PHILATELISTS ASSOCIATION SOUTH INDIA MADRAS

SIPA Bulletin

For Private Circulation to Members only

Vol. 24 No. 2 March - April 2003 Bimonthly

Editorial

One of the problems that we deal with frequently is how to dispose of a collection. Almost everyweek we get a phone call from someone who says, "My father expired six months back. He was a serious stamp collector and now we have his collection. We don't know what to do with it. Can you help me?"

The first thing that we tell them is that they need to find out what they have. We suggest that they need to get some knowledgeable help for this. They could go to a local stamp club and ask the member for help. The collection could be quite valuable or it could be very run-of-the-mill material. Most of the time it can be the latter.

After they had find out what they have, they can make decisions. They could keep the collection for personal use and take up the hobby. They could give it to a family member who has expressed an interest in continuing the collection. They could give it to a neighbour child. They could sell the collection to a dealer or other interested collectors.

All of these choices can have ups and downs. A person who has decided to dispose of his collection prior to his demise, thus saving his heirs the trouble, also faces some of the same choices. It is always difficult to dispose of something on which you have spent, not only a lot of money but also many hours in arranging and rearranging and mounting and who knows what else! If one gives the collection to an interested family member, there might be fewer qualms about giving it up. It could be that you might be able to see the joy that it is bringing the new owner and find that satisfying.

If you decide to sell the collection, then the price you would get is the fair market value, not what the catalogue lists as the value of the individual items. This would be true whether you were selling to a dealer or to another collector.

Coming to the question of dealers, the value to them will be the few major items that he might find for quick turnover plus the price he thinks he could get for the remainders. Quick turnover is what a dealer wants. Thus in all probability the price he will offer would not represent anywhere near the overall cost of developing the collection. Most knowledgeable collectors should realise that in most cases he probably will not get back the money he spends on his stamps when he sells them and he should let his heirs know this.

If one decides to try to sell the collection to other collectors, this could be most dis-couraging. The collector who buys a collection in its entirety is willing to pay a reasonable price for the items that are in the collection that he doesn't already have, but not much for what would become duplicates. Totally what he offers would be dependent upon what he feels he could do with those duplicates.

In order to establish a value there must be a market. If the topic is "Something peculiar, strange or special" there will probably not be a market, thus not much of a value in spite of what the catalogue says are the values of the individual items.

I hope that most collectors realise these facts, but they should also pass on this information to their heirs. All too often the heirs are faced with the sudden reality that they will not get all that money that they knew "Uncle Harry" had spent on his stamps. So, it is better to share with them that much of the money you spent was an investment in the happy hours you had working with your collections, probably never to be reclaimed when sold.

I realise that some of what I have said may be discouraging to some collectors, but try to remember the many pleasant, relaxing hours that you spent "working" on your stamps, collection and exhibit. Some people spend their money going to movies; some people spend their money on videos and VCDs; but you chose to spend some of your entertainment money on stamps. No hard feelings.

- Editor.

Our Second Sunday Meetings were held at the CPMG's Conference Hall, Anna Road, HPO, Chennai - 600 002. (10.30 - 12.30 pm) regularly where around 30 members atttended with President Shri Balakrishna Das presiding. Patron Mr. Madan Mohan Das spoke on "My experiences on stamp collecting."

AERO INDIA 2003

05.02.2003 **500,500,500,1500** **3 million each**

Man always dreamt of flying the sky. But he had to wait till the 20th century for this dream to become a reality. The persistent efforts of scientists and inventors to build a machine that could fly appeared to be moving in the right direction by the 1880s.

Finally in 1903 the Wright brothers, Wilbur and Orville (of USA), could successfully test fly a machine that was powered and manned. This landmark feat that changed the life of man on earth was achieved on 17th December 1903. 2003 is celebrated all over the world as the centenary year of man's first flight. The stamps are being released on the occasion of Aero India 2003, Bangalore, one among the top aero events of the world. The Aero India is organized biennially by the Department of Defence Production and Supplies. Leading scientists and management personalities of the world aeronautical industry participate in this prestigious show.

The history of Indian aeronautical industry is inseparably interwoven with that of Hindustan Aeronautics Limited (HAL). The company that began as the rather modest Hindustan Aircraft Limited in Bangalore in 1940 is today a mammoth organisation spread over seven locations, fourteen production units and nine research and design centres. It has produced 12 types of aircraft from in-house development and 13 types by licence production, over the years. The postage stamps appropriately depict four aircraft models of HAL, reflecting its growth and evolution. The first stamp shows the 'Hindustan Trainer No. 2' (HT-2), the first aircraft to be designed, developed and manufactured in India. The first flight of the prototype of this piston engined trainer aircraft was held in August 1951 and the first batch of six HT-2s flew out of HAL in January 1953. The HT-2 was the mainstay of flight training, both civilian and military, in the country for many years. The second stamp carries a picture of the 'Marut', a twin engined transonic ground attack aircraft designed by a team of Indian and German Engineers. The first prototype flew in June 1961. The Light Combat Aircraft (LCA) figures on the third stamp. This is the world's smallest lightweight, multirole combat aircraft. It was designed for the Indian Air Force as a multi mission tactical aircraft. It has many advanced features and its successful maiden flight was conducted in January 2001. 'Dhruv, the Advanced Light elicopter is depicted on the fourth stamp. It is a unique multi role, state-of-the-art helicopter with different variants to suit the requirements of the Army, Air Force, Navy and Coast Guard. A civil variant is currently undergoing test flights. Dhruv is the most exportable aerospace product of India and is noted for its advanced features as well as user-friendliness.

Theme : Aviation, Industry.

GHANTASALA

11.02.2003 **500** **0.4 million**

Ghantasala Venkateswara Rao (1922 - 1974), popularly known as Ghantasala, was one of the most popular playback singers of all time in Indian film industry. He was also an accomplished music director.

lage of Andhra Pradesh, he lost his father, himself a musician, when eleven years old. Venkateswara, however, was not willing to be defeated by adversities and decided to pursue the study of music against all odds. Living on alms and sleeping in temples and inns he was able to pursue his studies at the Music College in Vizianagaram, winning the appreciation of all for his proficiency in classical Carnatic Music.

In 1942 when he was twenty, he participated in the Freedom Struggle and was sentenced to 18 months of rigorous imprisonment for his involvement in the Quit India Movement. After his release from jail, Ghantasala came in contact with the poet-singer Samudrala Raghavacharya who introduced him to films.

In 1947 he got his first break as an independent singer and one year later as a composer. Since then he had no occasion to look back. Singing 9,600 songs in playback and handling 102 films containing nearly two thousand different songs as a music director, his output was unusually prolific. More than the songs, it was the trends he set that made him stand apart. As a singer, according to experts, he inspired three generations of singers to imitate him. As a composer he harnessed Classical Ragas (modes of melody) to yield immensely popular tunes for films. In the genre of non-film songs he popularised poems set to melodious tunes, apart from devotional and patriotic songs.

He has produced three films all of which had his own music. His fans, colleagues and the State and Central Governments conferred many honours upon him. Prominent among them was the Padmashri from the President of India. He was also made the Singer Laureate of Tirumala Tirupati Devasthanam, a coveted honorary post. He gave a number of benefit concerts in aid of charitable institutions, temples, churches, educational institutions, national defence fund organisations and cyclone relief funds.

Theme : Music, Musicians, Freedom Fighter.

S.L. KIRLOSKAR

26.02.2003 **500** **0.4 million**

Shantanu L. Kirloskar (1903 - 1994) was a visionary who set benchmarks for excellence in the nascent industrial sector in post-independence India.

Hailing from Sholapur in Maharasthra, Shantanu completed his higher education in the United States. As a student of Engineering in the USA, he learnt the essentials of the economics of mass production. Returning to India and joining as an engineer in his father's small production facility in a rural setting, he put his exposure to western work culture to good use. Over the next twenty years he assiduously built up a team of committed professionals who were trained to approach work with a new perspective. A keen observer, he studied the traditional products in the market and went on to introduce newer and better products. With his insight, he could also anticipate the products for future requirements.

Building in quality into his products, entering into some collaborations with overseas partners and making use of the industrial opportunities offered by the Second World War, he made 'Kirloskar' a name to reckon with in the engineering field. By the time of Independence in 1947, the Kirloskar group had four major companies engaged in the production of machine tools, electrical equipments and diesel engines. In free India

the Kriloskar group contributed its share to the building of the young nation by undertaking production and supplies to core areas like defence, power generation, oil and gas, railways, transportation etc. S.L. Kirloskar captained the group with elan till 1994, nurturing it to dynamic growth and diversification. The tally of Kirloskar companies added upto 51 in the 1990s, most of them in sectors crucial to the country's development.

S.L. Kirloskar had a through grasp of the dynamics of market forces, which became an asset to the Indian Industry when he took over as President of the Federation of Indian Chamber of Commerce and Industry in 1966. A statesman among industrialists, he believed that business houses should also fulfill their social obligations. He was a man of many parts - a music and theatre enthusiast, voracious reader, and philanthropist. He received many awards including a D.Litt from the University of Poona and the Padma Bhushan.

Theme : Personality, Industry.

❖ ❖ ❖ ❖ ❖

PHILATELIC SOCIETY OF INDIA

FOUNDATION DAY CELEBRATED

The Philatelic Society of India celebrated its 107th Foundation Day of 15th March, 2003 at the G.P.O. Mumbai in the presence of distinguished philatelic fraternity. Glowing tributes were paid by Shri Vispi Dastur, President, Empire of India Philatelic Society, Dr. Jivraj R. Thakkar, President, Kutch Coin & Hobby Circle and Capt. K. Dorle, Director, Army Postal Services. They all eulogized the services rendered by the Society for the promotion of the hobby for more than 100 years.

Speaking on the occasion, tributes were paid to the distinguished founders of the Society, many of them Englishmen then stationed in India in different fields of services, observed Shri Dhirubhai Mehta, President of the Society. The Founder President was Sir Charles Stewart Wilson who later became the Director General of Posts & Telegraphs, Shri Mehta stated. The privilege of being the first Indian President was bestowed upon Shri Chunilal Devkaran Nanji, popularly known to the philatelic fraternity as C.D. Desai, a banker belonging to the Devkaran nanji Banking Co. and a distinguished philatelist in his own right.

Shri Dhirubhai Mehta also paid glowing tributes to the distinguished philatelists who had chaired the leadership of the Society and laid strong foundation which survived for more than 100 years and continued to play a very vital role in the promotion of the hobby of stamp collecting.

The Society celebrated its Centenary in a big way in March, 1997. The Department of Post honoured the event with the release of two stamps (se-tenant) depicting the society's logo and its journal, the Philatelic Journal of India which also celebrated 100 years then. Many research and useful articles have been published in the journal which have become standard works of reference.

The Society had the privilege of the Past President of India viz. Dr. Rajendra Prasad, Dr.S. Radhakrishnan, Dr. Zakir Hussain, Dr.V.V. Giri and Shri Fakhuruddin Ali Ahmed as its valued Patrons.

The Members of the Society have participated in a number of exhibitions at different stages and brought great laurels to the country. To the credit of the Society are a number of Research Publications authored by distinguished philatelists and research students.

Shri Dhirubhai Mehta took an opportunity to mention about the proposal for a World Stamp Exhibition to be held by the Department of Post next year, to celebrate the 150 years of First Postage Stamp Issued in October, 1854. He further said that the Society also plans to hold a Stamp Exhibition to mark the 110th Foundation Day in 2010.

Dr. Jivraj Thakkar speaking on the occasion paid glowing tributes to stalwarts who laid solid foundation and on whose shoulders the Society is standing and those who supported the Society in all its facets over a period of more than hundred years.

The Society's Fortnightly Meetings are very popular and well attended. An opportunity was taken to present the members Certificate to those who attended 1200th Meeting earlier this year. Shri Dhirubhai Mehta appreciated the patronage and the support of the Department of Post, in the release of setenant stamp in honour of the Society to mark its Centenary which he mentioned was the singular honour given to the Society unparalleled in the world. The Society held a very large scale international Stamp Exhibition in 1957 to commemorate its Diamond Jubilee (Dijupex-57) followed by a number of exhibitions from time to time. The Department of Post always supported by providing special cancellations at different exhibitions and other facilities.

The 'birth day' cake beautifully decorated and depicting the logo of the Society 'Lion and Palm' was cut by the younger member of the Society Ms. Ayman Pinki.

❖ ❖ ❖ ❖ ❖

ROAD SAFETY THROUGH STAMPS

M.S. Mohamed Noorullah, a Highways Engineer, has a good collection of stamps on the theme of road safety.

There are different ways to impart awareness about traffic and road safety among the public. Exhibitions, painting contests, road shows etc are some of them. But for M.S. Mohamed Noorullah, the medium is stamps.

A deputy superintending engineer (Highways), Noorullah got hooked into the hobby of collecting stamps during school days. "My father was working with the postal department and I had access to a lot of stamps. In the beginning I used to collect stamps just for the heck of it and used to paste them on notebooks," says Noorullah. It was only after joining the South India Philatelists Association that he learned the value and method of collecting stamps scientifically.

"Being a Highways engineer, my obvious choice was to concentrate on the theme of traffic and road safety." Today, Noorullah has an impressive collection of both stamps and first day covers, across 50 countries, depicting the theme. "I purchase most of the stamps from the dealers or exchange it with my friends," says Noorullah.

Interestingly in many countries, postage stamps have been utilised to inculcate in the minds of the young the need for road safety. But in India, there are hardly and stamp on the theme.

"But for a few cancellation and messages through first day covers initiated by the Safety First Association of India and various Lion Clubs, there is not a single stamp in the country on road safety related themes," says Noorullah.

His collection, beautifully arranged and exhibited on album sheets with catchy one liners such as "short cuts shorten your life", "safe life is an ideal life", "while on road think of the ones at home", "it is better to be late than to be called late Mr....." etc. is thought provoking and has won many prizes. "To participate in major exhibitions at least three frames on any theme is a must," says Noorullah.

Each frame consists of 16 album sheets. And the frames are borrowed from the Tamil Nadu postal circle during the event. Besides stamps on road safety, Noorullah also has three frames on stamps on 'hands in action' such as voting, working, playing, wedding etc.

sages through a novel medium and I think philately is one".

(Courtesy : The Hindu. 2003)
Mr. Noorullah is a member of SIPA

❖ ❖ ❖ ❖ ❖

THE PENGUINS OF THE SOUTH ATLANTIC

Penguins on Stamps is a popular theme with collectors but not many of us are fortunate enough to have seen them in their home territory. G Moir, DFC & Bar, FRGS, FRPSL, recalls a visit to South Georgia, where he was able to photograph some of the varieties of penguin which have also appeared on stamps.

A well-known English expression states that it is often an ill wind which blows someone some good. That could especially apply to the Falkland Islands, South Georgia and its neighbouring islands following the tragic events of 1982.

An ever-growing number of tourists are now visiting these distant parts in order to enjoy the wildlife riches they have to offer, especially the penguins. On South Georgia, once the largest whaling station in the world, the wildlife is both prolific and important. Indeed, so significant is this wildlife, much confined only to those waters, that in March 2001 the British Antarctic Survey opened a new £5.3 million science research centre at King Edward point, now the only inhabited part of this remote British Overseas Territory, intending to make it a global model of conservation.

The range of wildlife is nothing short of magnificent, the most well known being the penguin. Fossil remains reveal that creatures much like those of today have fished those cold waters for at least 25 million years. All are flightless and depend on the sea for their livelihood. Although those seas are some of the least hospitable in the world, being in the region of the Roaring Forties, they are rich in both fish and plankton. The penguins' wings have developed into highly efficient flippers, and the feathers have been reduced to form a seal-like hair that not only acts as a highly efficient waterproofing and insulation, but also allows water to pass smoothly over it, thus much reducing drag. Their feet are webbed and set at the back of the body not only to act as rudders, but also as propellers when they toboggan over snow and ice. Their bills vary in shape from the long dagger-like bill of the King Penguin to the short, stubby bills of the Rockhopper, according to the food they consume.

The King Penguin

Of the seven main species breeding in these parts, four of which are on or around South Georgia, by far the most abundant is the beautiful King Penguin, first recorded by R Forster who was on board Captain Cook's Resolution when he discovered and took possession of South Georgia on 17 January 1775. Standing 30-33 inches tall, it is the most highly-coloured of them all, with very distinct bright golden orange patches

narrow band across the throat, to form a golden yellow patch on the chest and a pure white waistcoat. A total of 57,000 adults and chicks are known on 31 breeding sites on South Georgia, of which the main colonies each have over 10,000 birds. It is truly the ninth wonder of the world.

No nest is constructed, the single pale greenish white egg. laid in November or December (summer season), being protected by the adults who completely cover it a loose fold of skin and the tail. As the complete breeding cycle takes approximately 14 months, a pair will generally breed only once every three years. The chick is wholly greyish-brown, at first, turning to dense woolly brown, contrasting vividly with the dapper appearance of the adult.

The Macaroni Penguin

Of course, the ubiquitious Gentoo penguin is present in considerable numbers, but there is one species which is on a par with the Gentoo and, like the King, has its most northerly limits in the Falkland Islands; and that is the Macaroni Penguin. Indeed, South Georgia is where it was first recorded by a Captain Abbott who saw 15 among a colony of 20,000 Rockhopper Penguins; and where, too, I saw my first Macaroni Penguin.

It is quite a large bird, standing 27-28 inches, and closely resembles the Rockhopper Penguin, both in habits and colour. It has golden head plumes springing from a patch of the same colour on the forehead, drooping back and over the eyes.

Its dark throat area finishes in a 'V', whilst the demarcation line on a Rockhopper Penguin is almost straight across the throat. The bill is certainly larger with a red tip and a small patch of pink skin showing at the base. Both male and female are alike, although the former is slightly larger.

Macaroni Penguins return to their breeding colonies in September-October, often creating their rookeries on the cliffs of open coasts, rather than in more sheltered bays, and often in association with Rockhopper Penguins, King Cormorants and Black-browed Albatrosses. It is somewhat surprising that they have no difficulty in fitting their breeding cycles into the regime imposed by the climate of those Antarctic islands. They court, build nests, lay, incubate and rear their chicks with ease by March or April, and even complete their own moult before the end of the season.

There appears to be nothing wrong with the first egg-they still make good eating as I can testify.

They lay two eggs, but the first is no more than half the size of the second. Like the Rockhopper Penguin, the first egg is totally rejected and pushed from the nest. There appears to be nothing wrong with the first egg-they still make good eating as I can testify!! After an incubation period of 35-37 days, the young chick, partly grey and without the colourful plumage, is guarded by the male for the first three months, the female periodically returning with krill, their basic food, although crustaceans and cuttlefish

are also taken. From late January, both parents start to food, and the young leave the colony in March. Macaroni Penguins are very aggressive and noisy in defence of their nests and territory, and use their powerful beaks to drive off other birds, like the Giant Skua, which attempt to steal their eggs.

The Chinstrap Penguin

The two remaining species are both very much alike in size, the Chinstrap or Bearded Penguin and the Adelie Penguin, both standing about 30 inches high and both uncrested. The Chinstrap Penguin, apart from blue-black cheeks, crown and nape, has a distinctive black line or 'chinstrap' which runs from ear to ear over white cheeks and throat. They are considerably less common than the Gentoo, South Georgia being the northern limit of its range. However, there are several colonies on the island, with a breeding population of approximately 7500. This is thought to be increasing.

The Chinstrap Penguin often chooses nesting sites in very much steeper and more inaccessible places than is usual with penguins. Sometimes rookeries are even difficult to reach for a human, and the birds have extreme difficulties in landing on the steep shores and climbing to their nests. On some occasions birds miss their footing and fall headlong down the rocks, suffering no ill consequences from their experience.

They return to their colonies in November with egg-laying either in that month or December, the nest being a roughly circular platform of small stones, 30-50cm in diameter and 5-10cm high, with a shallow cup incorporating bones and feathers. A clutch often consists of two, sometimes three, the third being laid after the possible loss of the first. Both parents incubate in alternate long shifts, and the chicks are brooded for 20-30 days with both parents alternately guarding and feeding them in short shifts of 12-24 hours. The eggs themselves are smooth, white or cream, but unlike some other penguins, especially the Rockhoppers, there is no significant size difference between first and second egg. Fledging takes place during February or March, all birds leaving during the severe winter months.

As in the Falklands, I noticed that one very seldom comes across any dead, sick or injured wildlife. Nature provides her own dustmen, and each creature grouping appears to have its own major carrion eater. In the case of both the Chinstrap and Adelie Penguins it is usually the Sheathbill, the former being much less tolerant of its presence than the latter. The Chinstrap Penguin will chase away any Sheathbills if they venture too close to the chicks, and is a much more persistent, pugnacious and courageous bird, often returning to attack an intruder aftrer being repulsed several times, seeming to have a complete disregard for its own safety.

Birds miss their footing and fall headlong down the rocks, suffering no ill consequences from their experiences

However, there is one practice which appears to be shared exclusively by these two species, that of hauling out on ice-bergs and detached fragments of ice at sea. Here, the Chinstrap Penguin will choose the most difficult seen on low, fairly level or flat pieces of ice. Almost anywhere within the range of the Chinstrap, all accessible bergs are occupied or bear signs of their visits. It is those smaller pieces of ice that killer Whales enjoy tipping up with their heads, forcing the birds to fall into the water, and on which they subsequently feed.

The Adelie Penguin

Just as the King Penguin has its northern limit in the Falkland Islands, so the Adelie, the only other truly Antarctic penguin apart from the Emperor, has its northern limit in south Georgia. Adelies are the most abundant of all penguins, even more than the Gentoo, the colonies containing many thousands of pairs, the total population being somewhere in the region of two and a half million pairs.

The body and head are blue-black, the bill is reddish with a black tip, the eye being ringed in white. This classic Tittle man in evening dress', walks well on snow and ice, tobogganing when it chooses . Adelie Penguins cluster in huge colonies all around the Antarctic continent, fishing for krill and crustaceans in the shell waters around the continental edge and in peninsular waters. Most food is caught near the surface, although it is known for some birds to dive to considerable depths.

On their true continental breeding grounds, Adelie Penguins experience the coldest Antarctic conditions and enjoy the shortest summers. The entire breeding cycle has to be fitted into the few weeks when temperatures rise above freezing and when food is abundant in open water not too far away. The typically dense colonies are established on the ice-free slopes of rocky coasts, headlands and islands, on high ground, often far from open water but offering a practicable route to the sea. The critical requirement is that there should be open water within a few miles in the January/February period when chicks require regular supplies of food, although conditions in South Georgia then are not quite so severe..

The males are the first to return to the breeding grounds, sometimes walking across fast-ice to reach them. The females follow to join a known mate, but the pairbond is less strong than in other species, the harsh requirements of a short season permitting no delay. The male will bond quickly with any available female rather than delay in waiting for last year's mate. Courtship is brief, with much flipper waving and guttural sounds.

The nest is composed of small pebbles in a shallow depression and jealously guarded because it is vital the eggs are raised above the level of melt water, and others may wish to steal your nest material!! Two eggs are laid in mid-November, incubated for about 34 days, hatching in late December. The young are closely attended by a parent when they join the creche in their third week, but mortality may be heavy, sometimes only just over half the chicks reaching the creche stage. Fledging takes place after 50-56 days, for by mid-February the young birds are at sea, at the time when krill is most abundant. Once they reach the sea they are relatively safe and may live for more than 20 years. The adults abandon the nearly fledged chicks when they are about seven weeks old, be

north to the richest feeding waters.

In conclusion, penguins are only one aspect of a much wider range of bird wildlife, to say nothing of numbers of other creatures which seek South Georgia coasts, so it is not difficult to comprehend why the British Antarctic Survey has held station there for so long, and is now prepared to become so involved in conservation. To view this wonderful array of wildlife one must travel south. I can assure you, it will be an experience you will not forget. I am still hoping I might one day return.
(Courtesy : Gibbons Stamp Monthly 2002)

❖ ❖ ❖ ❖ ❖

From Vacuum Tube To Microcompressor

Chip That Changed the World

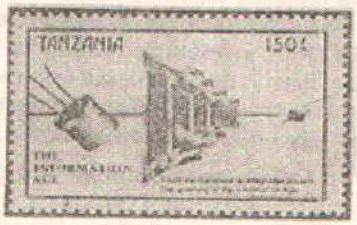
Fabio Serra Flosi

For almost half a century, vacuum tubes were the only way to build radios, TVs, radar, and computers. They also made long distance telephone calls technological and commercially possible. since their invention in the 19th century, vacuum tubes were greatly improved. In the early 1950s there were a wide range of them on the market (diodes, triodes, pentodes, etc.) for a large number of practical applications.

But those devices still had inherent limitations. Tubes were fragile and bulky; they needed too much power to work; they produced too much heat; and the lifetime was very limited. The filament would burn out and the tube would fail. They were fine where only a few units were necessary, such as in radio and TV sets, and as audio amplifers, etc. On the other hand, where thousands of them were needed, as in computers and automatic telephone switches, tubes were very unproductive. All those problems pressed scientists to find a substitute for vacuum tubes.

Founded in 1925, Bell Telephone Laboratories in Murray Hill, New Jersey, was the research division of the giant American Telephone and Telegraph or AT & T (presently, Lucent Technologies Inc.). After the end of World War II, Bell Telephone Laboratories management organized a group of scientists to develop a new device to replace the problem vacuum tubes.

William Bradford Shockley (1920-1989) was selected as the team leader (St. Vincent and Grenadines, Scott 2764r). Then Walter Houser Brattain (1902-1987) and John Bardeen (1908-1991) were hired, and joined the group.

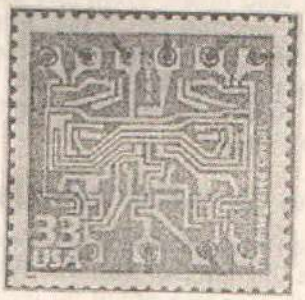


A Bipolar Junction Transistor Tanzania (Scott 562)

Combining the functionality of vacuum tubes (the ability to amplify weak electrical signals) with the advances in semiconductor research at that time, these three scientists developed a small device that was called a Transistor. A semiconductor is a solid material that is neither a good electrical conductor (like aluminum) nor a good insulator (like glass). Examples include the germanium for the early transistors, and silicon for the modern transistor.

On December 23, 1947, Brattain and Bardeen demonstrated their invention at Bell Telephone Laboratories. It was the Point Contact Transistor made of strips of gold foil on a plastic triangle, held down with a slab of germanium semiconductor crystal. (Dominica, Scott 21861).

During the next few years, those prototype underwent many improvements. In April 1950, a new type was shown by Shockley; it had a structure like a sandwich, with two layers of germanium crystals having one type of electrical charge, separated by a layer of germanium crystal having the opposite electrical charge. It received the name of Bipolar Junction Transistor, and was the first practical and manufacturable 3-terminal semiconductor electronic device. It exhibited the same properties as the vacuum tube, but was constructed of a very small piece of solid-state material, a crystal of germanium. (Tanzania, Scott 562).



Inside the Integrated Circuit (IC) U.S.A. (Scott 3188)

On September 25, 1951, AT&T began offering transistor manufacturing licenses for a fee of US $25,000 as an advance against royalties. In April 1952, AT&T held the first seminar to transfer information to the licenses. More than 30 electronic companies sent representatives to this seminar. One of the first companies to apply was the newcomer Texas Instruments of Qallas, Texas.

In 1953, Texas Instruments had established a production line of germanium junction transistors under an AT&T license. Then their president decided to manufacture a transistor radio receiver. The result was a portable shirt pocket model called Regency TR-1. It featured four T1 germanium transistors and it operated on a 22.5 volt battery that provided over 20 hours of life, It was placed on the market at a price of US $49.95 on October 18, 1954, and TR-1 was one of the first electronic devices featuring bipolar junction transistors. It measured five inches high and covered the medium wave band (from 535 kHz to 1630 kHz).

TR-1 had opened a new market for the transistors and the electronic miniaturization age commenced. Vacuum tubes were quickly replaced by the bipolar junction transistors that generated less heat, required less power, operated faster, and were much more efficient than their predecessors, IBM, the giant of the computer market, decided that, after June 1, 1958, all their products would use transistors instead of vacuum tubes. By 1959, the first fully transistorized computers were introduced.

The name "transistor" was suggested by an engineer from, Bell Laboratories, John R. Pierce (1910-). The name was based on the effect seen by its inventors: TRANSfer current across a resISTOR. In 1956, in recognition of their outstanding efforts, the three brilliant AT&T Bell Laboratories researchers (Shockley, Bardeen, and Brattain) were awarded the Nobel Prize in Physics.. (Marshall Islands, Scott 679m).

Germanium transistors had an intrinsic defect; they did not work properly at high temperatures. Silicon had similar properties to germanium, and replaced germanium in many appplications. The first company to produce silicon transistors was Texas Instruments on April 14, 1954.

In the late 1950s, efforts were made to reduce the size and improve the reliability of electronic systems, especially for military applications. More complex electronic circuits were built with thousands of components (transistors, diodes, resistors, and capacitors, all mounted over a printed circuit board and they were interconnected by printed tracks and soldered joints. This process led to prob

The Invention of the Transistor by Shockley, Bardeen and Brattain Marshall Islands (Scott 679m)

Jack Kilby With His First Integrated Circuit Pictured on the Center Left Marshall Islands (Scott 702o)

tacts. The challenge was to find a cost-effective reliable device with all components integrated in a single block, connected to form an electronic circuit.

Jack St. Clair Kilby (1923-) was hired by Texas Instruments in May 1958 to work in the area of microminiaturization. During his experiments, Jack Kilby attempted to construct an integrated phase using one transistor, three resistors, and one capacitor. All components were on a single slice of germanium crystal measuring 3/16 by 7/16 inches that was named Chip (Marshall Islands, Scott 702o).

When the power was applied to Kilby's prototype, the unit started to oscillate to a high rate. Using gold wires interconnecting the diffused components within the chip, it worked. So on September 12, 1958, Jack Kilby had invented the world's first integrated circuit (also named microchip).

Later that year, working for a small company in California called Fairchild Semiconductor, Robert Norton Noyee (1927-1900) developed a manufacturing technique, known as the Planar Process, that replaced the wire interconnections in Kilby's prototype, using evaporated aluminium to connect the parts within the chip. Noyee is considered as one of the most important founders of the famous Silicon Valley in California.

By 1961 the first ICs were available commercially. They had around 30 transistors within the chip, and were used in radio receivers and TV sets. (Tunisa, Scott 1005).

The invention of the integrated circuit (IC) made microelectronics possible, leading to technological, economic, and social transformations in our lives. Examples are computers, satellite communications, cellular phones, digital cameras, microwave ovens, the digital video disk (DVD), and cable television (CATV). The worldwide market of semiconductor components, created by Jack Kirby's invention reached US $230 million in 2000. (United States, Scott 3188j).

On September 9, 1997, Texas Instruments unveiled its new US $150 million research and development facility in Dallas, Texas. Named in honor of the inventor of the integrated circuit, the Kilby Center is one of the world's most advanced research centers for silicon manufacturing. After its opening, one could read the following inscription in front of the building; HERE, JACK BUILT THE CHIP THAT CHANGED THE WORLD.

The Integrated Circuit (IC) Tunisia (Scott 1005)

Working independently of each other, Jack S. Kilby and Robert N. Noyee are jointly recognized as the inventors of the IC. On October 10, 2000, the Nobel Prize in Physics would go to Jack Kilby for his part in the invention and development of the integrated circuit. The ceremony took place at the Stockholm Concert Hall on December 10, 2000, and Jack Kilby received his Nobel Prize from His Majesty the King of Sweden.

Born at Jefferson City, Missouri, Jack Kilby was a full time employee of Texas Instruments from 1958 to 1970. He was a professor at Texas A&M University from 1978 to 1985. Now, he is retired (age 77) and works as consultant for Texas Instruments on a contract basis, and has an office on the first floor of the Kilby Center.

During the 1960s, new uses of materials and new manufacturing processes permitted the inclusion of an almost unlimited number of components on a single chip. Kilby's IC prototype had just five components: one transistor, three resistors and one capacitor. Today's IC's have more than ten million individual transistors on a single silicon wafer of less than on e square inch.

Moore Predicted Chip Expansion Palau (06/30/99)

Gordon E. Moore (1929-), an Ameriocan engineer who worked at Fairchild wrote an article in electronics Magazine (April 19, 1965, Vol. 38, No.8) on the future of the semiconductor industry and the integrated electronics. Analyzing the history of the growing integrated circuit, Moore predicted that the number of transistors on a single silicon chip would continue to double every 12 months. Since Moore's prediction turned out to be true, it became known as Moore's Law. Only recently the rate of doubling has slowed to about every 18 to 24 months.

In July 1968, Robert Noyee and Gordon Moore decided to leave Fairchild Semiconductor for a new and exciting challenge. They founded Intel Corp. (short for INTegrated ELectronics), located in Santa Clara, California. Their colleague, Andrew S.Grove (1936-), a Hungarian chemical engineer, didn't originally invest money in the new company, but he is considered one of its founders. He was the company's fourth employee. Today Intel is a multibillion dollar company, the world's largest microprocessor manufacturer, with over 26,000 employees around the world, and revenues approaching US $23.8 billion in 2000. So Intel was founded on July 18, 1968, by Noyce, Moore and Grove.

Instead of competing with the old company (Fairchild was a silicon transistors manufacturer), Intel's first focus was building electronic memories, a special kind of IC that was able to store data specifically for applications on computers. By 1971, Intel had a successful business selling those chips.

Working at Intel, Marcian E. (Ted) Hoff (1937-), developed another kind of IC which could be programmed to do calculations. This microchip was called "4004". It was a silicon slice, measuring 1/8" x 1/16", with 2,250 transistors etched into it. this IC was first used in electronic calculators, and then in computers.

INTEL Founder Andrew S. Grove Palau (06/30/99)

By comparison, the "4004" chip delivered as much computing power as the first electronic computer built

cubic feet. So, the world's first microprocessor was developed by Ted Hoff on November 15, 1971. (Israel, Scott 1271).

Soon after the "4004", on April 1971, Intel launched the "8008" microprocessor, with 2,500 transistors within the chip. Then came the "8080" in 1974 with 5,000 transistors on a single chip. Many other models followed the "8080". During the last decade, Intel has launched the following microprocessor:

In 1993, the Pentium processor with 3.1 million transistors.

In 1997, the Pentium II processor with 7.5 million transistors.

In 1999, the Pentium III processor with 24 million transistors.

In 2000, the Pentium IV processor with 42 million transistors packed in a single chip (Togo, Scott 1953r).

The invention of the microprocessor, a special kind of integrated circuit, enabled developments that were unimaginable a quarter century ago. Those developments changed our lifestyle, and as the title of this article suggests, they changed the world.

42 Million Transistors on One Chip Togo (Scott 1953r)

References

Larry Dodson, Computers on Stamps and Stationery, American Topical Association Handbook # 134, 1998. Includes a comprehensive checklist of stamps related to Integrated Circuits.

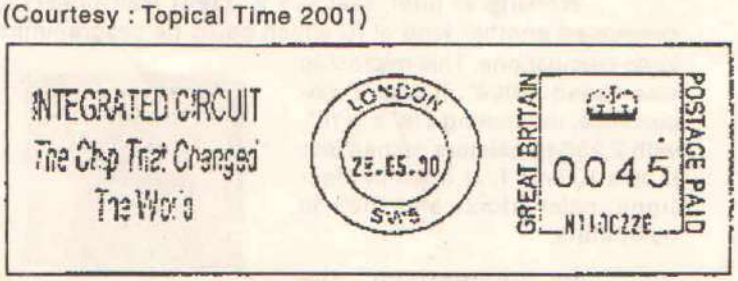
G.W.A. Dummer, Electronic Inventions and Discoveries, 4th Edition, Institute of Physics Publishing, Briston, United Kingdon, 1997.

Linda Geppert, "Andy Grove", Spectrum Magazine, June 200.

Proceedings of the IEEE, Fiftieth Anniversary of the Transistor, January, 1998. Articles on the history of transistors and their inventors.

Fabio Serra Flosi is an electronic technician and telecom engineer working in Brazil for a multinational digital radio and microwave manufacturer. His philatelic interests include telecommunications. He can be reached at P.O. Box 2236, Sao Paulo, SP 01060-970 Brazil or at <fflosi@harris.com>

(Courtesy : Topical Time 2001)



Author Created This Meter for the Stamp Show At Earls Court in London, England, Mary 22-28, 2000

❖ ❖ ❖ ❖

INDIAN POSTAL HISTORY - 1947-1997 (Contd.)

A.K. Bayanwala

22. The Government of India - Ministry of Home Affairs Office, through its Memo No. 18/3/48(1) Public dated 9th February 1949, had decided that in future the inscription "ON HIS MAJESTY'S SERVICE" on official letters, envelopes etc., should be replaced by the words "ON INDIA GOVERNMENT SERVICE". The existing stocks of envelopes etc., with the inscription "On His Majesty's Service would continue to be used, in the interest of paper economy, until they were exhausted. The Indian P & T Department took note of it vide DGPO Circular No. 5 dated 14th April 1949, by stating that necessary amendment to relevant rules in the P & T manuals would be issued shortly. In my opinion, "On India Government Service" on envelopes and postcards came in the same year - 1949.

I have an example, which shows the use of "On H.M.S." in 1949. I have an example dated 16th May 1949, which was printed in year 1948 and used by "On United Provinces Services". My example, which shows "On India Government Service" is dated 3rd May 1952.

To replace the existing King George-IV Service Postage Stamps, it was decided to introduce, a new series of India Service Postage Stamps for the use by Government Offices and others duly authorized in this behalf in accordance with the Clause 354 of the P & T Guide, Part I, July 1948 issue, and/or vide Postal Notice No. 46 dated 24th December 1949. The main motif of the designs is the "Ashokan Capital". The word "Service" appears at the top and the word "Postage" just beneath it.

Four stamps in rupee denomination i.e., Re. 1/-, Rs. 2/-, Rs. 5/- and Rs. 10/- were issued on 2nd January 1950. It was specifically mentioned that the existing KG VI stamps would continue to remain on sale until exhausted. Although Service Postage Stamps are intended primarily for use on official correspondence only. Philatelists and other members of the public could buy these stamps for collection purposes from the treasuries as well as the following Philatelic Bureaux:- Bombay GPO, Calcutta GPO, Madras GPO, New Delhi H.O., Simla H.O., Lucknow H.O., Patna H.O., Cuttack H.O., Shillong H.O., and Nagpur H.O. Service Stamps were available from all treasuries through out India. But, initially these stamps were available from 25 treasuries only i.e., Ahmedabad, Ambala, Allahabad, Bombay, Bangalore, Banaras, Calcutta, Cuttack, Delhi, Indore, Jubulpore, Jullundur, Kanpur, Lucknow, Madras, Madhra, Nasik Nagpur, Poona, Patna, Puri, Rajkot, Shillong, Simla and Tiruchirapalli.

But the collector had to buy Service Stamps of a face value, not less than 6 rupees 8 annas and then he had to pay ½% on the face value, to cover incidental expenses. This rule is embodied in Sec. 1 Clause-7 of the Postal Guide - 1954.

The Service Stamps in denomination of 3 pies, 6 pies, 9 pies, 1 anna, 2 annas, 3 annas, 4 annas, 6 annas and 8 annas were issued on 1st July 1950 vide Postal Notice No. 18 dated 20th June 1950.

It had been decided to introduce a change in colour of 4 annas Service Postage Stamp depicting Ashokan Capital, as a corollary to the change in the colour of the existing 4 annas ordinary postage stamp (Archaeological Series) from "red purple" to blue, due to the revision in foreign letter rate, vide DGPO Circular No. 43 dated 25th September 1951. The new stamp in blue colour was issued

able from 11 treasuries in the first instance, which were as follows :- Bombay, Calcutta, Cuttack, Delhi, Lucknow, Madras, Nagpur, Nasik, Patna, Shillong and Simla.

Seeing the colour change in 4 annas Service Stamp, one thing is evident that the person handling the then present position did not know what really happened in past. When New Service Stamp series did not have 3½ annas stamp for Sea Mail, what was the justification to change the colour of existing 4 annas stamp, when Sea Mail rate was increased from 3½ annas to 4 annas from 1st December 1950 ?

23. Republic of India - 26th January 1950 :

The Republic of India was proclaimed on 26th January 1950. India is a Sovereign Democratic Republic with a Parliamentary form of Government based on universal adult franchise.

The Indian Constitution was adopted by the Constituent Assembly on the 26th November 1949 and it came into force after two months on 26th January 1950. Because the Indian Government wanted the inauguration on 26th January 1950 to highlight this day as we the Indians, were celebrating Independence Day on 26th January every year since 1930, prior to 15th August 1947.

Our Constitution guarantees; Justice; Social Economical & Political liberty, Faith & Worship: Equality of status & opportunity.

A special set of 4 stamps were issued on 26th January 1950, to commemorate the inauguration of the Republic of India. The designs of the stamps are simple and symbolic. The first 2 annas stamps is intended for inland postage, depicts children watching procession of cavaliers carrying flags and blowing trumpets which herald India's attainment of full Nationhood. The second 3½ annas stamp is intended for foreign Sea Mail, depicts quill and an ink pot against the back ground of Mahatma Gandhiji's favourite hymn "Raghupati raghav Raja Ram", symbolize Nation's Education. The third 4 annas stamp intended for registration, depicts an ear of grain and a plough, symbolize Bharat as an Agricultural Country. The last 12 annas stamp intended for foreign Air Mail depicts Charkha, symbolize of Bharat Cottage Industry.

These stamps would remain on sale unit stocks were exhausted, concurrently with existing stamps. A folder containing the full set of 4 values, was issued on the day at Re. 1/-, 9 annas and 6 pies each. The bland first day cover was priced 1 anna each or Re. 1/-, 4 annas and 0 pies for a packet of 25 or Rs. 5/- for 100 envelopes, vide Postal Notice No. 51 dated 17th January 1950.

A Special Cancellation was provided at Philatelic Bureau only, at Bombay, Calcutta, Cuttack, Madras, New Delhi, Simla, Lucknow, Patna, Shillong and Nagpur. Private First Day Covers are also found. The Special cancellation on First Day Cover depicts the name of the city in Hindi language and the date in English. A mysterious cancellation in Hindi is also found, which is very, very scarce. It reads BHARAT REPUBLIC DIWAS / 26 JANUARY / JAI BHARAT. It is being found used only from Delhi and Gwalior.

Special Cancellations on 1st and 3rd Anniversary of Republic Day are also found. 5th Anniversary cancellation is combined with issue of Five year Plan Stamps. These cancellations are cute.

24. Local Delivery - 1st April 1950 :

On 1st April 1950, "Local Delivery" System at reduced rate of postage was introduced by the Indian Posts & Tele-graphs Department, vide Postal Notice No. 1 dated 1st April 1950. Local Delivery System applied to letters and postcards only. For other classes of postal articles, the existing all India rates of postage would apply for local delivery articles also.

But the usual special services as issue of Certificate of Posting, late posting under Late Fee, Express Delivery, Registration, Value Payable System, Insurance etc., would be available for local delivery letters and postcards on the same terms and conditions as for general correspondence of the same class.

A registered cover was mailed locally from Bombay on 25th May 1950 with postage of 1 anna normal charge along with 4 annas as Registration fee.

A local delivery postcard was mailed from Ahmedabad 13th May 1954 with 6 pies as normal charges along with 3 annas for Express Delivery fee.

Local Delivery Scheme was applied to Business Reply Service for the first 16th July 1950, vide Postal Notice No. 28 dated 27th July 1950. The reduced rates of postage became available to Business Reply Service users.

The special concessional rates of postage are :

1.	Letters :	
	For weight not exceeding 1 tola	1 Anna
	For every tola or fraction exceeding 1 tola	1 Anna
2.	Single Postcard	6 Pies
3.	Reply Postcard	1 Anna

The existing rates of postage (introducing on 1st April 1949) are :

1.	Letters :	
	For weight not exceeding 1 tola	2 Anna
	For every tola or fraction exceeding 1 tola	1 Anna
2.	Single Postcard	9 Pies
3.	Reply Postcard	1 Anna 6 Pies

Thus the concession on letter was for initial first tola only. After 1 tola, the rate of postage was same. For the purpose of concessional rate of postage letters and postcards should be posted for delivery within the limits of the respective local delivery areas.

The local delivery area is defined as follows :

The area included within the limits of a municipal limits within which delivery of postal articles were effected from any post office situated within the municipal limits. It also includes other urban areas like Cantonments, Town Area or Notified Area.

In rural areas, all areas included in the delivery area of the same post office.

Any other area specially included by the Central Government for that purpose.

A few areas for local delivery were defined which are as follows :

The entire Jaipur District along with four continuous districts of Sikar, Tonk, Jhunjhunu and Sawai Madhopur were grouped together as a special case, into one local delivery area in view of the cheaper rates of postage enjoyed by these areas under ex-State postal system.

The entire Greater Bombay area comes under Bombay local delivery area.

The entire Delhi State comes under Delhi local delivery area.

The local delivery area of Calcutta comprises of : Calcutta Corporation, South Suburban Municipal,

and areas served by a post office situated within these areas.

The Nagpur local delivery area includes Sonegaon Airport and Nagpur headquarters areas.

Dohad and Freelandgang were combined into a single local delivery area on and from 15th May 1952 vide Postal Notice No. 7 dated 18th June 1952.

A complete list showing all the localities included in their respective local delivery areas should be kept in all post offices.

Special Green letter boxes were installed at a number of post offices for posting of local letters, because they should be handled in sorting, separately from the general correspondence. But it didn't mean that special treatment should be given to local correspondence. Actually these articles should be handled in all respect like other general letters except that they should be put up in separate labelled bundles marked "Local" wherever possible, local letters should be exchanged direct between the various post offices and not through the RMS office.

Some special instructions were also issued by the Department which are as follows :

Posting of locals in RMS offices situated at the place or within the local delivery area would be allowed but no locals would be accepted in train letter boxes. If any locals were posted, it will treated as insufficiently paid mails. This rule embodied in Sec. I Clause 14 (3) of P & T Guide 1951.

Unpaid and insufficiently paid local letters would be taxed with double deficiency from local rates. Local postcards should be fully paid, or otherwise would be forwarded to D.L.O.

Local mail would be redirected free of charge, within the limits of the local delivery area where they were posted. No redirection was permitted, outside the delivery area.

❖ ❖ ❖ ❖

INDIA

EARLY CANCELLATIONS (Contd.)

OTHER CIRCLE CANCELLATIONS 1861 - 1873

Bengal and Burma Type [10]

Type [10] is a diamond of ten fine lines framing the office number. The figure is Type [4], with reversed lines, that is, rising from left to right. Diagonals are 22 and 19mm., and figures are 5½mm. high. Throughout, there is practically no variation in this type, except that Calcutta right duplex is slightly larger with the "1" measuring from 9 to 10 mm. The workmanship is excellent and there is no difficulty in discriminating between Types [10] and [4] with reversed lines.

The obliterator is in duplex form. The left duplex shows two concentric circles. I have, however, seen a Calcutta example of 1862 with only one circle.

The earliest date seen in October, 1862.

Type [10] continues in use until 1873. Types [10] and [9] gradually Type [7] in Bengal and Burma.

India Paid

Late in 1862, we find Calcutta with the words "India Paid" in the lower part of the left duplex, between the two circles. This was of course on letters for abroad, and it superseded the old detached "India Paid" in a rectangle, precisely similar arrangement in Bombay in 1862 for foreign mail.

For Calcutta inland letters, the lower space in the left duplex is occupied by two ornaments upto 1864, but, later on, we see Calcutta letters with the letters "A", "B", "C" or "D" at the foot between the concentric circles, or with a blank space. The blank is for the head office and the letter mark urban areas. I have seen "B" in the left duplex of a Type [9] Calcutta cancellation as late as 1872.

In 1872, there is a change from serifs to block letters in the Calcutta left duplex.

The Central Provinces Circle was formed in 1866-67. Type [9] was then in use as an all-India cancellation. While adopting Type [9], the Central Provinces Circle also introduced a distinctive obliterator in Type [11]. Type [11] is in the duplex form. The right duplex shows a circle filled with a series of fine horizontal parallel lines, spaces being provided for the number in the centre, the letter "C" above, and the letter "P" below. It is certain that Types [9] and [11] used the same series of numbers, for we have three cases in which the same number appears in both types. It seems probable that some offices received type [11], and others Type [9] and that very few received both types. And where an office is found with both types, perhaps the two types were not used concurrently.

The highest number seen is 47, and this doubtless represents the number of Imperial post offices in the Circle in 1867. The earliest date seen in March, 1867, and there are exceedingly few recorded appearances of Type [11] after 1870.

When the Handbook was published in 1919, very little was known about this circle. It was only in 1929 that Colonel Martin, Colonel Lean and I were able to solve the problem of the Central Province series of cancellations in Type [11] and [9].

At the time of the publication of the Handbook, there was very little evidence available as regards Type [12]. It cannot be said that material is abundant now.

Madras Circle, Type [12]

When one considers the facts regarding this cancellation, the great scarcity of material is surprising. As Types [6] and [9] show only one number over the highest number in the original series (159), it is clear that Type [12] was intended primarily for the use of Imperial offices opened after the appearance of Type [6]. Allowing for the consideration that these new offices were of secondary importance, and disposed of a much smaller volume of postal business, it is nevertheless remarkable that more covers showing numbers over 159 have not been forthcoming. The highest number recorded in Type [12] is 342.

This obliterator was also used by some of the offices in the original Type [6] series. Where comparison has been possible, the numbers, with two exceptions, agree. Consequently, a few numbers found in Type [12], but not identified in Type [6], may be accepted tentatively as Type [6] numbers.

The exceptions are 27 (Itchapore) which is Honore's number in Type [6], and 105 or 106 (Chillambum), the numbers 105 and 106 being shown by Vaniambundy and Cuddalore respectively in Type [6].

There are several varieties of Type [12], and the material now available shows that the order adopted in the original Handbook, is not the order of appearance as evidence by recorded dates. The varieties will now be classified in what appears to be their chronological order.