circumstances it is not surprising to learn that minor varieties are very numerous.

In printing from typographical plates the ink is applied to the surface by means of a roller. Impressions from these plates, before they have been pressed, show the design forced into the paper, instead of raised above it, as in *taille douce* printing.

There is often a noticeable difference in the impressions made from the same plate by different workmen, owing to the varying degree of skill and care employed. We frequently find in stamp catalogues such terms as "London print" contrasted with "local print." These terms indicate a fine impression and an inferior one. We find a good example in two five cent stamps of the Confederate States. They are both from the same plate but the first was printed in London by the skilled workmen of Messrs. De La Rue & Co., and the last was locally made with poor facilities.

Embossing is a variety of printing connected with both line engraving and typography. Embossing dies are produced by sinking lines in the plate but, as a rule, they are intended for such productions as stamped envelopes and the sunken portions are a series of hollows rather than sharply cut lines.

An envelope, viewed from the reverse, will give an excellent idea of the appearance of such a die. In printing from these dies very heavy pressure is used and the paper usually is backed by a piece of leather or something of similar nature. In its simplest form embossing is a stamping in relief without color.

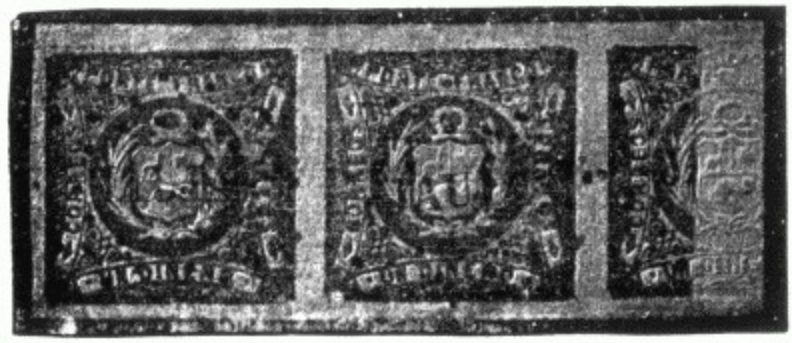
The stamp of Natal shown here was produced in this manner.

The stamps of Scinde, issued in 1850, were embossed and for the red one large wafers, at that date in common use for sealing letters, were used. The brittle nature of this material is probably responsible for the scarcity of this stamp, especially of copies in fine condition.

Embossing is usually combined with typography. The surface of the die being inked, that part of the design is printed in color at the same time that the rest is embossed.

These three stamps show this class of work, one being an envelope stamp with the head deeply embossed.

The Heligoland stamp like all the stamps of that island is in the local colors, red, white and green, of which the inhabitants are so proud. In the case of the Heligoland and Bavaria stamps the entire sheets are embossed at one time and not each stamp singly, as is usual.



Some curious varieties of this sort of printing are found among the early issues of Peru. The machine in use there printed the stamps one at a time on long strips of paper. When the end of a strip was reached another was attached to it with gum, in order that the process might be continuous. It frequently happened that an impression was printed upon or partly upon the overlapping ends of the strips.

In the course of time these ends became separated and thus we find stamps embossed partly with and partly without color and occasionally entirely without it. Philatelists call these varieties semi-albinos and albinos. The latter term is also applied to envelope stamps which have been embossed without the die being inked.

Lithography, while a simpler and less expensive mode of making stamps than those previously described, is not often employed for the purpose. The work is inferior in quality and too easily counterfeited to commend itself. In lithography the lines of the design are neither sunken nor, to any appreciable extent, raised above the surface.

The design is practically a drawing, in a certain greasy ink, upon stone of a particular quality. When several colors are used, as in chromo-lithography, a separate stone is prepared for each. The design is sometimes drawn directly on the stone and at others transferred to it.

For stamps a die is made in wood, metal or stone. Impressions from this are made in transfer ink (a very "fat" ink, made of soap, resin, tallow, etc.) upon transfer paper. These impressions are placed, face downward, on the stone and the paper is moistened. On being passed through a press the ink adheres to the stone and the paper is easily removed. A wet sponge is passed over the stone, the water adhering to the exposed surface but not to the greasy ink. While it is moist a roller, covered with transfer ink, is rolled over the designs to which it adheres.

The wetting and rolling are alternated until the designs have sufficient body. Lastly, a very weak solution of nitric acid, gum arabic and water is passed over the stone.

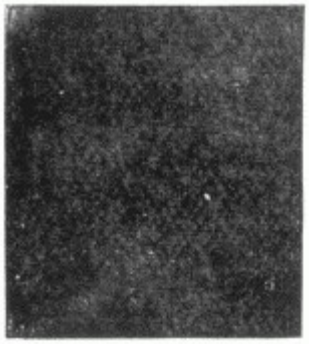
This is at once washed off. It bites the stone to a very trifling extent and serves to clean the surface and add sharpness to the design.

Impressions taken from a lithographic stone are perfectly flat and smooth, the surface of the paper being neither raised nor depressed. They have usually a slightly greasy feel.

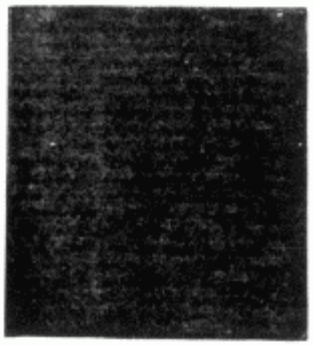
An interesting specimen of lithography is supplied by the first issue of New Caledonia. The design (fifty stamps in five rows of ten) was drawn upon the stone by a sergeant of Marines, named Triquéra. It is said the work was done with a pointed nail. As might be expected, it was very crude.

Another interesting stamp was issued in the island of Trinidad in 1855. In this case, the stone, after the designs had been placed upon it, was very deeply bitten with acid, so that it might properly be called etched and the impressions from it be said to be typographed from stone. This stone was used in 1855, 1858 and 1860. Owing to its friable nature and want of care the stone deteriorated, so that the last impressions from it are little better than blurs.

Having considered the design and the methods of preparing plates and printing stamps the next thing to attract our attention is the paper. We here show you some photographs of paper. These were not taken by reflected light but by transmitting light through the paper, so that we have the fibre and structure of it.



The two varieties of paper most used for stamps are termed wove and laid. Wove paper has an even texture suggestive of cloth. Like cloth it may show no grain when held to the light or it may have the appearance of interwoven threads. The paper ordinarily used for books and newspapers is wove. There is a very thin, tough wove paper, much like that familiarly known as "onion-skin," which is called pelure by philatelists. On a few occasions a wove paper, which is nearly as thick as card board, has been used for stamps.

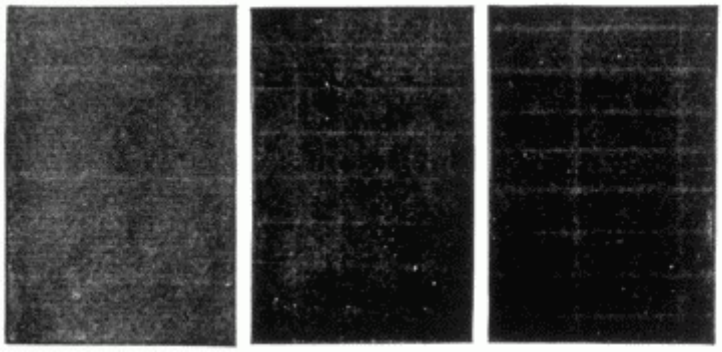


Laid paper shows alternate light and dark lines, parallel and close together. These lines are called *vergures*. There are usually other lines, an inch or more apart, crossing the *vergures* at right angles.

Ribbed paper has much the appearance of a fine closely laid paper. It is, however, a wove paper with a corrugated surface. In oriental countries, especially Japan, a peculiar, tough, cottony paper is produced. It is sometimes wove and sometimes laid, usually thin and hard to tear. I believe this is made from rice straw.

Paper which has thin lines about the distance apart of the ruled lines in writing paper is called *batonné*, from the French *baton*, a stick or rule.

If the paper between the *batons* is wove, it is called wove batonné. If the space is filled with fine laid lines, it is called laid batonné. *Quadrillé* paper has laid lines which form small squares. When these lines form rectangles, it is called oblong quadrillé.



Some of the stamps of Mexico were printed on paper ruled with blue lines. This was merely ordinary foolscap paper. Many of the early stamps of Russia were on a paper having the surface coated with a soluble enamel. This not only gave a very fine impression but, on an attempt to clean a cancelled stamp, the enamel would wash off, carrying the design with it.

Two stamps of Prussia, issued in 1866, are usually said to be on gold-beater's skin. But they are really on a very thin tough paper which has been treated with shellac, parrafine, or something which makes it transparent, and afterwards coated with a gelatine preparation. On this the design was printed reversed, i.e. only to be seen correctly when viewed through the paper. The stamps were gummed on the printed side.

When they were affixed to an envelope any attempt to soak them off resulted in the paper coming away while the design adhered to the envelope, like a decalcomanie. Essays of this nature were made in a number of countries, including our own, but Prussia was the only one to make and use the stamps.

There are several varieties of paper which have threads of silk or other fibre. The first of these is known as Dickinson paper, from the name of its inventor. It has one or two threads of silk incorporated in the paper in the course of manufacture.

For stamped envelopes two threads were generally used. They were placed about half an inch apart and the envelope was usually so printed that the threads would cross the stamp. For adhesive stamps only one

thread was used. Great Britain and several of the German States made extensive use of this paper. It has never been successfully counterfeited.

The best imitation was made by gumming together two thin pieces of paper with a silk thread between them but the fraud was not difficult to detect.

Some of the United States revenue stamps were printed on a paper which had a few bits of silk fibre scattered through it. The paper called granite or silurian has a quantity of colored threads mixed with the pulp. In Switzerland blue and red threads were used, giving the paper a slightly grayish tone. In Servia only red threads were used but in sufficient quantity to make the paper appear a faint rose color.

Manila is a coarse buff paper made from manila fibre. It is generally used for newspaper wrappers.

It will scarcely be necessary to say that paper is found in a great variety of colors and that such colored paper has frequently been used for stamps.

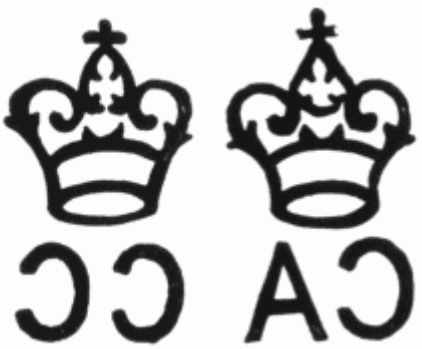
We cannot consider paper without treating of watermarks, since they are made in the process of paper making and constitute an important feature of stamp paper. Watermarks are designs impressed in the paper pulp. The paper is slightly thinner in the lines of these designs and appears lighter when held to the light. Of course you are all familiar with this appearance from having noticed the watermarks in note paper.

On rare occasions the watermark is a thickening of the paper instead of a thinning. In such a case the watermark appears more opaque than the paper. Watermarks in paper used for stamps are, of course, intended as a security against counterfeiting.

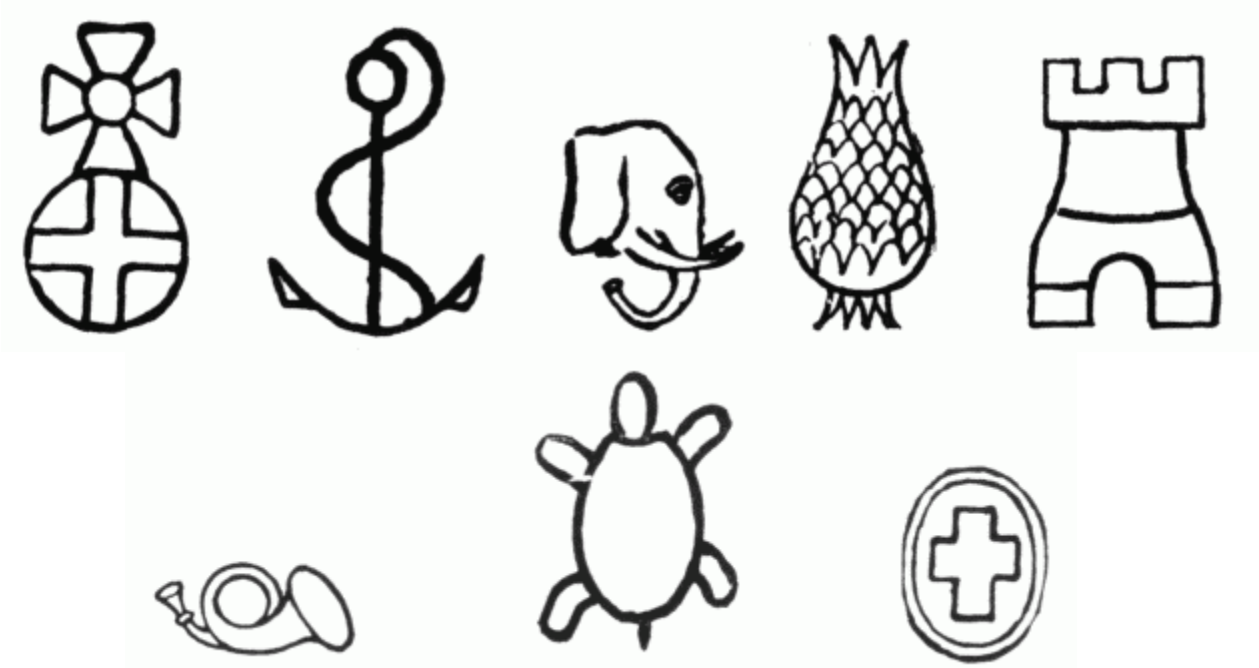
There are a great variety of watermarks; words, letters, figures, heraldic devices, etc., etc. Sometimes the design covers the whole sheet and at other times several stamps, but usually there is a separate watermark for each stamp.

The current stamps of the United States are watermarked with the letters "U. S. P. S.", United States Postal Service. This is so set up that the letters read in sequence from any point and in any direction. At one time several of the British colonies in Australia employed paper watermarked with a figure or word of the value of the stamp intended to be printed on it.

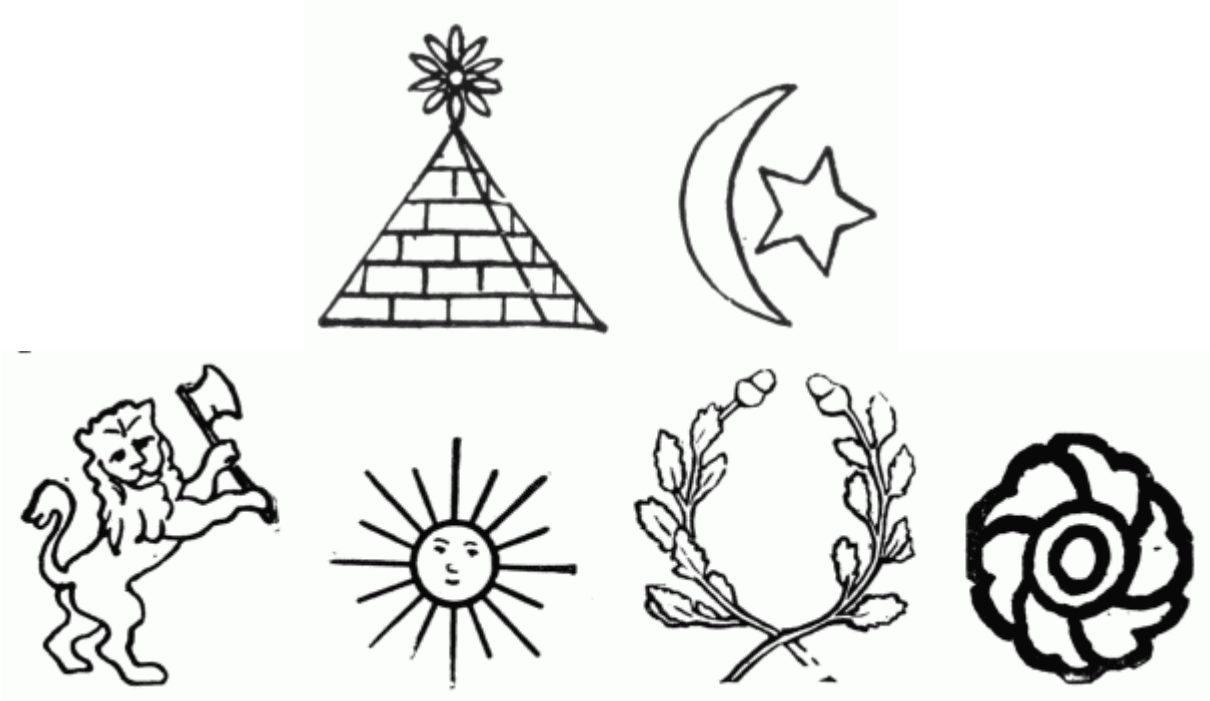
It can readily be understood that these would sometimes get mixed and result in more of those oddities in which philatelists delight.



Here are some well-known watermarks. The letters CC under the Crown stand for "Crown Colonies." This was extensively used on stamps of the British Colonies. It has been replaced by a similar design, lettered CA, "Crown Agents for the Colonies," which is still in use.



A great variety of crowns have been used, as also of stars. The cross and orb are found on stamps of Great Britain. The anchor belongs to the Cape of Good Hope, the elephant to India, the pine-apple to Jamaica, the castle to Spain (where else would we have castles if not in Spain?) the post horn to Denmark, the turtle to Tonga. The Geneva cross belongs to Switzerland but is not really a watermark, as it is impressed in the paper after the stamps are printed. The pyramid and sun and the star and crescent both belong to Egypt. The lion comes from Norway, the sun from the Argentine Republic, the wreath of oak leaves from Hanover, the lotus flower from Siam.



Here is one from Travancore, it represents a shell sacred to the god Vishnu. On the stamps of Shanghai we find these Chinese characters. They read Kung Pu, literally labor board, otherwise Municipal Council, by whose authority the stamps were issued.

The watermarks on the preceding page are from envelopes of the United States and Russia. Of course there are many more watermarks than those we show. On many sheets there are watermarked borders with the name of the country, the word "postage," or other inscriptions.

There is much that is interesting in paper making. The best paper is made from linen rags but many other substances are used, cotton rags, esparto grass, straw, etc. Very common paper, such as that used for the daily newspapers, is made from wood pulp. Paper is made in two ways, by hand and by machinery.

Hand made paper is made by means of a mould and a deckle. A mould is a piece of fine wire gauze, tightly stretched on a wooden frame. If the paper is to be laid, coarser lines are woven in the gauze. If it is to be watermarked, the designs, made of wire bent in the desired shape or of bits of metal, are fastened to the surface.

A deckle is a narrow wooden frame which fits on and around the sides of the mould. The deckle is movable, in order that it may be used with more than one mould. The mould is dipped in paper pulp and a quantity taken upon it. It is then shaken, to make the pulp cover the whole surface evenly and rid it of water. The edges of the resulting sheet are, naturally, rough and irregular and are called deckle edges.

To make the paper pulp the rags are first boiled with soda and lime, to rid them of dirt and grease. They are then macerated in a vat, through which fresh water continually flows. When thoroughly ground the pulp is treated with a bleaching fluid which removes all color. It is then pressed and is ready for use. When about to be used the pulp is mixed with water and color is added if desired.

When the paper is to be made by machinery the pulp is allowed to flow slowly from the vat upon a wide, endless band, usually made of fine wire gauze but occasionally of canvas or other form of cloth. This band is stretched upon rollers and travels slowly forward while, at the same time, it is shaken from side to side to distribute the pulp.

Two narrow bands of India rubber are stretched lengthwise of the gauze band and resting upon it. They serve to confine the pulp and regulate the width of the paper. These bands are also called deckles and produce the same edge as the frame used in making hand-made paper.

As the pulp moves along with the gauze band it passes under a roller called the "dandy roll." The covering of this roll determines the character of the paper. When the paper is to be wove, it is covered with wire gauze. If it is to be watermarked the designs are attached to the surface of the roll and duly pressed into the paper.

To make laid paper the surface of the roll is covered with longitudinal wires, with spaces the width of a wire between them. Rings of wire pass around the roll at regular intervals and hold the longitudinal wires in place. For *batonné* paper, there are thick longitudinal wires at intervals

and between them either smaller wires or gauze, as the paper is to be laid *batonné* or wove *batonné*.

After passing the dandy roll the paper goes over a number of rollers covered with felt and cylinders heated by steam, until it is dry. It is then sized, dried again, pressed between heavy rollers, to give it a surface, and the edges trimmed by revolving cutters. It is then wound up in a roll or cut into sheets, as may be required.

Having duly considered the design, printing and paper of stamps, the next thing to attract our attention is the gum. Most gums are prepared from potato starch, dextrin or gum arabic. Gelatin is sometimes added to supply body and glycerine to give smoothness. Gum varies much in thickness and color.

The first three cent stamp of the Danish West Indies furnishes an instance of this. The stamps were sent from Denmark without gum, as is frequently done with stamps for tropical countries. When they reached the islands the stamps were given to two druggists to be gummed. One used gum of good quality and, light color, while the other used poor material and of so dark color as to stain the paper and even darken the ink of the stamps.

In Hanover rose-colored gum was used for a number of issues. Some of the earliest local prints of the South African Republic were made upon paper sent out ready gummed from Germany. The paper was much wrinkled by the gum and the effect may be seen in the wavy and broken lines of the ink.

The stamps of the first issue of Reunion were sold ungummed and were affixed to letters in any way that pleased the writers. Some were fastened by wafers and some even were pinned on.

Formerly, sheets of stamps to be gummed were fastened in a frame and the gum applied by hand with a large brush. They were then sent to the drying room and hung up to dry. Now the process is entirely mechanical.

The sheets are fed into a machine in which they first pass under a gummed roller. Then they are carried on an endless chain through a long box filled with steam pipes and emerge at the further end dry and ready to be pressed and perforated.

The subject of perforations is also worthy of some brief attention. The first stamps were imperforate, necessitating the use of scissors or other instrument in separating them. This was a manifest inconvenience. In 1847, Henry Archer, an Irishman, began experimenting with machines for perforating stamps.

After a number of attempts he succeeded in making a machine which was accepted by the English government and for which, in 1852, he was allowed a compensation of £4,000. James M. Napier greatly improved on this machine and adapted it for steam power.

The general principle of all perforating machines is a series of hollow needles, which remove rows of small disks of the paper from between the stamps, and thus fit them to be readily torn apart. For convenience of reference and description philatelists have adopted, as a standard of measurement, the space of two centimetres. The gauge of a perforation is determined by the number of holes in this distance. Scales have been prepared for measuring perforations but it would be superfluous to attempt to describe them here.

One of the largest perforations that has been used for stamps has seven holes in two centimetres. This was used on the stamps of France by Susse Freres, a firm of stationers. It was done for the convenience of themselves and their customers. Some of the stamps of Mexico have a still larger perforation gauging 5-1/2. The finest gauge is about 19. This is an unofficial perforation and was applied to some of the early stamps of Tasmania.

We show you here a variety of perforations. The first two are ordinary perforations of different gauges, 9-1/2 and 14. The third shows a perforation in square holes instead of round. The next is an example of pin perforation, the holes being far apart and small. Two sides of the stamp show the holes before the stamps have been torn apart and a third side shows the ragged effect produced by separating them. Another form of pin perforation is made by needles which are not hollow and merely prick holes in the paper without removing any of it.

This sort of perforation has sometimes been made by a sewing machine with an unthreaded needle.

The last form of perforation shown is called lozenge. In this the machine removes small diamond shaped pieces from the paper. The effect before the separation is shown between the pair of stamps, while the outer edges show the appearance of single copies.

A variety of machines are used in perforating stamps. One perforates only a single row of holes at a time. This is known as the guillotine machine because its action suggests that unpleasant instrument. Another machine is called the comb machine because the needles are arranged to perforate across the top of a row of stamps and at the same time between the stamps of that row. This arrangement somewhat resembles a comb. It will be seen that the first application perforates the stamps of one row on three sides.

The application of the machine to the next row below completes the fourth side. In the best perforating machines the needles are arranged in circles around a spindle. The sheets pass under this roller and are perforated in one direction. A similar machine makes the perforations in the other direction.

There is another form of separation called rouletting, from the French "roulette", a little wheel, its simplest form being produced by a small

wheel with an edge of sharp points. By this process a series of small cuts is made between the stamps but none of the paper is removed.

In these two illustrations are shown roulettes of large and small gauge. The same result is also obtained by setting printers rules which have a notched edge between the *clichés* which compose the plate. These rules are set a trifle higher than the *clichés* so that, when the sheet of paper is pressed against the plate in printing, the points of the rules are forced through it. These points receive ink the same as other parts of the surface of the plate and the effect thus produced is called rouletting in colored lines.

There are a number of systems which produce the effect of rouletting in a variety of fancy forms. One is called *percé en arc*. This produces a series of arches on one stamp and a series of scallops on the adjacent one.

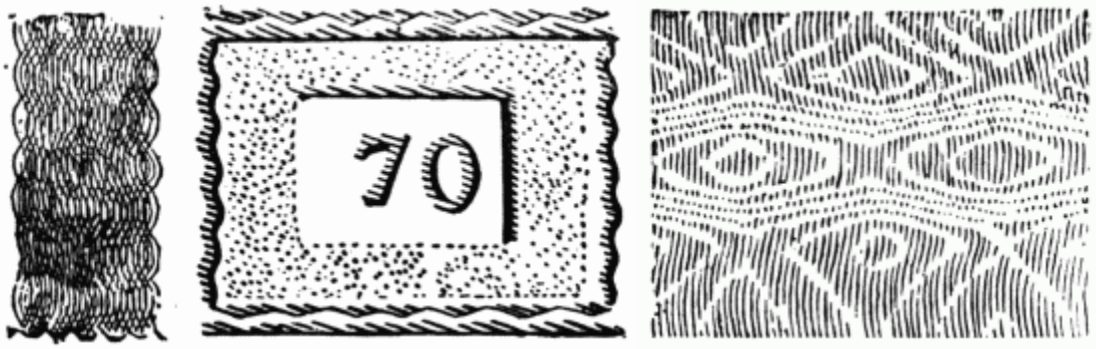
Here is an example of this rouletting, in a small gauge.

A similar form is called serpentine perforation. It is here shown.

Still another form leaves the edges of the stamps in sharp points. This is called *percé en scie* or saw-tooth perforation. When this perforation is very fine it is called serrate.

There is still another form of rouletting, which we also show you. It is called rouletting in oblique parallel cuts and consists of a row of short cuts placed obliquely and parallel to each other. Stamps thus rouletted have a very ragged edge when torn apart.

This roulette was only used in Tasmania and was a private production.



One of the nightmares of every government is the fear that its securities will be counterfeited or tampered with. I have several times mentioned precautions against such abuses in the shape of fine engraving, watermarks, enameled paper, sensitive inks, etc. T

here are numerous other devices which have been used with the same end in view.

The patterns here shown were printed on the backs of the stamps in blue ink. The first is a band of interlaced lines, called a *burelage*. The second is a sort of control number. The number differs for each stamp on the sheet. The third resembles the lines in watered silk and is called *moirée*. It covers the entire back of the sheet.

Sometimes the stamps are covered with a network which only becomes visible on the application of certain chemicals. In this country the experiment has been tried of breaking the fibre of the paper by pressing into the stamps a group of tiny pyramids, called a grill. The idea was that the cancelling ink would penetrate the broken paper and could not be removed.

We cannot finish our study of the material side of stamps without reference to another feature, i.e., surcharges. Correctly speaking, a surcharge is an added charge, but in philately the term is applied to a variety of overprints, the majority of which indicate a reduction rather than an increase in value.

Years ago the word surcharge usually suggested a makeshift, something of a temporary nature prepared to meet an emergency and, therefore, interesting and likely to become valuable. But our little weaknesses are now well understood by those who are exploiting the commercial side of postage stamps and we have reason to fear that many recent surcharges were made for revenue only and not from any real necessity.

The majority of surcharges are made to supply a value which has been temporarily exhausted. For example, many of the British Colonies obtained their supplies of stamps in London. It may happen that an order is not placed early enough or there is delay in filling it and delivering the stamps. Owing to this, the values most in use may be exhausted.

Under such circumstances, it is customary to provide a temporary supply by printing the needed value on some other stamp, usually one of higher value. To use a lower value would tempt the counterfeiting of the surcharge, for the profit to be made through the increased value.

There are, however, a variety of other surcharges, a few of which may interest you. The first two stamps indicate a change in the form of the currency of the country, from pence to cents in Mauritius and from the English half penny to its Spanish equivalent in Gibraltar. The Seychelles stamp was prepared to meet a change in the rate for letters to countries in the International Postal Union.

The first stamp made in St. Helena was a six pence. For a long time no other value was engraved but the six pence stamps were printed in a variety of colors and surcharged with the desired values. The Ceylon stamp has been made available for revenue purposes, as well as postal. The last stamp shown is from Shanghai. Its original value was 100 cash. This was overprinted "20 cash" and the equivalent Chinese characters in a double-lined frame, and again surcharged "100 cash."

There is an interesting bit of history connected with these surcharges.

The supply of 20 cash stamps was exhausted and the postmaster surcharged that value on eight hundred of the 100 cash stamps.

A tourist, learning this and knowing that the regular 20 cash stamps were expected to arrive at any moment, bought the entire lot. But the expected stamps failed to arrive and the postmaster made a second lot of surcharges but on the 80 cash this time. When the tourist learned this he wished to return the stamps he had bought. The postmaster refused to take them back but, pressure being brought through the Municipal Council, finally consented.

In the mean time the 20 cash stamps had arrived and, not needing provisionals of that value, he restored them to their original value by the second surcharge, "100 cash."

This group illustrates stamps of one country or state surcharged for use in another. For a long time Cyprus was supplied by overprinting the stamps of Great Britain.

In like manner Montserrat was surcharged on Antigua stamps, Gibraltar on Bermuda and Perak on the Straits Settlements. In the case of Gibraltar some of the stamps were printed in other colors than were used in Bermuda. The colony of Eritrea has always been supplied by overprinting the Italian stamps.

In 1883 a large quantity of stamps were stolen in Cuba and to prevent their being used the remaining stock were overprinted with the devices shown here. These were the *clichés* used to print the control numbers on the tickets of the Havana lottery.

Sometimes surcharges are the outcome of historic events or are at least suggestive of such.

The first stamp in this group is one of the crude products of the South African Republic, which was surcharged during the British occupation of the country.

The second is a stamp issued during the same occupation and surcharged after the Boers again came into power. The Chilian coat of arms on the stamps of Peru tells its own story of war and invasion. Lastly we have a

stamp of Fiji on which the initials "C.R.", Cakambau Rex, are overprinted with the "V.R." of the Queen of England.

During the Carlist insurrection in Spain, the stamps of France, surcharged with a *fleur de lys* surrounded by a five-rayed star, were used by Don Carlos to frank his correspondence across the frontier into France. These stamps were in use for only a brief period, pending the preparation and issue of the Carlist stamps.

It may be remarked that there are many suggestions of history in stamps that are not surcharged. The succession of portraits and other devices in the issues of a country is often eloquent of the march of great events, and there is a touch of pathos in Poland's solitary stamp.

Finally, I wish to call your attention to a few stamps which tell most interesting stones, and which have a touch of mysticism and symbolism, which is not of to-day.

The coat of arms of Mexico has its origin in the distant past. General Lew Wallace says in his historical romance the *Fair God*: "The site of the city of Tenochtitlan was chosen by the gods. In the south-western border of Lake Tezcuco, one morning in 1300, a wandering tribe of Aztecs saw an eagle perched, with outspread wings, upon a cactus, and holding a serpent in its talons.

At a word from their priests, they took possession of the marsh and there stayed their migration and founded the city; such is the tradition. As men love to trace their descent back to some stoned greatness, nations delight to associate the gods with their origin."

Many stamps of Persia bear the lion and the sun, the arms of the country and the insignia of its highest order of nobility. It is the lion of Iran, holding in its paw the sceptre of the Khorassan while behind it shines the sun of Darius. There is a legend concerning the latter symbol to the effect that Darius, hunting in the desert, threw his spear at a lion and missed.

The beast crouched to spring, when the sun, shining on a talisman on Darius' breast, so overpowered it that it came fawning to his feet and

followed him back to the city. And for this reason the sun became part of the arms of the kingdom.

But I think we may look further than this and find in it a relic of the ancient fire worship and of oriental pretentions to power over heaven and earth.

How much of Egypt's myths and splendors are here depicted; the temple column called Pompey's pillar, the obelisk of Luxor, the mighty pyramids, last of all the sphynx, that fabled creature with the face of a woman, the body of a tigress and the heart of both.

In fancy we can see her, crouched on a rock beside the great highway to Thebes, propounding her fatal riddle to the bewildered passers by, till Oedipus shall come.

On the stamps and coins of Turkey we miss the portrait of the reigning sovereign, which we find on such issues of most monarchies. This is due to a law of Mohammed, which forbids the reproduction of the human figure.

On the stamps we find the crescent, said to have been the emblem of the Byzantine empire and adopted by the Turks after the fall of Constantinople.

We also find an elaborate device called the Toughra or signature of the Sultan. It owes its origin to the Sultan Murad I, a liberal sovereign and founder of many schools and institutions of learning but unable to write his own name. He signed imperial decrees by dipping his fingers in ink and placing them on the documents with three fingers close together and the little finger and thumb extended.

In course of time this was adopted and, so to speak, consecrated as the signature of the Sultan. It was also elaborated and arranged to form a written phrase, while preserving, in a general way, its original form. The toughra contains certain characters which are permanent and minor ones which change.

The latter are the names of the sovereign and his father. Thus the toughra which we illustrate reads: "His Majesty Abdul Hamid, son of Mejid, may he be always victorious." The small inscription at the side reads "*el ghazi*," the victorious, one of the titles of the Sultan. The toughra is often referred to as the hand.

In an article published in 1867 I find the following on this subject:

"The hand has to Mussulmen three mystic significations; it denotes providence; it is the expression of law; and thirdly, of power; it restores the courage of the faithful and strikes terror to the hearts of their enemies.

"As an emblem of law, the Mussulman thus explains the meaning of the hand. It has five fingers, each, with the exception of the thumb, having three joints, all the fingers are subordinate to the unity of the hand, their common foundation.

The five fundamental precepts of the law are: 1st—Belief in God and his prophet. 2nd—Prayer. 3rd—Giving alms. 4th—Fasting during the sacred months and at the appointed times. 5th—Visiting the temples of Mecca and Medina.

Each of these precepts admits of three divisions, except the first, symbolized by the thumb, which has only two, *heart* and *work*. These dogmas and their modifications have for their source the central doctrine of the unity of God; and all the creed of Mohametanism is contained in the hand,—the five fingers and their forty joints.

"The hand placed above the gates of the Alhambra, upon the Sultan's seal, and upon the stamps, symbolises the spiritual and temporal power which protects the good and the faithful and punishes their adversaries."

This stamp is from Corea, the Land of the Morning Calm. In the corners are the plum blossom, the royal flower of the present dynasty which has existed over 500 years.

In the four corners of the central square are letters taken from the original alphabet of all languages and representing the four spirits that stand at the four corners of the earth and support it on their shoulders.

The central device is an ancient Chinese symbol which represents the dual principle in nature, the male and the female, the beginning and the end, the union of all opposite forces, of which the highest product is man.

This symbol pervades all oriental art and thought.

Those of you who have seen Vedder's illustrations of the Rubaiyat of Omar Khayyam will remember the ever recurring swirl which "represents the gradual concentration of the elements that combine to form life; the sudden pause through the reverse of the movement that marks the

instant of life, and then the gradual, ever-widening dispersion again of these elements into space."

The swirl is only another form of the Chinese symbol.

A postage stamp is a tiny thing but it holds in its pictured space thoughts that embrace the beginning and the end of things, life, death and—we know not what.