MOTOGI NAGAHISA,
THE FIRST JAPANESE PRINTER.

Motogi Nagahisa was a profound student of European mechanical science from his early youth, and gave special attention to the art of printing. After years of toil and experiment, he invented types for Japanese characters, and for the first time made printing a business. To him alone is owing the success and prosperity of Japanese typography in modern times. He is, therefore, most deserving of esteem, as the father of Japanese Typography, and this brief history of his life is written in order to preserve the memory of his work amongst his fellow-craftsmen.

Motogi Nagahisa, the fourth son of Kitajima Miyata, was born in Shindai-ku-machi, Nagasaki, on June 6th, in the seventh year of the period Bunsei (1842). When eleven years old, he was adopted by his uncle, Motogi Shozaemon. While still quite young, he took up the study of the Dutch language, and soon became an interpreter, but was too ambitious to serve long in this capacity. All his spare time was devoted to the study of mechanical science, especially that of the Occident, which was an unknown world to him. Soon after this, it happened that a trader belonging to the East India Company imported a quantity of opium into China. This was destroyed by fire by order of Lin Tse-shih, the then viceroy of Canton. This again was the signal for the outbreak of hostilities between England and China, which terminated on the latter’s agreeing to open five ports to foreign trade. The English thereupon desired to extend their trade with the Orient to Japan, and for this purpose sent an ambassador hither, who was introduced by the Dutch Government. Public opinion remained, however, strongly against any communication with the outer world. Yet Nagahisa was persuaded that it must come to this finally. Unless the Japanese possessed a knowledge of the customs and manners of the Occident, its arts and sciences, how, thought he, could we resolve upon any policy to be carried out against Europeans? But the people at large failed to appreciate the spirit of the age; they boasted that their ancestors had once repelled the invasion of the Chinese in the Tsukushi Nada, and they insisted that Japan should be kept apart from the rest of the world. He saw that he could not wean them from this delusion: so he applied himself to his studies with greater eagerness than ever.

His two greatest achievements were (1) the invention of printing types, and (2) the establishment of steam navigation in Japan.

One day while absorbed in the study of his foreign books, he was struck by their typographic clearness and neatness, as well as by the excellence of the engravings. Such an improvement was, he thought, urgently needed in Japan, yet he was completely at a loss to understand how printing could be brought to such a pitch of perfection. After having obtained some little insight into Occidental typography, both by perusing the books at his disposal and talking about it with those foreigners with whom he came into contact, he invented a sort of movable type, known as nagashi-komi, and printed a book therewith containing narratives of what had happened during the course of his services as an interpreter. This was in the 4th–5th years of Kayei (1851–52). He sent a copy of the book to Holland, where it met with warm encomiums. This was the first book ever printed with lead types in Japan.

From ancient times there was a kind of printing in this country in which movable types were used. These were called ichijii-ban, shokuji-ban, and kuwatsujii-ban. The types were made of square bits of wood, with characters engraved on them. But these types were very coarsely made, and used only in printing such books whose publication was forbidden by the government. The authorities winked at this illicit method of publication, for they thought that after a few copies had been struck off the types would become useless or lost. Under these circumstances, typography failed to make any progress whatever.

Yamanouchi, feudal lord of Tosa, had often heard of Nagahisa, and longed to see him. At last they met in Yedo (Tokyo), in the second year of Ansei (1855). It is said that Lord Yamanouchi greatly admired the model of a steamship made by Nagahisa at his lordship’s request, and that he praised him for his thorough knowledge of shipbuilding.

In the same year Nagahisa was arrested and imprisoned. The reason for this act was that it was believed that he intended to publish an English-Japanese Dictionary. It was also reported that he had taken blame upon himself for the sake of certain people. After being incarcerated for a period of three years he was pardoned, and at once applied himself anew to the study of the mechanical arts, above all to the improvement of the types which he had formerly invented. He cut the characters out of buffalo-horn, which he then beat into pieces of lead; again, he carved the characters out of steel, and beat these into matrices of brass. But strive as he might, the surface of the characters were not on a level with the foundation of lead or brass, or else the curves and strokes gave indistinct impressions. There were, in fact, numerous obstacles in his path. The lead and antimony which he used were of bad quality, while as to steel engraving he had not the proper tools. Instead of printers’ ink, he was compelled to use Japanese ink (in-mu, a red, pasty compound and sumi, known elsewhere as “Indian ink”). All his labour, therefore, failed to achieve success.

In November, 1st year of Man-en (1850), he was employed in the ironfoundry at Aku-no-ura, Nagasaki. At the same time he bought two steamers, the Victoria and Charles, from a foreign merchant. He acted as the captain of both vessels. In March, 1st year of Bunkyo (1861), the Shogun Iyemochi and Ane-no-keji were proceeding to inspect the battery at Kabuto, in
Kit. Nagahisa, happening come from Nagasaki on the Charles at this time, was at once employed to convey the two eminent personages to their destination.

It was just at this time that all civilised countries were eager to open up intercourse with Japan, but the people themselves were divided in their opinions. Some insisted on keeping the country shut out from the rest of the world; others advocated the conclusion of treaties with the Occident.

In the first year of Meiji (1868) he was appointed director of the iron foundry company with Aoki Kyushichiro. In March of this year he went up to Kyoto to receive payment for repairing the Choyo Maru, which had sustained injuries at Shimomori; further, to obtain 70,000 yen for building the Korai Bridge at Osaka and dredging the river; and finally to get permission to build a dock at Kusuge (Nagasaki).

In the second year of Meiji (1869) he superintended the work of building the bridge at Hamano Machi (Nagasaki). This was the first iron bridge built in Japan.

By this time the intercourse between Japan and foreign lands had become very active, and many until then unknown sciences were imported. Nagahisa was of opinion that from ancient times Chinese literature had been only one department of Japanese education. Unless some radical change was made at once, the young scholars of Japan would suffer loss and be quite unfit for practical life. So he built a school in which not only Chinese and writing but also foreign languages were taught.

Thus while engaged in navigation or his duties as an iron founder, he never lost sight of the types he had once invented. By chance he heard that an American missionary had built a printing establishment, called Meizhwa Shuyuan, in Shanghai, and that good types were cast there. He sent a man to learn the art, but in vain, for it was kept a secret. He then heard that Mr. Shigeno Konjo (or Shigeno Anyeki) had bought types in Shanghai. He requested this gentleman to sell him all he had. Taking the foreign types as models, he tried to reproduce them; but his efforts did not meet with success. Just at this time it happened that Mr. Gunberg, an American and a member of the Rikaw Sho-in, passed through Japan on his way to the United States. Shozo got an introduction to this gentleman through the Rev. Dr. Verbeck, and requested him to stop over in Nagasaki. The consequence was that a printing house was built and the casting of types begun. The persons who were engaged in this, the first of all Japanese typefoundries (the Katei Denshu-sho), afterwards separated into two parts. One half became the owners of the Nagasaki Shin-machi Typefoundry, the Tokyo Tsukiji Typefoundry and the Osaka Kita-kyutaro Machi Typefoundry. The other half went over to the Koubu Sho (Department of Public Works, now abolished), and started the Kwankoyyo Printing Establishment, then the Daijo Kwan (Cabinet) Printing Bureau, which is the modern Iinsatsu Kyoku, or Imperial Printing Bureau.

By this time the great deed of the Restoration was accomplished. All the feudal lords had to relinquish their estates, and were thus unable to give their vassals their hereditary emoluments. A hundred thousand feudal vassals or retainers were thus deprived of the means of livelihood and forced to work for their own living. Nagahisa persuaded his fellow vassals to work as printers. So his house became a printing office, and his late comrades-in-arms learned how to set up type. He also sent Messrs. Obata Seizo and Sakai Sanzo to Osaka to consult with Mr. Godai Saiisuke (or Godai Tonoatsu) as to the practicability of establishing a printing house in that city. But the health of the newly-fledged printers, after having been accustomed to long years of luxurious and idle life, began to suffer in consequence of their continued labours. At last, in the fourth year of Meiji (1872), Nagahisa entrusted the management of the Shin-machi Typefoundry to Mr. Hirano Tomiji. He instituted many radical changes, and brought about a great and general improvement.

In the same year, Mr. Iseki Moriyuki, then governor of Kanagawa Prefecture, established the Mainichi Shimbum (Daily News) at Yokohama. There being no one who understood the art of printing, he wrote for assistance to Nagahisa. The latter sent Mr. Hirano Tomiji to his aid, and a printing house was built.

In the fifth year of Meiji (1872) Mr. Hirano Tomiji established, with the consent of Nagahisa, a printing house and typefoundry at Shiwaya, Tokyo. This was shortly afterwards removed to Tsukiji, and named the "Tokyo Tsukiji Typefoundry.

In the course of several years Nagahisa succeeded in establishing a number of printing houses and typefoundries. Yet the demand for type was very small and the number of publications quite as few. The outlay for printing ink and paper, lead and antimony for casting type, the salaries of the overseers and workmen, etc., etc., was far greater than the income. Nagahisa lost thus more than half his fortune and even contracted debts.

At the outset he had made use of antimony from a mine in Iyo; but this being of very poor quality, he set to work on another mine in Amakusa. After spending a large sum on this undertaking he gave it up.

Meanwhile, the demand for type gradually grew more active, and the prospects of the trade began to look correspondingly bright. On hearing this, Nagahisa remarked: "It is as I said! The new era has begun!" In the summer of the seventh year of Meiji (1874) he left Nagasaki and came to Tokyo by way of Osaka, in order to inspect the different printing establishments with which he was connected.

He returned to Nagasaki in September, greatly cheered by what he had seen.

His health now began to fail, and he was often confined to his bed. On a journey to Osaka and Kyoto his sickness grew much worse. It did not appear to be serious at first, but the heat of that year was unusually severe, and this hastened the course of the malady. After being confined to his bed for three months, he expired on September 3rd, in the eighth year of Meiji (1875), being then fifty-two years of age.

His funeral was both grand and impressive. All his friends and employés assembled at the Senshu-tei in Nagasaki, where, in accordance with the Shinto ritual, they bowed before the Tanzoaku representing his
departed spirit. The poem written on this tanzaku (an oblong strip of white paper) was as follows:—

FURUSATO NO TSUYU.
Mugura horu
Waga furusato mo,
Shiratsuyu no
Tama bakari koso
Mukashi nari-kere.

Where the wild hops grow,
There is my home, the home that I love!
But all is changed now;
Only the dews that lie on the grasses,
That tremble and glow with each footfall that passes,
Only the dews unchanged remain.—
The guerdon of tears for a life of pain!

His wife had died many years before, after giving birth to a son. This son, Kotaro by name, was not of age when his father died. He went later on to Europe, in order to study Occidental typography, shipbuilding and other mechanical arts, as well as to acquaint himself with foreign languages.

The character of Motogi Nagahisa was mild and calm, truthful and persevering. All that he undertook, whether in printing or navigation, was solely for the benefit of the nation. His conduct was always regulated by this public spirit—never influenced by selfish motives. It was a habit of his to tell his employés that the imposition of taxes meant so many drops of blood pressed out of the heart of the people. The Government, he declared, should never abuse its prerogative. There are, nowadays, those who borrow funds from the Government, under specious pretences, and use them in their own trades. They claim to be acting for the public weal, while in reality they have no thought but for their personal advantage. Such men are nothing else than enemies of the nation. We should never stoop to imitate their sordid conduct.

Ah! where shall we find another Motogi? So pure in heart, so just in principles. Alas! had his life been prolonged, how great would have been the benefit reaped by this our Imperial Japan!—S. MAGATA.

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**On Marbling.**

Colours best suited for marbling purposes are those of a soft nature when wetted, and therefore more easily ground, but as there are special makers of colours for marbling, it will be best to obtain them from these firms, when you will have little difficulty in getting them to work.

Those required for our purpose are not so numerous as one might imagine, as any shade that may be required can be made from the three cardinal colours, viz.: red, blue, and yellow, with the aid of black and white; but of course you will need different shades of these three to produce the various hues that are required to make or match the different patterns and variations of patterns already in the market. The only colours fit for our purpose are:—

**REDS.** Scarlet drop lake.
Marblers’ damp red (in pulp).
Rose pink.
Oxford ochre.

**BLUES.** Indigo.
Ultramarine.
Marblers’ damp blue (in pulp).

**YELLOWS.** Orange chrome.
Dutch pink.
Raw Oxford ochre.
Marblers’ damp yellow (in pulp).

**BLACKS.** Vegetable lampblack.
Drop ivory black.

**WHITE.** Chinese white.

With these colours you may make every shade that you will require. Of course any shade of colour could be bought, but it would be useless to attempt the use of them for marbling purposes.

**REDS.**—The scarlet drop lake is the best red for quality, but its price prevents it being used alone—price has such an effect upon every craft nowadays—nevertheless a little mixed with the damp red makes a splendid colour for Dutch or nonpareil, and, in fact, all comb patterns. The quantity of drop lake to damp red is only limited by the quality of the work in hand, as the more drop lake you use, the brighter will the colour be, and, what is of more importance, the more lasting. We have occasionally had damp red which has been good enough alone for comb marbles, but generally it requires some better colour mixed with it to make it work well, for unless you have good colours for those patterns, they will not stand raking and combing, for the colours will appear rough and broken. Naturally, much will depend upon the state of your gum, it is not always the fault of the colours, but this will be more fully explained by and by.

Marblers’ damp red (in pulp) comes next in brightness to drop lake, and is used in large quantities for making marbled paper; it is principally used for the red veins.