

LIQUID OF LIFE -

BLOOD, FROM AN ANCIENT MYTH TO A MODERN MEDICINE

Throughout the ages people believed that blood contained mysterious and magical properties and was the elixir for the cure of most maladies. The following is study of blood and the blood circulatory system, from ancient myths to the development of the modern day science of haematology, included are diseases of the circulatory system, heart and blood, leading to the establishment of blood transfusion as a modern effective treatment of some these diseases, the importance of blood donors, their recruitment with the aid of the postal services, the act of donating and finally receiving the 'Liquid of Life' itself.

Background image is an electron micrograph of blood cells within a blood vessel from GB 2003 prestige booklet, inside front cover enlarged x12



The village of Blood was named after the Blood families from New York and Vermont. See derivation of surname Blood page 3.

Blood, Edwards County, Illinois had a P.O. between 1893 and 1910.

- | | |
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96



Llama blood is regarded as sacred by Native South Americans, blood is sprinkled around doorways to bring blessings to those that enter. Issued in 1873 for lower rate (2c) post within Lima only, example with worn 'c' of centavos



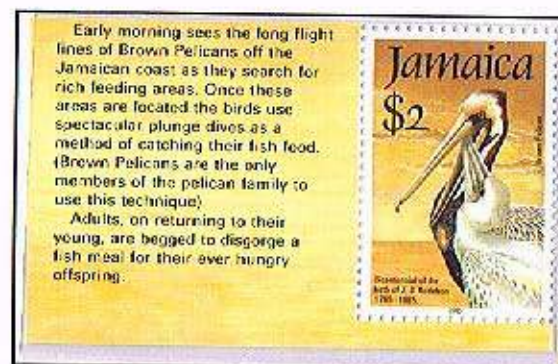
Meter: Francotyp-postalia, mymail



Meter: Satas, baby

1 A MYSTERIOUS LIQUID. 1.1 MYTHS AND LEGENDS.

...myths of ancient times and the influence on propaganda
...the legend of the pelican begins the story



The legend of the pelican arose from the belief that the pelican pierced its own breast to feed its young on its own blood.

The emblem of the pelican feeding its young is often used as a charitable symbol, such as the Empress Maria Feodorovna Institution for orphanages.

Later, the pelican came to be used as a symbol of blood donation by many Blood Transfusion Services



Ireland Blood Transfusion Board

First used Sept 1950 in Dublin (Baile Atha Cliathe) 3 dies, Cork, and Kilkenny (Krag), and again in 1951 in Dublin and Cork



Russia multi-advertisement letter sheet, 1899 sold for a reduced price, - 5 kop with income from advertisements going to the Maria Feodorovna charity. Letter No. 14, 5000 printed. Used to Germany uprated to 10 kop for international postage rate. Text above the emblem means 'charitable'.



Netherlands Red Cross Blood Donation Service



Belgium Red Cross Blood Donor Emblem



AFDS = Association Fruile Donor Sange (Blood Donors Association of Fruile)

1.1. MYTHS AND LEGENDS

mystical properties of drinking blood

The pelican myth, led to the belief that the act of either drinking blood or replacing it, would give the person some special powers



In Greek mythology Ovid tells us that Medea restored to strength the ageing Aeson by removing his exhausted blood and replacing it with her own magic concoction, and...

...Ulysses regained consciousness in the Kingdom of Death by drinking blood,



In ancient Rome epileptics were 'treated' with generous doses of human or animal blood...

...and gladiators drank blood to give themselves extra strength.



An Aboriginal custom of when starting on an avenging expedition every man drinks some blood, so as to make him 'uchuilima', that is, lithe and active, red ochre is used in artwork to illustrate blood.

However, it was Bram Stoker's 19th century story of Count Dracula, that took the idea of drinking blood to another dimension...



...he based his story on some of the above accounts, and including folklore inspired by the ruthless Vlad the Impaler, together with the feeding habits of the vampire bat.



The neck of female victims was the favoured area for extracting blood...



Type I Type II Type III Type IV
1888 3c small queen 'vampire bite' variety, probably caused by accidental damage during retouching of the plate impression.

...by this act Dracula's immortality was assured



1.1. MYTHS AND LEGENDS

blood letting

As opposed to drinking blood, blood letting had its own scribes.

According to the Romans, man learned the act of blood letting from the hippopotamus, when the animal feels plethoric it violently scratches itself against thorns and trees until it bleeds - later staunching the blood by wallowing in river mud, but not on its back!



Imperforated proof pair with control punches



Brown issue for general use

Inverted centre section

Colour die proof

Blue issue for official use, without OS overprint

grey proof with OS overprint with slight centre shift (not issued)



blue proof with OS overprint

Ancient Greek painting on a vase, showing a physician bleeding a patient from the arm,



However, it was Galen in the second century who first described blood letting in any detail



An early scene of patient undergoing blood letting from his leg.

The people who carried out blood-letting often adopted the name "blood", this is thought to be the derivation of the surname Blood

The philosophy that blood letting removed impure blood, survived for many centuries as a result it probable led to the early demise of ...

...George Washington...



...and Wolfgang Amadeus Mozart



Hollywood films also perpetuated the myth of 'blood brothers' amongst North American tribes, although well renowned for their hunting skills, they did not practice this custom...



...but blood contracts were not uncommon Prince Árpád elected ruling Prince of the Hungarians with a compact sealed with blood. Wall painting of Bertalan Székely in the council room of Kecskemét City Hall.

The most famous was the 16th century 'blood compact' agreement called Sandugo, between Philippine natives and their Spanish conquerors,



In some parts of the world blood-letting is still practiced, as part of religious ceremonies

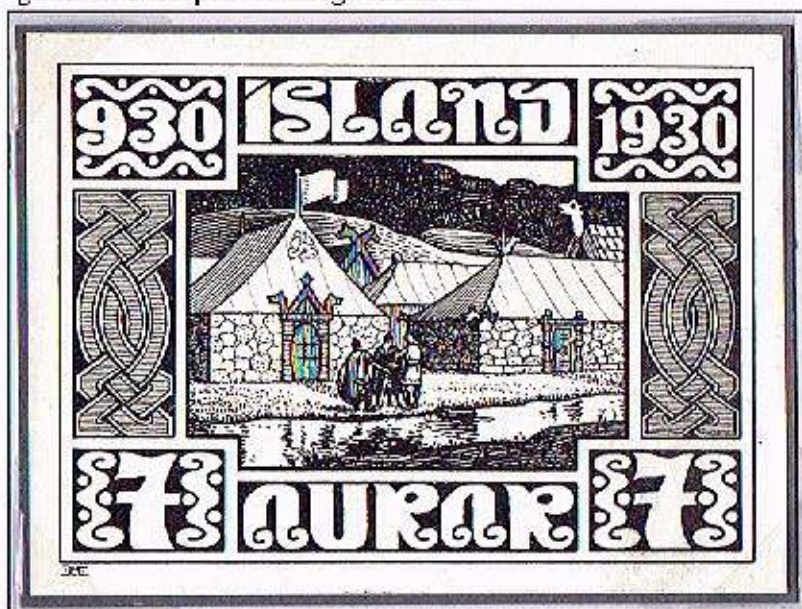


▲ Blood's Penny Post private post, postmark 1859, part of the Philadelphia Despatch Post, in use between 1853 and 1860



The Vikings held many beliefs about the Earth which was created after Odin and his brothers killed the evil giant Ymir,

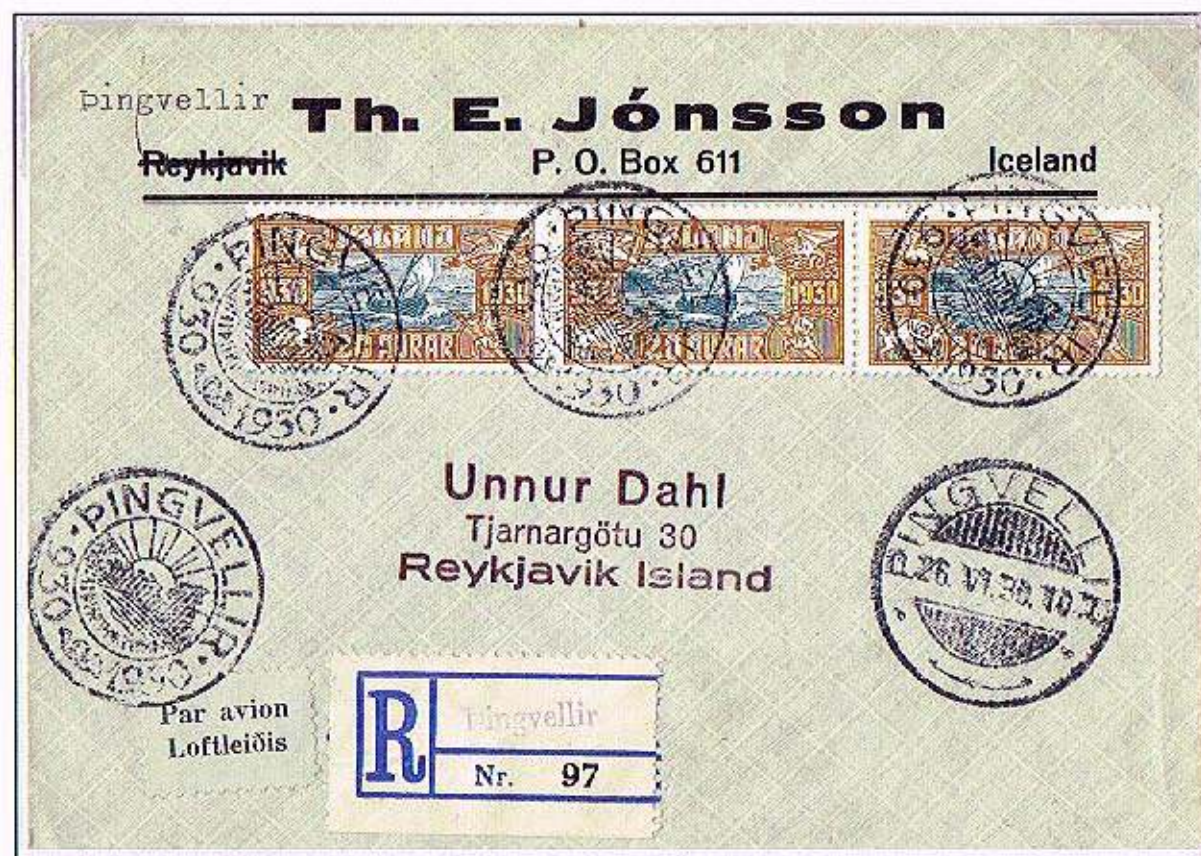
they set his skull in the sky and flung sparks of fire from Muspelheim to make it the Sun. His blood gushed upon the land forming the rivers, and drowning all but two of the frost giants who escaped the deluge in a boat.



Black and white proof from printers first reduction sheet, taken from an original sheet of 9 values (3 - 35 auror), with text "18 die zur ausführung bestimmten 16 entwürfe nach. Schwarz-Weiss-Zeichnungen von Ludwig Hesshaimer. Richtige Proportion 34:25. Erste Verkleinerung. Blatt I"

It is in this part of the creation myth that Loki, an offspring of the frost giants and blood brother of Odin, gave the humans blood.

Ymir's blood then circled the Earth as the sea, not turning the sea red but giving the sea its many different hues of blue-green, and perhaps brown!



Registered letter from Pingvellir, Iceland dated 26 June 1930, the special cancellation postmark shows the rising sun.



The Imperial Penny Postage came into effect on Dec 25, 1898. Canada Post Office issued a 2c (equivalent to GB 1d.) stamp, half with the ocean in blue and half with the ocean in green. a muddy brown variety is due to oxidation of the blue/green ink by contaminants in the air or the water used in production.

KARTKA POCZTOWA

NADAWCA: _____
(imię i nazwisko)

POCZTA: _____
(nazwa i nr placówki pocztowej)

POWIAT: _____
(miejsce zamieszkania, ulica, nr domu, nr mieszkania)

POCZTA: _____
(nazwa i nr placówki pocztowej)

POWIAT: _____
(miejsce zamieszkania, ulica, nr domu, nr mieszkania)

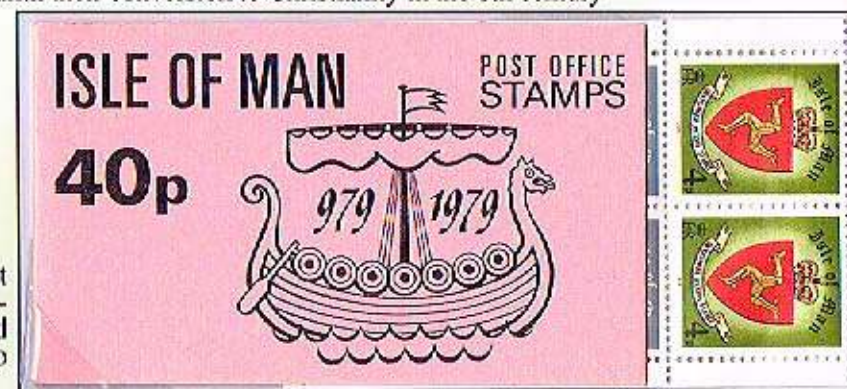
ZOSTAŃ HONOROWYM DAWCĄ KRWI
- ZGŁOŚ SIĘ DO PCK

P. P. T. T. VI 64-400 000

So Odin and the Vikings sailed on the 'sea of blood' across Northern Europe,



and as they colonised lands as far as America, so their beliefs followed...
...until their conversion to Christianity in the 8th century



◀ Inscription at bottom left corner - 'Honouring blood donors - apply to the Red Cross'

1.2. RELIGION AND PROPAGANDA

the symbolic use of blood in religion

With these numerous myths surrounding blood, it is not surprising that blood is frequently symbolised in religious beliefs



At the Last Supper Christ preached "This is my blood of the new testament which is shed for many"



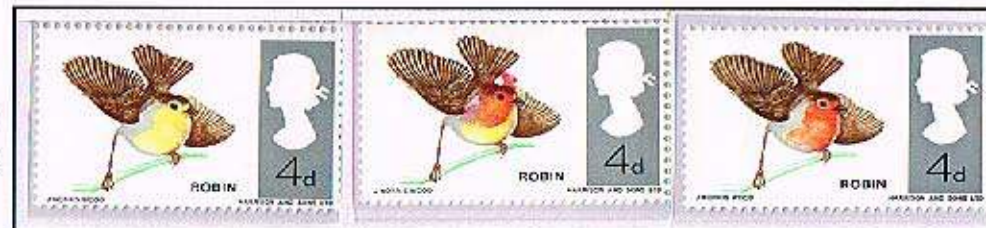
Pilate washed his hands of the Blood of Christ proclaiming "I am innocent of the blood of this just person"



Christ's body was then wrapped in a shroud, the Turin Shroud is believed to contain his blood stains.

Following the crucifixion, legend has it that the robin was splashed by the blood of Christ and thus obtained its red breast,

Printed in 8 colours in senant blocks of 4, the GB 1966 birds issue was prone to many errors, one of the rarest is the missing red colour and red colour shift.



Missing red
Before the crucifixion

red colour shift
blood falling on bird

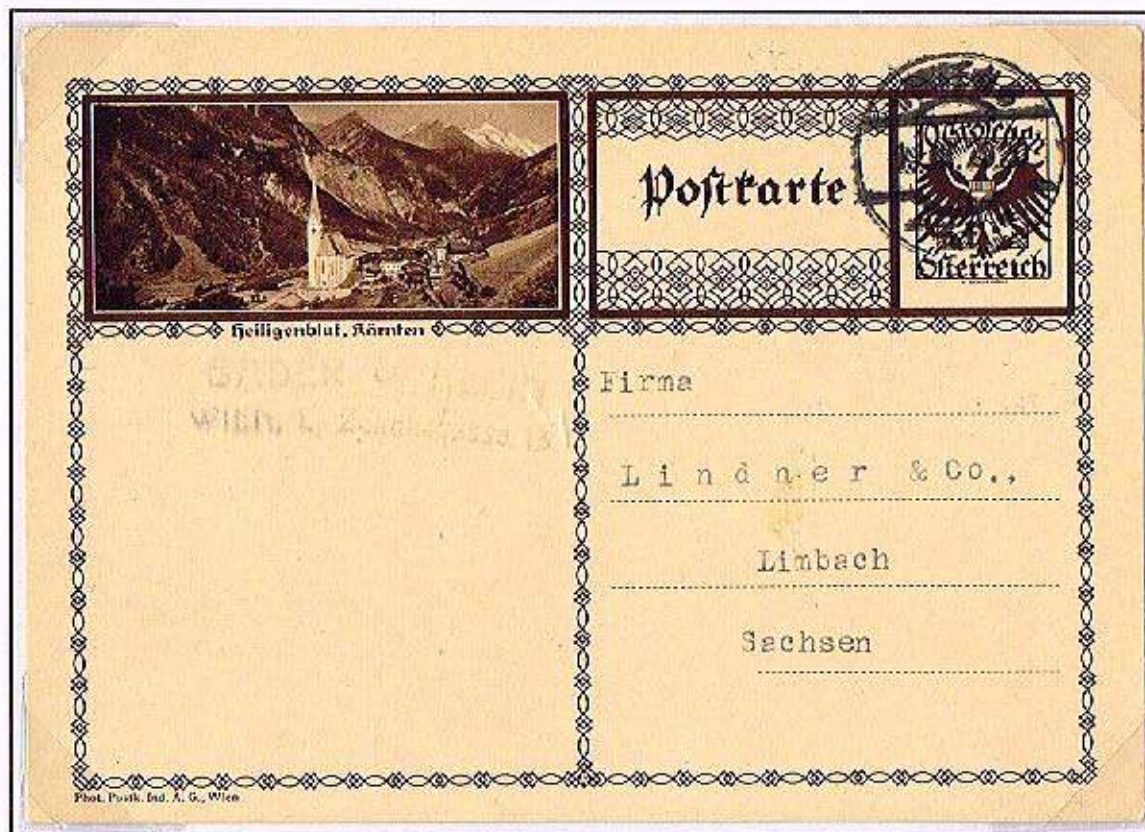
normal issued stamp
robin with final red breast

Since this time the blood of Christ is venerated in Christianity

There is an old legend that Derrick of Alsace, brought the relic of the Holy Blood of Christ to Belgium in 1150, and is now part of the Holy Blood Procession



The Austrian village of Heiligenblut meaning "Holy Blood", founded in 1273, after Briccius a Danish commander, which legend claims brought back the blood of Christ from Rome. He perished in 914 under an avalanche in Hohe Tauern

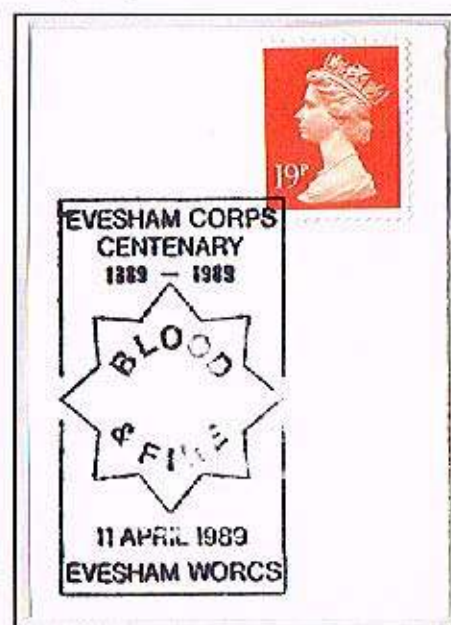


Meter: Pitney Bowes, model R

The aim of the Missionary Sisters of the Precious Blood is to make the Precious Blood of Christ fruitful through their way of life.



Many religious orders take their name from the precious blood -



The motto of the Salvation army is 'Blood and Fire' 'The Blood which was shed by Jesus for our sins and the Fire of the Holy Spirit'



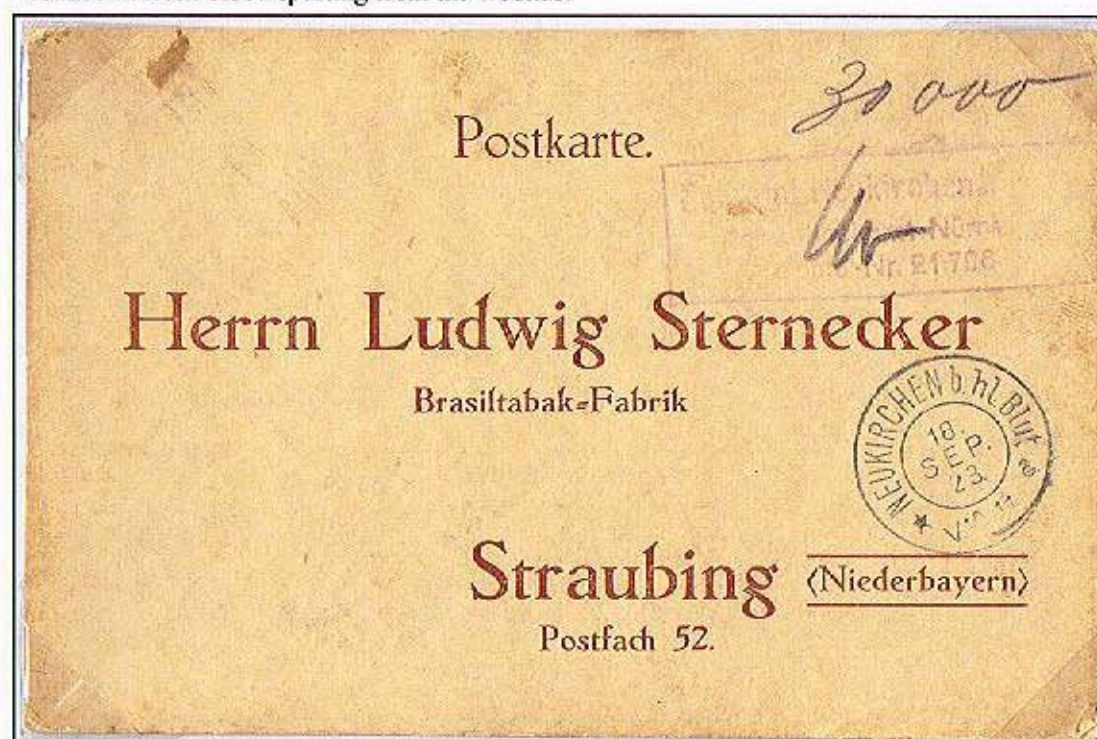
Enlarged sections x4

Blue colour shift on upper stamp, starting to partially cover the word 'blood' on flag

St. Maria Matilda De Mattias, was the founder of the religious congregation of the Sisters Adorers of the Blood of Christ.



Neukirchen-beim-Heiligen-Blut (Neukirchen-at-the-Holy-Blood) derived its name during the Hussite Wars c1450, when attempts to destroy the statue of the Madonna, by hacking it to pieces resulted in fresh blood spurring from the wounds!



1923 postcard from Neukirchen b. hl. Blut with violet Ra3 Post Office Neukirchen hl. Blut post office to Nuremberg Account No. 21 726 hs. and Neukirchen b. hl. Blut cds.



St. Gennaro of Naples is the patron saint of blood banks, his blood contained in a vial liquefies every year

St. Lucia patron saint of the blind, is invoked against haemorrhagic disorders, after being stabbed in the neck.



Others too claimed these magical powers such as blacksmiths or farriers who were believed to be "blood charmers", capable of staunching a haemorrhage.



Originally a China postcard (1), confiscated and used by the Japanese army during the 1942 occupation of China. Label (2) which signifies that this card is for the use of military authorities, the mail was censored by the Japanese authorities, censorship mark (3), and the personal stamp of the individual censor (4), thus a field postcard by use.



Wars and battles would also make use of 'blood' propaganda...

Wars and battles would make use of 'blood' propaganda...

Matanzas means massacre and bloodshed, after the massacre in 1565 of 250 French Huguenots.

Letter handed to outgoing ships captain at Matanzas, Cuba, July 1st 1837, by forwarding agents, Hernandez & Basden mark applied on reverse. Letter received at Boston, July 20th 1837, and marked on front, with the rate of 6c due from recipient, the ship letter for a letter addressed to the port of entry.



Charles W. Storey Esq
care of messrs. Atkinson & Rollins

1305 Stora

John & Edward



...the symbolic use of blood appears in many political and war propaganda campaigns...



Enhanced scan
of ship mark

From "Blut und Boden" (blood and soil) to the overprint denouncement of Hitler's actions - "Blood and tears his sowing, his work a crime", blood propaganda is emotive...



The Battle of Bloody Run, was fought during Pontiac's Rebellion in 1763 at Parent's Creek. The creek, or run, was said to have run red with the blood of the British soldiers and was henceforth known as Bloody Run. 1853 black CDS and paid 3 in circle, Bloody Run, PO, Bedford Co., Pa. in service 1813-1873.



Landesbauernschaft
Niederrhein
Zaunover
Zeppelstraße 10-12



Braunschweig
Landesbauernschaft
Niederrhein
Zeppelstraße 10-12

An den



... but scientists were more concerned with the secrets blood held...
Meter, Franco-type, D

Understanding the blood circulatory system was complicated by the many myths about the heart,



the heart had long been regarded as the mythical centre of love and affection, (and still is),

particularly when pierced by Cupid's arrow,

but love can sometimes lead to a broken heart!

Perforation shift error



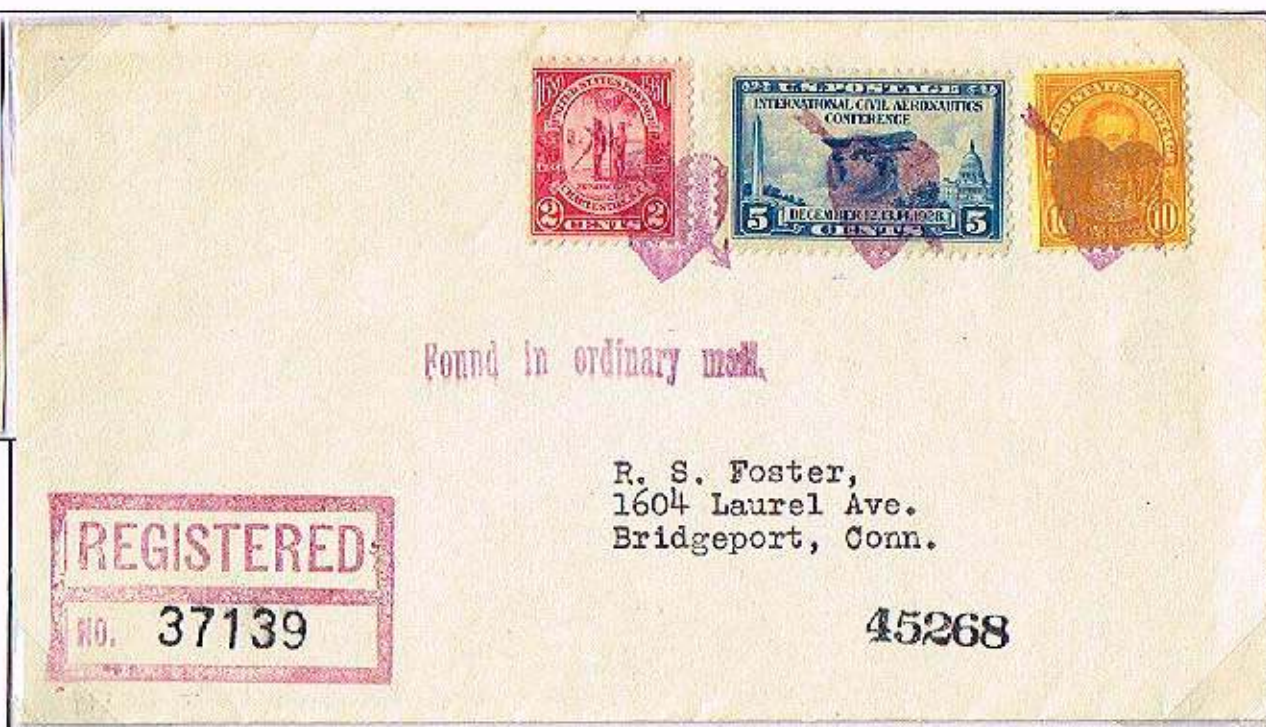
This stylised heart shape is applied in many other situations -

A damaged heart (as appears in Firenze 25) may result in the heart not functioning correctly

Red-brown Firenze 3 (1794) and 25 (1796) heart hand stamp, from Firenze (Florence), each week of the year had its own number - used in black 1767-1769, red brown 1774-1800 and red 1800-1808. The hand stamp of 25 appears to be damaged.



Whitehall heart in star 1861 postmark, posted in January just 3 months before the first battle of the American Civil War. Envelope hand-made from cross squared paper slight residue from brown gum marking front



Fancy cancellation, on registered mail but found in ordinary mail, only date known. Example of the ineffectiveness of the USPS 1927 postal directive. Scan of Postmarks on reverse above



Inverted heart punch, used to cancel postage stamp, then reused as telegraph stamp, 1915.

Hearts in circle fancy cancellations
New York City outgoing foreign mail cancellations in use 1871-1877



2.1. THE HEART OF THE MATTER...

unravelling the mystery

Gradually over the centuries through scientific research the mysteries of blood and the circulatory system began to be unraveled



Pan Ku



Yin and Yang watermark
Small dragon
issue 1885,
negative scan



Tomb of
Hwang Ti

As far back as 2800 BC the Emperor Shen-nung, inspired by the Chinese creator, Pan Ku, established harmony: Yin and Yang, two polar opposites, the ideal state of nature including health. A century later Emperor Hwang Ti suggested "All blood of the human is under the control of the heart and is regulated by it"

Imhotep (2725BC), physician to the pharaoh in the 3rd dynasty, attributed pulse rate to the resultant action of the heart's activity.



Intentionally misperforated
Farouk collection.
ONLY 100 PRODUCED



In Ancient Greece Hippocrates described blood as one of the four humours controlling health and disease.

Later c1490, Leonardo da Vinci described the heart and blood vessels, and investigated blood flow



Trial colour plate proof



Vesalius in 1550 described the flow of blood through the heart...



... And in 1628 Harvey proposed the theory of the the continuous circular motion of the blood throughout the whole body.



Servet discovered that blood circulates from the lungs to the heart.

Descartes was a philosopher and is best remembered for his book 'Discourse de la methode'. However, his other book 'Description of the Human Body' would give support to the theory of blood circulation



Error, ▲ incorrect title of book and ▲ correct title
When it was discovered that the stamp had the wrong title for his book, the French PO quickly printed numerous copies of a corrected stamp, but with the title still on the wrong side of the book!

White paper
matt gum,

white paper
shiny gum,
2nd issue

but it would need a more modern scientific approach to complete the picture of the function blood the heart and blood circulation...



...White emerged from obscurity to use the ECG as an essential tool for studying the heart
Dry print run from the 1986 1st issue



With further work by Forssman and Santos on angiograms to study blood flow, would finally elucidate the structure of the heart...

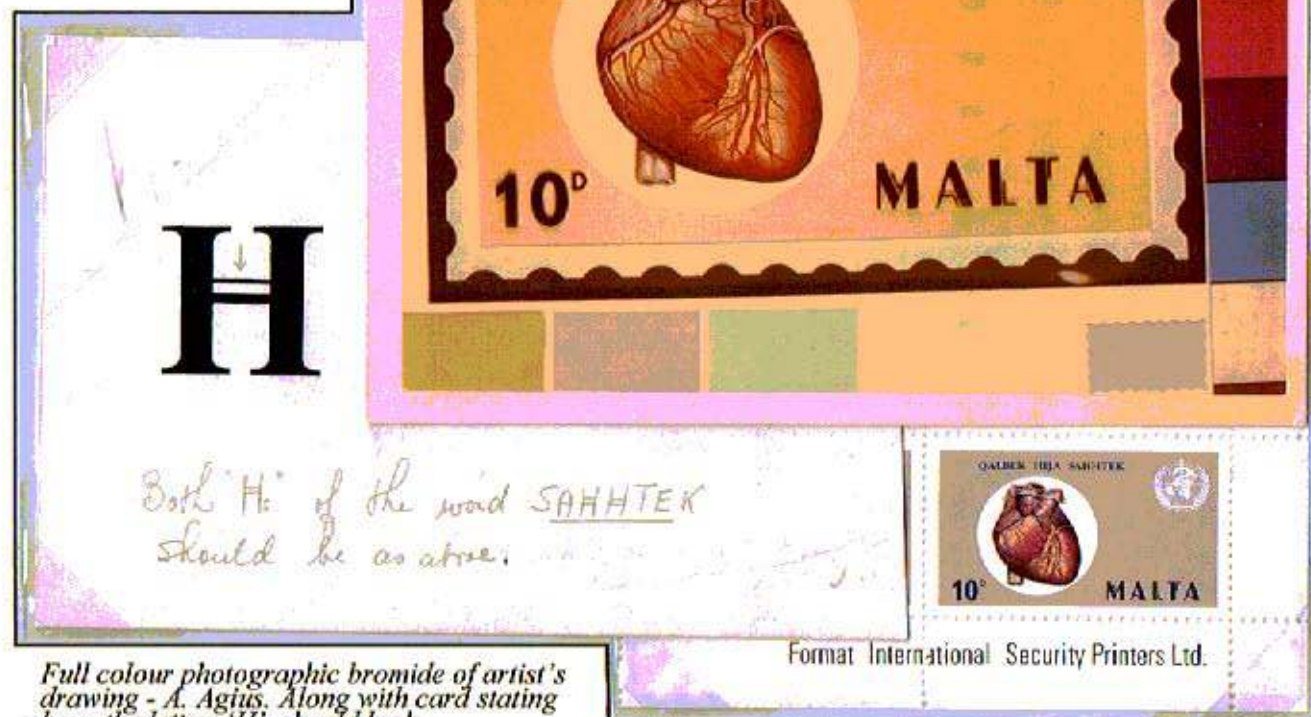


2.1. THE HEART OF THE MATTER.

structure and function

From the work of these scientists we now know that the function of the heart is to circulate blood to all parts of the body.

The heart is a muscular pump ...



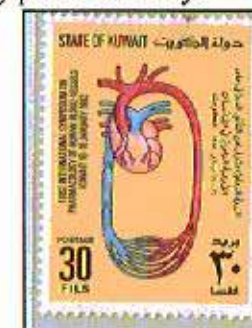
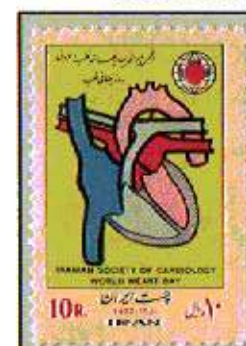
Full colour photographic bromide of artist's drawing - A. Agius. Along with card stating how the letter 'H' should look.



Perforation shift error

Arteries (red) carry blood away from the heart, they divide into smaller branches and lead eventually to every part of the body.

Blood is returned to the heart via the veins (blue)



It is essential that all organs of the body receive a supply of blood...



...eyes,



stomach,



kidneys

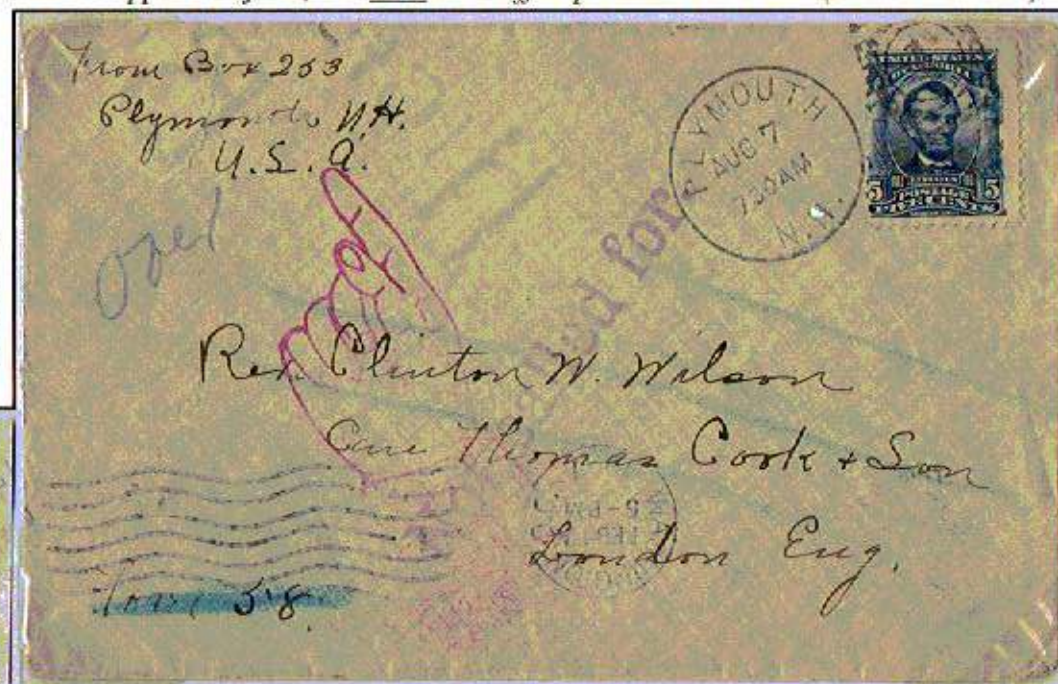
brain,



and extremities such as the hands
If the vital organs are not supplied adequately with blood, then death can occur



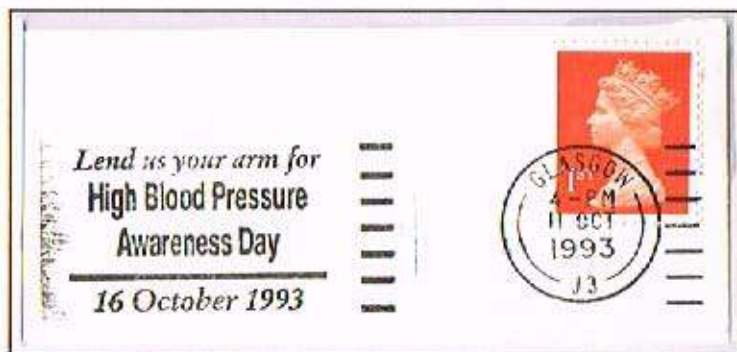
Company's instructional 'not called for' and USPS return to sender 'pointing hand' cachet applied on front, and dead letter office postmark on reverse (scan not reduced)



3.1. CARDIOVASCULAR DISEASE

hypertension

Hypertension - an increase in blood pressure, and can cause heart disease

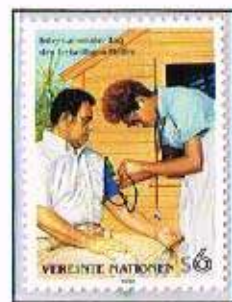


In use 1st to 17th Oct 1993 at Glasgow and Edinburgh 1 die each.



Meter: Francotyp Cm7000/Cm10000

Blood pressure is measured with a sphygmomanometer applied to the arm.



Normal blood pressure is regarded as 'The rhythm of health', in this case the sphygmomanometer remains intact, but 'The rhythm of health' and 'World Health Day 92' are interrupted...



Margin perforation shift

...and essential for a normal healthy heart.



Bromide proof with scan of cachet on reverse

Hypertension can result in damage to veins (varicose veins) and to many of the internal organs and...



2.2. A BLOOD SCIENCE IS ESTABLISHED

haematology comes of age

Until the invention of the microscope, little was known of the composition of blood.

Two early microscopists contributed greatly to our knowledge of blood cells.

Leewenhoek invented a simple microscope and first described red blood cells in 1674. Leewenhoek was assisted by Huygens, another early lens maker.



Later Malpighi described red blood cells and capillary vessels containing blood



But the microscopes used were simple, such as this early wooden Japanese microscope, and did not give the finer detail

In 1846 Zeiss established a factory for microscope production, joined by Abbe in 1866 and Schott in 1879. The cooperation of these three men founded the Carl Zeiss Company in 1879, based in Jena, the start of modern microscope technology.



Meter: francotyp C

Types of microscopes from 1845 to 1873

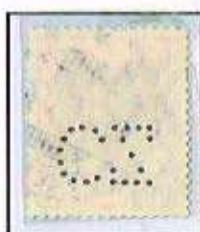


The use of perfins was a common practice within the Carl Zeiss Company (CZ) (Reference numbers taken from German perfin catalogue)

1.CZ,5, 1902-23



1.CZ,7, 1913-23



1.CZ, 1, 1922-38



1.CZ,4, 1913-54



1.CZ,5, reversed



typical stamp perfin applied to



Schematic layout of lenses
Muster (specimen) overprint



Development finally progressing to the electron microscope, invented by Klug.



With these tools blood can now be analysed in greater detail

Biochemical analysis opens up new horizons...



Boerhaave was one of the first to make biochemical studies on blood.

Doctor Joseph Lister discovered that the coagulation of blood did not occur unless blood vessels were damaged, there were no flaws in his theory.



'Doctor Blade' flaw ▲
Caused by surplus ink not being removed from the printing cylinder



stamps perforated on all 4 sides, or stamps perforated on 4 sides in pairs with stamps perforated on 3 sides, the booklet as above containing the 4 x 3 pairs are AVAILABLE IN LIMITED QUANTITIES ONLY.

In 1840 Berzelius extracted iron from blood leading to the discovery by Leon Marchlewski and others of the structure of the iron containing protein, haemoglobin found in red cells.

The structure of haemoglobin was confirmed by Perutz in 1959 by X-ray crystallography

Swedish booklet issued in 1939 to commemorate the bicentenary of The Royal Academy of Sciences. Until 1940 booklets were prepared by hand, booklet panes were taken from sheets containing 10 x 10 stamps, 2 strips of 5 x 2 stamps were stapled between the covers, and contained either



Muller studied the chemical and physical properties of lymph, chyle, and blood.



Bayern PTPO stationery card

Bernard studied the exchange of gases in red cells and observed the resultant colour changes *trial colour plate proof*



Gesellschaft für Morphologie und Physiologie zu München.

Einladung

zur Sitzung am Dienstag, den 20. November Abends 8 Uhr
im „Hotel Stachus“ (Speisesaal, 1. Stock).

Tagesordnung:

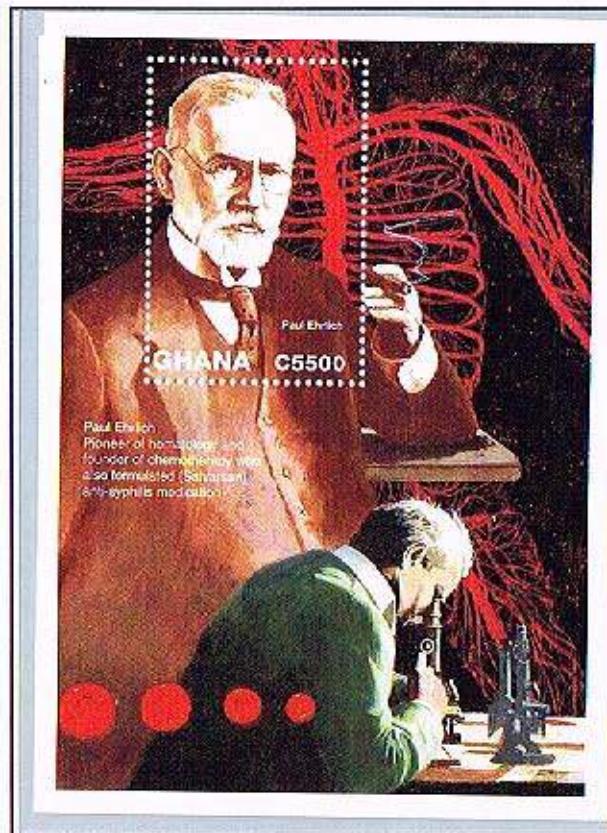
1. Herr Prof. Dr. Rückert u. Herr Prof. Dr. Mollier:
Über die erste Entstehung des Blutes und der Gefäße bei den Wirbeltieren. 2. Teil.
2. Herr Privatdozent Dr. L. Neumayer:
Demonstration des Gehirnausgusses eines fossilen Primaten.

But up to the 1900s many hypothesis on blood cell formation and morphology existed...
...Ruckert and Mollier lectured on the subject at the Munich Society in 1900....

2.2. A BLOOD SCIENCE IS ESTABLISHED

the formation of blood cells elucidated

Three 19th century scientists establish the formation of blood cells



Ehrlich classified the different types of white cells, by staining the cells using different coloured dyes, some of which are illustrated in the stamp below.

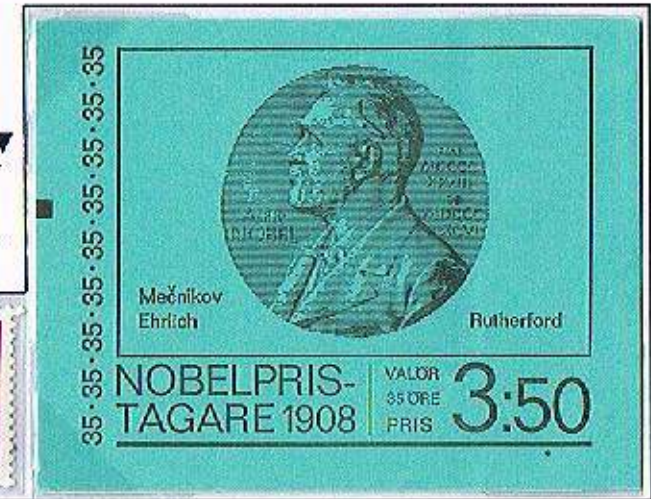


Metchnikoff, a Russian working in the Pasteur Institute, Paris, discovered the ability of white cells to ingest foreign material



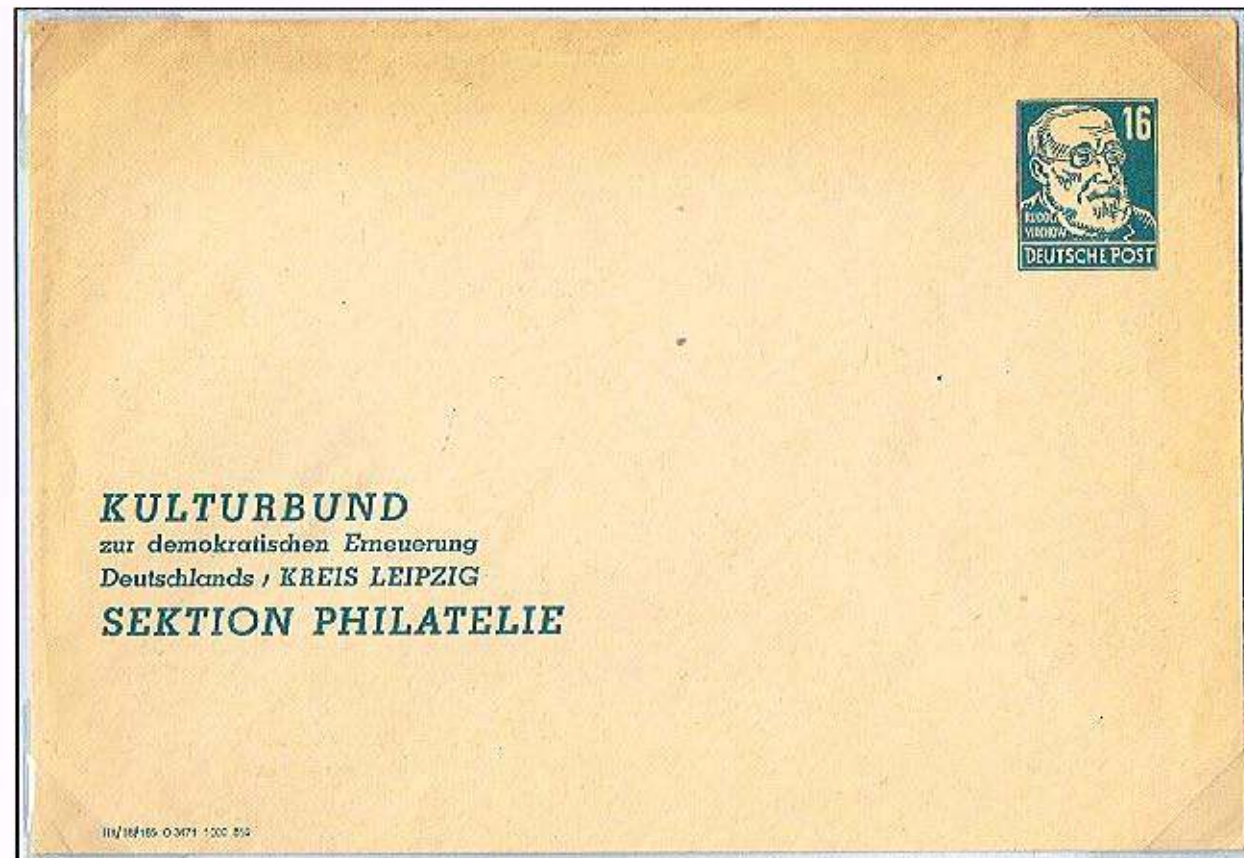
Booklet and stamp from within booklet

In 1908 they shared the Nobel Prize for medicine.

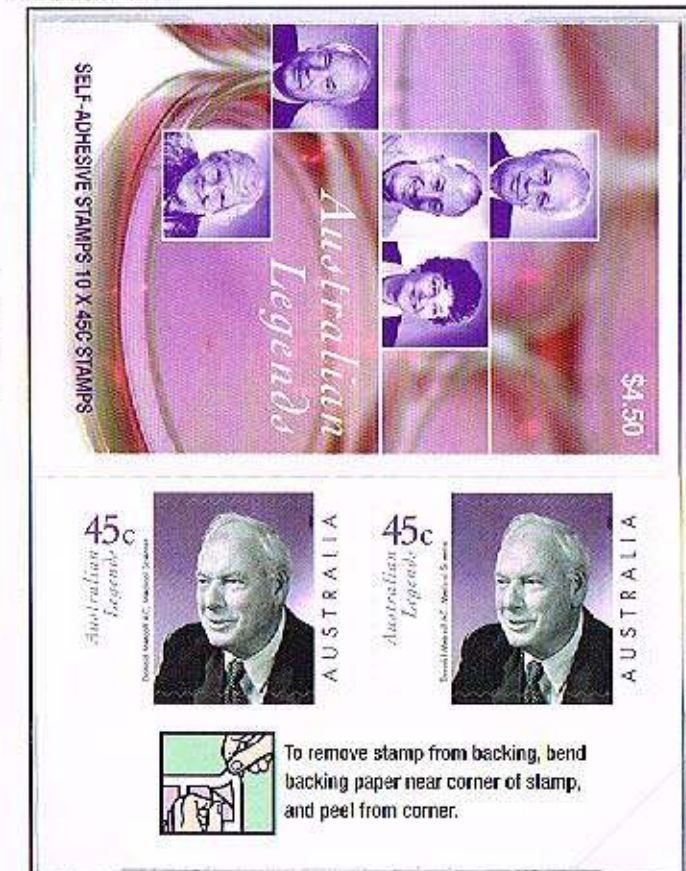


Virchow classified blood cell development, he also described thrombosis and leukaemia.

These discoveries were brought together by Metcalf, who has been called "the father of haematopoietic cytokines" for his pioneering work on the control of blood cell formation. In 1965, co-developed techniques permitting the growth of the various types of blood cells.



First issued in 1948 Russian Zone. Also used on private postal stationery. This copy above re-issued 1952 in DDR, with DDR watermark.



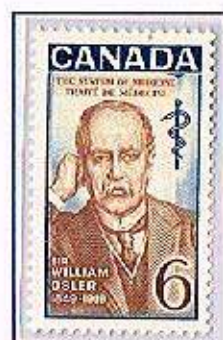
2.2. A BLOOD SCIENCE IS ESTABLISHED

20th century developments

Developments in the 20th century were rapid



Krogh measured the oxygen content of blood and the gaseous exchange between blood and tissue, and Heymans investigated the vasomotor control and the regulation of blood pressure



Osler elucidated the role of blood platelets in heart disease.

At the 1953 European Haematology Congress, the synthesis & metabolism of haemoglobin, morphology & function of platelets and theories of blood coagulation were all discussed by eminent haematologists of the day.



R-registration label from mobile post office, 1953 Haematology Congress, Amsterdam

Bogomolets' contribution was on blood circulation.

He later became Director of the Institute of Haematology, later named after him.

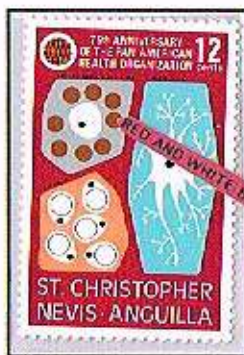


With the developments previously outlined, the study of blood - haematology was now to become a major discipline within the hospital, with research into blood composition.

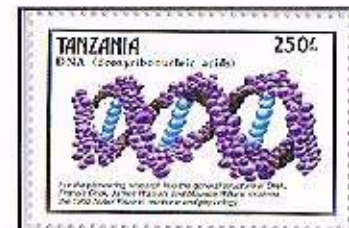
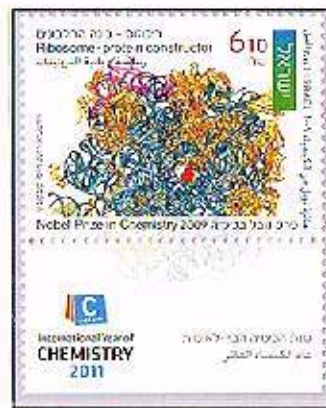
2.3. COMPOSITION OF BLOOD.....

a complex mixture of cells suspended in plasma

Blood cells and plasma are made of proteins, DNA is essential to the production of all proteins



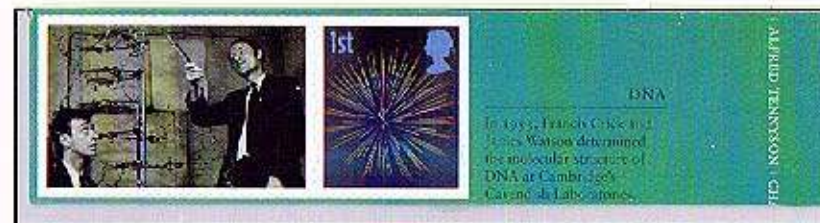
Proteins are made by ribosomes, contained in the main body of the cell,



DNA (deoxyribonucleic acid) is the molecule that contains the genetic code of organisms, and tells the ribosomes what proteins to make. Within cells, DNA is organized into long structures called chromosomes.



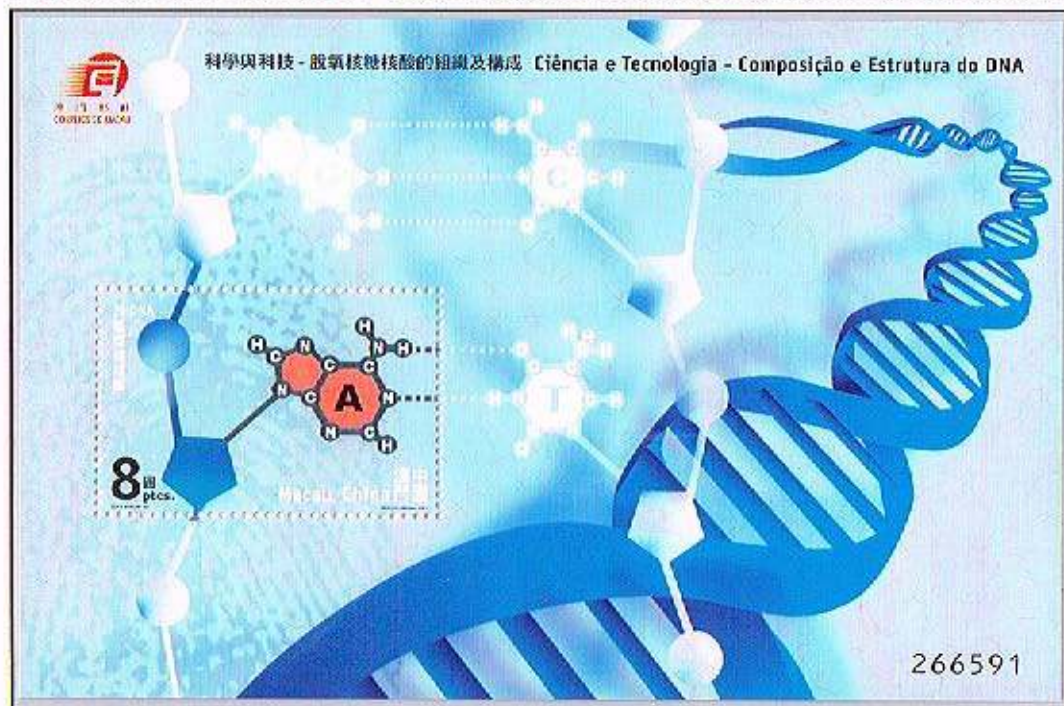
Mendel, by his work on cross-breeding pea plants would lead to the science of modern day genetics



In 1953 Watson and Crick proposed that DNA was a double-helix structure.

Part of limited edition sheetlet issued by Royal Mail for the 800th Anniversary of Cambridge University

DNA is made of 4 nucleotides - Glycine Cytosine, Thymine, and Arganine (shown below).

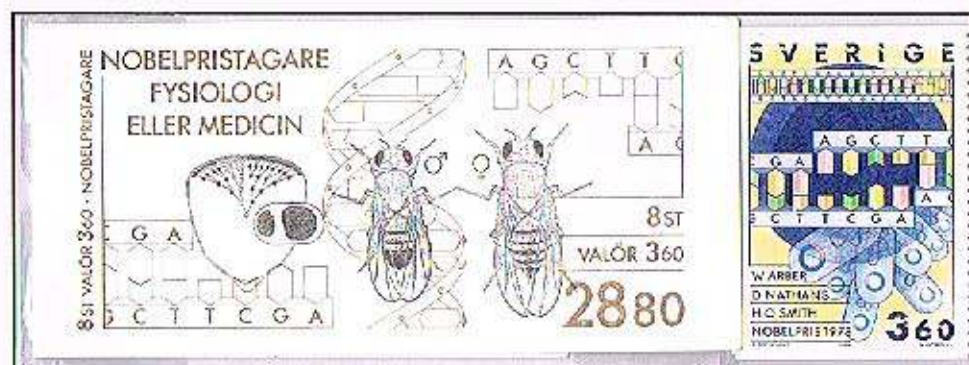


They are grouped in triplets - table of nucleotides of RNA. In RNA Thymine is replaced with Uridine, eg GCT is GCU in RNA and GCT in DNA



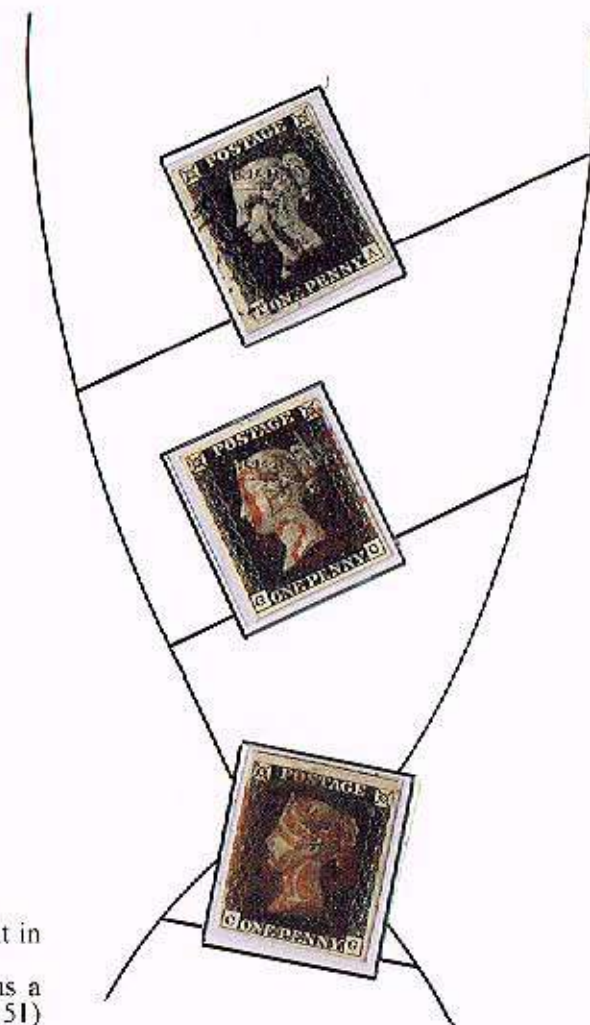
enlarged section

The 4 nucleotides are paired together - Arganine with Thymine, and Glycine with Cytosine



The DNA chain is illustrated with the QV line engraved 1d issues and the relevant position letters. The black Maltese cross links the T-A bonds, and the red Maltese cross links the C-G and G-C bonds.

An error in the sequence of amino acids can result in the production of an abnormal protein. Queen Victoria had such an abnormality she was a carrier of the blood disease, haemophilia (see page 51)



2.3. COMPOSITION & FUNCTION OF BLOOD

plasma

The liquid part of blood is called plasma



Purkyně first used the term plasma.

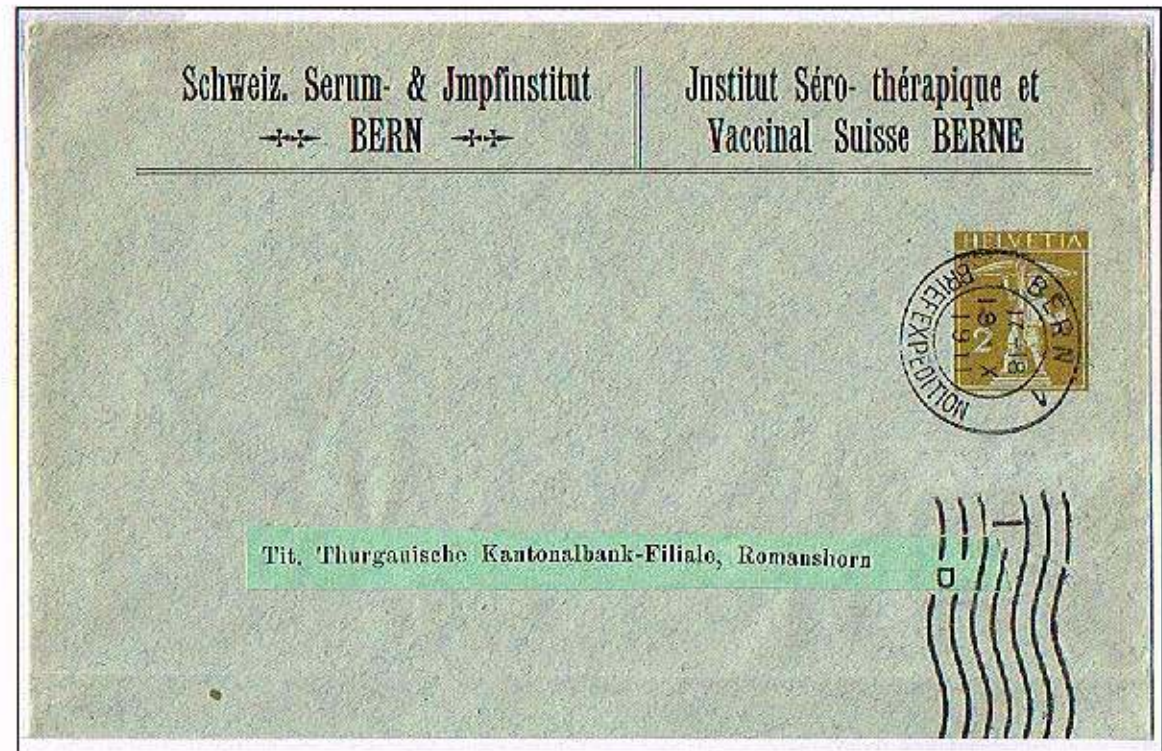
The liquid plasma contains coagulation proteins such as fibrinogen



Serum is plasma after blood has coagulated

During coagulation fibrinogen is converted to fibrin, a jelly like substance which stops bleeding from an injury

Later the fibrin is removed by a process called fibrinolysis



Other essential substances are carried by plasma such as ...



albumin

Meter: francotyp C

vitamin B12



Iron (Fe)



enlarged section



salt (sodium chloride NaCl)



Muestra perfin, sample proof

Printed to private order,
postal stationery.
Printed paper rate

glucose



Enlarged section - the design shows the incorrect formula for cori ester, a derivative of glucose, a line is incorrectly drawn to the second 'O' in 'OPO 2-3'. It should be drawn to the first 'O'.

Plasma also transports waste products eg urea, away from tissues

Many of the substances mentioned above such as iron and vitamin B12 are essential for red cell production...



Most creatures are dependant on oxygen, and transporting oxygen to all parts of the body is a major function of blood...



Meter: postalia

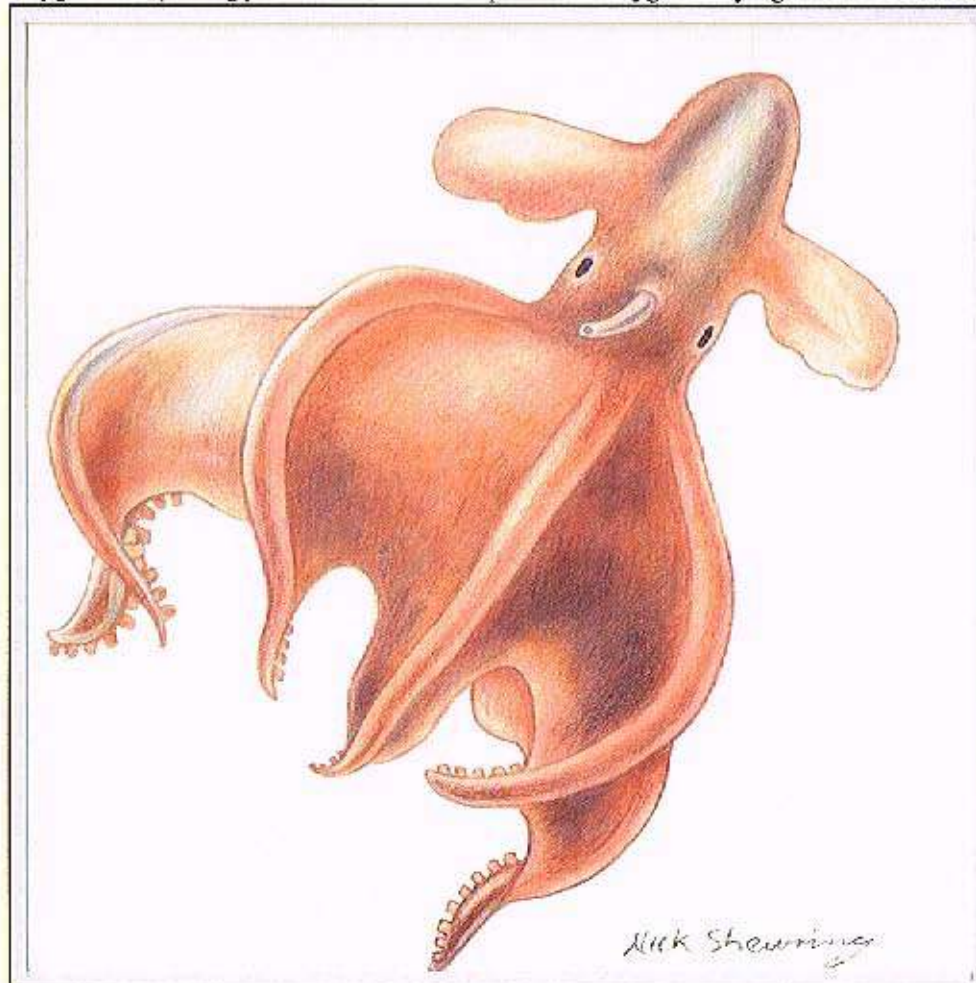


... several Antarctic fish species including the the Mackerel Ice fish (*Champsocephalus gunnari*), have nearly colourless blood as a consequence of a total lack of oxygen carrying cells. They can still flourish because of the high oxygen content of the cold waters of the Southern Ocean and in part because oxygen is absorbed and distributed directly by the plasma.

Like many related Antarctic fishes, they also carry compounds in their blood that prevents the blood from freezing

To survive in the deep ocean, octopuses evolved a copper rather than iron-based blood called haemocyanin, which turns its blood blue. This copper based protein is more efficient at transporting oxygen than haemoglobin when water temperature is very low and not much oxygen is around.

... the majority of animal species 45% of their blood is made up of oxygen-binding and oxygen-transporting proteins contained in specialised oxygen carrying cells of the blood...



Original artwork by Nick Shewring for the 2016 (£1.22) and 2017 (66p) British Antarctic Territory stamps. The printers Pobjoy Mint scanned the image of this artwork into a pre-designed computer template both for the 66 stamp and the £1.22. The image in the 66 stamp is slightly larger and at a different angle to match the stamps that were printed in se-tenant format.

In most animals including humans it is haemoglobin, an iron containing protein contained in the red cells which carries oxygen to all parts of the body, it is haemoglobin that gives blood its red colour.

... below red cells viewed under the light microscope and below right (stamp) red cells viewed under electron scanning microscope



Fig. 311.

Schmidt, wonach in 400 Th. Blut

Fig. 311. Blutkugeln des Menschen. a. Von der Fläche, b. von der Seite, c. geldrollenartig vereint, d. durch Wasser kugelförmig gewordene, e. durch solches entfärbte, f. durch Verdunsten geschrumpfte Blutkugeln.



dieselben ohne Verdünnung zu sagen für sich. So wichtig es ist, die Blutkugeln genau zu kennen, so alle Untersuchungen des Gegenstandes. Angaben von feuchte Blutkü-

Structure of the haemoglobin molecule, stamp below left, and postmark below right



◀ GB stamp designed by Keith Bassford, based on an original black & white drawing by A. Kolliker, in 'Handbuch der Gewebelehre' published 1859 (copy left). Authenticated and signed by K Bassford

REFERENCE FOR BLOOD CENS.
RE AMUSEO FOR ARTWORK (4)

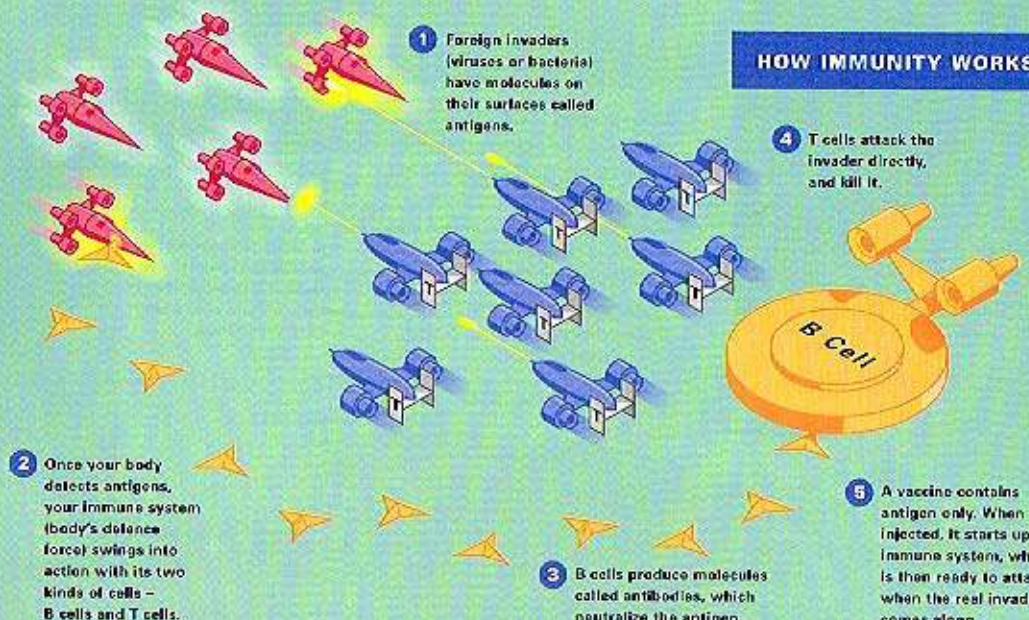
2.3. COMPOSITION OF BLOOD

white cells & immunology

The role of T & B lymphocyte cells (type of white cells) in the blood is an essential component of the immune system

The role of T & B cells in the immune response is described below

WORLD CHANGERS A Tale of British Scientific Genius



Pages from
GB 1999
prestige
booklet and
a complete
booklet.



Scanning electron micrograph of a white cell (lymphocyte) cross section of a white cell under the electron microscope



It is the role of these cells in the immune response that produce antibodies in the plasma against infectious diseases.

The serum/plasma antibodies are purified by specialised laboratories for further use and research.



meter: Francotyp "C"

Postal Stationery issued 1875 with Medical Certificate of successful vaccination dated 1875. The Vaccinations Act of 1867 and 1871 permitted all Boards of Guardians to appoint an officer to enforce the law of vaccination. Type I and type II - different print of Queen Victoria's hair ribbon



Vaccines can be manufactured which can trigger the immune response against diseases such as smallpox and others.

VACCINATION CERTIFICATE.

To Mr. JEFFERIES
Vaccination Officer

of the Aylesbury Union [Parish]
(Postal Address) 11, Granville Street,
Aylesbury, Bucks.

To Mr. T. FR
Vaccination Officer
of the _____
(Postal Address) _____



2.4. EXAMINATION OF THE HEART AND BLOOD.....

technology helps us to understand and diagnose diseases

Many of the components of the circulatory system can be examined in great detail...



Chromalin proof by Walsall Security Printers in which full color proofs are produced directly from the colour separations prior to final production of the printing plates.

Taking the pulse is the simplest procedure, an increased pulse rate of 238 can occur after strenuous exercise



Normal stamp and reverse of imperf with control number 238



The stethoscope invented by Rene Laennec in 1816, enabled him to hear and correlate the different sounds of the heart

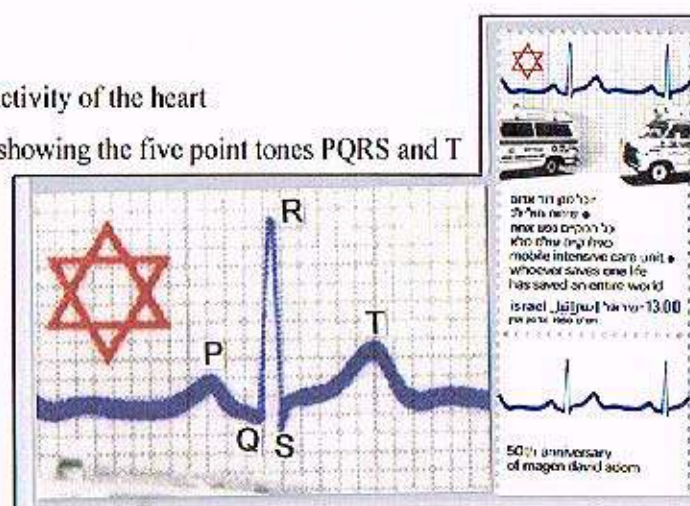


The Electrocardiograph (ECG) monitor records the electrical activity of the heart

ECG tracing showing the five point tones PQRS and T

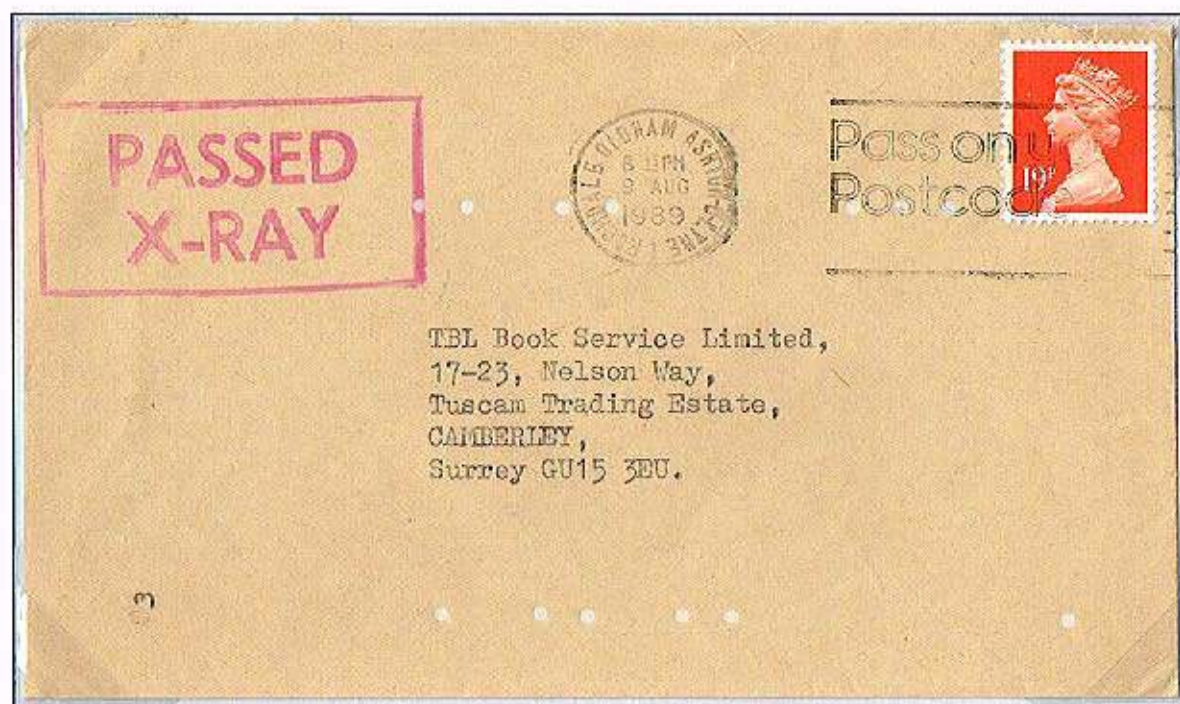


Black print - ungummed imperforated proof printed in black from the original printing plates and affixed to Government information folder.



Enlarged section

ATM (Automatic variable stamp) label, 2006



X-rays are an important tool for the diagnosis of heart disease, but can also be used for the detection of HIV contaminated needles and explosive devices inserted into envelopes and packages.

Cachet applied by Royal Mail Security Mail Screening Services following X-ray examination



Other techniques such as computed tomography (CT scan) can show the heart in 3D



2.4. EXAMINATION OF THE HEART AND BLOOD

blood analysis

Blood analysis is an essential part of a doctors examination



Meter: Pitney Bowes R series



Taking blood for analysis,



even from small babies and foetus reverse of stamp (not reduced)

...with special blood sampling devices



Meter: Francotyp Cc



Meter: Francotyp-Postalia, digital ultimail 30

The examination of blood cells under the microscope may indicate the presence of certain diseases such as...



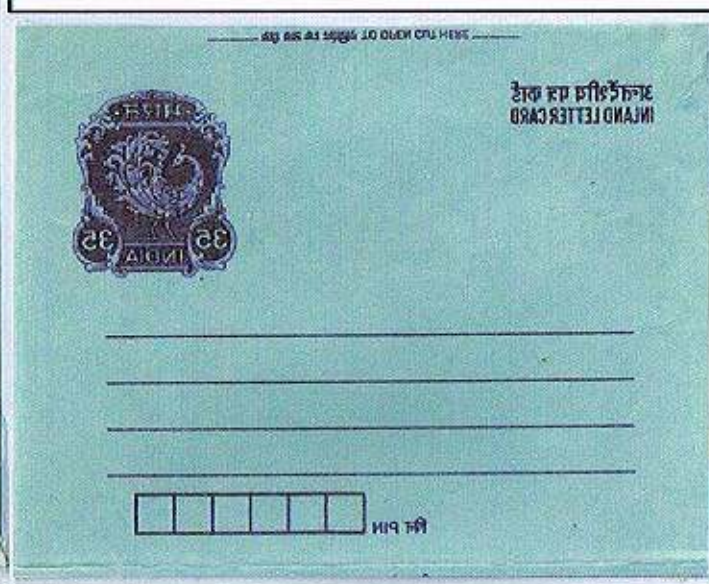
Reverse of stamp (not reduced)

leukaemia cells

presence of sickle cells in sickle cell anaemia .



The reverse printing has made the instructions for preparing a blood slide for microscopic analysis difficult to understand, but the diagram although a mirror image of the original can still be understood.



Staining the cells with special dyes (Fields stain) may show malaria parasites



Reverse printing error on inland letter card - scan of reverse

2.4. EXAMINATION OF THE HEART AND BLOOD

techniques used

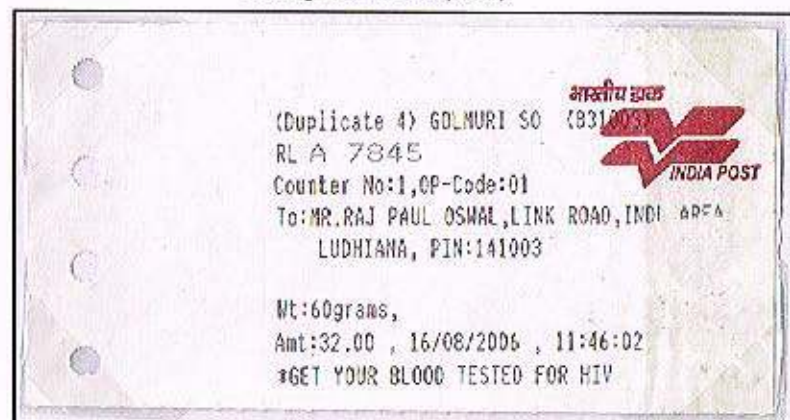
Analysis of the blood constituents

465



Issued stamp and reverse of imperf with control number 453
Blood glucose levels were originally measured by a method devised by Folin and Wu, blood glucose can detect diabetes.

testing for AIDS (HIV)



▲ Receipt issued to sender of registered letter etc.
Slogan in use for only one day at one post office only.



Early laboratory equipment for blood glucose estimation Folin & Wu method (blue tubes), a Duboseq colorimeter is also illustrated to measure the amount of blue colour change.

Colour shift, in UL corner block, caused by paper crease on LR stamp occurring after application of yellow, cyan and black but before magenta which is shifted to left. ONLY KNOWN BLOCK OF 4



Modern day measurement of blood glucose



Special blood dilution pipettes used for preparing blood, to count cells under the microscope...



Meter: Postalia, D2/D3

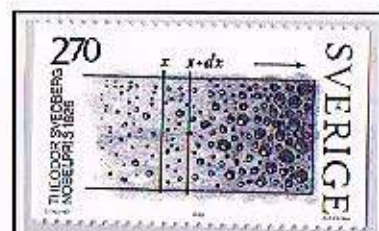
...the method of counting cells under the microscope was automated by machines such as this early Technicon automated analyser (1970's) similar to that used for blood counting...



...which have now been replaced by more advanced blood analyser systems.



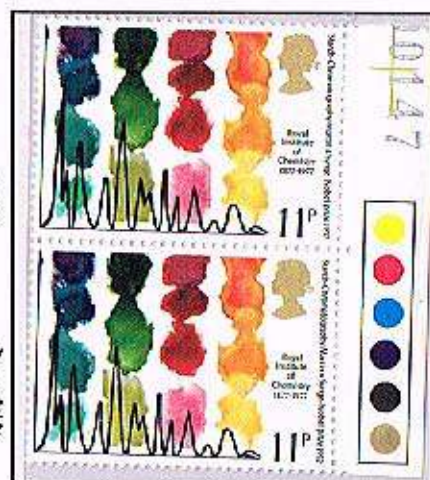
Meter: Pitney Bowes, 6300



Chromatography & electrophoresis will separate different proteins, amino acids etc, these separated elements can be stained by special dyes as shown on right



Printers traffic light colour check sequence, shows all the separate colours used in the stamp



Photometry can be used for the chemical analysis of plasma.

Meter: National Postal Meter Co.



...testing laboratories

The type of equipment used for analysing blood can be supplied by specialist hospital suppliers such as Günther Wilke in Germany and Health Care Products Ltd. of Hong Kong.

Products Limited
Exporting to:
 Hospital Products
 Dental Products
 Pharmaceuticals
 Laboratory Equipment

TSAT T57 MUL
 27.2.85
 HONG KONG

PB
 396

HONG KONG
 POSTAGE PAID
 0.40

Blood testing laboratories:

[illegible]

Mannbrunze 6. 8. 1917.

Liebe Freunde!

Habe eure Karte erhalten und habe mich sehr gefreut, dass ihr noch an mich denkt, die besten Grüsse sendet auch euer Freund Gummert. Grüßet auch meine Liab. auf Wiedersehen

Feldpost.
MAUREUGE
-6. 8. 15. 10-11-
(FRANKREICH)

etw

Kaiserliche Blutunterstützungstelle

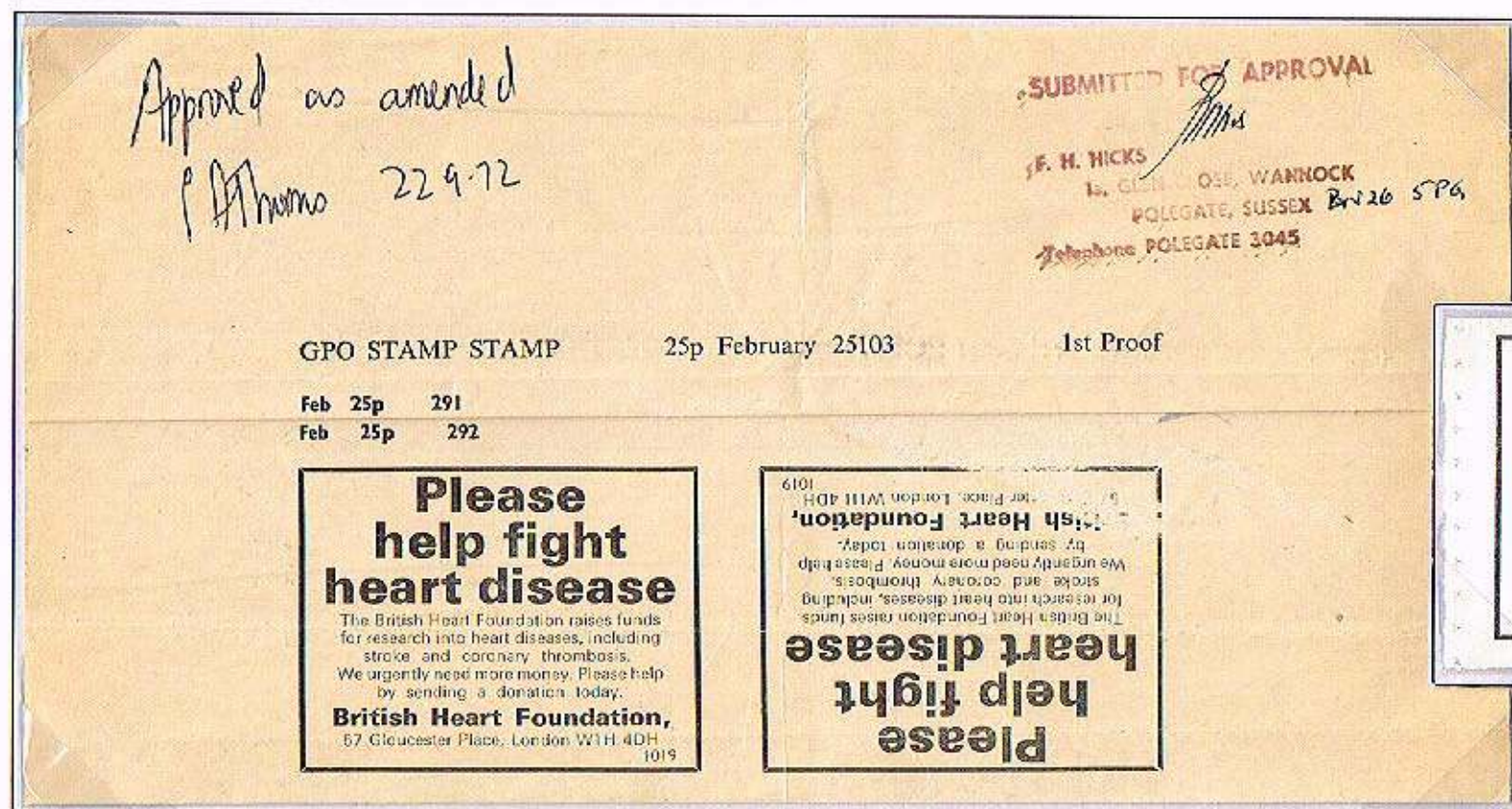
Herrn Kusanke
Töchter
in Cusselode
Kr. Lüneburg
- D. Hannover

Field post facilities used by Red Cross Bhutaners
Blood analysis and heart examination can provide essential information for the diagnosis and understanding of numerous diseases...

DISORDERS OF THE CIRCULATORY SYSTEM

1. CARDIOVASCULAR DISEASE

blood requires a healthy heart and circulation
what chance when the heart does fail



Diseases of the heart and circulation are two of the most common causes of death, and are on the increase. Coronary thrombosis, a blood clot in the blood vessels of the heart is a major cause of heart disease

First proof of advertising panes for 1973 booklet (folded to show the British Heart Foundation pane only)



Thrombosis or clotting of the blood within the blood vessel can be caused by an abnormality in the haemostatic mechanism, one such abnormality is factor V Leiden or Leyden named after the town where it was first discovered in the population.



The pale area on the error below right is indicative of damage caused by a thrombosis



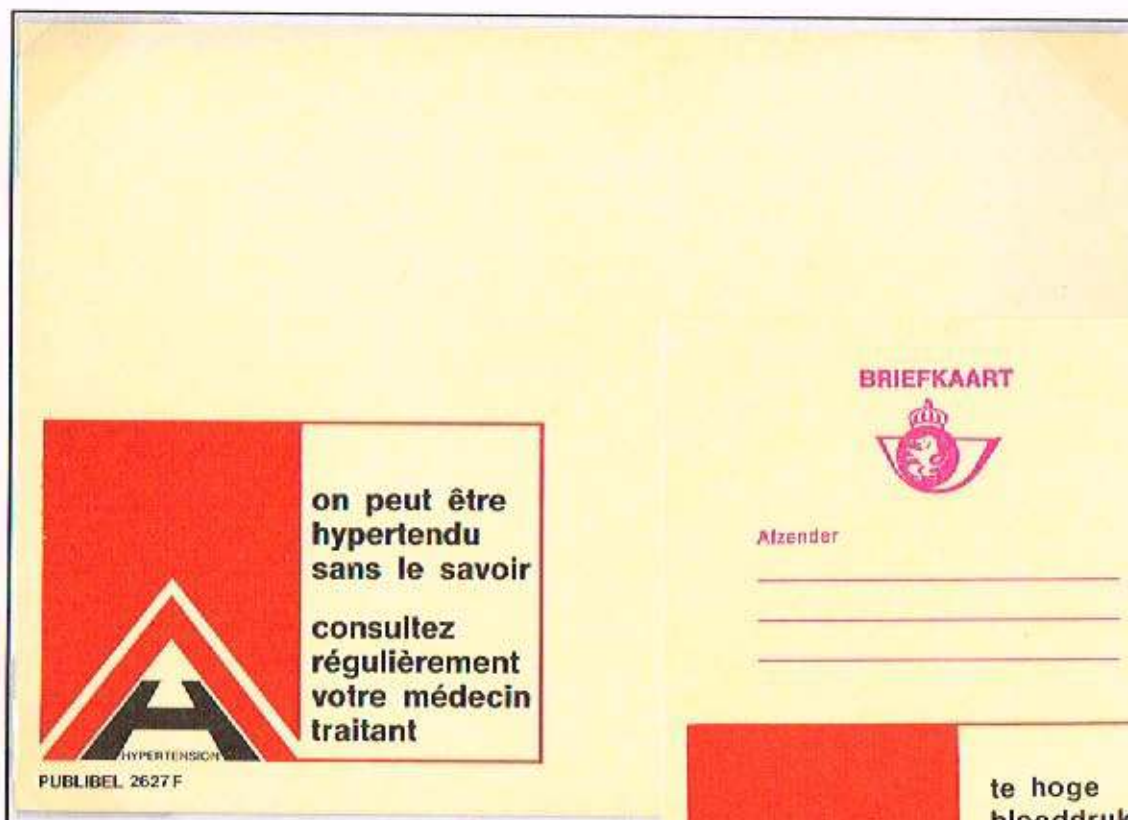
Colour variation

3.1. CARDIOVASCULAR DISEASE.....

hypertension

... can be present without realising it...

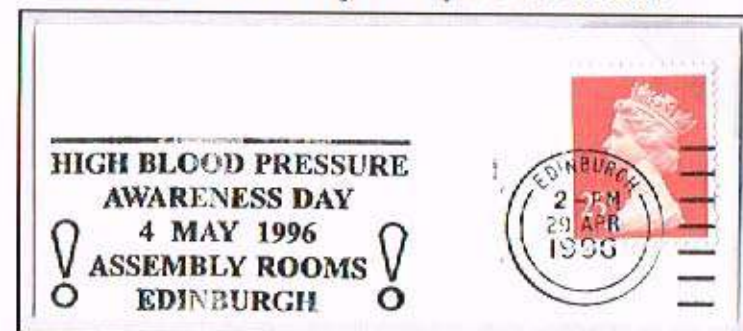
...so blood pressure must be checked regularly, as these publibel cards advise



Belgium publibel cards issued from 1933 to 1984, text and pictures provided by the advertiser, Belgium Post then assigns the unique publibel number to each design.
 ▲ French (F) language, preliminary publibel card, with number added but before the indicium and other official text and markings are added by Belgium Post
 ▼ Flemish/Dutch (N) language final publibel card



Public awareness of high blood pressure is essential



1st day of use - 4 dies in use at Edinburgh 29 Apr to 1 May 1996

The use of 'la vasculose', a hydrocarbon substance constituting the hard part of plants and practically insoluble, was thought to help regulate blood pressure, as well as regaining youthfulness and detoxifying your body!
 However, it is more beneficial to prevent hypertension.



1928 French postal cheque advertising envelope

3.2. POOR LIFESTYLE HABITS.....

Hypertension and heart disease can be caused by...

...can cause circulatory complications



... stress...



Meter: Pitney Bowes, CV

...overeating ...



... and salt, once thought to be 'jolly good' ...



Meter: Neopost



...but now considered bad for you.



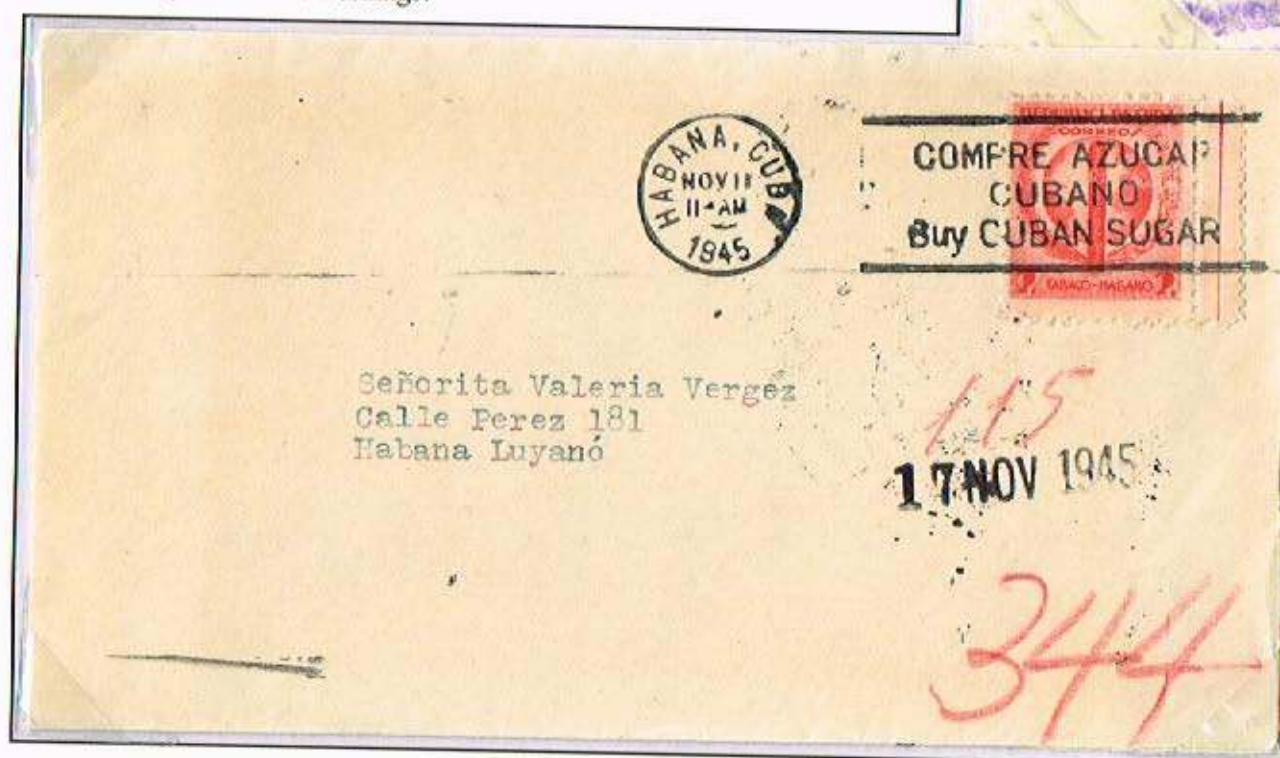
Miscut perfs

... excess dairy products, such as milk, butter etc...



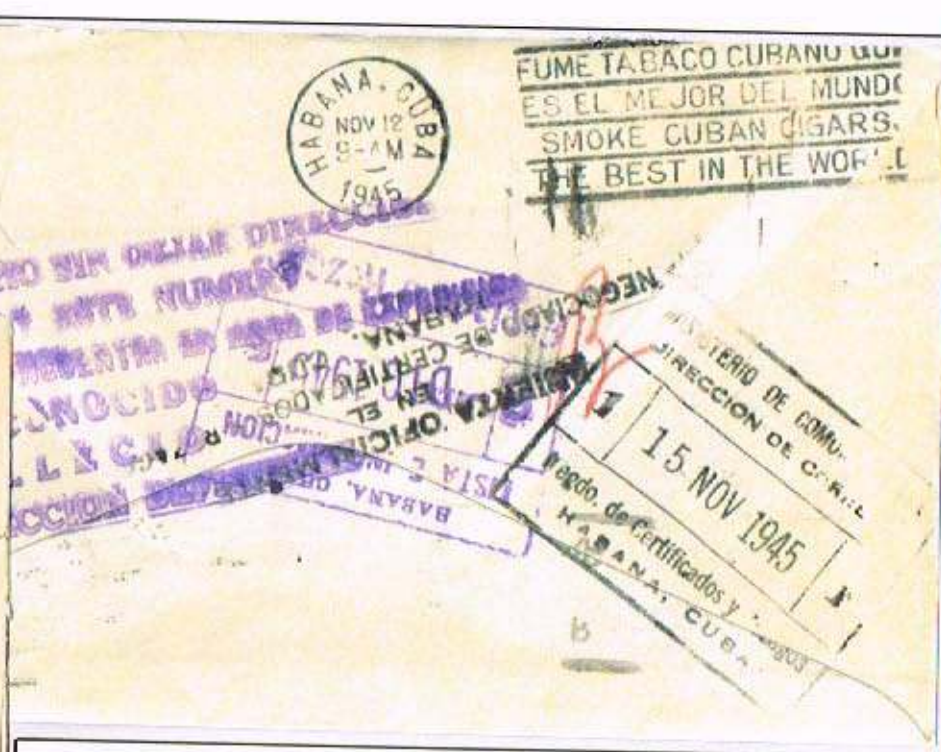
Part of French booklet pane

Two other substances which can lead to blood circulation problems are excess sugar and tobacco, a double message on this cover to buy both, but with no warnings!



17 NOV 1945

344



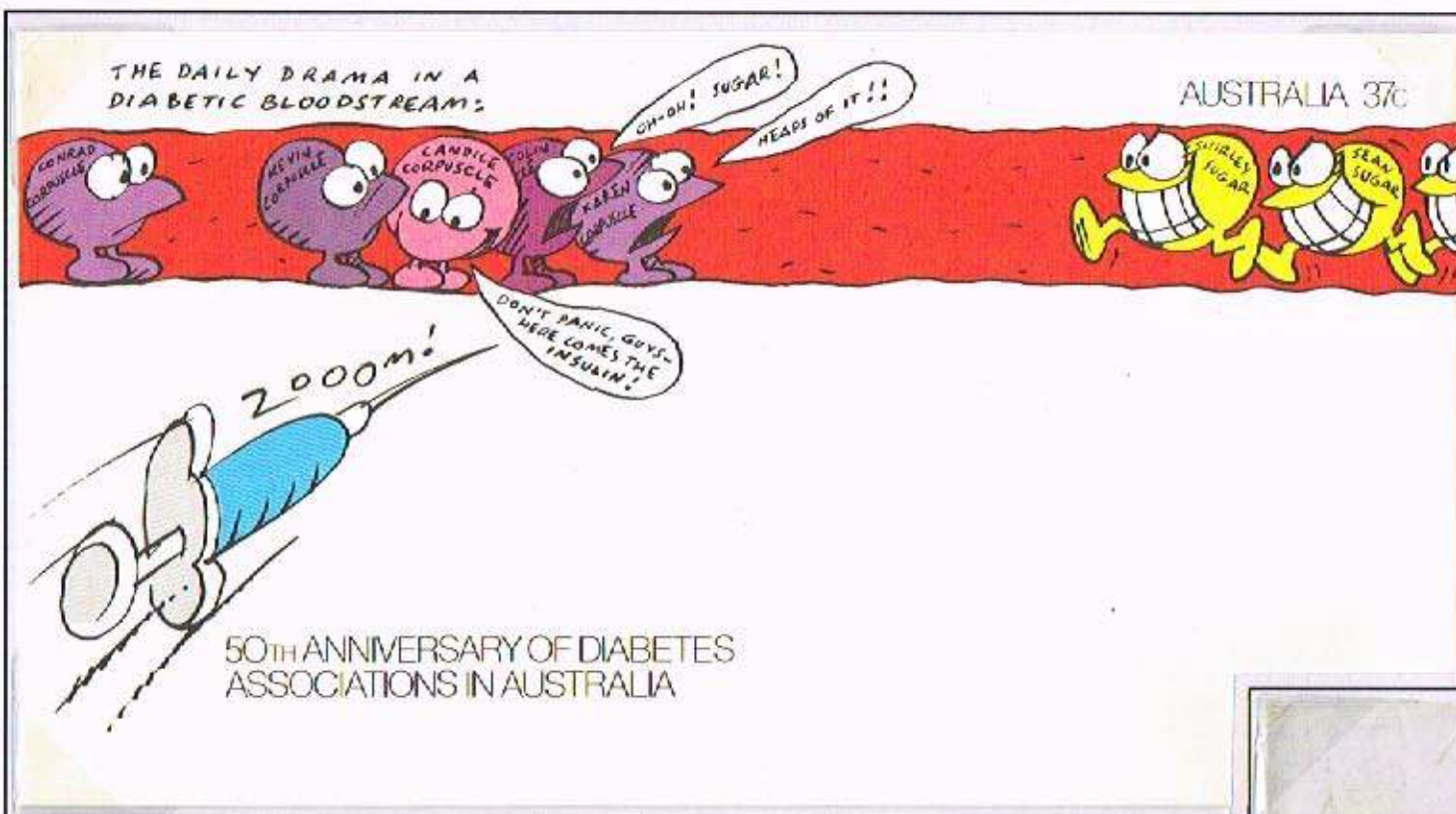
Sugar cancellation used on 2c cigar stamp, letter undelivered and reverse cancelled with a cigar cancellation. (not reduced)

Excess sugar in the blood can result in other problems...

3.2. POOR LIFESTYLE HABITS.

diabetes

A condition resulting from the failure of the body to regulate sugar levels in the blood.



First recognised by Minkowski as a malfunction of the pancreas.



In type I diabetes, the pancreas produces insufficient insulin to regulate blood glucose levels.

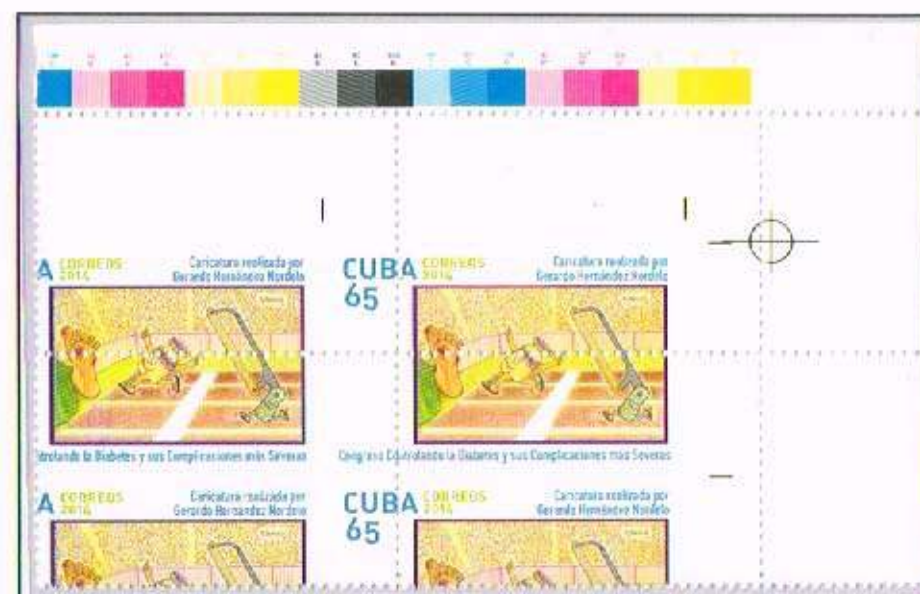
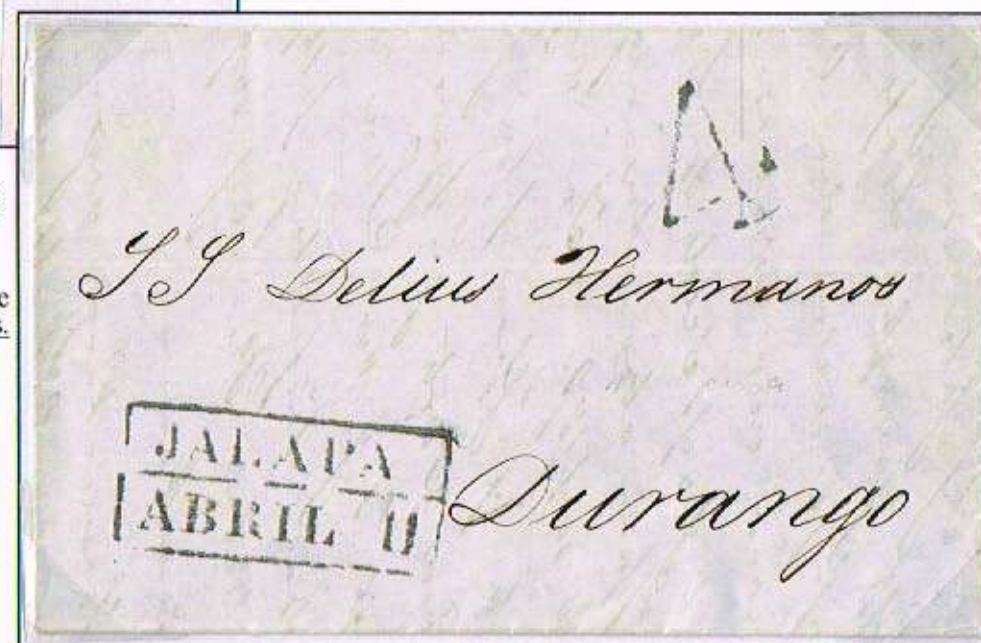


Cultivation and refinement of cane sugar has led to an increased sugar intake in Western diets, together with a lack of exercise, has resulted in the failure of the body to control increased blood glucose levels and thus prevalence of type II diabetes, in later life..



Some medicines will help diabetes, Jalapa in Mexico derives its name from 'spring in the sand', the peppers that grow in the region and get their name from the village are known to reduce blood sugar in diabetes ►

Diabetic complications as a result of poor circulation, can affect the limbs and extremities of the body and require more extreme treatment such as amputation of the affected area, such as the toes.
Below right: Cuba perforation shift resulting in 'toe amputation'



3.2. POOR LIFESTYLE HABITS

the perils of tobacco

Columbus first observed the native people of the Caribbean smoking tobacco in 1492.



Jean Nicot introduced it to France in 1556, the substance nicotine derives its name from his surname.



The portrait on the issued stamp of Nicot, is actually that of Jan Nicquet a Flemish merchant

Raleigh is generally credited with introducing tobacco into England circa 1585.



By the end of the 19th century smoking had become a 'popular addiction'. Many countries were now cultivating tobacco, on an industrial scale,



Tobacco plants which ever way you looked!



It was also an economic necessity for the national debt.



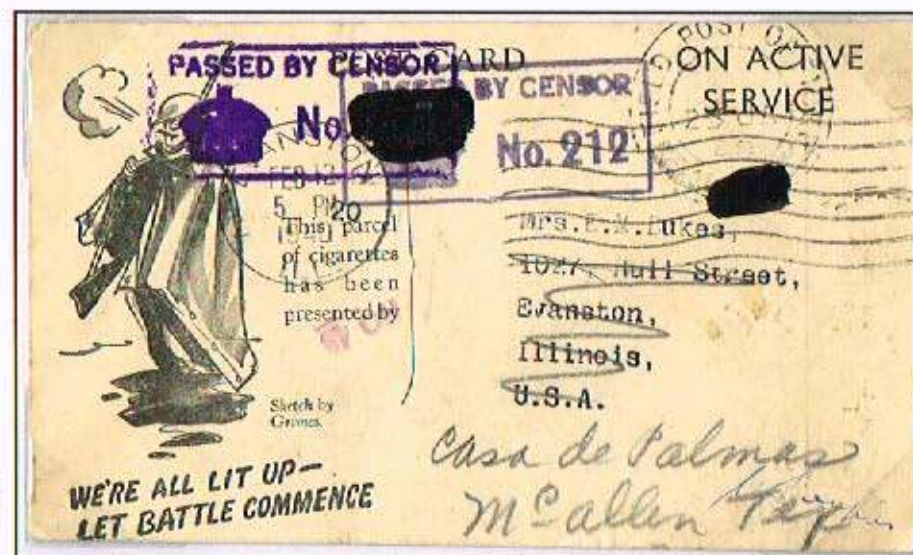
With cigarette companies advertising their products



These cards are the smallest postal stationery ever to be forwarded through the post. They were inserted inside packs of Atlas cigarettes, the buyer was asked to complete the card and return it to Austin Walsh & Co. Scan of reverse on right

First printed in 1892 by the Government Office under licence of De La Rue by Wiggins Teape & Co.

But little did people realise how dangerous this plant was. It was seen as a great service to forward cigarettes to troops during WW2, after the success of this scheme in WWI when over 230 million were provided by the British public.



1940 cigarette 'thank you' reply card for parcel received through the Overseas League Tobacco Fund, with various censor marks

After WW2 and during the 1950s & 1960's it was realised that tobacco smoking was harmful to health, by the 1980's campaigns to discourage smoking were well underway
◀ official logo designed by the International Green Cross Society

Proof sheet showing FDI cancel in four settings in different colours so the correct position and colour could be chosen for the special cancel, for the 1993 Tonga 'health and fitness' set of stamps, (see example p31)



Smoking had now been linked to cancer, heart and circulatory diseases but prevention of circulatory diseases is possible by stopping smoking and by other methods...



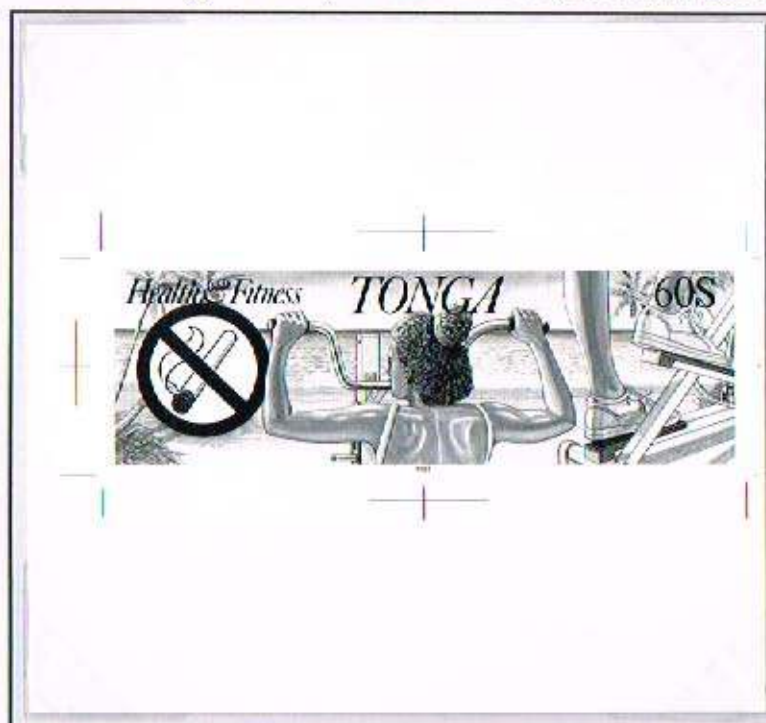
3.3. PREVENTION IS BETTER THAN CURE

cardio-vascular disease can be prevented

Exercise is a great way of improving the circulatory system



Meter: Francotyp-Postalia, EFS3000/NEF300, specimen, without place name and code



...but paying the wrong fee at the gym, may raise your blood pressure as well, not a good idea!



▲ On left - photographic first proof with wrong value (60s), and issued stamp right ovprinted with SPECIMEN to show what the correct value is (80s).

Mountaineering is a great way of exercising...

...the indigenous population of the high altitude plateau around Mt. Kilimanjaro have adapted to living at high altitude and as a result have increased the oxygen carrying capacity of their blood and thus excel at long distance running.



Climbing Mount Everest is perhaps excessive, high altitude is detrimental to good circulatory health, it causes the number of red blood cells to increase, resulting in a condition called polycythemia.

Which can result in acute pulmonary oedema or cerebral oedema, as a result of local vasodilation of blood vessels resulting in greater blood flow and increased cardiac output.

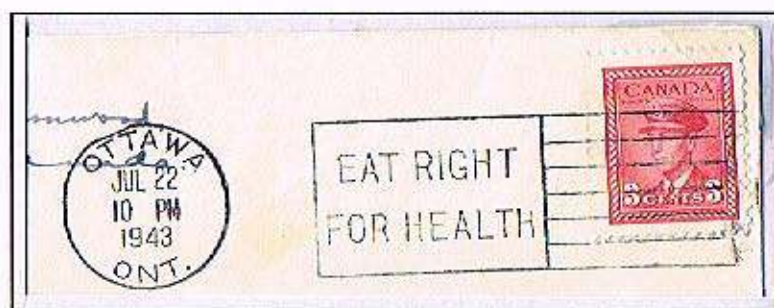
You're never too young to start



3.3. PREVENTION IS BETTER THAN CURE

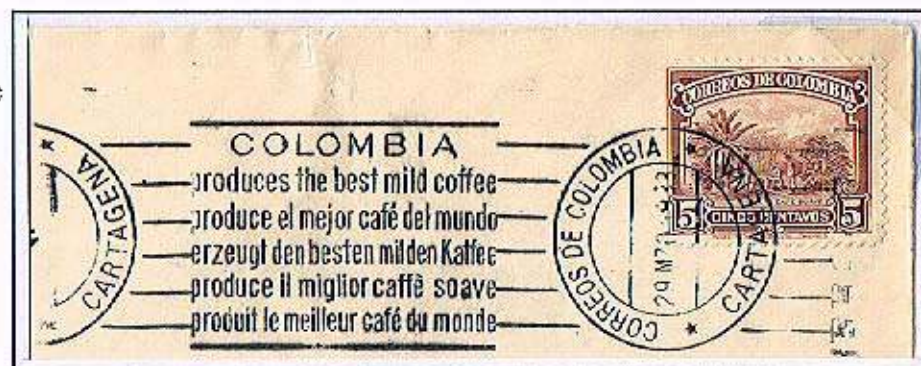
diet

Dietary Awareness - a good diet is also essential to maintain a healthy blood circulatory system,



Certain foods such as coffee will stimulate the heart

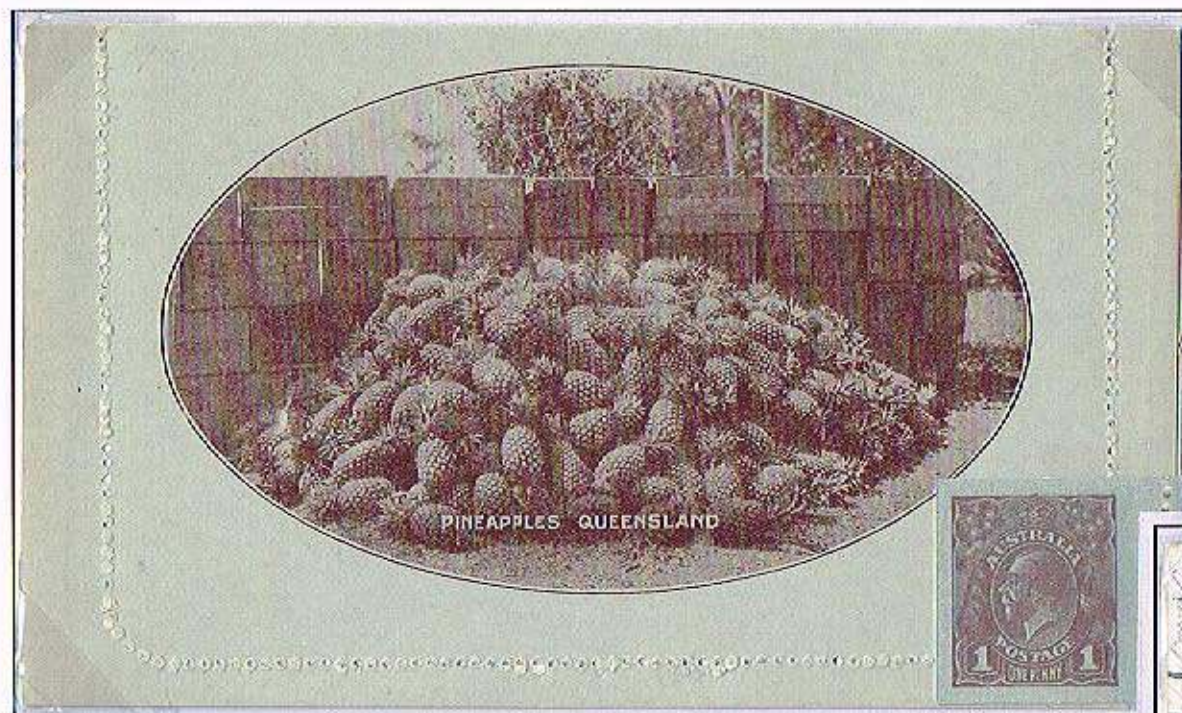
Vitamins are essential for a healthy heart and blood production, fresh fruit and vegetables are a good source of these, 5 portions of fruit or vegetable is the recommended intake



Meter: Francotyp Cc.Mm



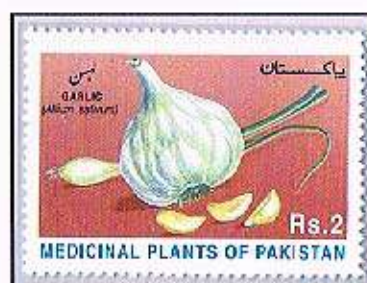
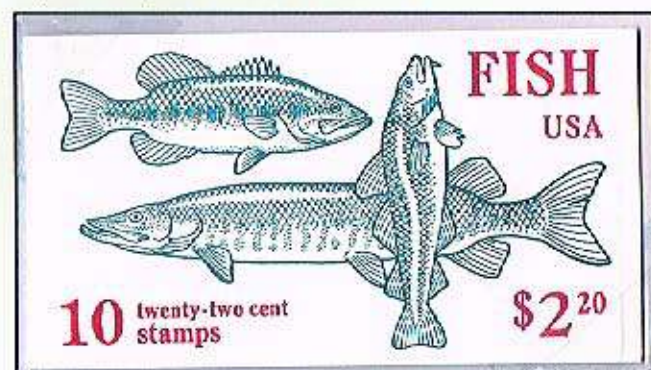
Latvia, 1919 double printed proof, due to shortage of paper printed on fruit wrapping paper Scan of stamp not reduced shown on left.



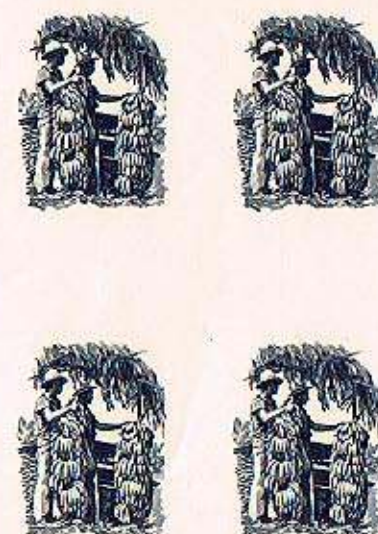
Australia pre-paid letter card

Fish oil and onion plants provide substances which help protect against heart and blood diseases

But advice on the correct diet will often be needed. Field post facility Red Cross Dietary sanatorium ►



Issued as self adhesive and gummed



Waterlow plate proofs for the photogravure vignettes for 1950's 'National Products' issue, and the issued stamp



3.4. TREATMENT OF HEART DISEASE

red wine good for the heart?

Recent reports have shown that red wine provides some protection against circulatory disorders

VIN DUFLOT guérit les maladies arthritiques: Goutte, Rhumatisme, Gravelle, Sciaticque, Asthme, Eczéma, 4 f. Ciro de 6 flacons 1^{er} contre 24 f.

AKSIR guérit les maladies nutritives: Anémie, Pauvreté du Sang, Pâles Couleurs, Époques difficiles, Pertes, Névrose, Maux d'estomac, Palpitations, Faiblesse, 3 f. 50 Un verre à liqueur, 1/2 dose p^r enfants.

Ph^{ie} DUFLOT, 30, Rue Trévise, PARIS et toutes Ph^{ies}.

A LA CHEMISE ÉLEGANTE
1, l'angle des Rues Solignac, 3, & Strasbourg, 1. — NANTES

G^{re} ROUSSE & MOUGIN
CHEMISIERES
Chemises & Siles de Flanelle irréprochables sur Mesure
SPÉCIALITÉ DE LINGERIE FAITE À LA MAIN
Pour Dames et Enfants

FABRIQUE DE SIÈGES & MEUBLES DE FANTAISIE
AMÉLIORATIONS
12, Rue Lafayette, 12
NANTES

REPARATION & RÉGLAGE
de tous types. Maison fondée en 1888

C. SORIN, PHARMACIEN
Élève de l'École Supérieure de Paris

6^{re} PHARMACIE DE LA RUE BOILEAU, 3
NANTES — MÉDICAMENTS — SPÉCIALITÉS
EAUX MINÉRALES
Prix les plus réduits de la région.

VINS de TABLE GARANTIS NATURELS
AUG^{re} CHAZEL
Propriétaire des vignes de SAUVIGNON & PORT-NOUVEAU
7 années VIN CASTAGNOL AMORCEMENT
Spécialité de la Maison
Demandez la Fille-Courant — NANTES

SPECIALITÉ DE GANTS DE PRAUX
Gantier en tous genres
PRIX COURANTS 1/2 — 2/50
Spécialité de Gants sur Mesure

DELACARDE
2 et 4, Passage Pommeraye. — NANTES

MANQUE DE FORCES
ANÉMIE — CHLOROSE
FER BRAVAIS
Régénère le sang des personnes anémiques et chlorotiques.
NOS DÉTAILLANTS: Pharm^{ies} & Épicer^{ies} de la Région

VINS DES RR. PP. MISSIONNAIRES D'ALGER
Maison GARRE
H. DENIS 4, Rue Mainordes
NANTES
Sont recommandés pour Dames, Tenue Individue, la Tenue et la Bretagne
Vin Maquis Malaga (Vin de dessert)
Vin Blanc sec (Vin de table)
Vin Rouge de l'Hérault (Vin de table)
Sont en vente en flacons à prix courants aux Dames

Qui se trouve partout

23^e ÉDITION
CARTÉ-LETTRE

Vendue 5 Centimes

E. Bret
Camille
Nimes

Nouveauté de l'année

Purchased for 5 centimes
a saving of 10 centimes on
the normal postage rate.

This anti-alcohol message has been
emphasised unintentionally by the use
of a Post Office specimen overprint on
lower stamp ▼

Kein
ALKOHOL
im Straßenverkehr
DEUTSCHE 80 BUNDESPOST

Kein
ALKOHOL
im Straßenverkehr
DEUTSCHE 80 BUNDESPOST

"si es el hombre quien hace el vino es el vino el que rehace al hombre" - "if it is man who makes wine it is wine that remade man" but taken in moderation only, excess alcohol can lead to other health complications.

There have been numerous claims of other wonder cures circulatory diseases including marienbad tablets and siero casali for arterio-sclerosis,

25c
REPUBLICA ARGENTINA

50c
REPUBLICA ARGENTINA

50c
REPUBLICA ARGENTINA

25c
REPUBLICA ARGENTINA

"SI ES EL HOMBRE QUIEN HACE EL VINO
ES EL VINO EL QUE REHACE AL HOMBRE"

"SI ES EL HOMBRE QUIEN HACE EL VINO
ES EL VINO EL QUE REHACE AL HOMBRE"

50c
Siero Casali

Austria postal stationery in German or English. Postmarked 1909 with 5 Heller stamp for letter rate and foreign mail. English version sent to USA, German version to Sweden

5 Heller

Sehr ge
Ich gestatte
Tabletten, nach
v. Basch, in Br
bitten, mich in me
verdiente Verbreit
unterstützen und de
ordnen. Ein Versu
Wirksamkeit der T
Gratisproben stets

MARIE
nach Rezept des

Die Marien
schmerzlos auf die
fördern, mich in me
nehme Nebenwirku
wirkungen ist bei d
selben besonders W
wurde zum Teil
sich nicht im Mag
Der Gebrauch
denen es sich um
zuständen, wie S
schmerzen hand
und vorgeschritten
Da die genaue
keit begleiten, so
der Fettleibigkeit
einen unterstützen
Bei den im
scheinungen, die
ist der Gebrauch
ebenso bei Hartle
(Darmatonie) u
störungen, Gemüts

Die Marienbader Tabletten werden
nicht an das Publikum annonciert.
Sollten in den dortigen Apotheken die Marienbader Tabletten
nicht vorrätig sein, wolle man sich an den General-Depositar
für Schweden, Instruktions-Apotheke, Nordstjärnan, Stock-
holm, wenden.

Dear Sir,
I take the liberty of reminding you of the **Marienbad Tablets** prepared from the prescription of **Prof. Ritt. v. Basch, M. D.**, & of requesting you to support me as much as possible in my efforts to make this preparation deservedly known, by prescribing it wherever possible.
It is sufficient to try this preparation once to convince oneself of its efficiency, and I have much pleasure in placing at your disposal a free sample of it.
Yours faithfully
C. W. Barentin,
G. m. b. H.

MARIENBAD TABLETS
prepared from the prescription of **Prof. Ritt. v. Basch, M. D.**, of Vienna & Marienbad.
The **Marienbad Tablets** are a mild & painless cathartic, act mildly & painlessly on the movement mechanism of the intestines & thus promote the evacuation of the bowels, without any disagreeable after-effects. Especial stress is laid in their composition & preparation to avoid any after-effects. This Object is attained partly by the Tablets becoming dissolved not in the stomach but only in the intestine.
They are especially useful in cases of increased full-bloodedness with attendant dizziness, congestion & headache, that is to say in cases of commencing & advanced arterial sclerosis.
As the above symptoms often accompany obesity, it appears advisable to make use of **Marienbad Tablets** in the treatment of obesity.
The Tablets should also be used for women in case of symptoms of full-bloodedness during the pregnancy, in cases of constipation due to the weakness of the intestines (atony of the intestines) and attendant bad digestion and moodiness etc.
The **Marienbad Tablets** are not advertised among the ordinary public.
May be had in most chemists' shops.
If none can be obtained from your chemist, apply to the General Depository for U. S. A. **Joseph Sieke, New-York, City, Monroe Avenue, 174th Street.**

Claims concerning samples not received, &c. are to be addressed to the Head-office:
MOR FEKETE, WIEN, I., KRUGERSTRASSE 16.

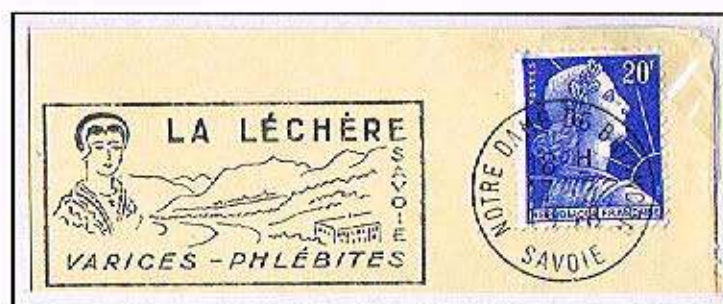
3.4. TREATMENT OF HEART DISEASE...

health spas for the treatment of cardiovascular diseases

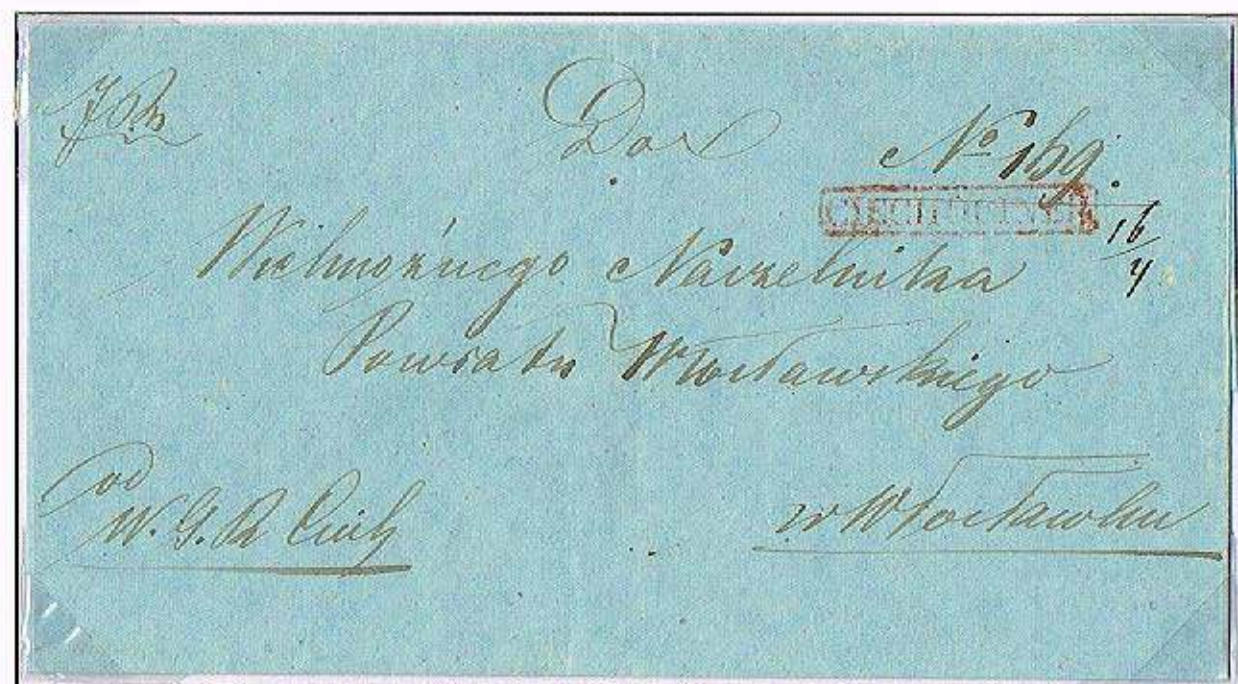
Spas have long been known to be of great therapeutic value in the treatment of blood circulatory diseases...



Official mail forwarded without prepayment between Jan 1st 1870 and Mar 31st 1920. Noted by the rubber stamp 'Frei H. Ablös.' The figure 21 denotes for use in Prussia. More than 30 administrations, had this type of agreement, with the Imperial Post Office, with whom the agreement was signed. Postage was paid once a year.



... the thermal waters of Bagnoles de l'Orne and La Léchère are recommended for the treatment of phlebitis (inflammation of the veins) and varicose veins.

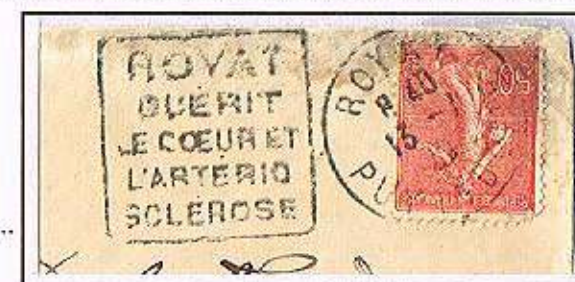


...arterial disease...



Baguins postmarks, with in the 1920's the second date stamp replaced by a tourist advertising slogan

...circulatory diseases...



...arteriosclerosis...



Ciechocinek is a spa town and is known for its unique 'saline graduation towers', the local saline springs are considered to be of great value in the treatment of cardiovascular diseases.



◀ Ciechocinek postmark on letter dated 16/4/1853, on Government business from Racibor Commune, with indistinct seal on reverse.



3.4. TREATMENT OF HEART DISEASE

when the heart fails there is every chance

Diseases of the circulatory system and the heart can be treated, many different types of drugs are used:

Drugs extracted from plants and synthetically produced drugs have different effects on the heart. Plants such as the foxglove (digitalis) and ginseng stimulate the heart.



Heart-regulating beta blockers synthesised by Sir James Black, 1962

Beta blockers are used for the management of cardiac arrhythmias. Propranolol was the first clinically useful beta adrenergic receptor antagonist. Inferior anterolateral view (left side) of the heart and its major blood vessels.

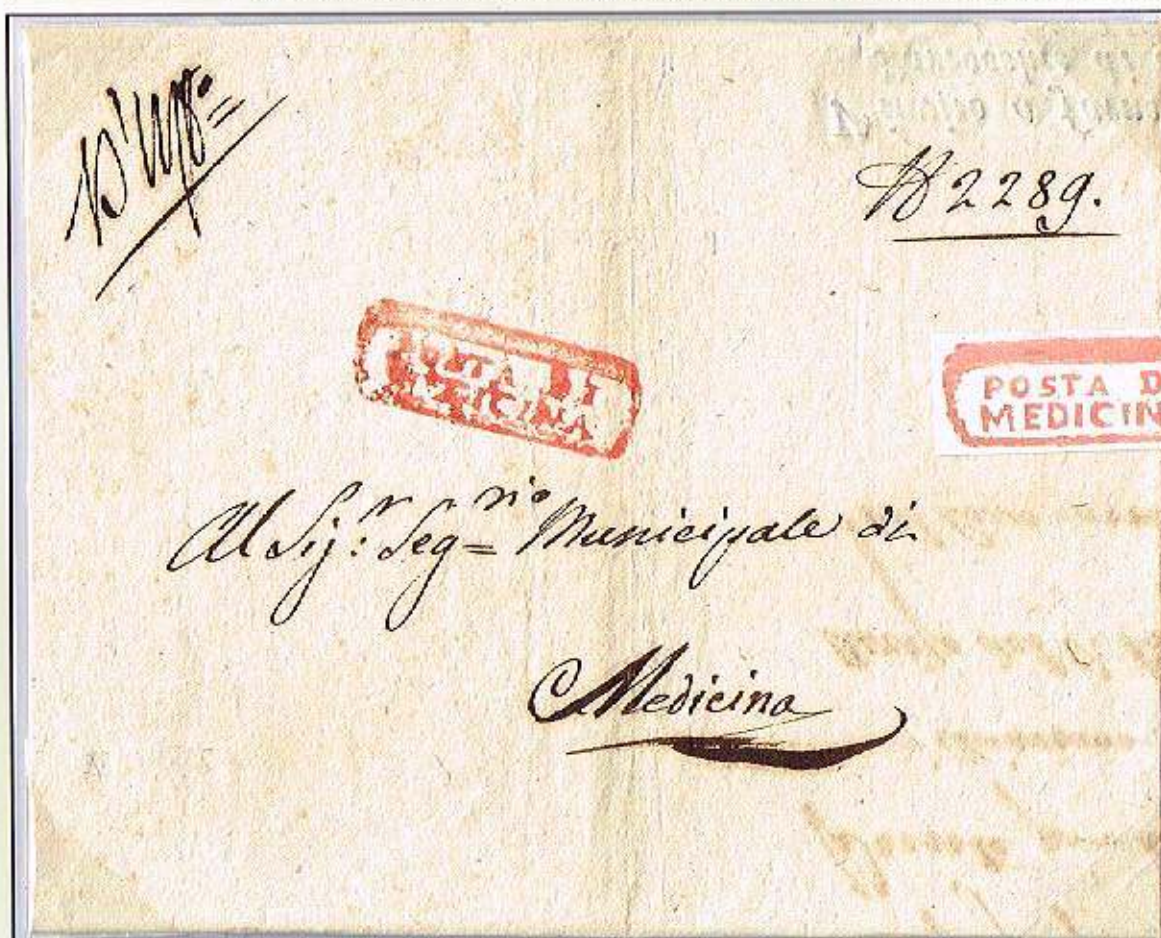


▲ Enlarged section of stamp



Drugs which prevent thrombosis are extensively used in the treatment of heart disease, heparin prevents blood coagulation and thrombosis.

The snake has long been associated with healing, the origins of the name Medicina (in Italian it means "medicine") is from the legend of the Emperor Frederick Barbarossa, passing through the area fell ill and miraculously recovered from this illness because of a snake that accidentally came into his pot of soup, thereafter the town was named Medicina.



▲ 1805 official mail from Castel S. Pietro to Medicina, postmarked on arrival with red framed 'POSTA DI MEDICINA'.

Ein neuer Mensch durch

HEKTOGERON

Gelée Royale.

Neu! + Ginseng Neu!

Der kostbare Bienen-Königinnen-Futtersaft mit Wirkstoffen aus der asiatischen Ginseng-Wurzel (Hochwertiges Naturprodukt der Pharmazeutischen Fabrik Warkentin & Co.)

Ein Jungbrunnen für Körper und Seele! Es ist erwiesen, daß selbst geringe Mengen dieses kostbaren Stoffes dem menschlichen Organismus neue Kraft und neue Jugend zuführen. HEKTOGERON Gelée Royale mit Ginseng erobert uns wertvolle Lebensjahre.

Klein-Packung mit netto 250 g Inhalt DM 10,40
Orig.-Packung mit netto 500 g Inhalt DM 19,75

Interessenten senden wir auf Wunsch unseren ausführlichen Prospekt „Ein neuer Mensch durch HEKTOGERON Gelée Royale + Ginseng“ kostenlos zu. Bitte anfordern!

Die Heilkraft des Honigs ist eine dreifache:

1. Infolge des hohen Zuckergehaltes ist er ein vorzüglicher Krafteisen.
2. Durch einen Wirkstoff, das Glykulin, wirkt er stoffwechsel- und kreislaufördernd.
3. Mit seinen bakterienkötenden Bestandteilen, den Inhibitoren, ist er ein hochwertiges Mittel gegen Entzündungen und Infektionen.

Advertising card, with the return postage paid by the advertiser, Seibold & Co. With Bad Brückenau postmark & red postage date stamp.



The power of snake venom is illustrated by the use of the drug, Arvin, which prevents thrombosis, it is derived from the the venom of the Malayan Pit Viper (Angkistrodon Rhodostoma), after the venom is collected and purified.



Original artwork by Isabel for 50c and 75f issues and issued stamp



3.4. TREATMENT OF HEART DISEASE

aspirin - the most common drug

Aspirin inhibits blood cell platelets (thrombocytes).

Originally extracted from the leaves and bark of the willow tree by Felix Hoffman

Initially marketed through Bayer in 1899, aspirin was primarily used for pain relief by inhibiting localised hormones such as prostaglandin which produce pain and inflammation following injury.



Colour die proofs on card from Courvoisier archives, with an imperforated example of final stamp.



Booklet stamps not reduced

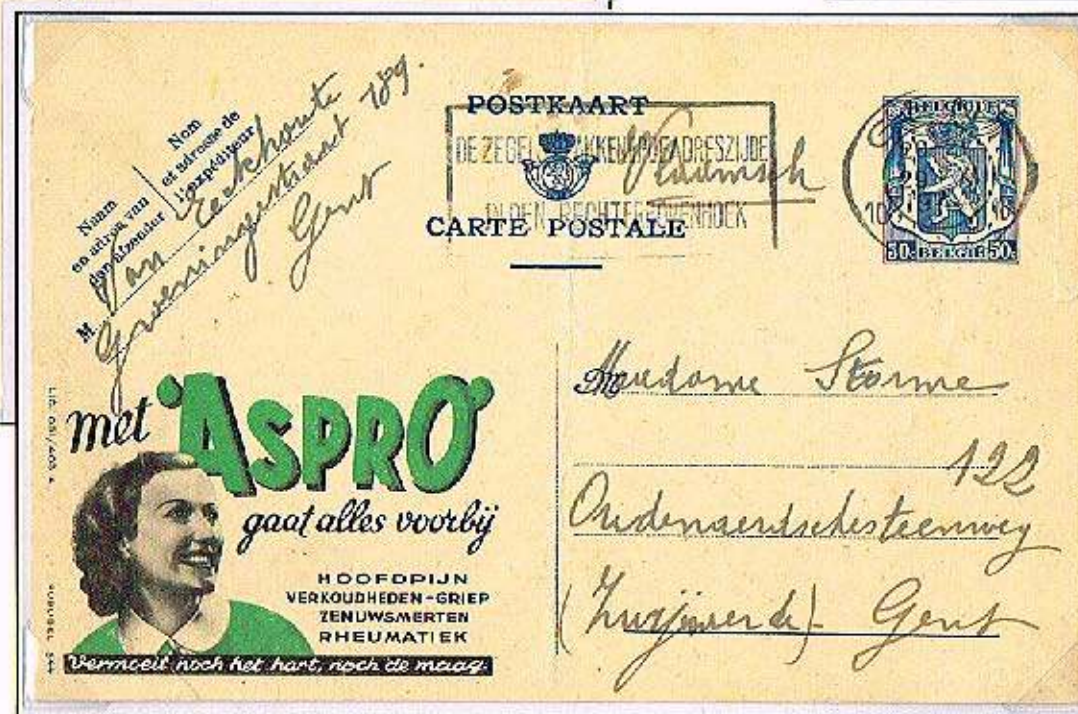


Meter: Francotyp, Ce

It became a generic drug in 1930 when the Bayer patent expired, it is now known by a variety of names...



Meter: Francotyp, Ce



Bergstrom and Samuelson were awarded the Nobel Prize for their work on prostaglandins and related compounds such as thromboxane



Aspirin has a powerful effect on blood platelets inhibiting thromboxane, and thus preventing thrombosis

3.4. TREATMENT OF HEART DISEASE

surgical intervention

Drugs may not always be effective, it may then become necessary for heart surgery,



Italian, early 1800's cover with heart catchet, with inscription 'Conivnita Apostolica Nozzano' - routed Nozzano to Coriano, which at the time was in the old Papal province of Romagna.. The manuscript D'Uff indicates exemption of payment.



The heart valve can be replaced with artificial valves,... some of these valves were made of graphite



Graphite line issues of 1957 - an experimental issue introduced in the Southampton area in conjunction with automatic letter facing machine - right hand stamp with misplaced vertical lines.



but if the valve is not correctly placed then further surgery such as...

...the placement of a stent to ensure free blood flow may be necessary

However, if the above procedures are unsuccessful then a heart transplant may be necessary



Official Postal stationery view card printed 1927. Updated 1/4d to Germany - a due charge of ten centimes was applied, as rate abroad required an additional 1d

Much of the original research into transplant surgery was carried out at The Johannesburg Medical Research Centre...

... leading to the first heart transplant operation at the Groot Schuur Hospital, by Christiaan Barnard



colour error



the recipients often lead a full and active life, in the case of one such person...

A personalised metermark of Stephen Boorn, produced by a Neopost 1325, printed by digital inkjet, at The Stamp Show 2000 London, demonstrating the future of franking, rated as 1st class post



...Stephen Boorn, Britain's longest surviving heart transplant, it would lead him to winning an International Gold Medal in thematic philately.

However, for a successful heart transplant, the donor heart must be healthy, this donor heart does not look a healthy colour.

However, a healthy heart, requires a healthy blood supply...

4. COMPLEX BUT WITH OCCASIONAL DEFECTS.

4.1. PURIFYING THE BLOOD

blood diseases and treatments
some early universal medications

There are numerous disorders that affect the blood, some affect the different cells of the blood and others that cause malfunction of specific proteins carried in the blood.

Many substances were thought to purify the blood whatever the cause, during the 1800's advertisements for a cure of all blood disorders were common.

Rasilla extract was a celebrated for purifying and cleansing the blood ► others include...

GB postal stationery envelope 1d pink, sold at a reduced rate on account of adverts.
Copy (reduced) of reverse showing 1d embossed stamp

...Lecin,



Left hand advertising tab. One of four adverts within booklet No. 2, issued 1911

Pilules pink.



Encased postage stamp (jeton) used as currency during First World War, with advert on reverse, an interesting example of a non-philatelic use of a postage stamp.
Photocopy of front (not reduced)

Lauchstädter Blunnen for refreshing the blood (auffrischung des blutes) and for improving poor blood condition (schlechter blutbeschaffenheit)

postal cheque letter from Berlin on official postal cheque envelope with advertising

Lauchstädter Blunnen
zur Auffrischung des Blutes
zur Stärkung des Körpers

Seit mehr als 300 Jahren
gerühmt hervorragend
bewährt bei

**Rheumatismus
Gicht (Podagra)
Nervosität
Mattigkeit
Blutarmut
Bleichsucht
schlechter
Blutbeschaffenheit**

Bestes Kurgetränk bei
Zucker- u. Nierenleiden

Brunnenvorstand der Heilquelle
zu Lauchstädt in Thüringen
Brunnenschriften kostenlos

Herrn
Richard Kayser
Fabriksbedarfsartikel

318 52 Cottbus
P S
9 Schützenstr.

THE Anglo-Colonial Letter Co. Limited
1, SOUTH JOHN ST.,
LIVERPOOL.
TELEGRAPHIC ADDRESS: "COLONIAL," LIVERPOOL.

Sold at the Offices of the Company, and in places Licensed for the Sale of Postage Stamps.
NINEPENCE PER DOZEN.

L.O. 4.—Dated May 30th, 1899. } BRANCH OFFICE:—
11, ADAM STREET, ADELPHI, LONDON W.C.

ANTI-SHINE! ANTI-SHINE!
Ladies' Jackets, Gents' Coats, &c. Repairs and Alterations.
The Shine Remove Co., NEW OXFORD STREET,
Opposite No. 21.

RASILLA EXTRACT.
The celebrated Remedy for all Skin and Blood Diseases, including Mercurial Poisoning, Rheumatism, Scrofula, Gout, Scurvy, Eczema, Glandular Swellings, and Sores of all kinds.

The Extract acts as a mild tonic, and by building up the system enables even the most delicate to withstand the insidious attacks of disease.
Cleanse your Blood at any time you feel it is foul, more especially during Spring and Autumn—the health of the system is sure to follow.
RASILLA EXTRACT is agreeable to take, and is guaranteed to contain nothing injurious to the constitution of either sex.—Price, 2s. 9d. per Bottle.
To be obtained from ERNEST & CO., 12a, Finsbury Square, LONDON, E.C.

4.1. PURIFYING THE BLOOD

four more treatments to cleanse or purify the blood

Tea, pills, tonics and thermal cabinets are all recommended

Even a cup of tea can
cleanse the blood or...

...Beecham's pills to purify the blood



Advertisement on reverse of NZ 1893 1d and 2d stamps. A variety inks were used for the various adverts - 240 per sheet divided into 4 panes, 8th row 4th column



BRIEFKAART



SALI "JODATI" DI MONTECATINI
sicuri depurativi del sangue

'Jodati' can do both - 'a safe and sure way to cleanse and purify the blood'

Italian advertising telegram, 1937

SAVONA DA S S KERMAGIOW GIBRALTARRADIO 131 7

Ricevuto il 1937

Ricevuto

2 Cermelonoli ... Amari Savona

Pel circuito N.

ARRIVING TUESDAY MORNING

PAROLE DATA DELLA PRESENTAZIONE
Giorno e mese Ora e minuti

Scan of single
ring cancellation
dated 15.01.37,
and
received/reply



SAVONA
Ricevuto il 15 1937
Risposto il 1937

But thermal cabinets were probable of little use in treating blood diseases (blutkrankheiten), especially blood borne infections...



Thermal-Cabinet
heilt Rheumatismus, Haut- und Blutkrankheiten
5 Pfennig pro Bad! Prospekte umsonst!
Century-Thermal-Bath-Cabinet G. m. b. H.
Berlin A.W.S
Friedrich-Strasse 108 I.

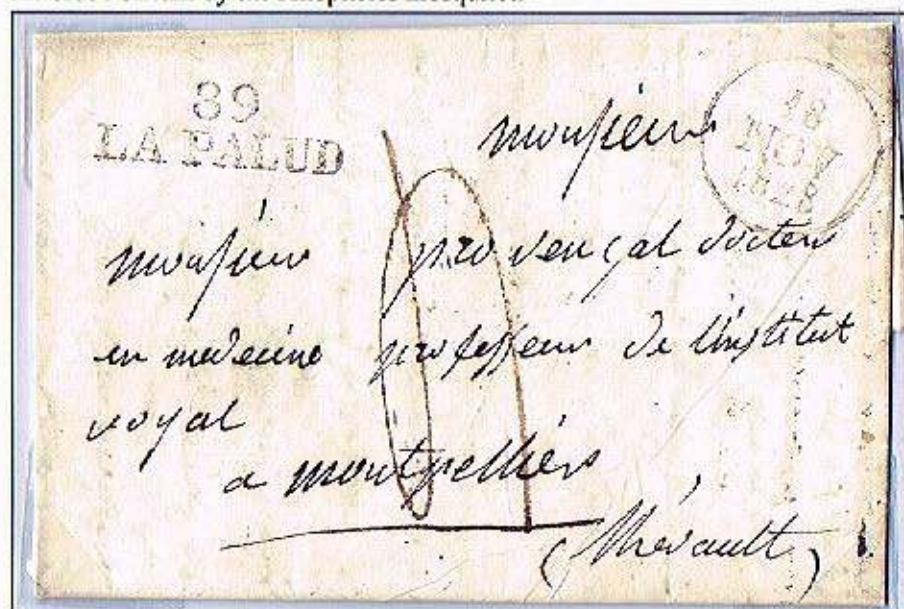
Albert Kindleben
Berlin 22
Friedrich-Strasse 31
Spielhagen & Co.
Papier und Schreibmaterialien

4.2. BLOOD BORNE INFECTIONS

from ancient plagues to AIDS, diseases transmitted by blood

'purifying the blood cures' will not prevent the transmission of some infectious diseases via the blood, from a carrier host.

One of the most common and ancient parasitic diseases to infect humans is malaria. The life cycle of the malaria parasite is dependant on human blood, it is introduced into the blood stream by the Anopheles mosquito..

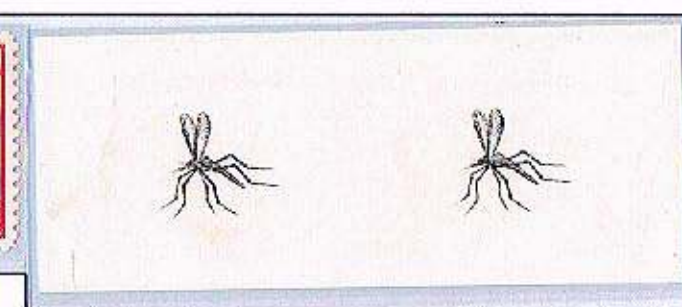


The mosquito breeds in marsh areas, La Palud is named after the surrounding marshy areas, hence 'paludisme', French for malaria.



Inverted centre piece

A dangerous adversary in any format, inverted or on its own..



Proof pair printed on gummed paper. Stamps printed by E.A. Wright Bank Note Co. in line-engraved, except for the mosquito printed in photogravure.



Laveran was the first to observe the parasites within the red cells, where they can be seen when the cells are stained with special dyes.



DDT kills the mosquito but the mosquito is an elusive insect, perhaps avoiding DDT sprays when found on both sides of these stamps!

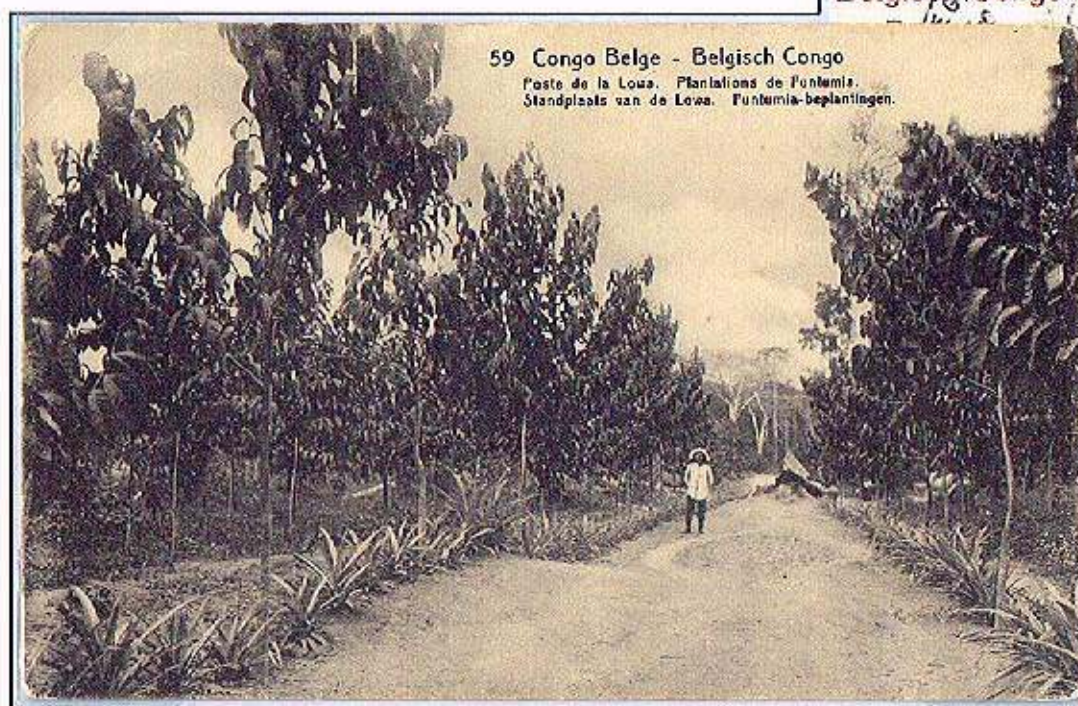


Part of reverse of 1925 India telegram, front scan reduced by 50%

Attempts at curing malaria are numerous- Dr. H.L. Batliwalla, of Warli sold a medicine which was reputed to cure malaria, was it the extract of Funtumia elastica (Silkrubber) another traditional cure for malaria, but it is quinine which is effective in destroying the parasite within the blood.



Printing error, strip of 3 printed on both sides (reverse print on gum side, shown on left).



Belgisch Congo

59 Congo Belge - Belgisch Congo

Poste de la Loue. Plantations de Funtumia.
Standplaats van de Loue. Funtumia-beplantingen.

4.2. BLOOD BORNE INFECTIONS.

...yellow fever

In 1881 Finlay, working in Cuba proposed the theory that the disease was transmitted by mosquitoes



Print proof, with security punch hole made by the printers, Waterlow & Sons Ltd



Reed proved Finlay's theory and Gorgas eradicated the disease from Panama, which had decimated workmen building the canal.



Precautions such as the early notification of the disease to the health authorities was far more beneficial

In the early 1800's yellow fever appeared in Italy, many attempts were made to contain the disease, one of which was to disinfect mail, by various methods for both incoming and outgoing. However, the precaution of disinfecting mail was completely unnecessary as yellow fever was not transmitted by touch.



▲ 1827 letter from Turkey to Trieste, probable disinfected by fumigation, note lighter area of tong marks at bottom centre. Manuscript '5' for postage rate and '15' onward

Again, attempts at controlling these types of diseases by lazaretto (quarantine) stations was to no avail, although there was some success in controlling blood borne bacterial diseases such as plague...

Disinfected letter from Cephalonia to Trieste, mailed via Ancona (Papal States) route instead of direct, with straight line Ancona transit handstamp in black on front and manuscript forwarding agents endorsement on reverse, and struck with a scarce framed italic disinfection cachet LAZARETTO ANCONA / NETTO DENTRO, E FUORI (clean outside and inside) in black., Trieste arrival cds in red alongside. ►



Public Health notification post card - free postage

Schistosoma ▶ - these worms penetrate the skin and travel via the blood circulation to other organs in the body, even a double layer of skin will not protect you!

Double paper on reverse between the two stamps and gummed over. Scan of reverse not reduced



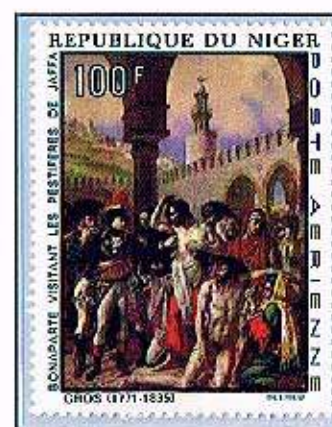
4.2. BLOOD BORNE INFECTIONS

the black death strikes

The plague or Black Death swept across Europe in the 14th Century, caused by a bacterial infection.



Eyam is best known for being the "plague village" that chose to isolate itself when the plague was discovered there in 1665, rather than let the infection spread



In this painting by Gros, Napoleon indicates a plague node on the axilla



The causative bacteria, *Yersinia pestis* was first discovered by Alexander Yersin, a Swiss scientist who is well remembered in Vietnam for his work on the plague, and known as Ông Năm (Dr Nam Fifth).

Meter: Postalia, D2/D3, with fee paid inscription



The bacteria are carried by rats and other rodents such as squirrels, and transmitted to humans by the blood sucking bite of the rat flea.



Hooke's flea of 1665



MORT AUX RATS **BESTRIJDT DE RATTEN**

Demandez prix à la S. A. Etablissements **AEROXON** 76, Rue Léopold, Malines

Vraagt prijs aan de N. V. Etablissements **AEROXON** 76, Leopoldstraat Mechelen

100 % Efficacité

100 % Doeltreffend

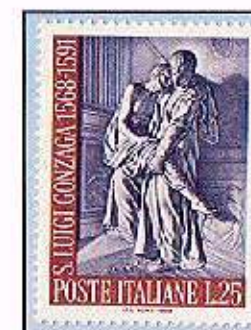
Raxon

est : 1° inoffensif pour hommes et animaux domestiques 2° à l'emploi très économique et en conséquence bon marché

is : 1° onschadelijk voor menschen en huisdieren 2° spaarzaam in 't gebruik en daardoor goedkoop

PUBLICITY OFFICE, 50, av. Neelard, Brus. Tél. 15.96.00 - Toutes publicités.

Belgium Giro Service official envelope



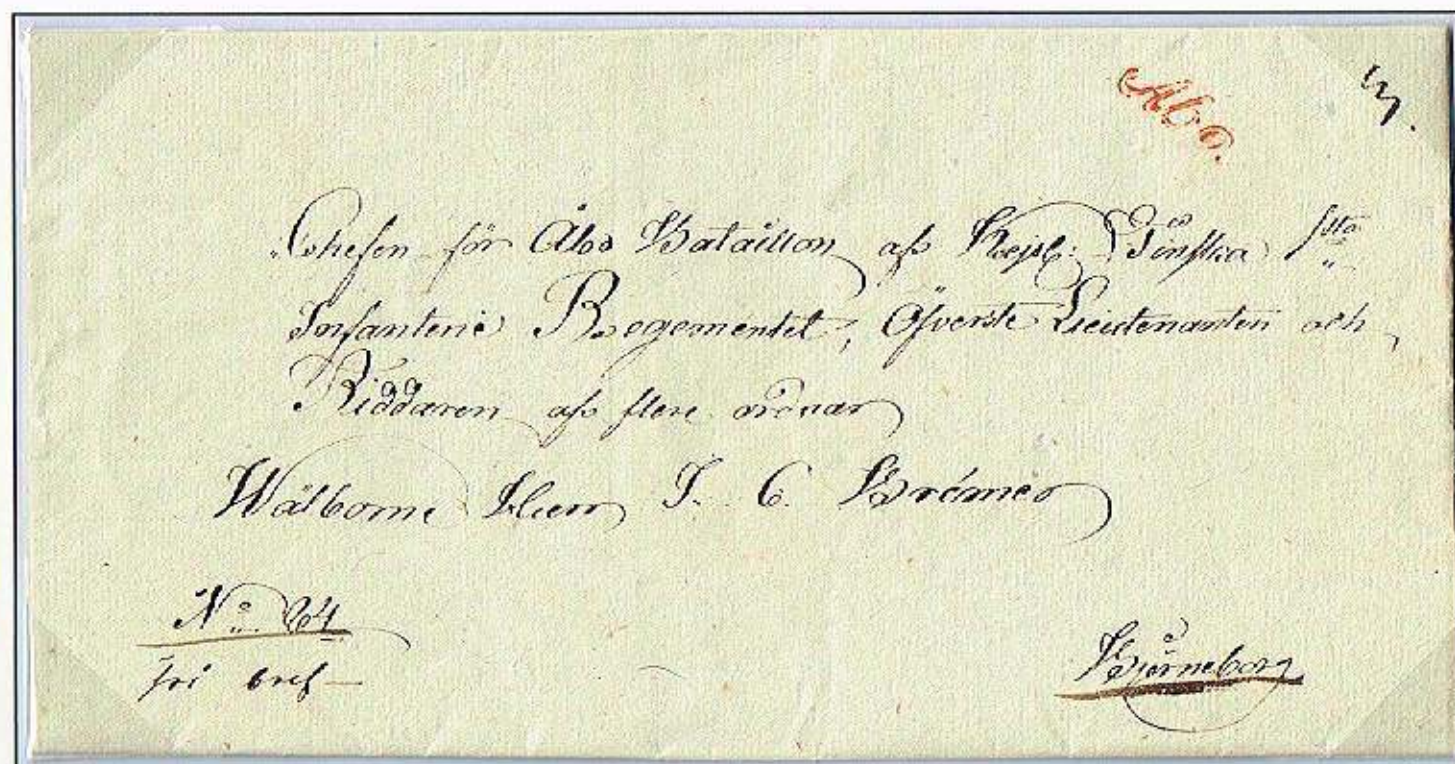
A fatal form of plague is septicæmic plague, in which bleeding occurs due to D.I.C. (diffuse intravascular coagulation of the blood coagulation system), blood pustules form under the skin, which turn black - a possible reason why it was called black death

4.2. BLOOD BORNE INFECTIONS.

trying to prevent black death

More practical attempts at preventing the disease were largely unsuccessful.

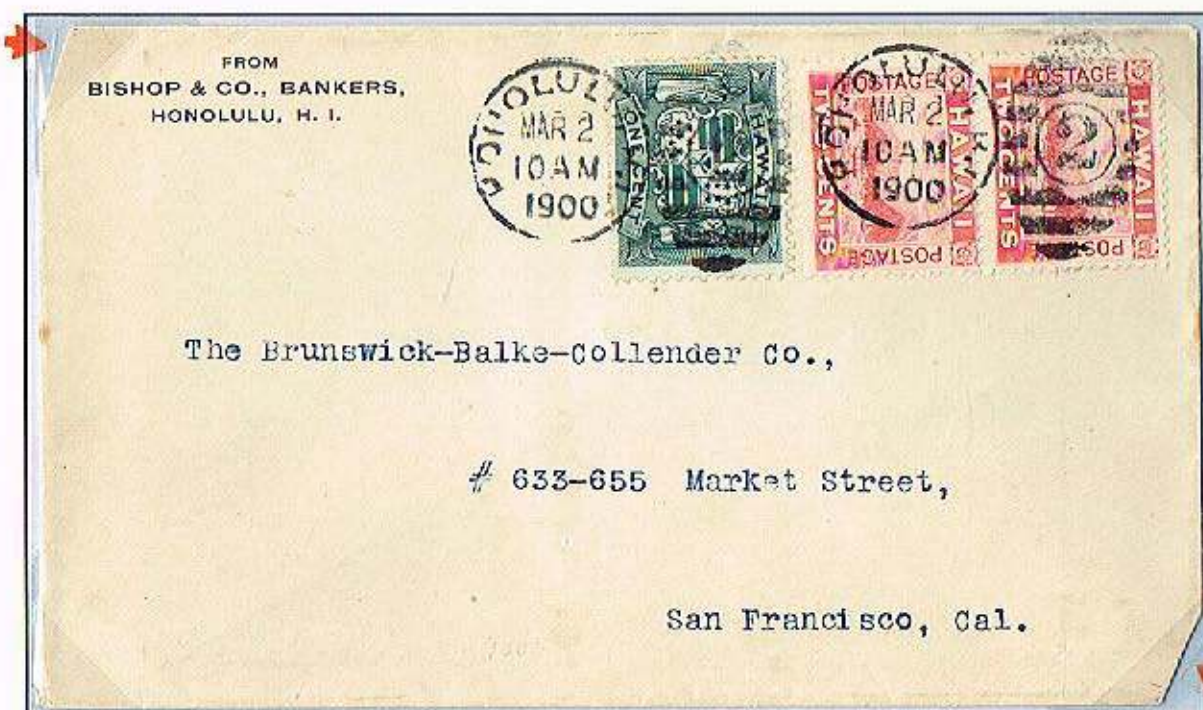
In the middle ages charms were often used



Following rumours of a plague outbreak in 1822 in Finland, it is thought that the postmaster of Åbo (Turku) used a red hand-stamp instead of black to warn the citizens of plague, although there is no record of a plague outbreak in Finland at this time. ▲

Red Åbo postmark on cover to Björneborg (22 May 1822). Reference: The Early Postmarks of Finland - "The red Åbo disinfected mail strike is unique in Finnish postal history. When the plague threatened, the Turku Postmaster started to use the red warning cancel which had earlier been used elsewhere in Europe." Known dates are from April to October. ONLY A FEW COPIES RECORDED

Disinfecting mail was also used to try and control the disease during an outbreak of plague in Hawaii. During the period 12 Dec 1899 to 13 Apr 1900, all mail from Honolulu was disinfected by the the Hawaii PO, by cutting at least one envelope corner and fumigating with sulphur dioxide.



In Amsterdam several plague epidemics occurred in 1647-65. The City Coat of Arms indicates this with 3 crosses of St. Andrew, which are supposed to protect the city from flood, fire and plague. ►

1704 letter from Rotterdam to Amsterdam with the Amsterdam 3S postmark showing the Coat of Arms, a post horn and the letter R.

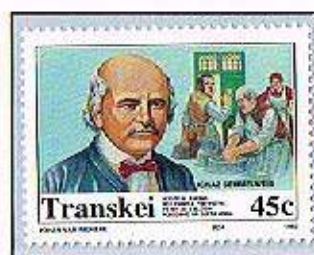


When the plague finally receded the church bells were rung, but it would be several centuries before new discoveries would cure this plague, and a new blood borne plague would appear.

4.2. BLOOD BORNE INFECTIONS

the magic bullet fights blood borne infections

Septicaemia or blood poisoning had long been recognised, and with the introduction of antibiotics the lives of many with this type of blood infection would be saved



Semmelweis discovered that the incidence of puerperal fever and septicaemia could be drastically cut by the disinfection of hands and obstetric instruments.

HOSPITAL MIASMA
RECOGNIZED PUERPERAL
FEVER AS A BLOOD-
POISONING OR SEPTICAEMIA

enlarged section



Trench Fever caused by the bacteria *Bartonella quintana*, is acquired after a bite from infected blood sucking lice *Pediculus humanus corporis*, during WWI infected soldiers were transported on separate specialised ambulance trains for infectious diseases.

It wasn't until the discovery by Fleming of the antibiotic effect of the penicillin mould and...



Chemical structure
of penicillin



Kuk Infektionskrankenzug No 206 - improvised Military Infectious Diseases Ambulance Train, and Field Post Sorting Office. Kuk = Kaiserlich und Königlich (Imperial and Royal) With circular cachet Kuk Infektionskrankenzug No 206 and Franz Weidner medical assessor and a civilian postmark - Vienna 15-6-1917

... the extraction and purification by Florey, that provided the drug we know as penicillin



Mass production of penicillin and the introduction of other antibiotics saved countless lives of patients suffering from blood poisoning (septicaemia)...



Meter: Francotyp, Frama ME, specimen

... but a new blood borne plague resistant to these drugs, was soon to appear..

4.2. BLOOD BORNE INFECTIONS

AIDS, a new blood borne infection appears

AIDS or SIDA (Acquired Immune Deficiency Syndrome), is a relatively new disease first described in 1979,



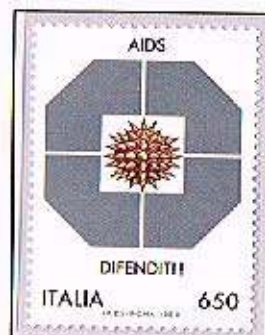
The appearance of the virus in humans is a result of multiple cross-species transmissions from the chimpanzee.

Multiple transverse missing perforation



The AIDS virus enters the blood stream of the infected person and is capable of damaging the immune system by altering the function of lymphocytes (white cells) in the blood.

Internal and external structure of virus

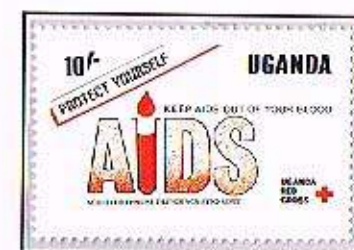
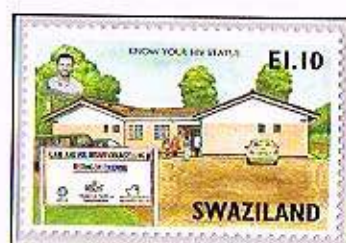


Since 1987 campaigns to warn of the dangers of AIDS are extensively used



The 1st philatelic item to refer to AIDS, GB slogan 1st used on 26 Jan 1987 and at irregular intervals until 1990, 500 dies used.

Knowing your HIV status assists the numerous AIDS campaigns directed at preventing the virus entering the bloodstream, eg controlled blood transfusion, auto transfusion etc.



Research into AIDS continues, but conditions such as AIDS, malaria and chronic infection can lead to one of the most common blood disorders...

4.3. BLOOD DISORDERS

the most common blood disorder is anaemia

Anaemia is a reduction in the number of circulating red blood cells.

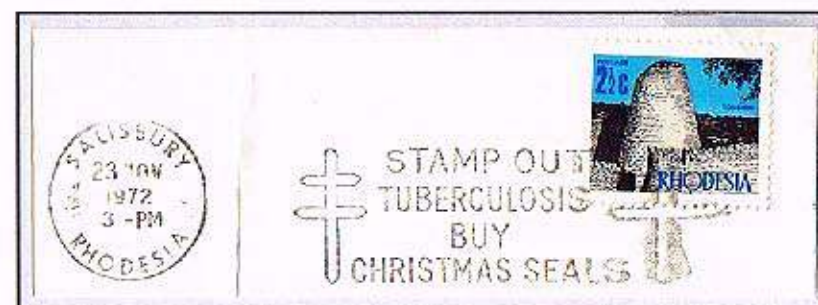


this can result in tiredness and exhaustion (anemie ed esaurimenti).



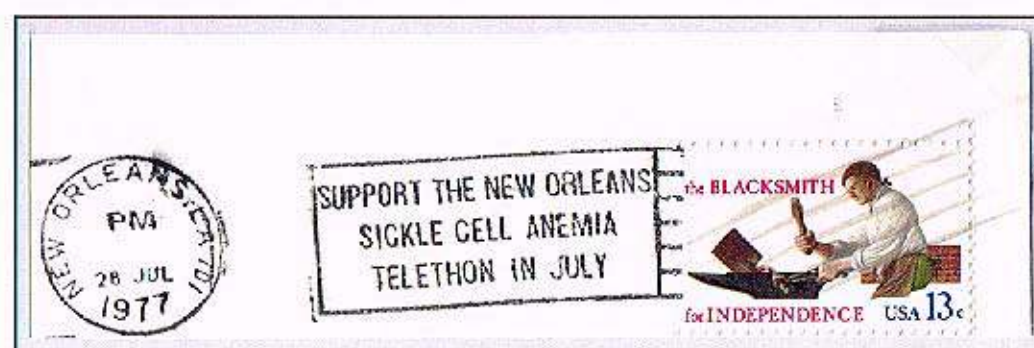
There are many causes of anaemia, chronic infections such as malaria, AIDS or TB...

◀ 1st ever charity stamp issued in 1897 to raise funds for the Queen Victoria Homes for Consumptives (TB) a postage value of 1d, with an additional 1/-, the design is of an angel supporting an exhausted person.



Some anaemia's can be inherited e.g.

◀ thalassaemia, & sickle cell anaemia ▶



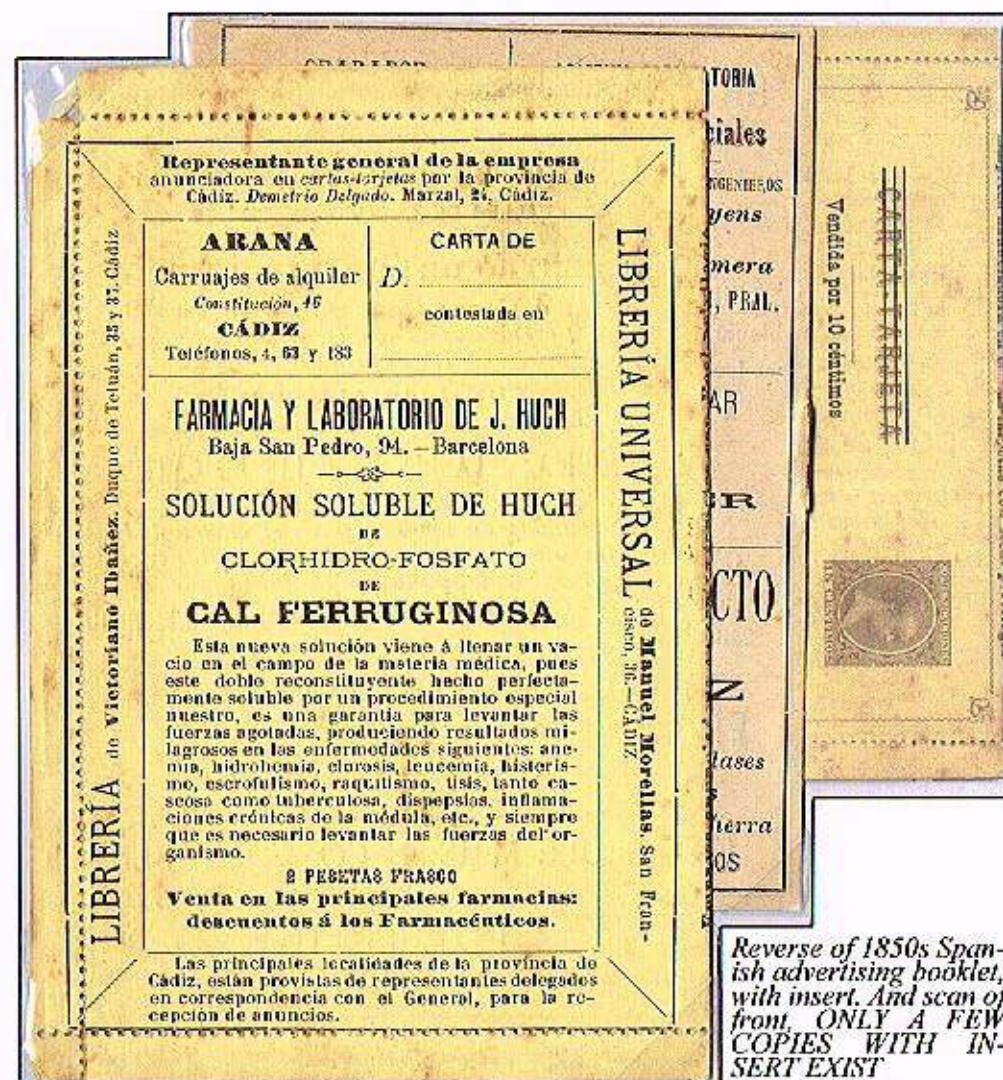
toxins such as lead, can interfere with the absorption of essential elements for red cell production,



Blood diseases such as leukaemia a disease of the white cells, is a cause of anaemia too, radiation poisoning has been known to cause leukaemia



Research into controlling and curing leukaemia continues, attempts to cure leukaemia (leucemia) and anaemia (anemia) were made by the pharmacy and laboratories of J. Hugh of Barcelona with the medicine of cal ferruginosa ▶



Reverse of 1850s Spanish advertising booklet, with insert. And scan of front, ONLY A FEW COPIES WITH INSERT EXIST

4.3. BLOOD DISORDERS

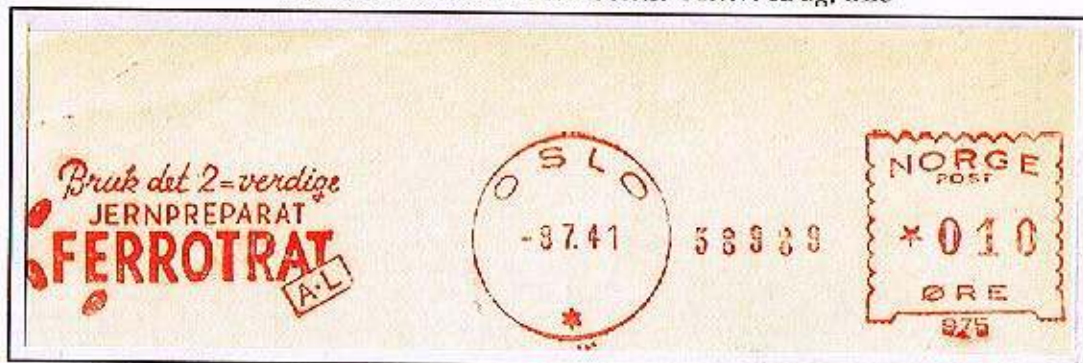
treatment of anaemia - iron deficiency

The most common cause of anaemia is due to a deficiency of iron (Fe), an essential element for haemoglobin & red cell production...

...this type of anaemia can be treated with iron supplements...



... and can be taken as iron tablets. Meter: Krag, BB3



It had long been known that certain springs contained beneficial elements for health and well being



Plate proof second issue, position 6 in sheet of 12

The Great Seal of Nevis used in 1861 on its first stamp issue. In the Stamp Collectors magazine of Jan 1867 it is described as 'representing a sick female in the Spa bath, supported by a companion, extending out her arm to the nymph of the stream for a bowl of it's healing waters'



Pre-cancelled stamp

The presence of iron contained in spring waters, known as Chalybeate (iron rich or ferruginous) springs were considered to be particularly good for the treatment of anaemia.

The community of Chalybeate, in USA took its name directly from the above meaning. These springs, such as Tunbridge Wells, and Bussang, became popular health spa resorts.



1860 Tunbridge Wells 820 sideways duplex cancellation, with manuscript 'not known' and return postmark

Stamps from within booklet, and scans of booklet front cover and insert (reduced)



4.3. BLOOD DISORDERS

health spas for the treatment of anaemia

These types of spas were popular all over Europe during the 19th and early 20th centuries...



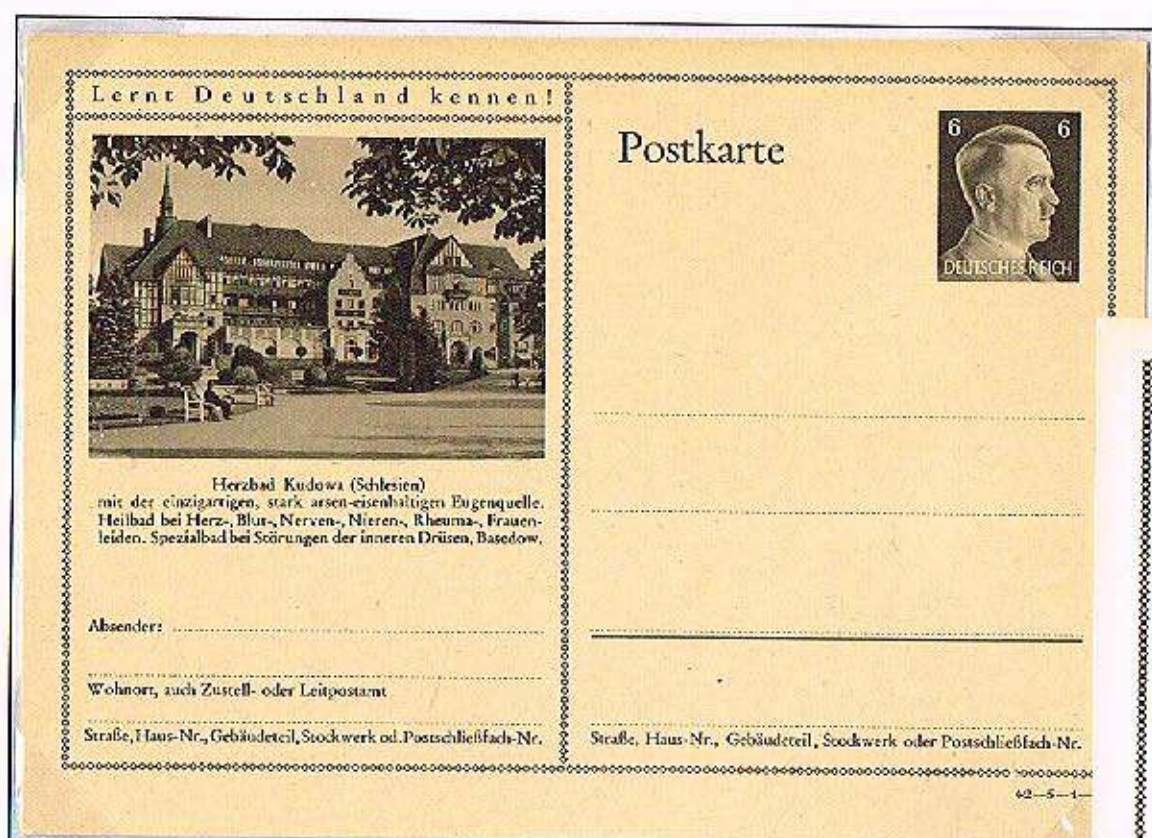
... the ferruginous spas were particularly popular in Germany, spa towns such as Bad Lauchstädter, Bad Pyrmont, Bad Liebenstein and Herzbad Kudowa.



They all advertised their curative properties. Bad Liebenstein even claimed its waters could cure metabolic disorders. (Stoffwechselkrankheiten)

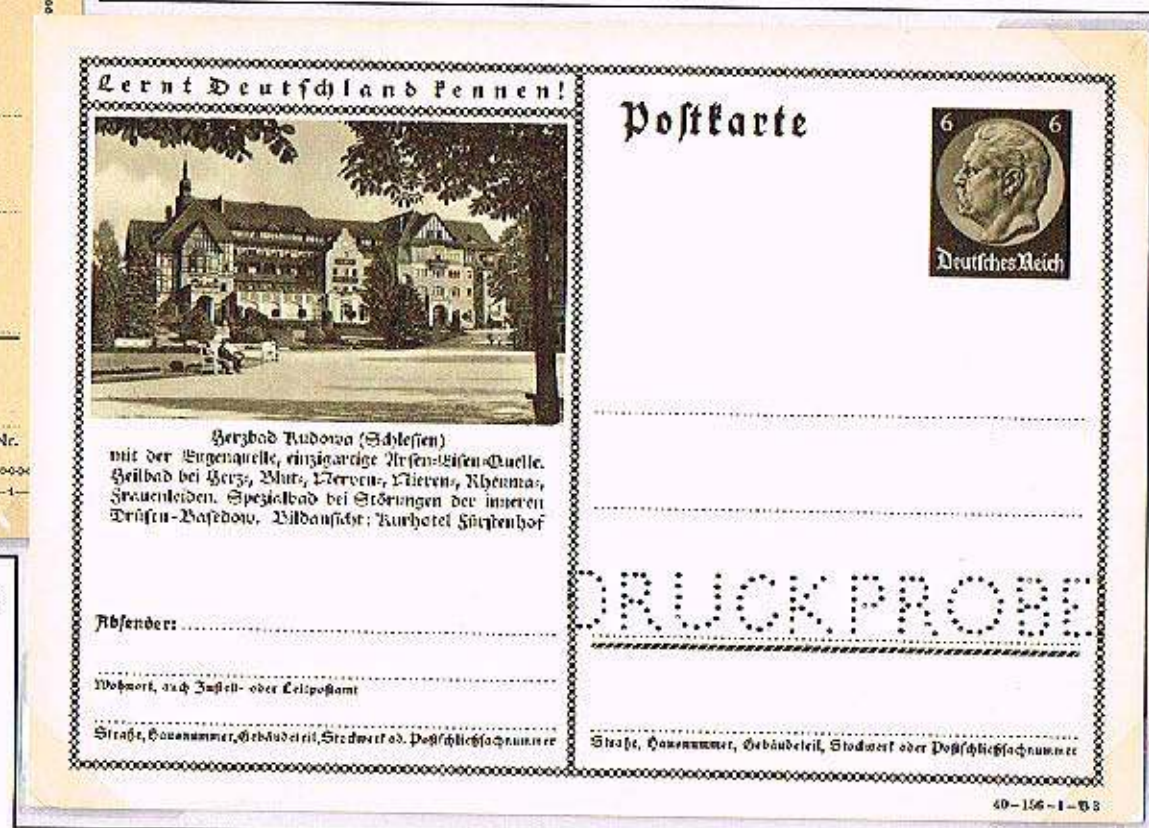


Meter: Francotyp, D



Herzbad Kudowa water contains a high concentration of iron (eisenhaltigen) and is recommended for the blood.

The wording on the later Hitler head (1942) has been changed to include eisenhaltigen, which does not appear on the earlier Hindenburg head card



Hitler head design used 1941-42
Hindenburg head design used between 1933-1940 (Printing proof)

Although these spas and springs are a natural cure, other treatments may be recommended.



Guberquelle
arsen- und eisenhaltiges Mineralwasser
gegen Blutarmut, Bleichsucht, Schwächezustände etc.



Korrespondenzkarte.

Firma
Heinrich Mattoni
Aktien-Gesellschaft

WIEN.

Private printed to order postal stationery, with 5 hellor imprinted stamp for letter rate first issued in 1908. ▲



MATTONI'S
GISSHÜBLER
natürlicher alkalischer SAUERBRUNN

Darkauer Jodsalz
zur Bereitung natürlicher Jodbäder im Hause
bei Skrofalose und allen Arten von Hautkrankheiten.

Wine and beer have also been advocated

Postal Union Congress 1929 booklet, edition 168, showing stamps within (reduced)

Bottling the spring water is a possible solution.



Wine and beer have also been advocated

Postal Union Congress 1929 booklet, edition 168, showing stamps within (reduced)

Private printed to order postal stationery, with 5 hellor imprinted stamp for letter rate first issued in 1908. ▲

French advertisement letter card (1887) - Lettres annonce edition No.255, sold for 5c with a 10c surcharge paid by the advertising, for international rate.



...Eniova for anaemia and also used as a baby food

Private printed to order postal stationery card of the local Berlin post company, Berliner packetfahrt AG, 2 pfennig rate, in use c1890

Private printed to order postal stationery card of the local Berlin post company, Berliner packetfahrt AG, 2 pfennig rate, in use c1890

Private printed to order postal stationery card of the local Berlin post company, Berliner packetfahrt AG, 2 pfennig rate, in use c1890

Private printed to order postal stationery card of the local Berlin post company, Berliner packetfahrt AG, 2 pfennig rate, in use c1890

Telephone Amt III. 744.

Berlin, den 189

152.

Ersuche um Zusendung von

Deutschem Porter (Malzkraftbier)
für Blutarme, Bleichsüchtige, Brustkranke, Wöchnerinnen, Reconvalescenten etc.

Mk. Marke A, (süßlich, Brauerei Burghalter) 14 Fl. 3; 28 Fl. 6; 50 Fl. 10 Mk. excl. Fl.

Mk. Marke B, (bitter, Brauerei Burghalter) 14 Fl. 3; 28 Fl. 6; 50 Fl. 10 Mk. excl. Fl.

Mk. Marke C, englische Art. 12 Fl. 3 Mk.; 25 Fl. 6; 50 Fl. 11 Mk. 50 Pf.

Marke A. u. B. zum Selbstabziehen, bei einigen Tagen früherer Bestellung, in 1/10-Tonnen ca. 8 Liter, 3 Mk. 50 Pf.; 1/5-Tonnen ca. 16 Liter 6 Mk. 50 Pf.; 1/4-Tonnen ca. 32 Liter 12 M. excl. Fass.

(Wird flaschenreif in ca. 8-9 Tagen)

Ferner grosses Lager von englischen Bieren: als

Mk. **Porter** von Bass & Cp. in London, sehr mild, 9 Fl. 3; 50 Fl. 15 Mk. excl. Fl.

Mk. **Porter** von Barclay, Perkins & Co. in London, etwas herber als voriger, 9 Fl. 3 Mk.; 50 Fl. 15 Mk. excl. Fl.

Mk. **Pale Ale** von Bass & Cp. in London Pa. Qualität, 9 Fl. 3; 50 Fl. 15 Mk. excl. Fl.

Mk. **Culmbacherbier** (Bayern) süßiges hochfeines Tafelbier 16 Fl. 3 Mk. Bei Nachkuren besonders zu empfehlen.

Pfand für gekorkte Flaschen 2 Fl. 15 Pf. do. Patentverschluss à 10 Pf., 1/10-To. 2 M., 1/5-To. 3 M. und 1/4-To. 5 M.

Das Abholen der Flaschen ist schriftlich zu verlangen. Gewünschtes bitte auszufüllen resp. zu unterstreichen.

Adresse des Bestellers:

4.3. BLOOD DISORDERS.

treatments for blood production

Restoring blood production especially after blood loss

Dinamol reputed to be effective against many disorders including anaemia.



Busta Lettera Postale (BLP) - Postal Letter Envelope (with letter insert), the adverts paid for a discounted stamp to be affixed to it, overprinted with BLP - the profits going to the Post Office with a large proportion going to an Organisation that assisted the war wounded.

and Radjosan for blood production



Dr. Kochs' meat - peptone advertised as the most effective of all known means of nutrition for anaemia in women following childbirth, when blood loss must be prevented...

Private printed to order postal stationery, 1905



4.4. LOSING THE LIFE BLOOD.....

bleeding can also cause anaemia

Loss of blood from bleeding either from trauma or inherited as in the case of haemophilia can be life threatening



Haemophilia had been recognised by Arabian physicians Ibn Al-Naphis in the eleventh century as an inherited haemorrhagic disorder affecting only boys, particularly noticed after circumcision



Haemophiliacs will require specialised treatment in specialised haemophilia centres.



Meter: Pitney Bowes, R series

Haemophilia is due to a deficiency of the blood clotting protein either factor VIII (8) or very rarely factor IX (9).



Experimental Maltese Cross postmark with No's 8 & 9 in centre, used to identify individual stampers. In use in main London Office from Mar 1843 to Apr 1844.



In the 1940's the second type of haemophilia was described due to a deficiency of factor IX (9), this was called Christmas disease (the 1st patient described was named Christmas and the 1st paper describing it was published near Christmas).

1943 Kodak military airgraph from Egypt

ROYAL HAEMOPHILIA: Queen Victoria was a carrier of the disease, her 8th child Prince Leopold suffered from the disease and she also had 4 daughters who were carriers of the disease. As a result members of several European Royal Families suffered from haemophilia. It has now been discovered (2009) from genetic analysis that the Royal Families suffered from the much rarer type of haemophilia.



Her granddaughter Victoria Eugene, married Alfonso XIII of Spain. Their son, Alfonso on right, was a haemophiliac

Alfonso XIII overprint

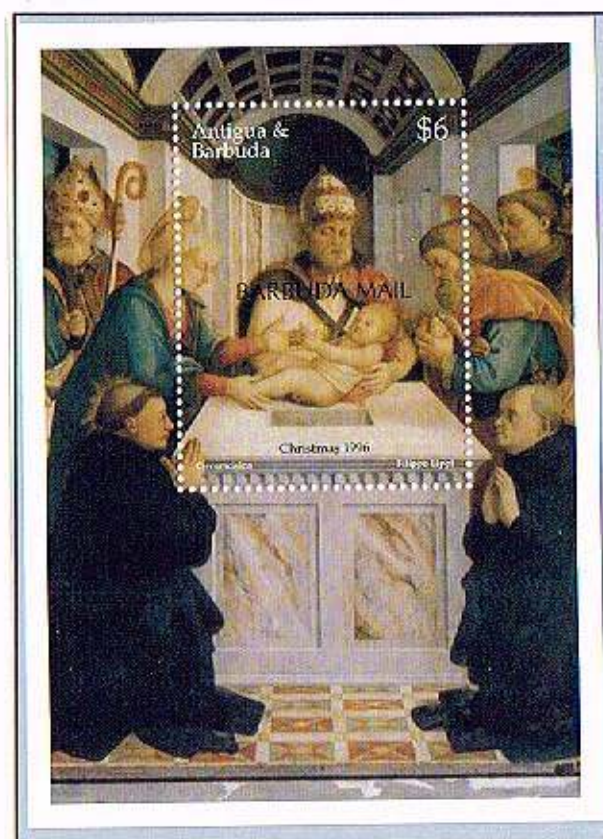
Die proof



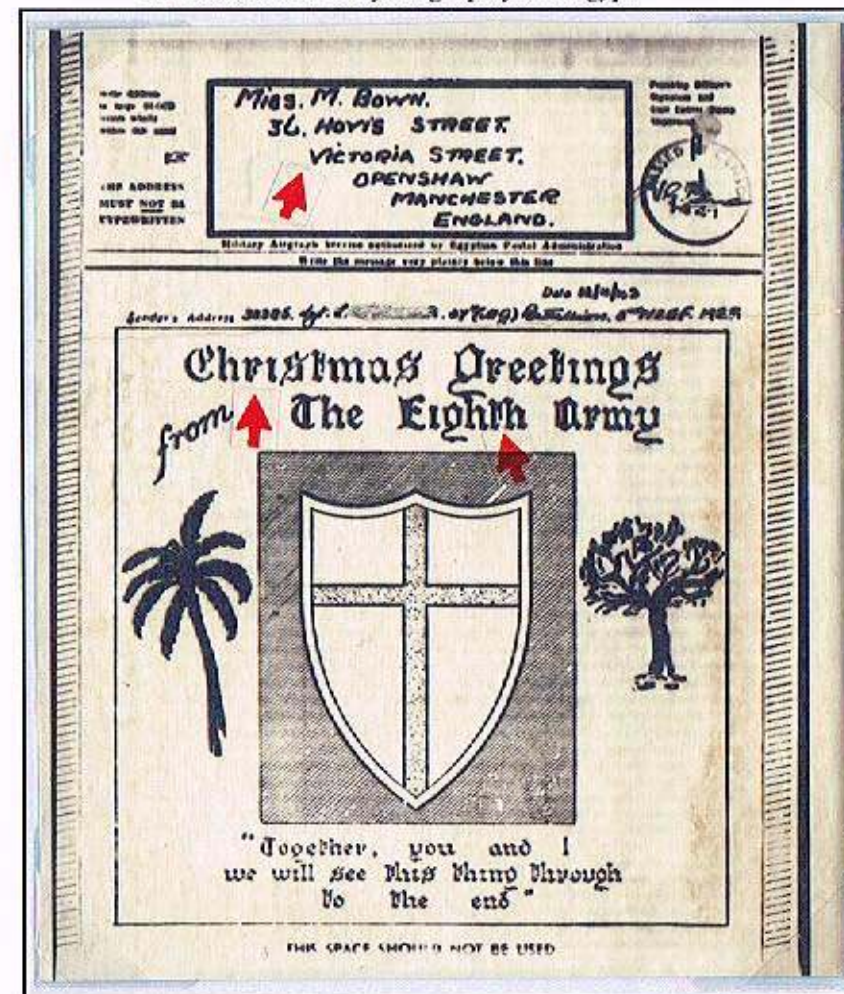
Another granddaughter Alexandra married Czar Nicholas, they had a haemophiliac son Alexis (2nd from right)



Value die after say from



Eric Von Willebrand first described another inherited bleeding disorder affecting both sexes, originally occurring in the Åland Islands



A variety of medicines, have been tried to prevent and stop bleeding

No. III. { OCTOBER 7. }
1840.

EDINBURGH ENVELOPE ADVERTISER.

Writing, Arithmetic, and Book-keeping.
MR COOPER, of the High School, has
opened his CLASSES for YOUNG LA-
DIES and GENTLEMEN, at his House, No. 38
George Street, Edinburgh. Hours from 7 to 11
Morning 1 to 2, and 4 to 6 Afternoon.

**THE NORTH OF SCOTLAND
Fire and Life Assurance Company.**
CAPITAL, ONE MILLION.

**Waterproof Veneered Cloths,
Deavers, Piles, Linings,
DONE OF THE NEW PROCESS,**
By ALEXANDER & JAMES WALKER,
of High Street, Edinburgh.
S.O. the Docks opposite.

**Mr Macdonald's School for
English & Scots.**
EDINBURGH.
The School is now open, and
all Boys from 7 to 14 years of age
are instructed in English, Latin,
French, and German, and in the
principles of Agriculture and
Mechanics.

Pianofortes for Sale.
JOHN THOMPSON, Cabinetmaker and Up-
holster, High Gate, Barking, in the County
of Middlesex, has on Sale Three excellent Piano-
fortes, viz. a 4 ft. Square, Rosewood Cabinet, a 4 ft.
Lute Rosewood Cottage, and an 8 ft. Square Mahogany
Cottage.
A large assortment of Paper Hangings.

**Auction of Unredeemed Effects,
AT THE AGENCY OFFICE,
Over the Old College,
On Monday, 12th October, and Five following
Days, at 12 o'clock,**
(COMPRISING a great variety of Piece
Goods, Cloths, 20 Pairs of New Blankets,
Bosoms, Jewellery, Silks, Hosiery, Bed and Table
Linens, and numerous Goods, as described in the
Catalogue. To be sold at New Quarterly court, of
this Court.

Pattison & Pringle
RESPECTFULLY intimate, that they
have now received a considerable parcel of their
WINTER STOCK, consisting of
BLACK DUCAPES, BARRATHREAS, AND
SATINETTES,
BLACK SATINS AND VELVETS,
BLACK & COLOURED FRENCH WEAVING
(of every superior quality),
BRITISH MERING AND OLEANS
CLOTHS,
As excellent choices of the Newest Designs in
PRINTED CAMBRIC,
P. & P. would more particularly request the
notice of their Customers in this Stock of
REAL WELSH AND LANCASHIRE
FLANNELS,
which, having been selected with the greatest care,
will be found very superior.
COTTON AND LINEN SHIRTINGS AND
SHEETINGS,
LONG LAWNS AND CAMBRIC,
LAWN AND CAMBRIC HANDKERCHIEFS.
OUTLETS:
Ladies and Gentlemen preparing to proceed
abroad, for summering in the continent, of the various
Articles necessary for the purpose, will be assisted by
judges of the Style and Quality of
MARRIAGE AND FOREIGN OUTFITS,
as furnished by
PATTISON & PRINGLE,
ORIGINAL IMPORTERS, WATERLOO,
New, and 6 South Bridge, Edinburgh.

James & Budge,
Successors to the late Messrs. James & Son,
GILDED BROCK, TRADESMAN, DRY,
SALTERS, AND WINE-MERCHANTS,
10 South Bridge Street, Edinburgh.
RESPECTFULLY intimate, that they
have now received a large quantity of
the most superior and fashionable
articles of
CLOTHING,
as
COATS,
JACKETS,
TROUSERS,
SHIRTS,
PANTS,
HOSIERY,
LINEN,
CLOTHS,
FLANNELS,
SHEETS,
HANDKERCHIEFS,
AND
ALL
OTHER
ARTICLES
NECESSARY
FOR
THE
WINTER
SEASON.
They
also
have
on
hand
a
large
quantity
of
the
most
superior
and
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CLOTHING,
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CLOTHS,
FLANNELS,
SHEETS,
HANDKERCHIEFS,
AND
ALL
OTHER
ARTICLES
NECESSARY
FOR
THE
WINTER
SEASON.

**THE RIGHT HON. LORD BELHAVEN and
STENTON, Chairman.**
The Right Hon. Lord BELHAVEN and
STENTON, Chairman.
The Hon. Charles Hume, M.P., Deputy-Chairman.
Mr John Hay of Park, B. George Lyon, Esq. W.D.
William Bell, Esq. W.D. George McLaren, Esq.
Alexander Bernick, Esq. John Macrae, Esq.
of Newton. James Buchanan, Esq. W.D.
Dalziel Craigie, K.L.C. John David Hope, Esq.
James Buchanan, Esq. W.D. John Macrae, Esq.
Secretary and Agent—WILLIAM DOUGLAS.

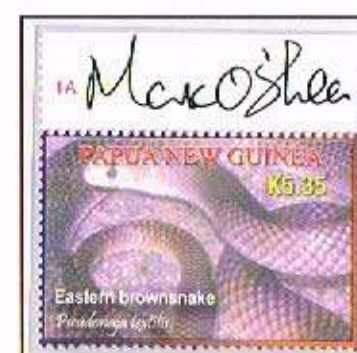
**LICENSED VICTUALLERS' AND
General Fire & Life Assurance Co.**
ABERDEEN PLACE, LONDON BUILDING, and
19 GEORGE STREET, EDINBURGH.
ESTABLISHED BY ACT OF PARLIAMENT.
Insurance in Edinburgh.
The Right Hon. Lord BELHAVEN and
STENTON, Chairman.
The Hon. Charles Hume, M.P., Deputy-Chairman.
Mr John Hay of Park, B. George Lyon, Esq. W.D.
William Bell, Esq. W.D. George McLaren, Esq.
Alexander Bernick, Esq. John Macrae, Esq.
of Newton. James Buchanan, Esq. W.D.
Dalziel Craigie, K.L.C. John David Hope, Esq.
James Buchanan, Esq. W.D. John Macrae, Esq.
Secretary and Agent—WILLIAM DOUGLAS.

**THIS Institution has, in the course of a
few years, established its character as one of
the most successful Assurance Offices in London.
The Capital Stock in the Company, subscribed
by a numerous and wealthy body of Proprietors,
amounts to a sum of £1,000,000, and the
Shares are at a premium of 50 per cent.
The Company insure every description of Property
from Loss or Damage by Fire.
In the Life Department, the Assured may either
participate in two-thirds of the Profits arising
from the Fire and Life Policies, or by a lower
rate of premium secure a precise sum, without
contingent additions.
The Premiums are moderate, especially on the
Non-Participating Scale, and for the early and
advantageous of life, and may be paid either an-
nuity, half yearly, or quarterly; one-half of the
Premium for the first five years may remain in
the hands of the Assured, on interest of 5 per cent.
The Company have invested, and will continue
to invest, a portion of their funds in Scotland.
Advances will be made at all times on policies,
proportional to their required value; and Loans
of larger sums will be granted on approved secu-
rities.
Advances are granted on particularly favourable
terms, and the Company are prepared to treat for
every description of business dependent on the
contingency of human life.
SPECIMENS OF THE TABLES.
Amount Premiums to insure £1,000 on a Single Life.
With participation of profits. Without participation of profits.
Age 25. 1. 2. 3. 4. Age 25. 1. 2. 3. 4.
— 35. — 45. — 55. — 65. — 75. — 85.
— 35. — 45. — 55. — 65. — 75. — 85.
Amount on Single Lives for every £100 advanced.
Age 25. 1. 2. 3. 4. Age 25. 1. 2. 3. 4.
— 35. — 45. — 55. — 65. — 75. — 85.
— 35. — 45. — 55. — 65. — 75. — 85.
Prospectuses, Rates of Premiums, and every
other information, may be had on application at
the Head Office, 19 George Street.**

**BRUSHING THE TEETH AN ABSURD AND
HIGHLY DANGEROUS PRACTICE.**
DR ALLISON'S (100 SOUTH BRIDGE).
Celebrated TEETH SOLUTION highly
prized (3s. 6d., 6s., and 11s.) Wholesome and safely
effectually Preserves the Teeth, prevents Gums from
curing, the Denture, Factor of Breath, Sensing,
Bleeding, Ulcers, Tenderness and Rheumatism of
the Gums, and superseding brushing the Teeth, and
all preparations of Camphor, Turpentine, Charcoal,
Myrrh, Chalk, &c., all of which are condemned.
Dr A's Specific for Hooping Cough, Croup, and
Bronchitis, Sore Throat, Rheumatism, Gout, Uro-
thral Disorders, Secondary Symptoms, Female
Complaints, &c., are safe and valuable.
Dr A's New Scallite Powders—1s. per doz., 2s.
6d., three doz.—will recommend themselves in
cheapness. Soda 6d. per doz., or 1s. 3d. for three
doz.
Dr Allison's New Medicines are rapidly acquiring
a high reputation for their very general efficacy, and
his professional advice is always given promptly, no-
sophistically, and without charge.
Circulation at 6000, being the number printed.



Stops spitting of blood
and blood in urine



The venom of the Eastern Brown
snake used to stem blood loss.
Tab signed by Mark O'Shea,
stamp designer and herpetologist

RHINOSTOP stoppt RHINITIS

und alle anderen vasomotorisch
bedingten
Erkrankungen der Schleimhaut.

Der Oto-Rhino-Laryngologe verwendet es
bei: vasomotorischer Rhinitis, zur Kupie-
rung von Erkältungsanfällen, Asthma
bronchiale, bei subakuter Bronchitis,
Katarrhen der Tuben und des Mittelohres,
zur symptomatischen Behandlung des
Heufiebers usw.

Packungen: Schachtel mit 3 Amp. zu 1 cm
Spitelpackung mit 10 Amp. zu 1 cm

Falls Sie die Wirkung der Präparate bereits kennen, bitte ich Sie, dieselben im Auge zu
behalten und in geeigneten Fällen anzuwenden. • Sonst stehen Ihnen zur Bildung Ihres
eigenen Urteils Versuchsmengen und Literatur selbstverständlich gern zur Verfügung.

SIMON'S APOTHEKE • BERLIN C 2 • SPANDAUER STRASSE 17

STRYPHNON stoppt

HAEMORRHAGIEN
flächenhaften und parenchymatösen
Charakters, kleine venöse und okkulte
Blutungen.

Der Oto-Rhino-Laryngologe verwendet
es bei: Operation der Mundhöhle, Tonsil-
lektomie, Uranoplastik, Septumresektion,
Adenotomie, Totalaufmeißelung usw.

Packungen: Gaze, Festkantenbinden, Jodo-
form-Stryphnonbinden, Pulver (als Streu-
und Einblasemittel)

Injektionen:
subkutan 0,5%, 6 Amp. à 2,2 cm
intravenös 0,5%, 6 Amp. à 2,2 cm



Hier

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Mulready advertising envelope, Edinburgh
1840, Copy of front (reduced)

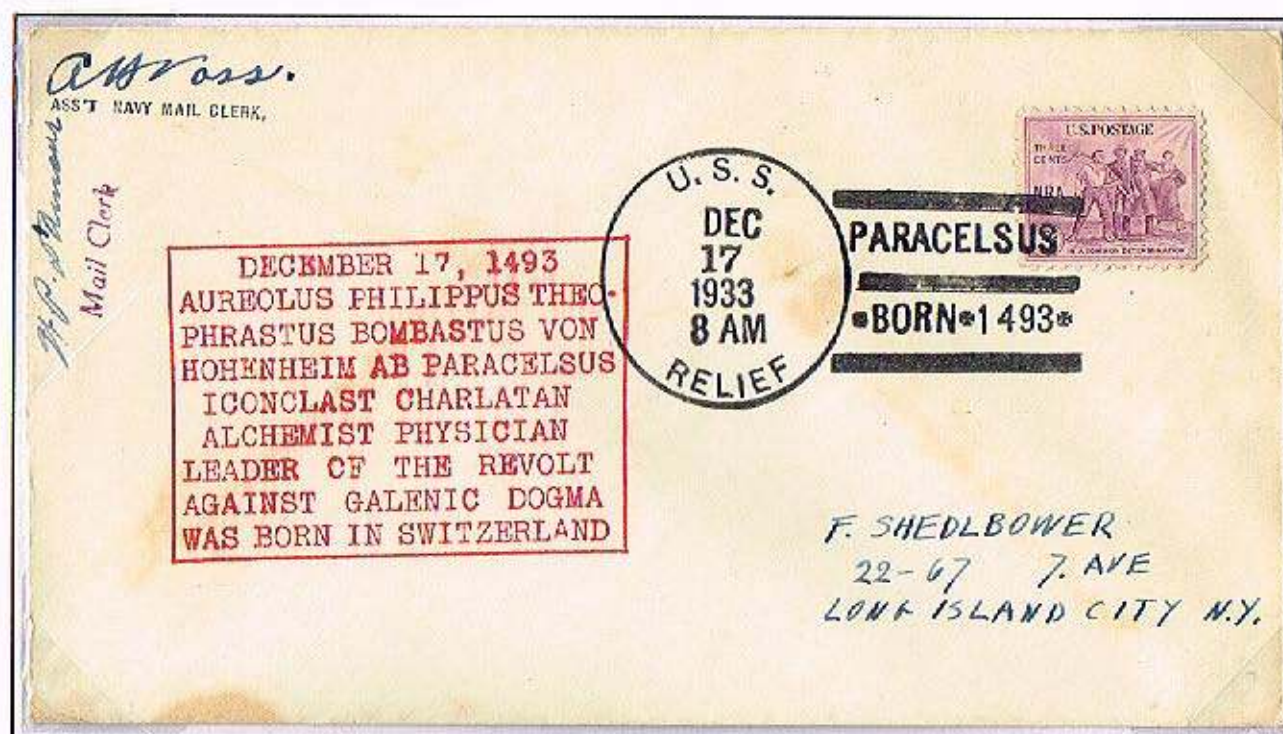
Excessive bleeding, (even bleeding from the gums) can lead to
anaemia and/or shock, and may require a blood transfusion.

The following chapters examines the
science of blood transfusion in detail....

A MODERN MEDICINE FROM AN ANCIENT MYTH.

1. EARLY BEGINNINGS

blood transfusion begins to develop
scientists were convinced blood had life giving properties



Postmark and cachet from the US hospital ship, USS Relief

In the 15th century, Paracelsus used blood as a component for the remedy of leprosy, and in 1656 the architect Christopher Wren experimented with injections into the veins of dogs

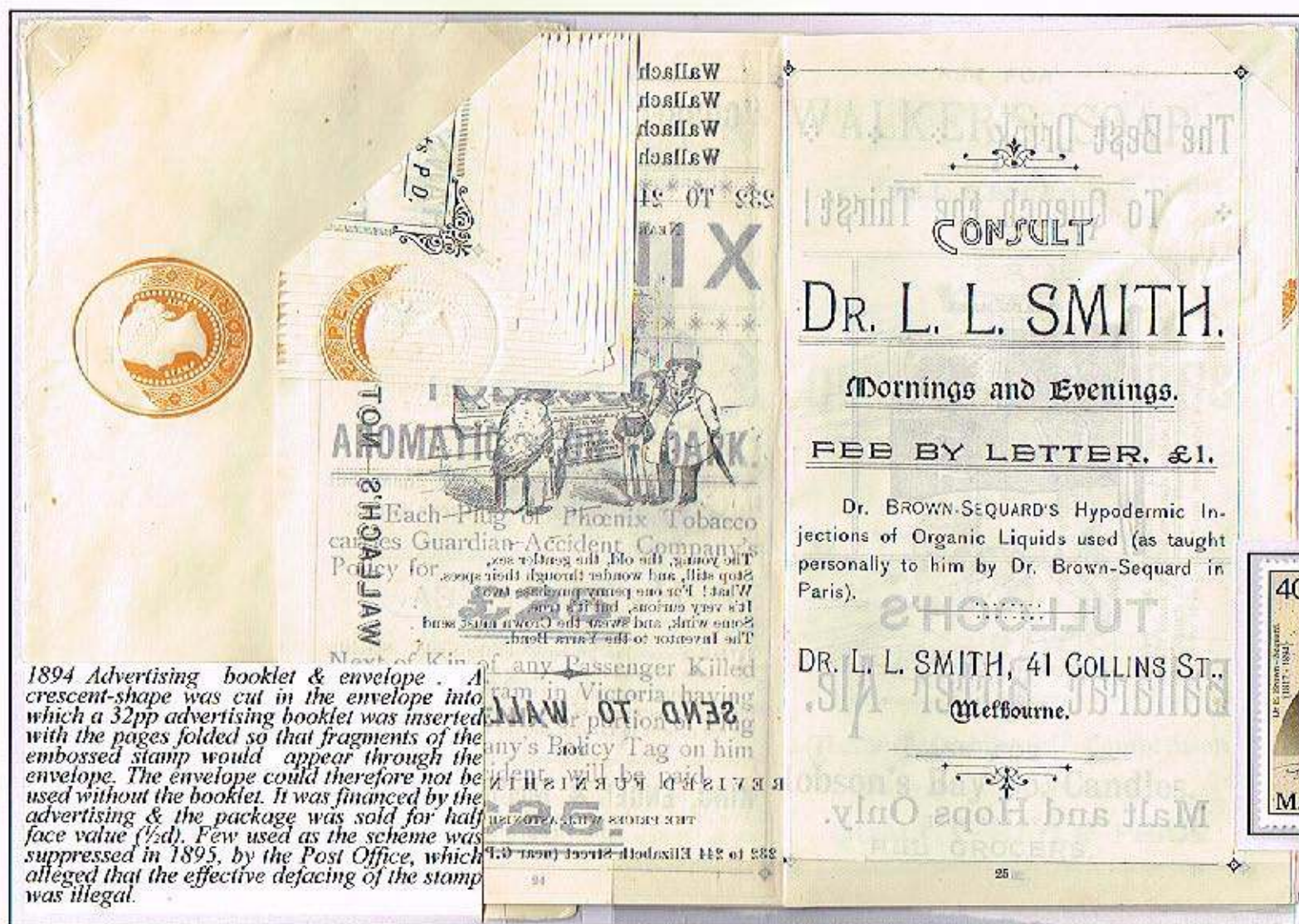


George Hayem, made his mark by his work on the transfusion of artificial serum in 1881...



Meter: Secap

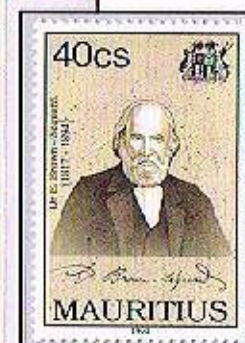
The invention of the first transfusion giving apparatus was probable made by Francesco Folli in 1654 ▼



1894 Advertising booklet & envelope. A crescent-shape was cut in the envelope into which a 32pp advertising booklet was inserted with the pages folded so that fragments of the embossed stamp would appear through the envelope. The envelope could therefore not be used without the booklet. It was financed by the advertising & the package was sold for half face value (1/2d). Few used as the scheme was suppressed in 1895, by the Post Office, which alleged that the effective defacing of the stamp was illegal.



In the 1850's Brown-Sequard, by the transfusion of defibrinated blood discovered that it will restore the irritability of the muscles after a corpse had become rigid, but he did not realise the full potential of this observation.



Before any further developments could proceed a vital discovery was necessary...

5.1. EARLY BEGINNINGS

blood group discovery advances transfusion techniques

Regarded as the father of modern day blood transfusion, Landsteiner, in 1901, discovered the ABO blood group system...

...by observing the agglutination pattern ie sticking together of red cells, (shown on left), Landsteiner made the theory that antibodies linked the red cells together (similar to two ▼ imperforate stamps joined by a gutter), and thus worked out the main ABO blood groups.



Imperforate phase proof pair in final colours with gutter



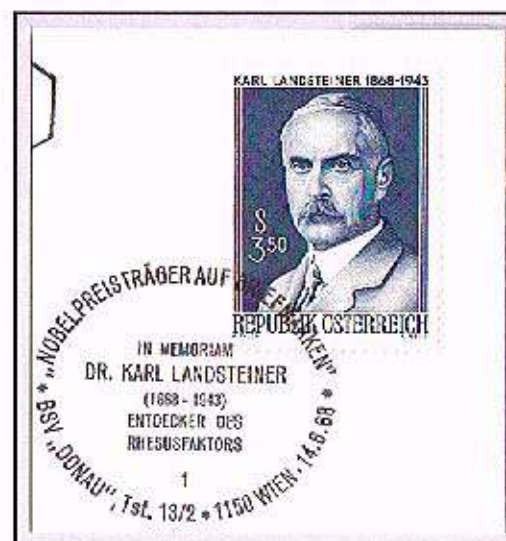
Initially he identified 3 groups A, B and C (C later became O or zero),



in 1902 he identified a 4th ABO type, group AB, so there are now 4 main ABO groups - A, B, O & AB.



The designation A and B with reference to blood groups was proposed by Ludwik Hirsfeld, and in 1911 he discovered the inheritance of the blood types



In 1937 Landsteiner made a further discovery, that of the Rhesus (Rh) blood group system, by using red blood cells from the Rhesus macaque monkey.



Alexis Carrel, a vascular surgeon famous for his method of suturing blood vessels, made in 1908, the first transfusion to a newborn baby,



Carrel developed a method of suturing blood vessels.

Enlarged section of stamp

Carrel was assisted by Lindbergh, it was Carrell's medical skills combined with Lindbergh's engineering knowledge that made them a strong team for their later venture of inventing an artificial heart pump machine, Lindbergh of course became more famous as an aviator.



The inaugural flight of Contract Air Mail Route 2 (C.A.M. 2) took place on the 15th April 1926, when Charles Lindbergh flew the south-bound flight from Chicago to St. Louis. In 1928 on the 20th & 21st February, Lindbergh flew the mail again on his original route.



....out of war a modern service is born

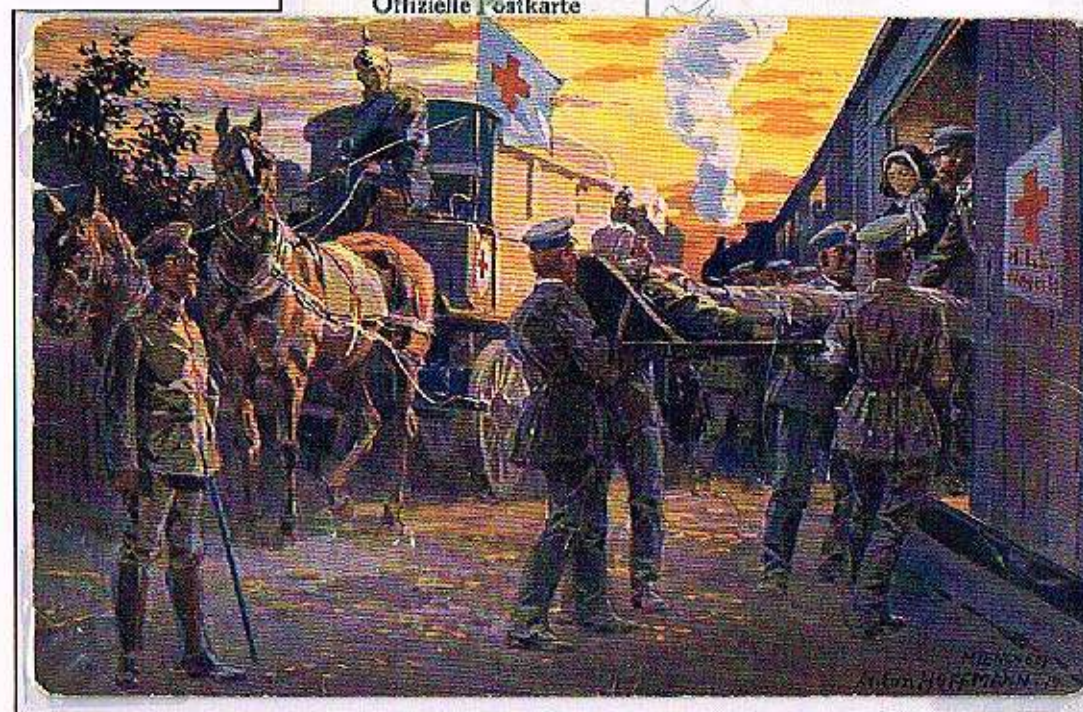
It was at this time philatelic appeals for funds for the Red Cross were initiated.



WWI Military hospitals, hospital ships, hospital trains, at this time, all used blood transfusion in a limited form only...



Postkarte



Date stamp applied at Base Post Office, Australian Imperial Forces, mainly on mail routed via France. Franked by Australian Auxiliary Hospital, Harefield, Middx. 1918

5.2. BLOOD TRANSFUSION SERVICES.

civilian blood donor services established and research continues

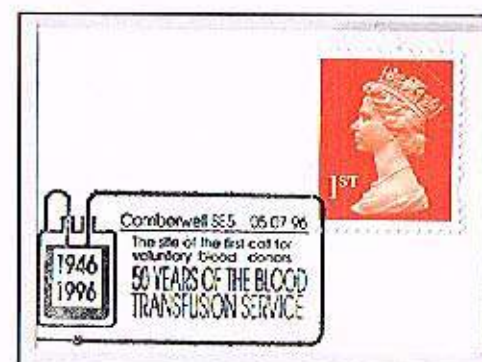
In 1921 members of the British Red Cross, Camberwell Division became the first voluntary blood donor group.



Missing red ▲

doctor blade flaw ▲

Phosphor (3 bands) ▲

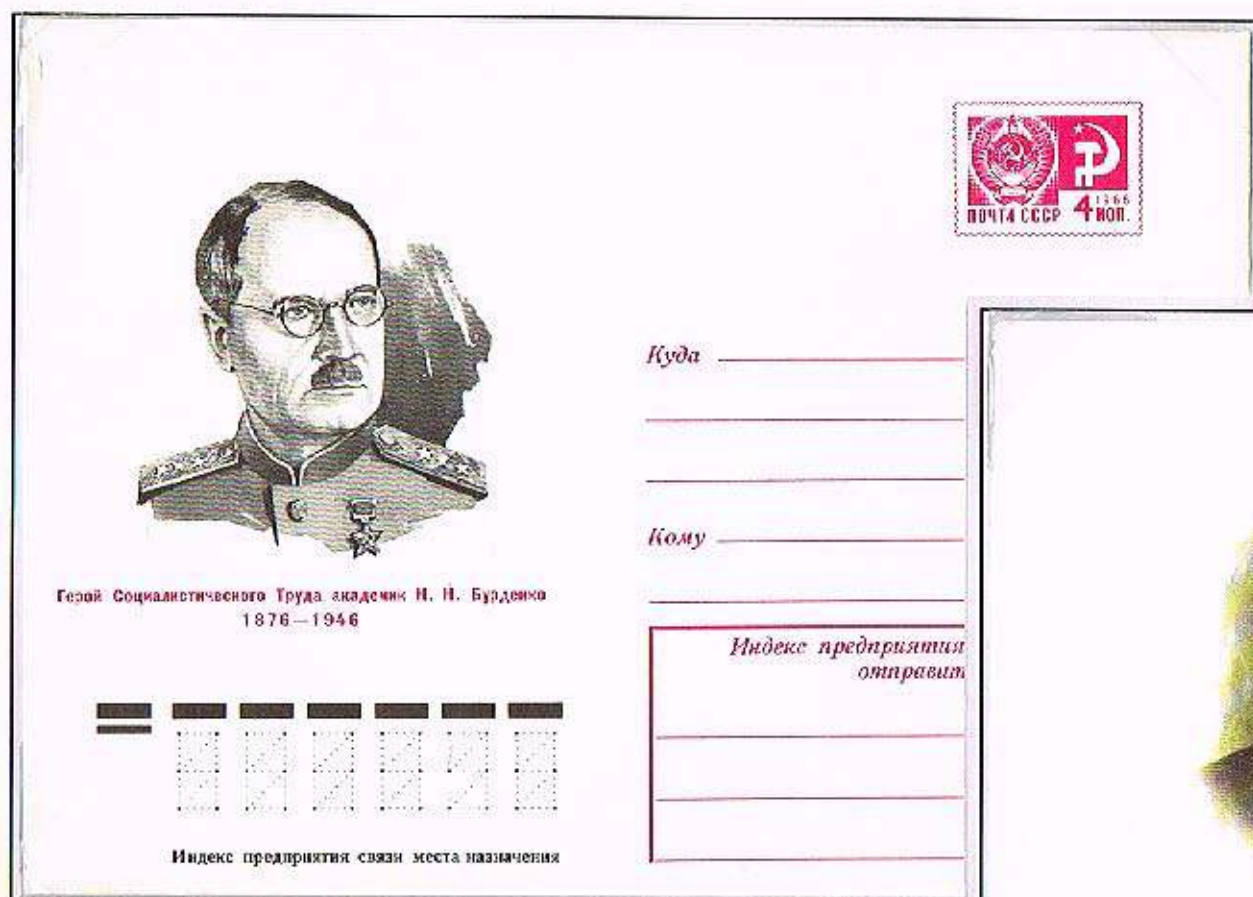


Other countries soon followed the idea, the first voluntary blood donors groups (AVIS) in Italy were formed by Vittorio. Formentano, and Alberto Finazzi.



Research continued with Bordet who improved transfusion giving sets by coating them in wax...

... and Burdenko then established the point at which a blood transfusion became necessary.

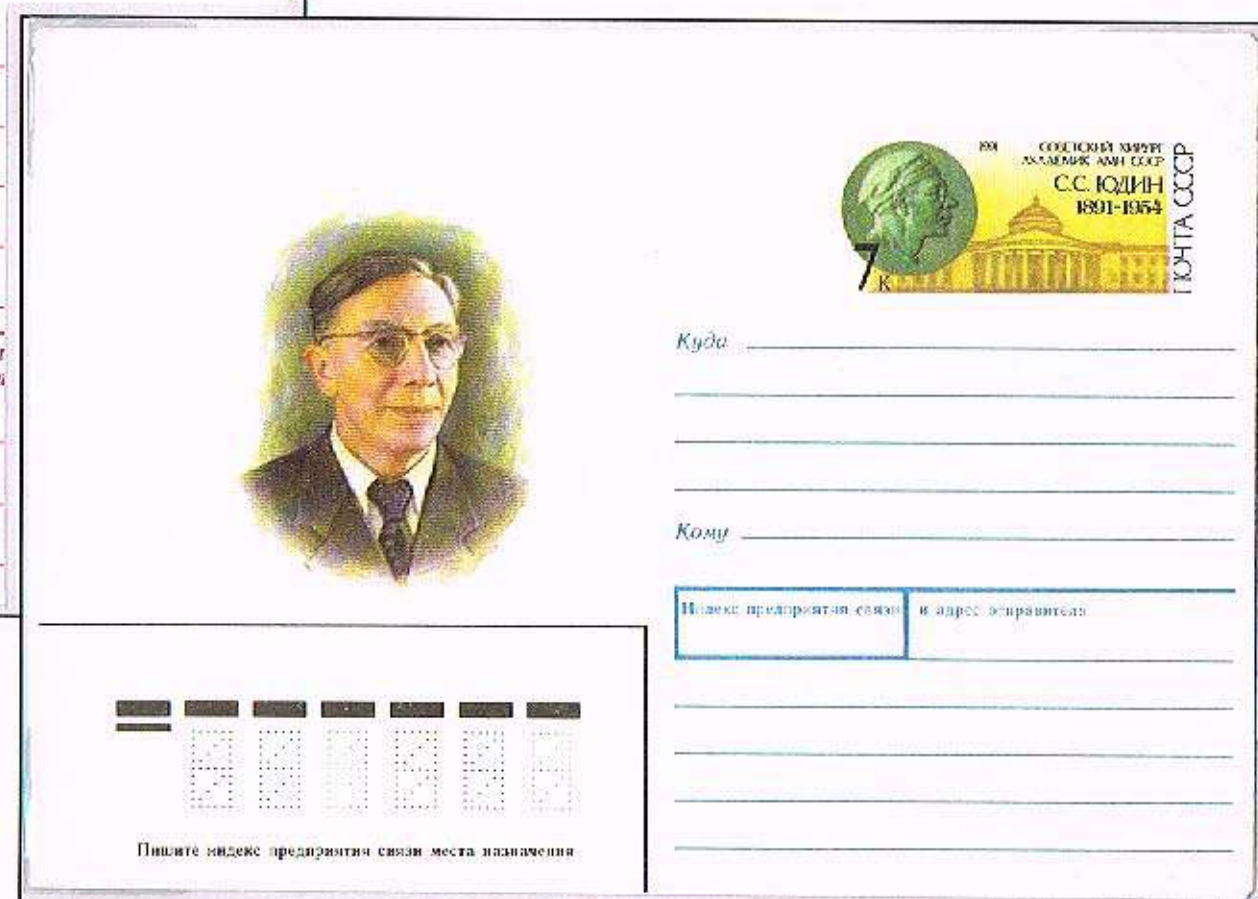


Куда _____

Кому _____

Индекс предприятия
отправит

Индекс предприятия связи места назначения



Куда _____

Кому _____

Индекс предприятия связи и адрес отправителя

Полните индекс предприятия связи места назначения

In the 1930's Sergie Yudin pioneered the use of cadaver blood for transfusion, and established storage centres in the USSR

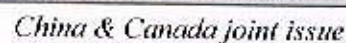
...further developments and wartime intervenes

The term 'blood bank' first appears

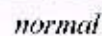


Meter: Pitney Bowes, series R.
P.L. & R. - Postal Laws & Regulations

The impact of war would again accelerate developments; Norman Bethune, a Canadian physician, established a Red Cross blood transfusion unit during the Spanish Civil War (1936-39), he later set up clinics in China where he died from septicaemia (blood poisoning)



Kotnis followed Bethune's example during the Sino-Japanese war of 1938



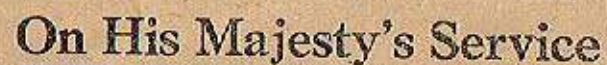
gunned on both sides

The outbreak of World War II would now further accelerate the formation of these centres, in England and Wales eight regional transfusion centres were opened, as part of the Emergency Blood Transfusion Service...

Official paid envelope used by EBTS with enclosed card ►

...and in Scotland the Scottish Blood Transfusion Service was established in 1940.

GB slogan postmarks are normally printed in black ink, on this special occasion a 'blood' red ink was used. ▼



A person finding this card should return it at once to:

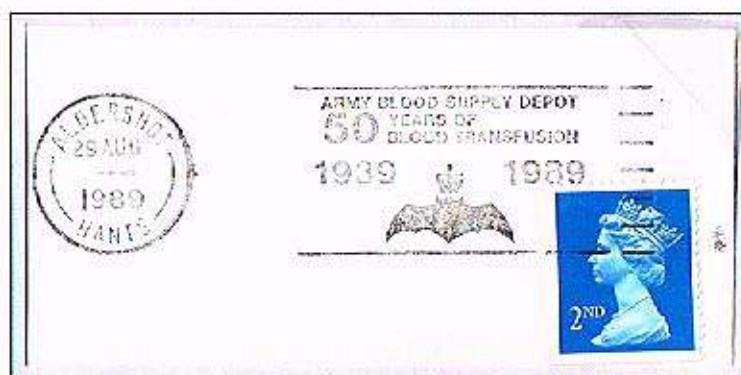
Mr. Wilfred Jackson
54. St. Barnabas Rd
Highfields.
Sheffield 2

Emergency Blood Transfusion Service
VOLUNTEER BLOOD DONOR

If undelivered, return to
Regional Blood Transfusion Officer,
Ministry of Health,
School of Medicine,
LEEDS 2.

Following the outbreak of World War II, the Army Blood Supply Depot was established at...

... Bristol in 1939 and later moved to Aldershot



The Army Blood Transfusion Service provided blood components for the military field hospitals, as shown here during the North Africa desert campaign



PLATE 3: DISPATCH RIDER COLLECTING PLASMA (DRIED BLOOD FLUID) FROM ADVANCED BLOOD BANK CLOSE TO THE FRONT LINE. THIS PLASMA WILL BE USED AT THE CASUALTY CLEARING STATION.

ON HIS MAJESTY'S SERVICE

OFFICIAL PAID

ARMY BLOOD TRANSFUSION SERVICE,
DONOR REGISTRATION DEPARTMENT,
SOUTHMEAD HOSPITAL,
BRISTOL

DETACH HERE

THE FOLLOWING FRIENDS OF MINE ARE WILLING TO ENROL AS BLOOD DONORS:-

1. NAME _____
FULL POSTAL ADDRESS _____

2. NAME _____
FULL POSTAL ADDRESS _____

3. NAME _____
FULL POSTAL ADDRESS _____

(SIGNED) _____
ADDRESS _____

◀ Reverse of official reply paid form above.

BLOOD TRANSFUSION IN DESERT WARFARE

Broadcast from the Front Line during the Battle of Alamein
By Godfrey Talbot
(B.B.C. Observer with the 8th Army).

"I've just come out of a dressing station. It's partly dug in underground. There's been a raid just now. The doctors are doing wonderful work in these places. In one tiny underground cave in the sandy rock there were four men having blood transfusions. . . . It's one of the many places where this is being done at various parts of the desert front.

"It's no exaggeration to say that blood transfusion on a big scale is one of the biggest and finest medical service developments in this war. It's a thoroughly well-organized business, and it's saving very many lives on the battlefield itself, as well as at base hospitals—lives which would have been lost from loss of blood.

*The Army Blood Transfusion Service advertising booklet with information on its work in the field and appealing for blood donors to use the official paid reply.
Scanned pages from within booklet reduced*

O. H. M. S.

ARMY BLOOD TRANSFUSION SERVICE

Miss R. Turner,
The Willows,
MARK,
NR. HIGHBRIDGE,
Som.

On His Majesty's Service official envelope from the Army Blood Transfusion Service, official paid postage with a 1d paid cancellation.

France also established an Army Blood Supply Service

Groupe :
Date :

CARTE POSTALE

F. M.

CORRESPONDANCE

Vous avez eu la générosité de proposer votre sang pour nos blessés. En leur nom, le SERVICE CENTRAL DE RÉANIMATION - TRANSFUSION DE L'ARMÉE vous remercie.

Nous vous prions de bien vouloir vous présenter, à jeun, ou n'ayant pris qu'une très légère collation à midi.

chez 14^e rue Charles de Gaulle
le *27 mars*
à *10h30* - *1944*

Dans le cas où vous ne pourriez être libre ce jour-là, ayez l'obligeance de nous retourner cette carte et de nous faire savoir la date exacte de votre visite.

mon neveu le
18 avril

Voir au dos

S.G.I.E. Paris, - c. o. n. 31.4780

RÉPONSE

M. _____

vous fait connaître qu'il ne pourra être libre au jour proposé.

Il vous prie de bien vouloir noter qu'il se présentera le _____ à _____

(Une semaine au moins après la réception de cette convocation).

**SERVICE CENTRAL
de RÉANIMATION et de
TRANSFUSION de L'ARMÉE**

53, Boulevard Diderot

PARIS (XII^e)

During the First World War, Arnault Tzanck was a doctor in a military ambulance unit, where he realized the vital role of blood transfusion. With the outbreak of WW2, he was instrumental in setting up a French Army Blood Service.

Franchise Militaire (FM) - Postage exempt (reverse not reduced)

Individual Army Units were also set up in areas of conflict, such as the US 6713 Blood Transfusion Unit based in Italy

After the war Tzanck was responsible for the organization of blood transfusion services in France that resulted in the establishment of the Centre National de Transfusion Sanguine (National Blood Transfusion Centre) in 1949 with Tzanck as its first director.

**ARNAULT
TZANCK**

CENTRE MEDICO-CHIRURGICAL
INSTITUT ARNAULT TZANCK

Tel : 04 92 27 33 33
Avenue Maurice Donat
06721 SAINT LAURENT DU VAR

ECOPLI

NICE CTC
ALPES MARITIMES

29-10-13

268 00 1N4742
8492 069650

€ R.F.
LA POSTE

000,61

S2 111612

Meter: Satas

INSTITUT
ARNAULT TZANCK
CENTRE
MEDICO-CHIRURGICAL

NICE CTC
ALPES MARITIMES

29-10-13

000,61

Meter: Neopost/Satas

Print the complete address in plain block letters in the panel below, and your return address in the space provided. Use typewriter, dark ink, or pencil. Write plainly. Very small writing is not suitable.

No. _____ To: **DET JAMES P. DICKSON (JR) (US)**
SANCTA ROSA A.A.P. COVY CENTER
ALBUQUERQUE, NM.

From: **PTO LEO S. HUFF 57345704**
6713 Blood TRANSF. UNIT
A.P.O. 654 NY/ NY

JULY 19/44
(Date)

ITALY

HELLO BOBES *****
SPECIALLY THE BLOOD PATTY *****

WE... I GUESS THE BIG EVENT IS ALREADY PASSED AND EVERYTHING IS BACK TO NORMAL EXCEPT
JIM. I DON'T SEE HOW YOU CAN WORK AND CARRY THAT MANY ABOUT FOR ALL THE GITS TO SEE
WHAT ARE YOU GOING TO CALL IT (4) AND WHAT NATIONALITY IS IT (DOY ON A BASTY LITTLE GIRL)
P. S. DON'T LET BOBES SEE THIS OR ILL GET ON AGAIN ***** I GOT SOME PICTURES FROM THE POLAR
YESTERDAY AND IT REALLY MADE ME FEEL GOOD. THERE WERE PICTURES OF MY SISTERS. AND I HAD
HAVEN'T SEEN HER IN NEARLY 15 YEARS ***** MY BROTHER'S HOME NOW AND HIS SO BUNT THAT HE
CAN'T FIND TIME TO DROP IN ALONE TO LET ME KNOW HOW THINGS STAND AT HOME. HE LIVES IN GREAT
MONTANA AND MY POLAR LIVE IN COLO. (MOM AND MY BROTHER WERE THE ONE WHO RETURNED HOME
FROM HERE.) I GOT ALMOST FROM MY GIRL IN TEXAS. THE LAST LETTER SHE WROTE WERE ABOUT
NOT. I KIDDED HER ABOUT GETTING MARRIED AND SHE REALLY GAVE ME THE WORKS. I'D BETTER BE SO
GOOD OR I WON'T HAVE ANY PLACE TO GO UP END THE SUMMER. YOU KNOW HOW THAT WOULD WORK.
I DIDN'T MIND STAYING AT PT. SAN ANTONIO JUST THE SAME WITH SOMEBODY WOULD GET RID OF
THOSE LITTLE GITS AND BUGS BEFORE I GOT A CHANCE TO RETURN ***** I LIKED TO GO SWIMMING THERE
BECAUSE MY BOIL COULDN'T SWIM AND I COULD HAVE A SMALL TIME DUCKING HER. THE OTHER DAY WHEN
SHE WROTE SHE TOLD ME SHE CELEBRATED (4th). ARRIVE: SARY OF MEETING BY GOING SWIMMING
AND GETTING A BUCK OF A BUNBUN ***** SHE REALLY WENT FOR MY PICTURE TOO... PROBABLY SHE WILL
WRITE AND TELL ME THAT THE BATS HAVE ALL LEFT THE HOUSE AFTER THEY SAW MY POSS IN A FRAME.
WELL I GUESS IT'S BETTER CLOSE FOR NOW TIME IS FLYING AND I HAVE SOMETHING TO DO...
SO LOTS OF LOVE WITH ME YOUR BOB FAMILY AND DON'T WORK TOO HARD *****
YOUR OSEM LEO (PS. I MET ROBERT KENNEDY THE OTHER DAY HE WAS WITH
US AT (BARKLEY) REMEMBER ***** HE WAS THE DUMB LOOKING GUY WHO FINALLY LED US IN A
ROSP UNIT HERE: *****

V-MAIL *Sol Long Kie*

V-mail, or Victory Mail, used by the US based on the British Airgraph system. V-mail letter was on small letter sheet, 17.8 cm by 23.2 cm, censored, photographed and transported as a thumbnail-sized microfilm image. Upon arrival at their destination, the negatives would be printed. The final print was 60% of the original document's size, creating a sheet 10.7 cm by 13.2 cm.

5.2. BLOOD TRANSFUSION SERVICES

World War II

The search for long term storage of plasma

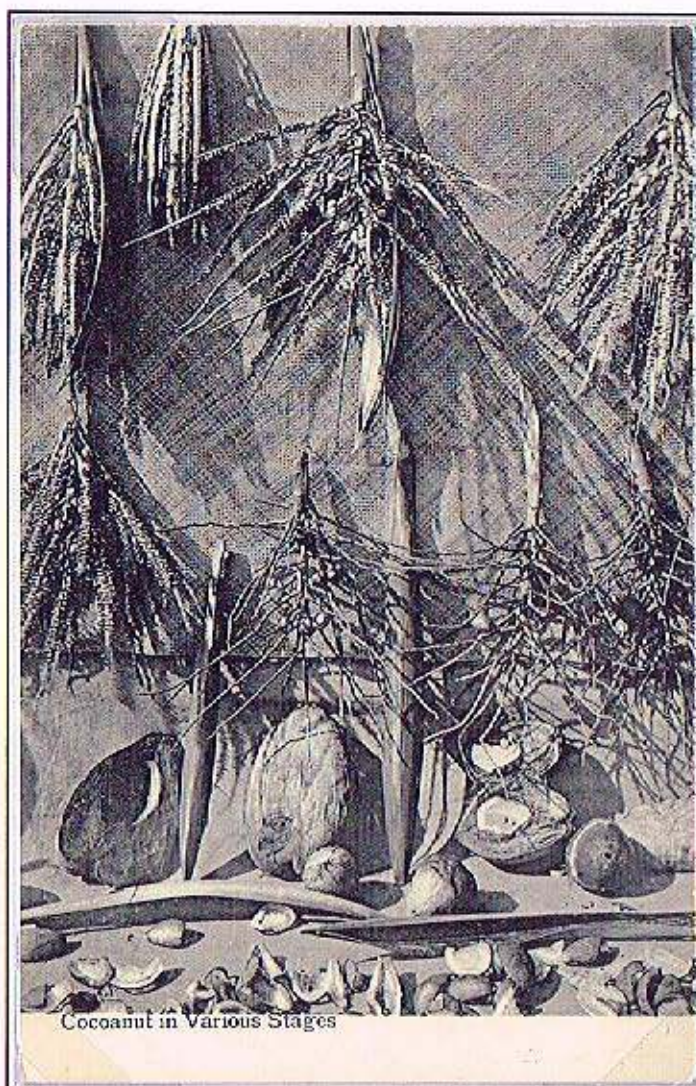
During this time attempts at counteracting the effects of shock from severe trauma were being investigated, blood transfusion was the best method of treatment, but was not always readily available on the battlefield, intravenous infusions of saline were often used,



as well as dextrin infusions

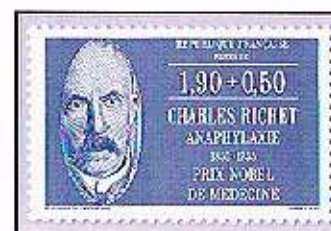


printed to private order postal stationery



It was discovered at this time that coconut water has a chemical composition similar to plasma, and was used straight from the nut to give emergency transfusions to soldiers in the Pacific War when blood wasn't available, however, human plasma is the better alternative...

printed to private order postal stationery



During WW1 Richet had investigated the possibility of blood plasma transfusions...

... and in the 1930's Charles Drew had developed the idea of long term storage of plasma, which could be used in the treatment of burns and shock, and at the beginning of WW2 he became the coordinator of the 'Plasma for Britain' campaign

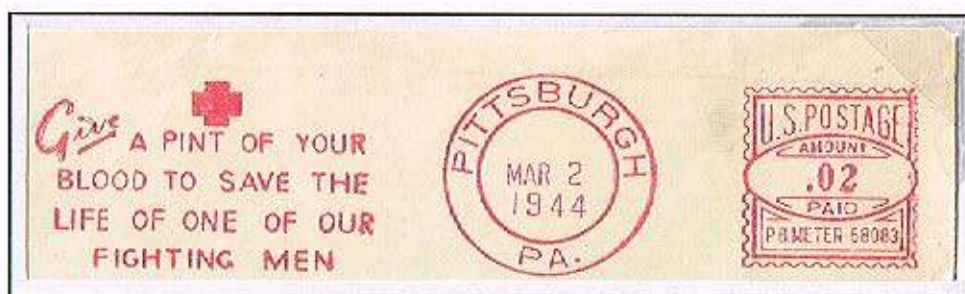


... Charles Best, better known for his role in the discovery of insulin, was instrumental in organising the collection and production of dried plasma for the Canadian military in Europe.

5.2. BLOOD TRANSFUSION SERVICES

A war time stamp that never appeared

As a result of the British and Canadian experience, in the USA a vigorous campaign to attract blood donors for plasma preparation for the armed forces was in force...



Meter: Pitney Bowes CV/CVS



Meter: Pitney Bowes CV/CVS

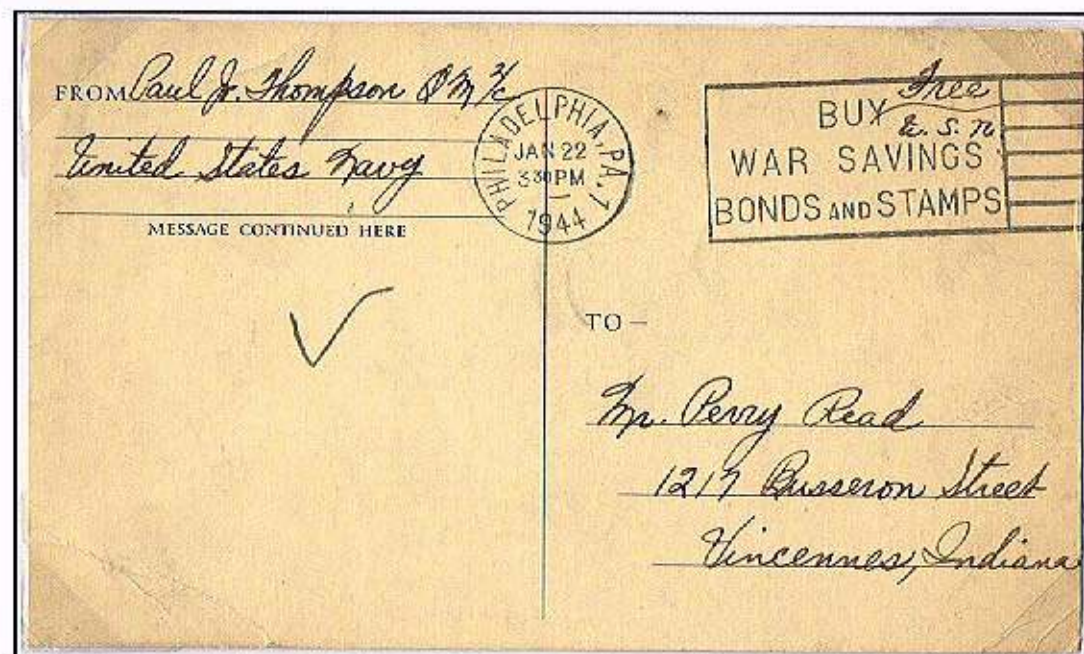
... thus in 1944 the US Post Office in conjunction with the military medical authorities planned to issue a 'blood plasma' stamp to bring to the attention of the public the need for blood plasma for the wounded.

The stamp was scheduled to be issued in March 1945, but 3 factors prevented the issue of the stamp:

1. the urgent requirements for the printing of invasion currency and war bonds



2. Although President Roosevelt (a keen philatelist) played no part in the actual design of the proposed stamp, he apparently considered the proposed design 'too horrific' and vetoed the design.



1944 slogan cancellation used on US Armed Services postage free privilege envelope

3. The war was almost over.

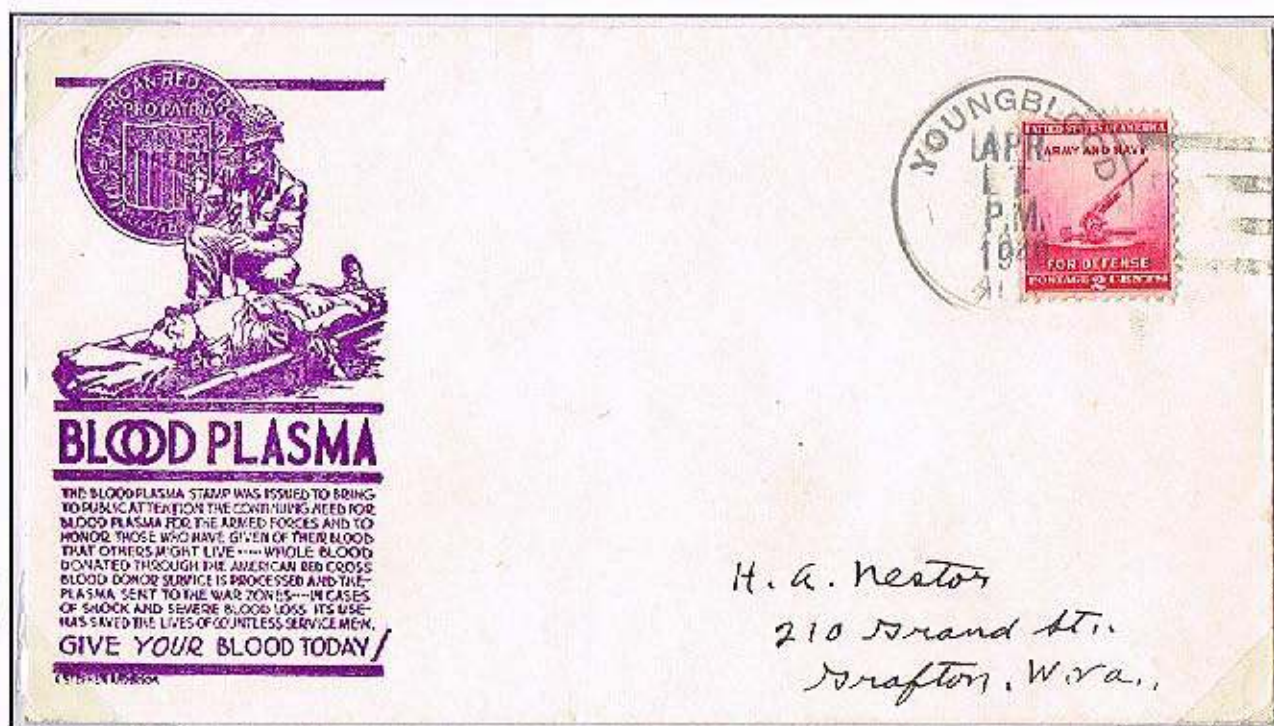


France liberated, 1945

The whole project was thus cancelled.

A single copy of the original proposed stamp design, is held by the Smithsonian National Postal Museum, Washington, DC.

Non-philatelic items were produced such as this FDC. The FDCs printed were used as FDCs for other later stamp issues. This one not used as a FDC but has a Youngblood postmark and an Army and Navy defence postage stamp. Youngblood Post Office, Pike County, Alabama, in operation 1894-1955



H. A. Nestor
210 Grand St.
Dorafton, W. Va.,

From these emergency and military services, individual blood bank centres were established



Meter: Secap

Some centres were founded by individuals such as the Robert Waitz centre in Strasbourg,

and are often situated within hospitals,



Meter: Francotyp, C



or in their own individual buildings



A new blood transfusion building in Helsinki



New main blood bank building as part of the Honduras 1956 5 year plan



Dr Mohamed Hamad Satti promoted interest in blood transfusion at the Satti laboratory.

Vignette & imperf plate proof, final stamp issued in different colour from the plate proof.



Meter: Pitney Bowes, R series

Others are independent organisations such as the Utrecht Red Cross Foundation (Stichting) Blood Bank



Meter: Pitney Bowes



The Sarajevo Institute of Blood Transfusion was formed in 1958. Providing a map on this postal stationery card for the Sarajevo Institute was a short lived idea!

Postal stationery card printed privately by the Bureau of Voluntary Blood Donation, Sarajevo, a non profitable organization, with the approval of Sarajevo Post Office for local use only. The Ministry of Post banned the use of the card, and was thus in use for only a few days.



5.2. BLOOD TRANSFUSION SERVICES

.....national transfusion services

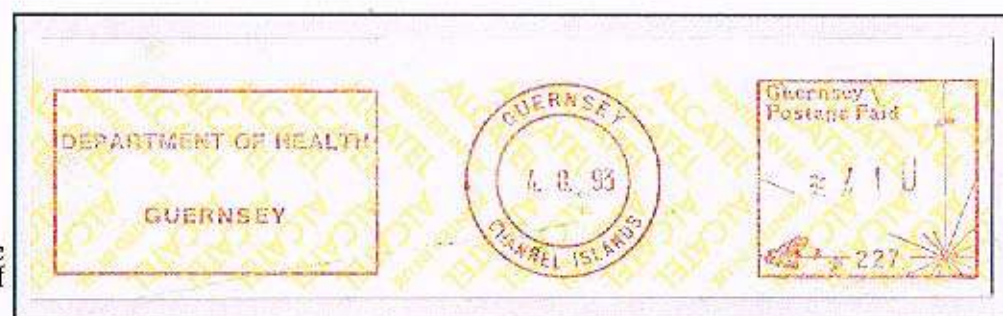
From these individual centres many countries established a national network of blood transfusion centres.



▲ Red colour omitted

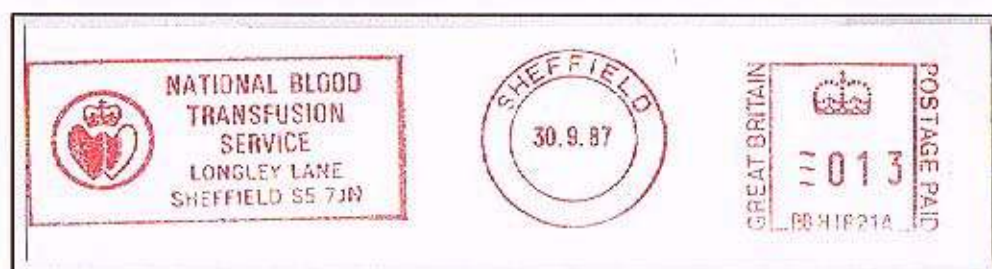
The Red Cross Society of many countries, is an essential organisation in maintaining blood transfusion services, if the Red Cross is 'missing' or not active then many countries would not be able to sustain a transfusion service.

Many blood transfusion services are financed by the health departments of the individual countries



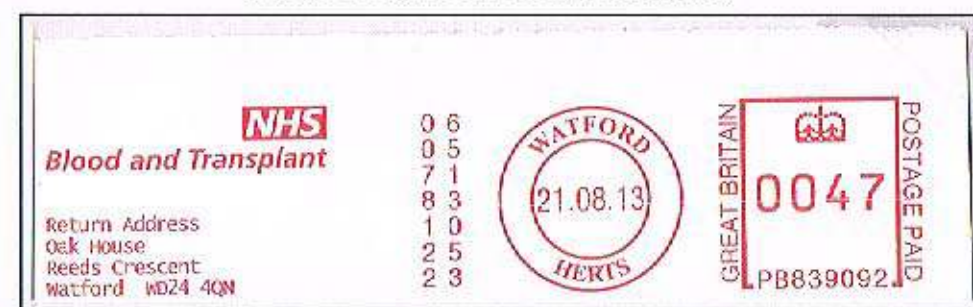
Meter: Neopost, electronic

Some became national organisations within the health service of that country - the EBTS of England & Wales became the National Blood Transfusion Service



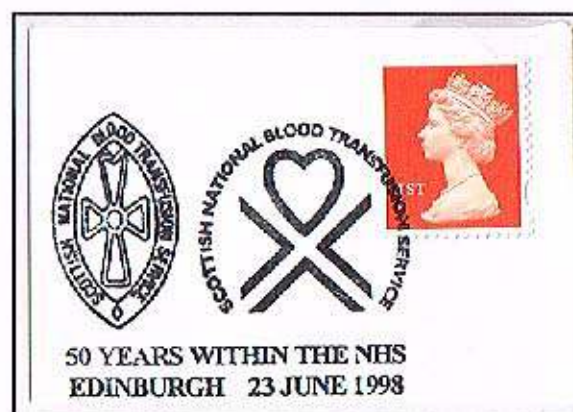
Meter: Pitney Bowes

and later became NHS Blood & Transplant.

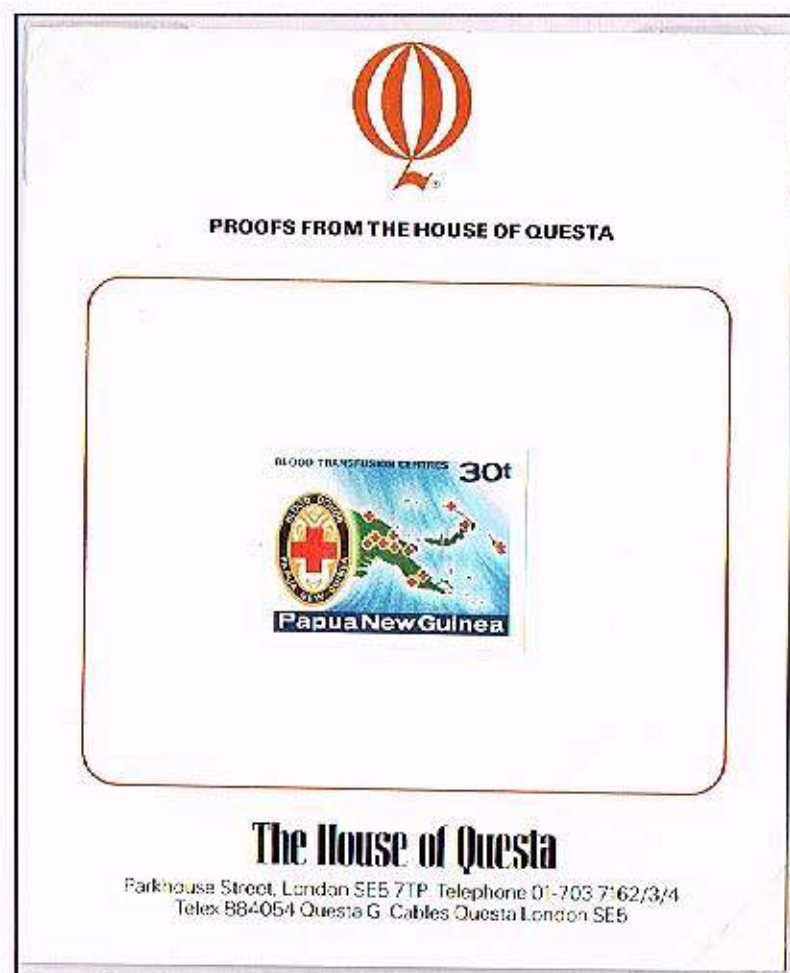


Meter: Pitney Bowes,

The Scottish National Blood Transfusion Service also remains within the UK National Health Service



and in Portugal, The Instituto Nacional de Sangue - INS (National Blood Institute) was created in 1958. This first body, eventually became the Instituto Português do Sangue - the IPS (Portuguese Blood Institute), part of the Ministry of Health.

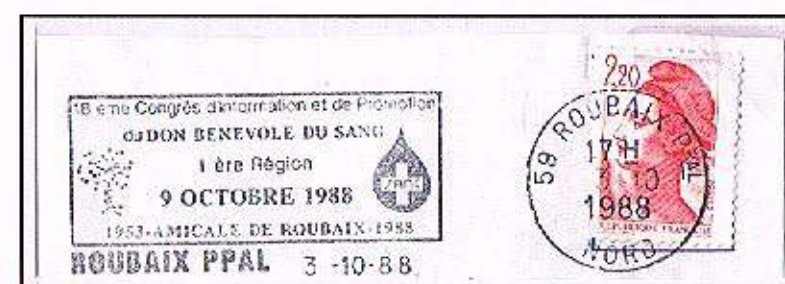


Transfusion Centres are scattered throughout each country, as shown in these maps of Papua New Guinea and France.

Printers presentation card with imperforated proof for final approval before printing stamps.



ATM label, with test values, and control/ security number preprinted onto the backing paper, this number indicates the number of labels remaining on the roll.



The centres collect and process blood obtained from blood donors. Arranging appointments for blood donors to attend donor sessions is an essential part of their work....

POSTAGE PAID

BECOME
A BLOOD DONOR
SYDNEY N.S.W. AUSTRALIA 2000

A. J. M. ANNEGARN,
ROLLOFSSTEAAT 2,
2596 VN. THE HAGUE,
HOLLAND.

N.S.W. RED CROSS BLOOD TRANSFUSION SERVICE
153 CLARENCE STREET
SYDNEY, N.S.W. 2000
AUSTRALIA

Telex: RXNSW 121964 Telephone: (02) 290-2555

Hand applied
postage paid
indichum, for
both internal
and foreign
mail

Bezirksinstitut für Blutspende-
und Transfusionswesen Halle
402 HALLE
ZKD

An das

DRK Betriebskomitee
VEB Chemische Werke Buna
z.Hd. Kamerad Wilsky

4212 Schkopau

Bezirks-Institut
für Blutspende- und
Transfusionswesen Halle
402 Halle (Saale) - Leninallee 203

IV/10/10 Pz G 013/00 5 0000

- ZKD (Zentral Kurierdienst)
From 1956 until the reunification of Germany, East
Germany operated a secure parallel postal system for
official mail between government offices and govern-
ment-owned businesses. Ordinary ZKD mail was
franked with special meters and handstamped franks.

Halle Blood Transfusion Centre.

The transfusion services arrange donor clinics, frequently by
post to the donor, often with postal privileges.

NBTS PTPO appointments postcard with 1/2d upgrade on unregulated size
postcard. Not classified by Huggins catalogue - ONLY KNOWN COPY

Rood Kruis van België
Afdeling GENT

Vijlwindgatenstraat 24
DIENST VOOR BLOEDTRANSFUSIE
Tel. 25.20.60

Ministerie van Volksgezondheid en van het Gezin
HET RODE KRUIS VAN BELGIE
Bloedtransfusiediensten
PORTVRIDOM

Mr. VERHOEFTAEDT Aloïd
Bromeïiastraat, 49,
St.Amandsberg.

De Hoofdgeneesheer van de Plaatselijke
Bloedtransfusiedienst van Gent

Belgium Red Cross Transfusion
Service, Belgium Ministry of
Health free postage

NBTS, 201

SPUSION SERVICE,
TYPE AREA
DE OFFICES
STRICT,
BLACKPOOL.

BLACKPOOL
18 JUNE
1952
LANCSA

NATIONAL BLOOD TRANSFUSION SERVICE

You have kindly offered to give your blood. Will you please
attend at MUNICIPAL HEALTH CENTRE
WHITEGATE DRIVE,
BLACKPOOL.

on WEDNESDAY 25 JUN 1952 if possible at 7-0
or, if not convenient, between 2-4:30 p.m. or 6-7:30 p.m.

We should be glad if you would let us know, either by postcard
or telephone, if you are unable to attend, suggesting a more suitable
appointment.

[S.18810] Hw.

6.1. AN INVITATION TO DONATE BLOOD

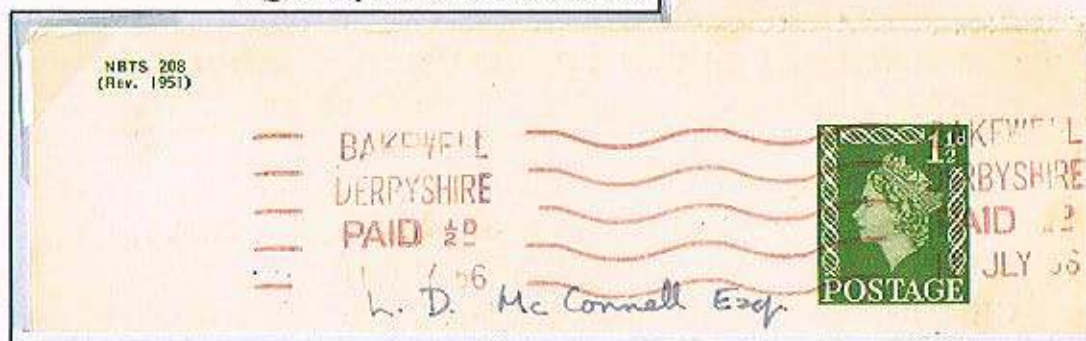
NBTS innovation

The idea of a PTPOs was taken a step further with a system of pre-paid folded reply cards introduced in 1949 by the NBTS (National Blood Transfusion Service) for donor appointments.

The cards (NBTS207 & 208) were folded with an imprinted stamp for outgoing mail and a second imprinted stamp for the donor's reply section of the card. The donor cut off their own address section and returned the pre-paid appointment details section to the NBTS.

The complete cards shown on this sheet are the side addressed to the donor and are all therefore postmarked

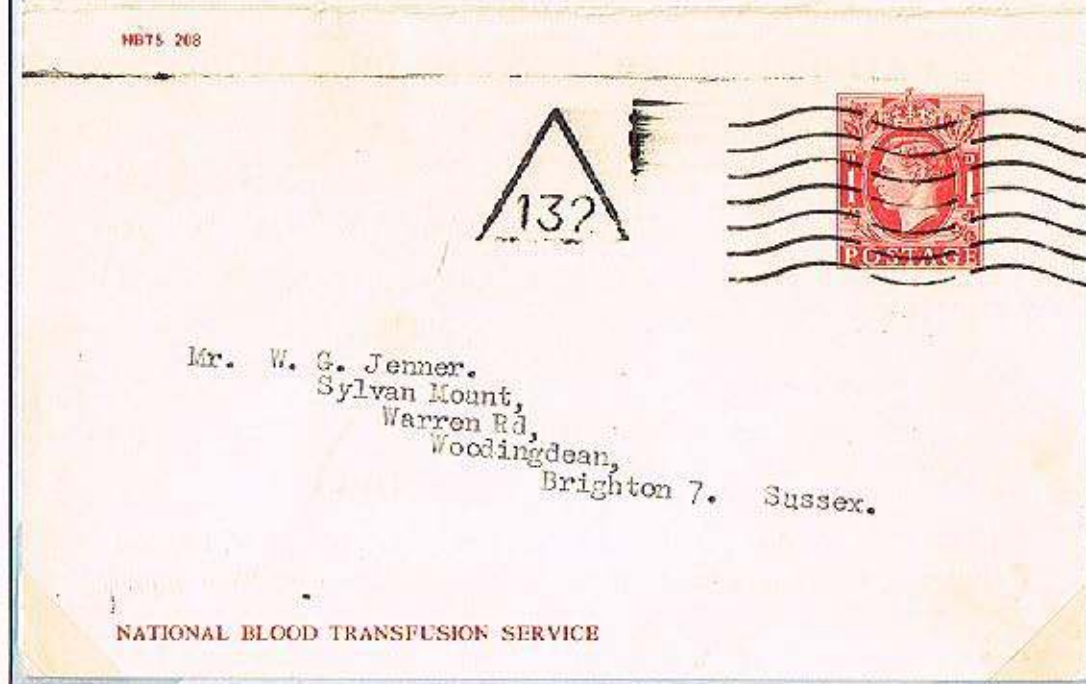
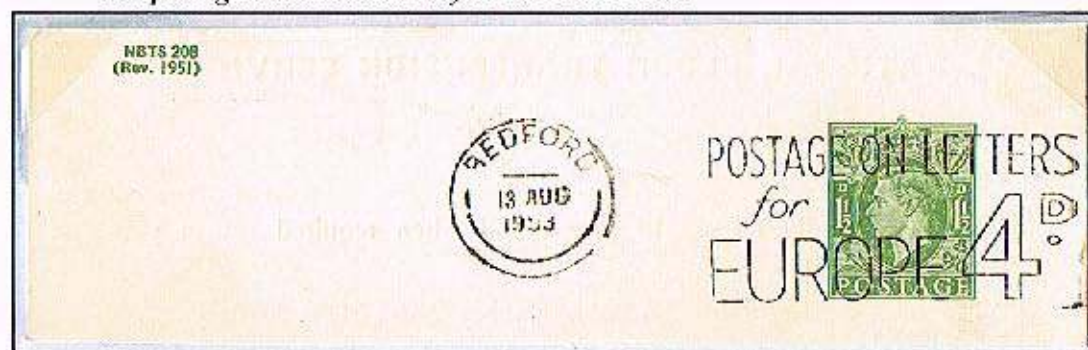
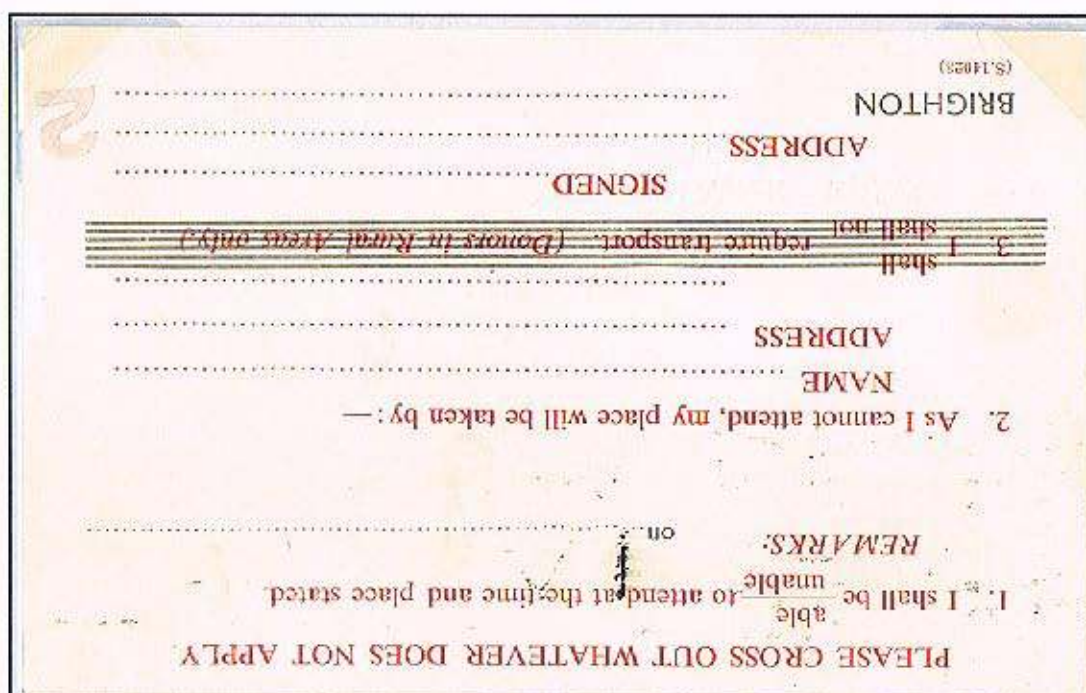
▼ QEII imprint introduced in 1952



▲ GVI & QEII imprints combined, the GVI imprint continued to be used until 1957

▲ rate increased to 2d 1st June 1956

▲ ½d postage increase added by meter cancellation



▲ rate increased to 1½d June 1951

The George VI imprint was designed by Eric Gill from the Edmund Dulac portrait, originally designed in WW2 for letterpress printing as an emergency stamp issue, never issued as a stamp but the design used on official postal stationery. Due to lack of space not all items are shown in their entirety

▲ Addressee side of card (unfolded) with reply section attached

▲ 1d printed paper rate since 1940

6.1. AN INVITATION TO DONATE BLOOD.

These reply cards continued to be in use until the early 1970s

...NBTS innovation

The cards shown on this sheet are the reply side of the cards and are complete, the reply section has therefore not been used and thus not postmarked.

NATS 208T
(Rev. 1961)NBT5 208
(Rev. 1961)

ACRE LANE 2046 May

NETS 208
(Rev. 1961)

DARTFORD 19th Nov



▲ Official paid imprint used from 1968 when a 2 tier 1st and 2nd class postal rate was introduced

◀▲ rate increased to 3d 17th May 1965

NETS 208
(Rev. 1961)

Mrs. L. THOMAS.

NBS 208
(Rev. 1951)

▲ rate increased to 2½d 1st Oct 1961

NBTS 208
(Rev. 1951)

The Queen Elizabeth II imprint, was designed by John Farleigh from the Wilding portrait. With regular increases in the postal rate (inland printed matter) and in 1952 a change of monarch, constant changes in the postage imprints were necessary, usually the addition of a ½d orange to make up the rate, until in the late 1960's an 'official paid' version was introduced for a short period.

◀ Reply section of card unfolded with the donor appointment details attached

It is important that we should know how many donors will attend. Will you, therefore, please use the attached postcard for your reply?

21 MAY 1958

ST. ANDREW'S CHURCH HOUSE, RUGBY

You have kindly offered to give blood when required. Will you please attend at:

Tel. No.
Coventry 3843

NATIONAL BLOOD TRANSFUSION SERVICE.

NBTS 208
(Rev. 1951)

Regional Blood Transfusion Service

90, Gosford Street

Coventry

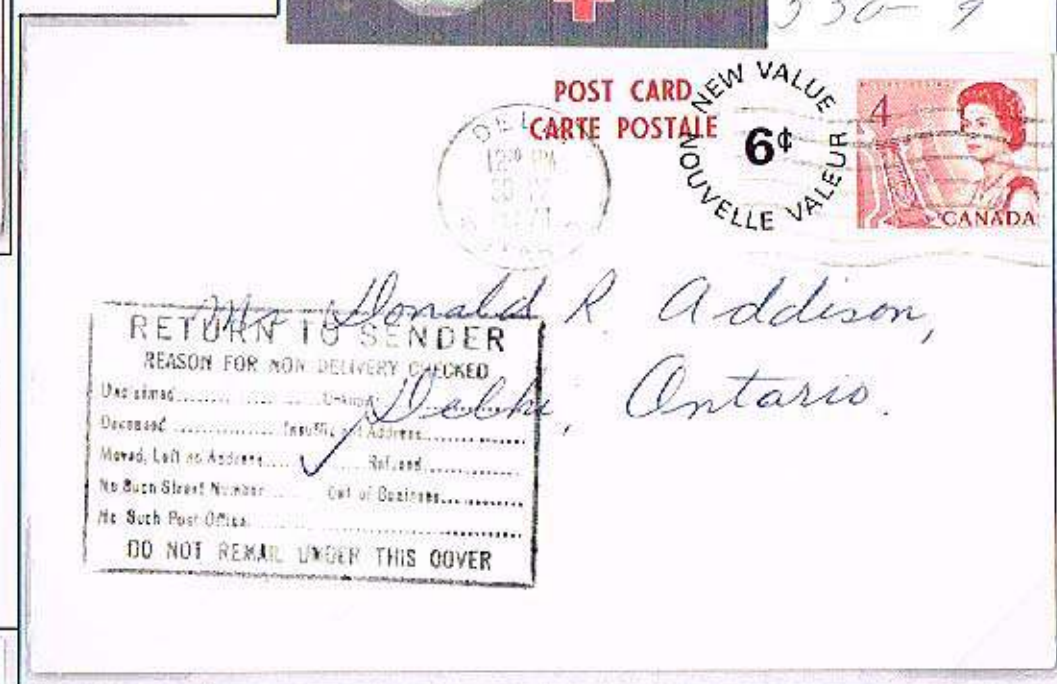
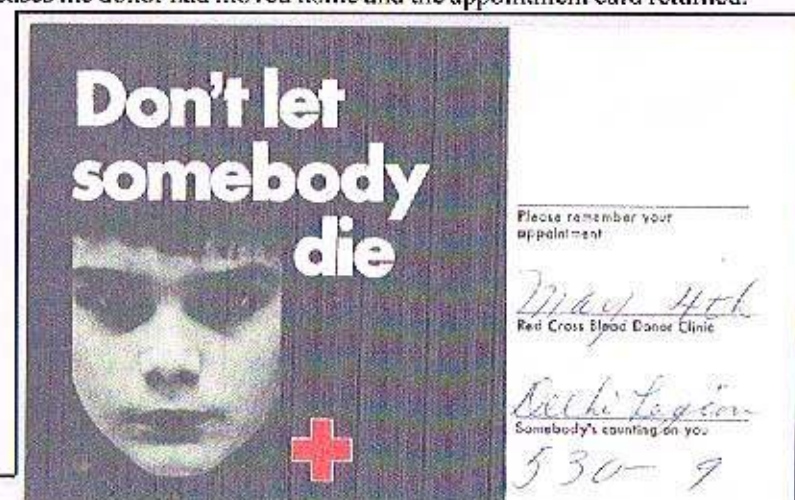
6.1. AN INVITATION TO DONATE BLOOD.....donor appointments must get through

It is vital that the blood donor appointment is delivered to the potential donor...



Canadian postal card with 4c preprinted stamp replaced by 6c to comply with a 2c increase in postcard rate introduced on Nov 1st 1968, not postal stationery as Red Cross information printed privately later, return to sender cachet applied by post office (scan of reverse) ►

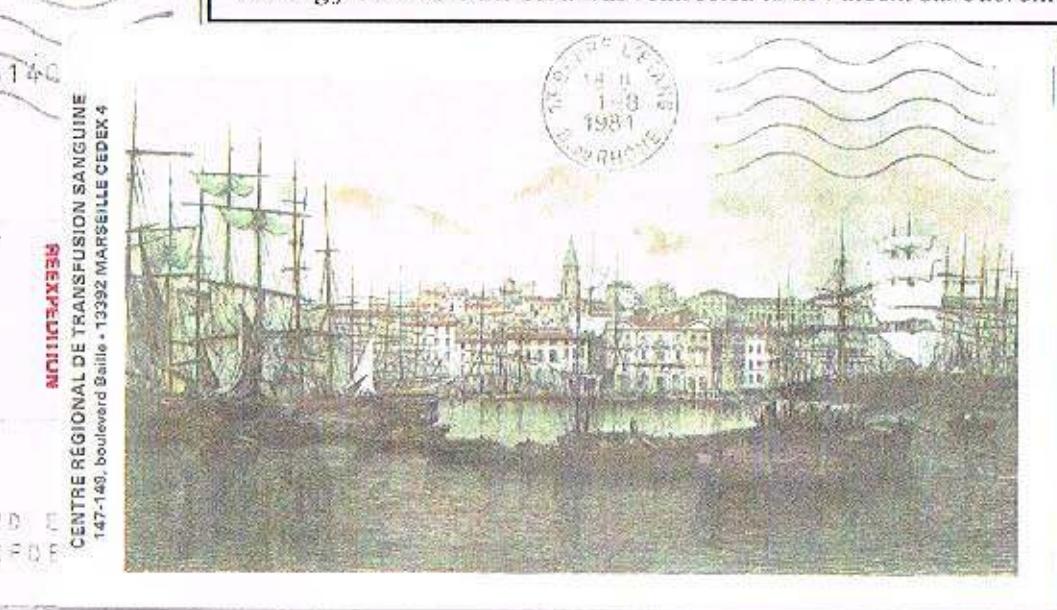
...in these two cases the donor had moved home and the appointment card returned.



Using the Post Office redirection service, available in many countries, means the appointment will still get through, French example below...



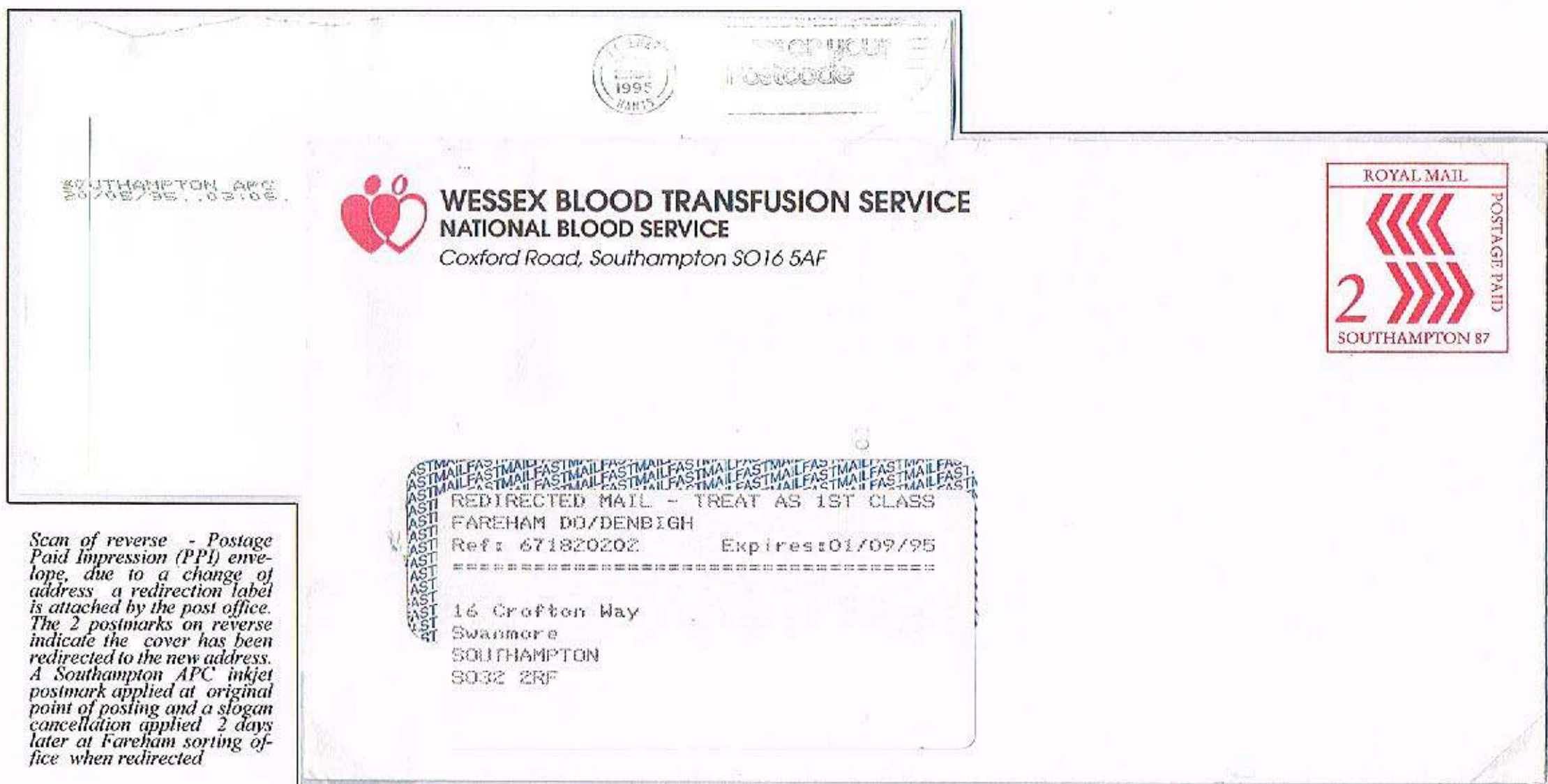
La Poste France réexpédition service with Marseille date stamp applied at point of posting, a redirection label applied at Berre L'Etang and a new date stamp applied 2 days later on reverse at Berre L'Etang from where the card was redirected to St Vincent sur Jabron.



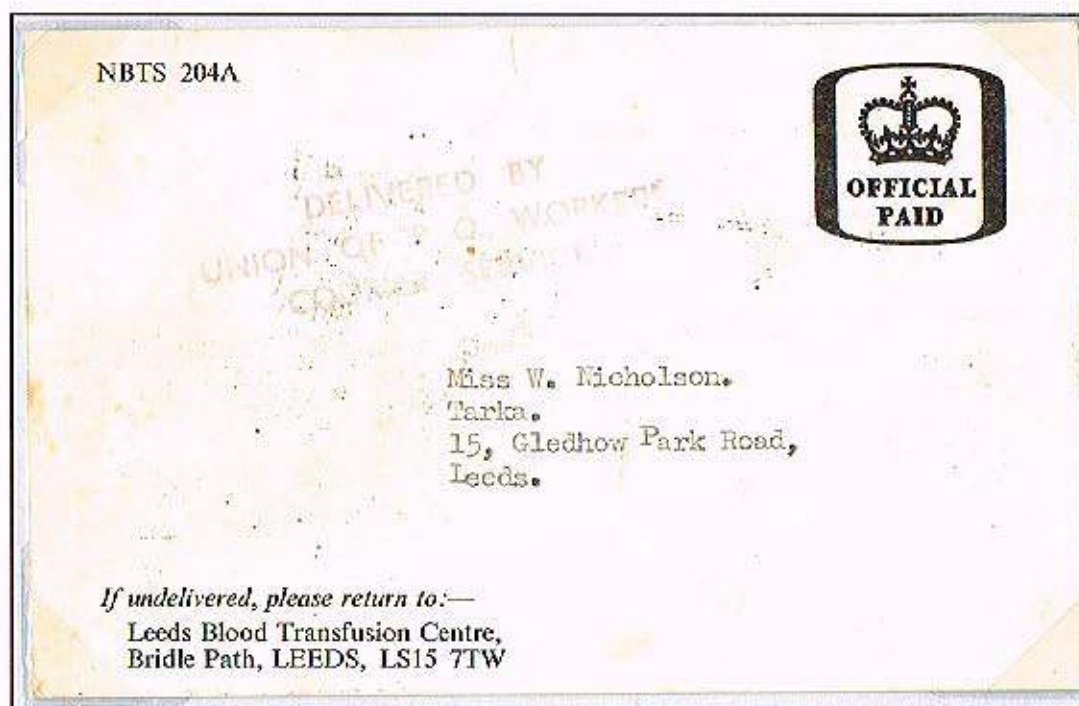
6.1. AN INVITATION TO DONATE BLOOD

donor appointments must get through

...and use of the GB redirection service...



During a postal strike mail will usually not be delivered, but during the 1971 British postal workers strike, the P.O. workers courier service delivered vital NBTS donor appointments.



However, Post Office workers assist blood donation in other ways...

1970s official paid blood donor appointment card, voluntarily delivered by Union of PO workers during the 1971 postal strike

NATIONAL BLOOD TRANSFUSION SERVICE
VOLUNTARY DELIVERY BY POSTMEN.

You have kindly offered to give your blood. Will you please attend at

Holy Trinity Church Hall, Trinity Street, (Off Bear Lane). LEEDS. 1. On MONDAY 8th MARCH, Afternoon session 2.30 to 4.30pm. Evening session 5.30 to 7.30pm., or on TUESDAY 9th MARCH, 1971. Morning session 11.00 to 12.45pm. Afternoon session 2.30 to 4.30pm., whichever date is more convenient. **NOTE:** If you have ever suffered from jaundice you should NOT be a blood donor.

PLEASE NOTE: THE MORNING SESSION PREVIOUSLY HELD EVERY MONDAY WILL THIS WEEK BE HELD ON THE TUESDAY; THERE WILL ALSO BE NO EVENING SESSION ON THE TUESDAY.

Leeds Blood Transfusion Centre,
Bridle Path, LEEDS, LS15 7TW

Leeds 645091

1/70 166/11 M706340 200c COWARD, 886

6.2. BLOOD DONORS UNITE

...local to international communities united for a common purpose

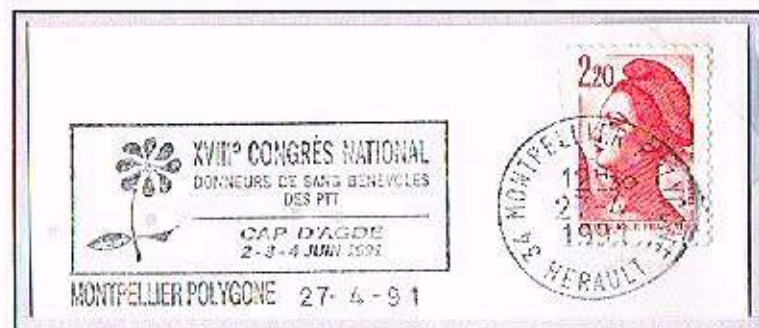
The common bond of donating blood has led to the formation of groups of blood donors from the workplace,



In 1952 the French Post Office Employees formed a Voluntary Blood Donors Association, as did the Italian Post Office workers...



The colour of the issued stamp, may have benefited from being multi-coloured to emphasise the tree of hearts, 4th stamp in trial colour plate proof.



...with regular annual meetings.



Other workers have also formed their own blood donor groups...



Central Research and Development Core of Railway Technicians (COBR TK) Voluntary Blood Donors



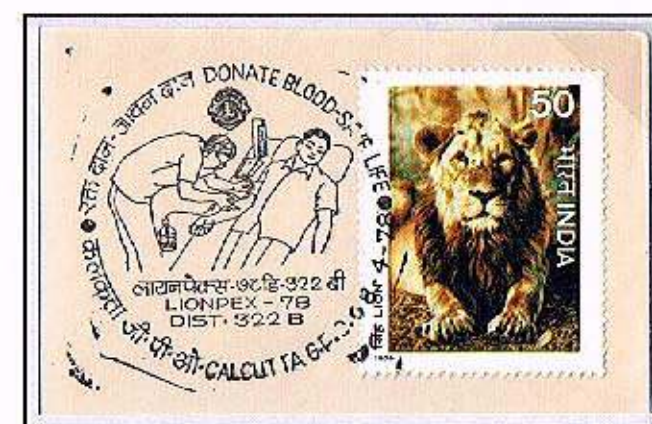
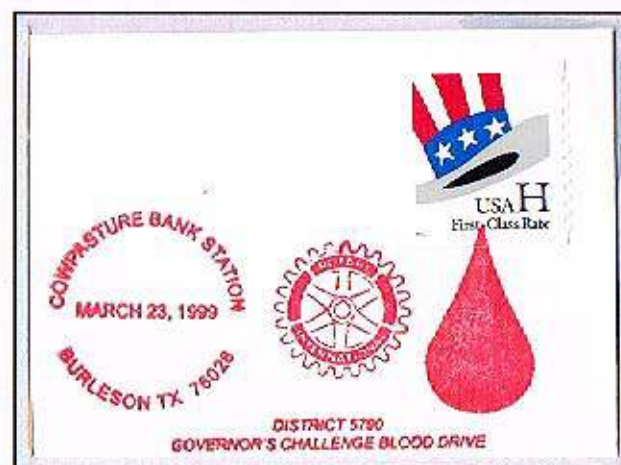
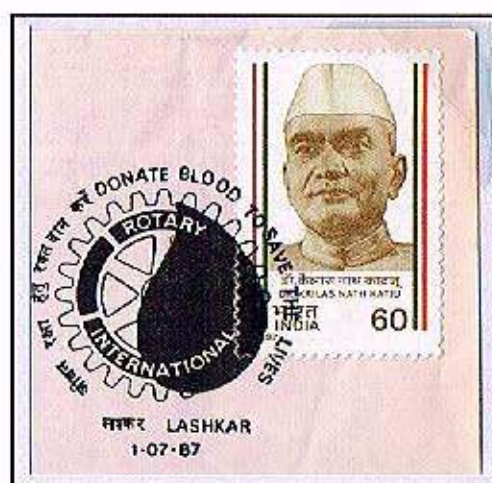
Maritime workers of Gdansk (above) and Le Havre (below)



6.2. BLOOD DONORS UNITE

local and regional communities

Blood donor associations are also organised on a local basis...

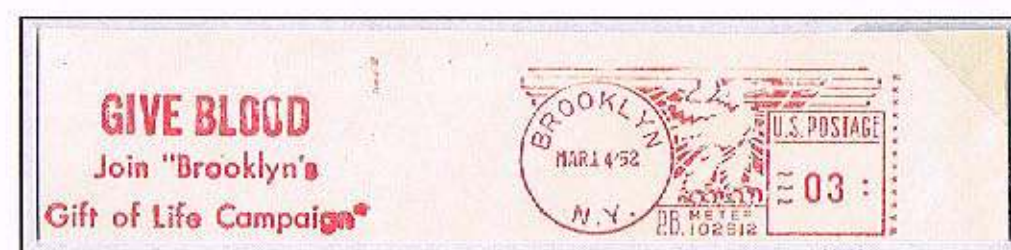


...through organisations such as the Rotary and the Lions,

and also on a regional or district basis



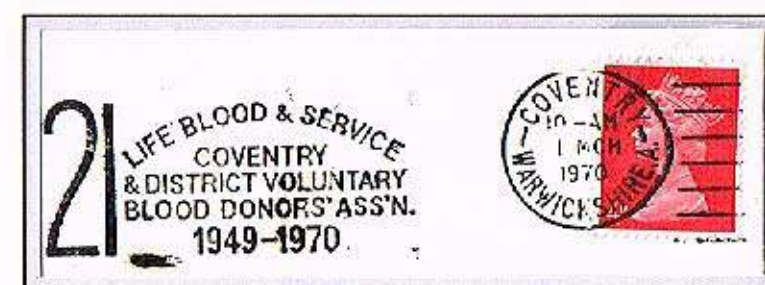
Meter: Neopost, electronic



Meter: Pitney Bowes 'R' series



Vilcea blood donors group,
(Vilcea - a județ; an administrative division/county of Romania)



6.2. BLOOD DONORS UNITE

National groups

From local & regional groups, National & International are formed



Cyprus Blood Donation
Coordinating Committee ▶



Linking together to form
International federations -

Such as the Pan American
Federation of Voluntary
Blood Donors



▼ National Board of Blood Donation, Egypt

Unused artwork (note spelling error
▼ Donation), and final issue

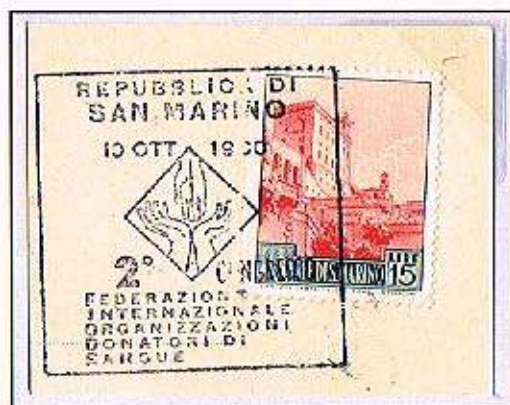


6.2. BLOOD DONORS UNITE...

communities united

Link together to form International federations...

... the International Federation of Blood Donors (FIODS)



The 2nd Congress held in San Marino, others years held in Monaco, 3rd and 7th, and the 8th Congress in Morocco



▲ Final engravers die proof, typically about 19 final die proofs are prepared; of these about 10 are black plus perhaps 3 each of 3 other colours. Signed by artist, Pierre Gandon, with final issue of stamp.

▲ Inauguration of Post Office National Museum 1970 sheetlet, overprinted in 1976 with FIODS Congress

The aim of National and International Donor Organisations together with the Blood Transfusion Centres of each country is to motivate and recruit more blood donors

6.3. DONOR MOTIVATION

Although donor groups are beneficial, a considerable amount of effort is used to motivate and recruit the public to become blood donors -



Blood donor campaigns are regarded as a national and humane duty...



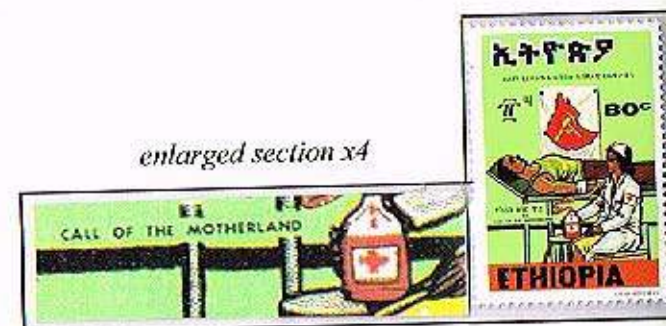
Preliminary artwork & issued stamp



PP-Post Paye - postage paid by sender



...and a duty to the motherland (РОДИНАТА)...



6.3. DONOR MOTIVATION

voluntary blood donation

Implementation of non-remunerated blood donation has been introduced in most countries



Meter: Pitney Bowes, DM

Meter: Pitney Bowes, CV/CVS



in countries which do not have or did not have a voluntary system of blood donation, opening a family blood bank account was one way of acquiring credit with the blood bank

Cost free blood is dependant on voluntary blood donors

Give your blood voluntarily to save a life (translated from Croatian)



With a voluntary blood donation system leading by example is an important form of motivation

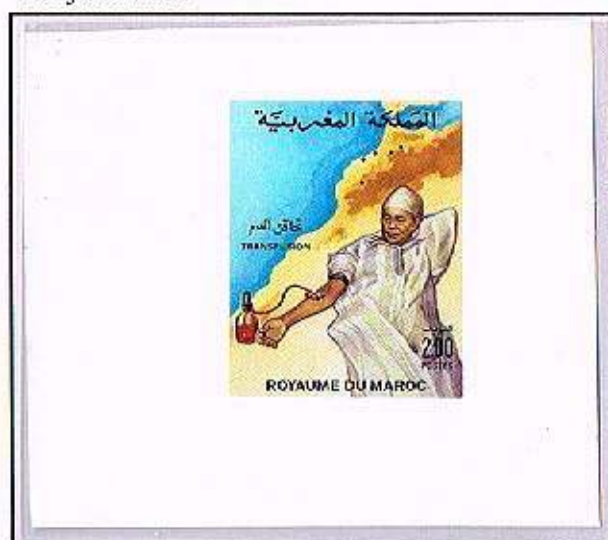
Whether it is a fictitious TV character portrayed by actor Tony Hancock...

...or a monarch can donate blood, even without his royal insignia...
Margin proof in issued colours, without gold royal crest, and final issue

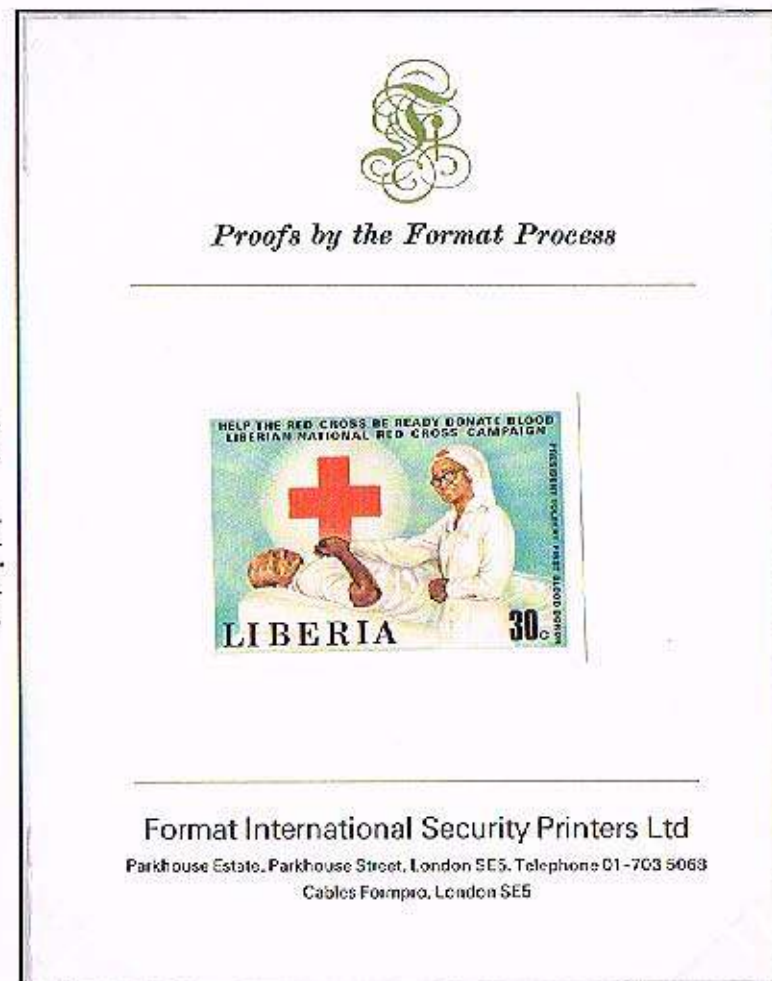


...or Presidential donors such as William Tolbert...

Printers presentation card with incorporated proof for final approval before printing stamps.



...or well known film stars such as Pu cunxin



Format International Security Printers Ltd

Parkhouse Estate, Parkhouse Street, London SE5. Telephone 01-703 5068
Cables Formpro, London SE5

6.3. DONOR MOTIVATION

rewards

Rewards for voluntary blood donors are few

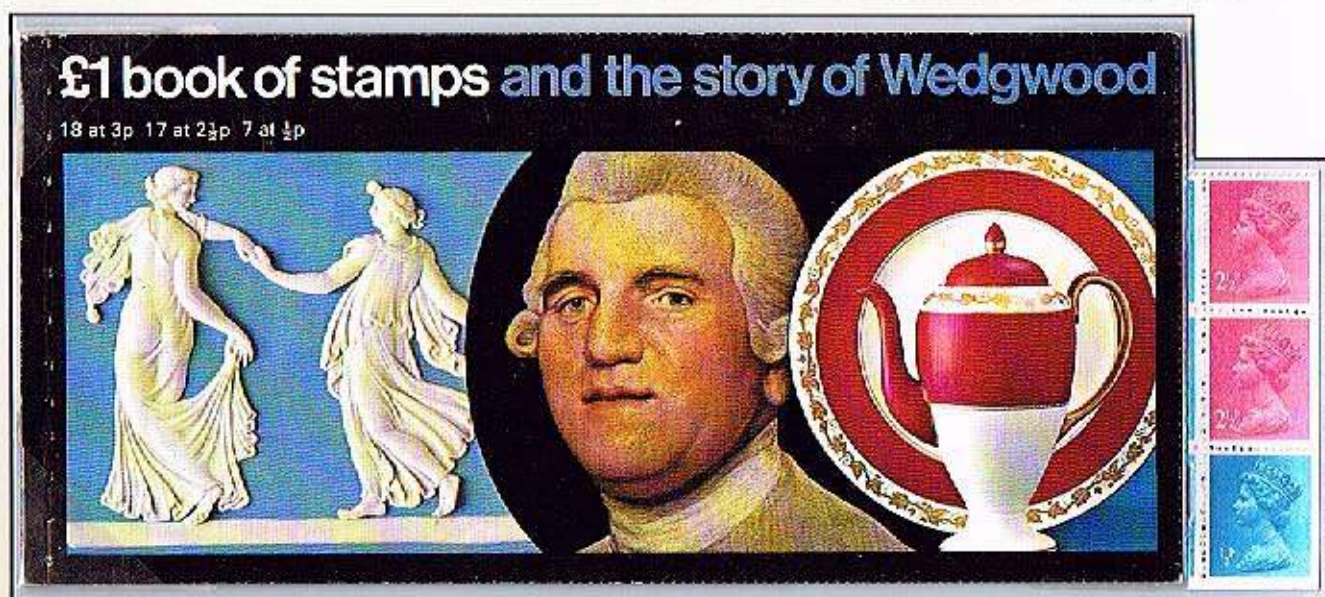


Rewards are usually given to donors who donate blood repeatedly over many years and take the form of a medal or certificate of participation



Polish blood donor's medal of distinction

following 100 donations, the UK National Blood Transfusion Service awards the donor with a Wedgwood plate



2nd Central Celebration for outstanding blood donors



Scan of part of stamp sheetlet within booklet, showing position of Machin ½p left side phosphor band variety

Meter: Pitney Bowes 1980, 6500 series



...but the donor is always appreciated



6.3. DONOR MOTIVATION

education

Education is a vital part of blood donor motivation...



Enlarged section x4

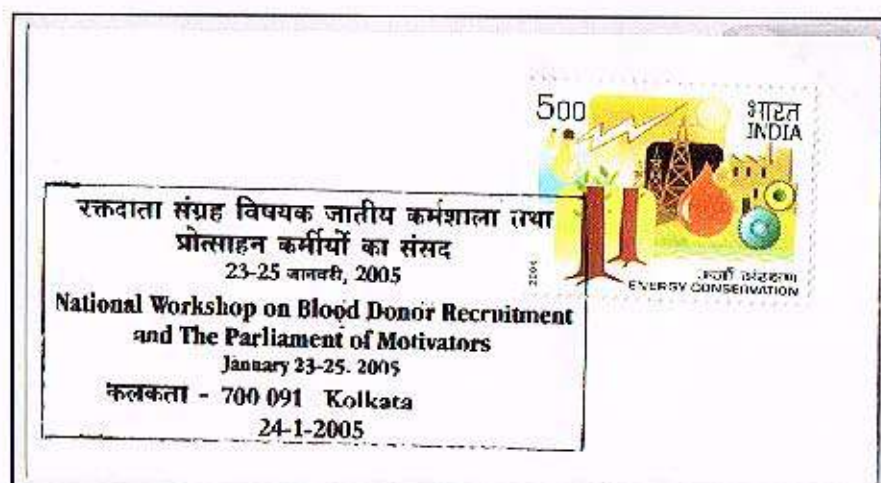


Meter: Francotyp-Postalia, EF53000



...either through traditional methods or via the modern medium of the internet (www.spende-blut.com). The role of the International Society of Blood Transfusion (ISBT) is also essential in education.

International & National workshops are held on blood donor motivation



National donor days were initiated to motivate the general public to donate blood.



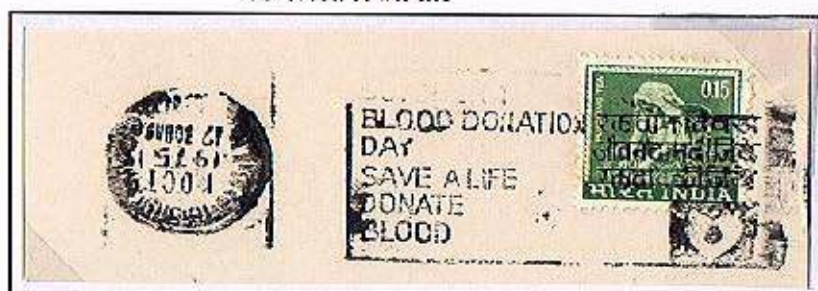
Theses were held on various dates in each country,



In 2004 the first World Blood Donor Day was held on June 14th, Landsteiner's birthday, and was established as an annual event by the WHO

and sometimes a donor fortnight

inverted town die



6.4. BLOOD DONOR APPEALS

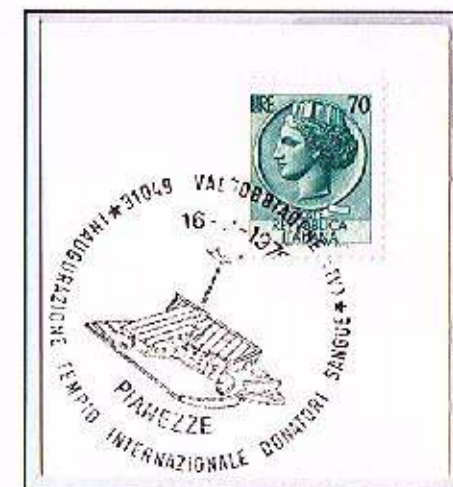
important messages for donors

Appeals for blood donors carry different messages but they must be effective.

The idea that blood donation is about people helping people is often illustrated



Meter: Frama, specimen meter cancellation honouring Michele De Lorenzo, author of AICAM catalog on blood donor meter cancellations, the final cancellation is unlikely to have been used to cancel mail



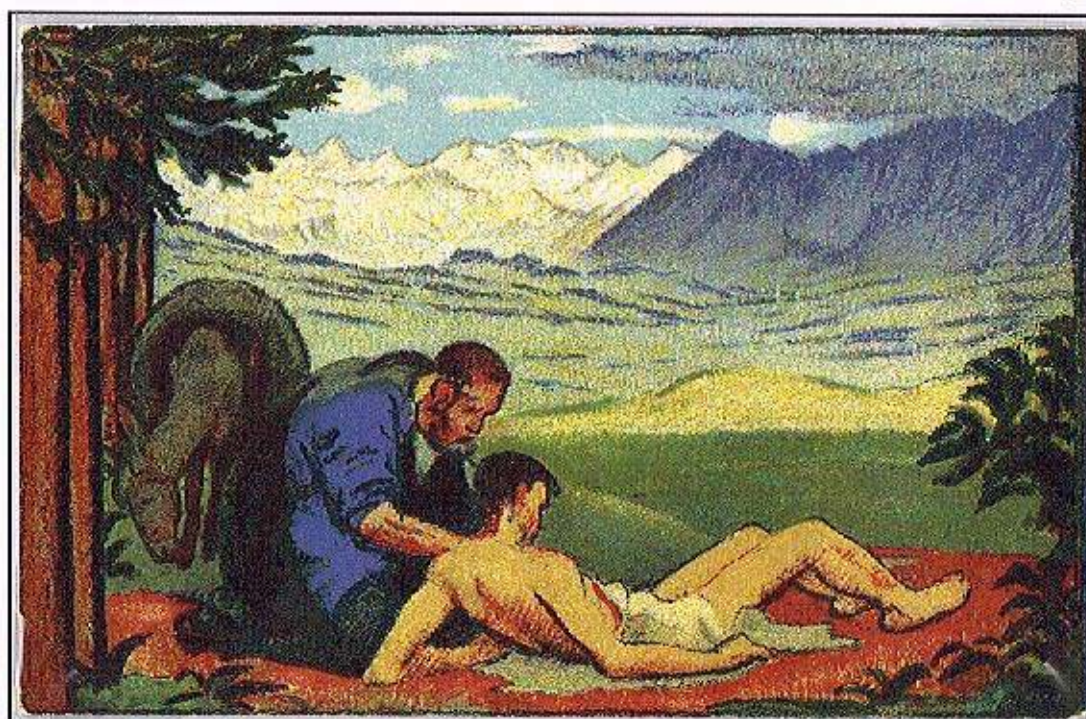
The religious aspect of benefiting others led to the construction of a temple dedicated International Blood Donors, and inaugurated and consecrated by the Bishop of Padua in 1979.



It is this symbolic idea that is adopted as the badge of blood donation by several countries.



Meter: Francotyp-Postalia RB1.7, jetmail



It is a modern version of the story of the Good Samaritan
Swiss postal stationery card - issued for National Day 1st August 1917



6.4. BLOOD DONOR APPEALS

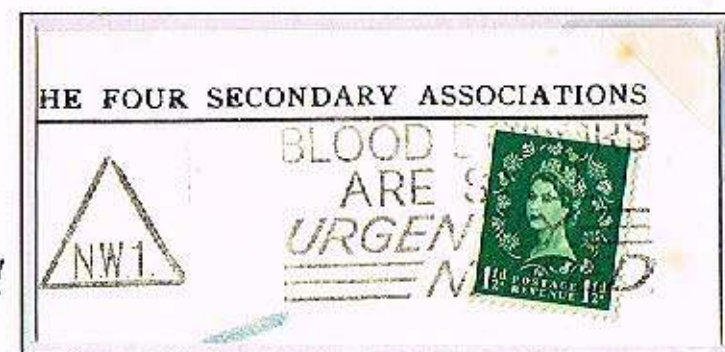
"blood donors are still urgently needed"

is the universal message of this donor appeal...



◀ First used on 14th Apr 1947, and used for a 4 week period annually (except 1950, 52 & 54) until June 1955 350 dies used,

Triangular die in use at London NW1 for inland printed paper rate 1953 ▶

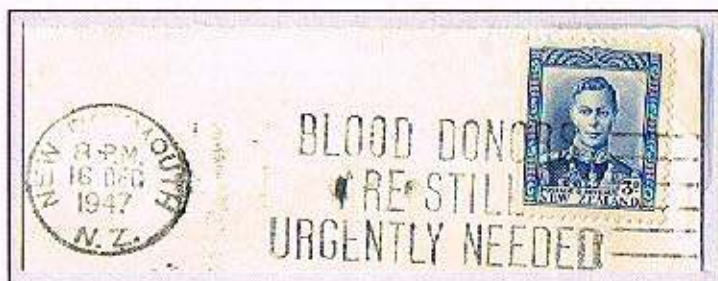


...this was emphasised following World War II, the slogan was sponsored by the Ministry of Health, U.K. Blood Transfusion Service as it was realised that the numbers of blood donors had to be maintained to supply the requirements of civilian hospitals. A campaign was thus launched in 1947 using the phrase :

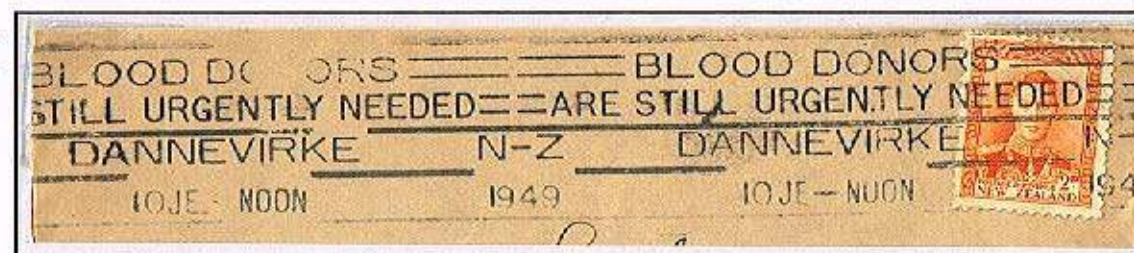
"Blood Donors Are Still Urgently Needed".

the phrase was utilised in different philatelic ways and by several other countries -

Shortly after the UK, New Zealand first used the slogan in 1947.



In use from Jul 1947, for periods of 4 weeks to Dec 1955, at 13 offices. 3 line slogan (left) and the less frequently used 2 line continuous slogan (right)



Postage paid impression - in use by Royal Mail for bulk mail cancellation. The slogan die is an identical die as the one used for cancelling stamps, (top 2 examples) but used in a different colour.



UK Regional Transfusion Centres (RTC) in this case Mersey RTC, Liverpool.



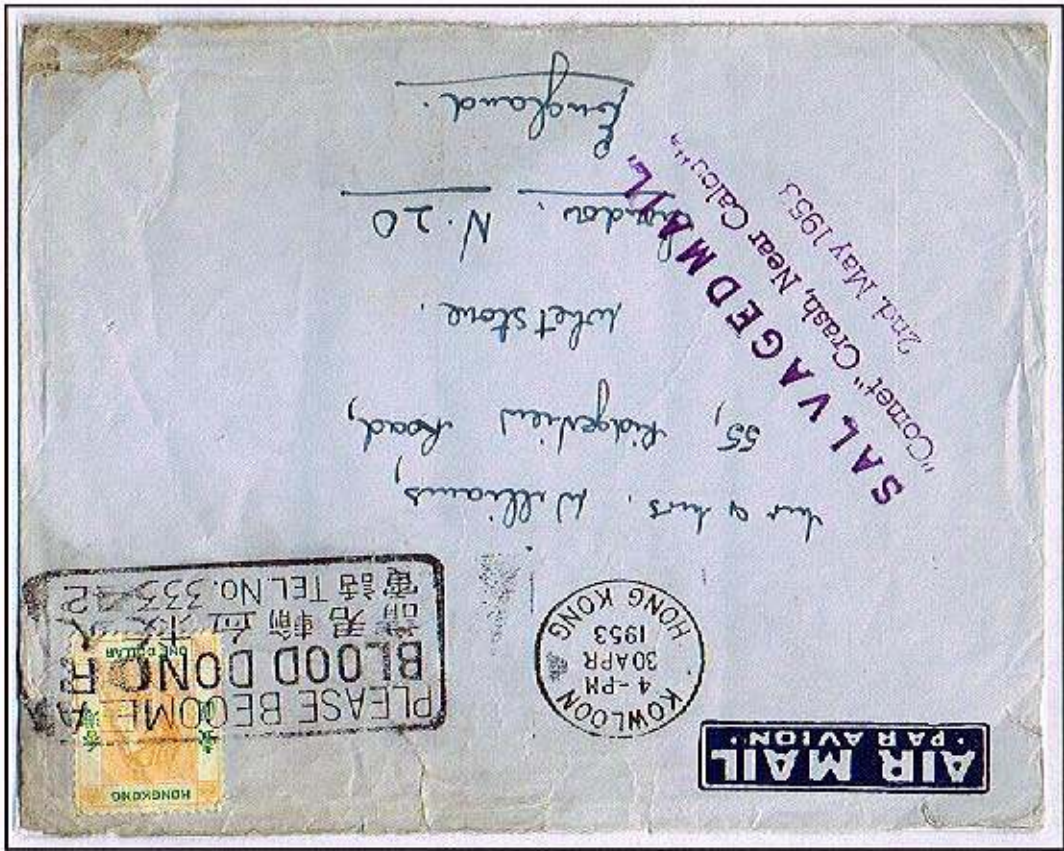
Neopost meter cancellation - the die is made in a different type of machine from the Royal Mail slogan (top 2 slogans) but with a similar design

The phrase was also adopted by U.S. Health Organisations.



(Pitney Bowes 'R' series meter cancellation)

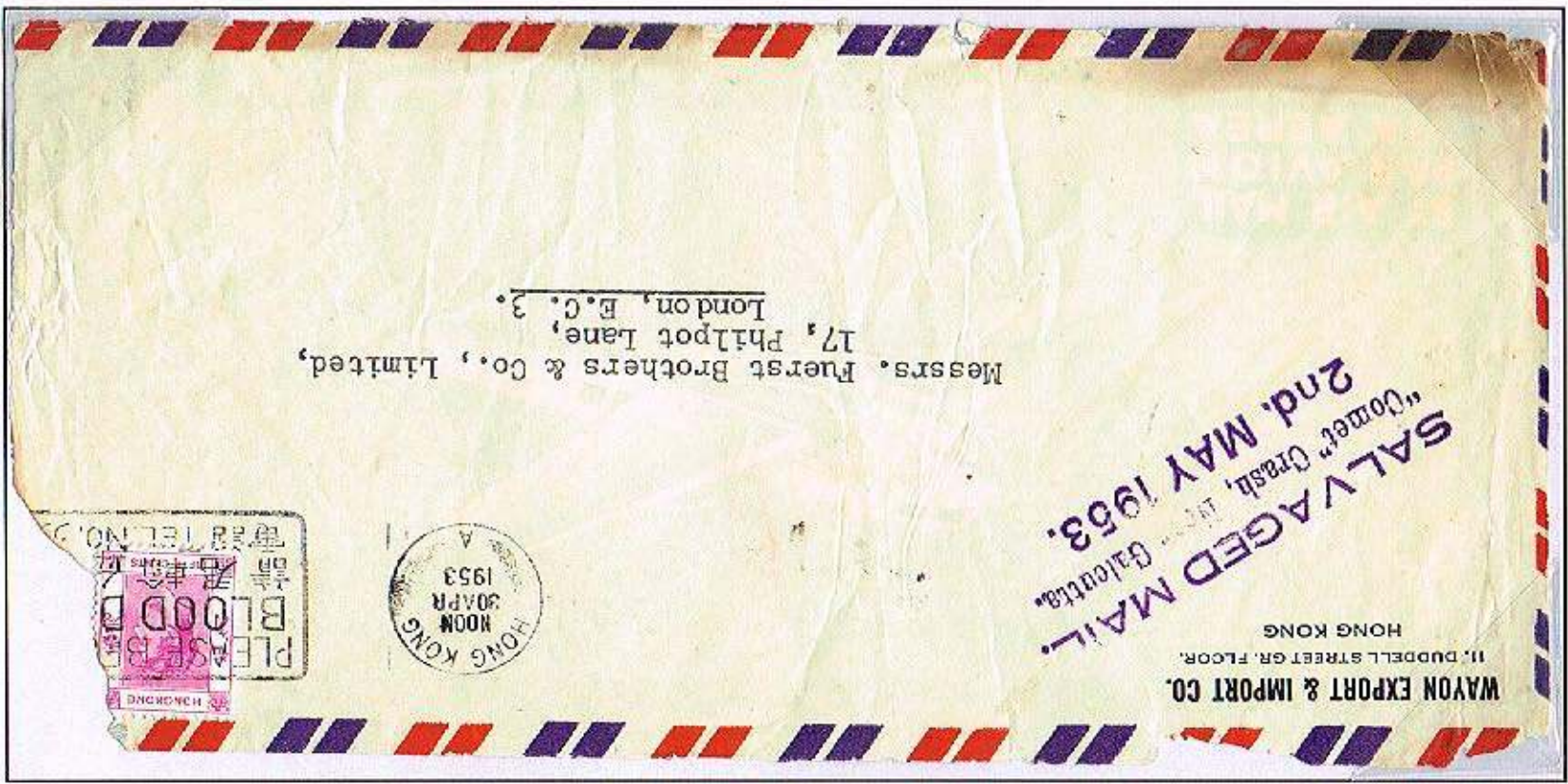
Appeals using postal slogans are primarily aimed at the people living in that country.



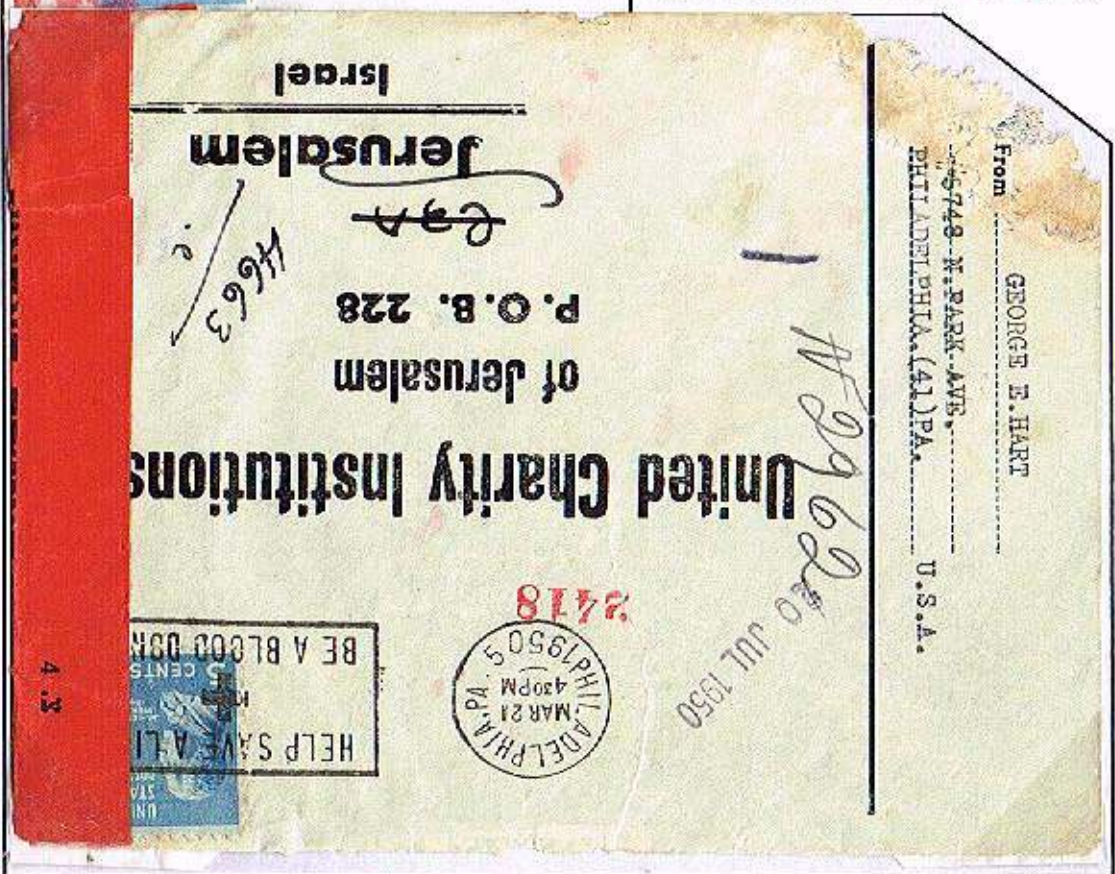
However, when mail is sent abroad the message is still relevant to the recipient of that letter, provided the message can be still understood. In the two airmail examples above and below both were salvaged from the same air crash, the first message is still legible but the lower example has lost a vital part of the message.

Salvaged mail from the BOAC Comet aircraft (G-ALTY) which crashed six minutes after take off from Calcutta, after entering a violent thunderstorm, with the loss of all 43 persons on board. The plane was en-route from Hong Kong to London. Cachet on lower item misspelled "Calcutta"

The Israeli red censor label has partly hidden the US blood donor message, although water damage incurred during transit did not affect the message



▲ Scan of postal slogan beneath censor label (not reduced)
The letter was opened in Israel probable to check that no money was present, as the recipient is a charity, and resealed by the censor, scan of censor label (reduced).



6.4. BLOOD DONOR APPEALS.....

emphasising blood saves lives

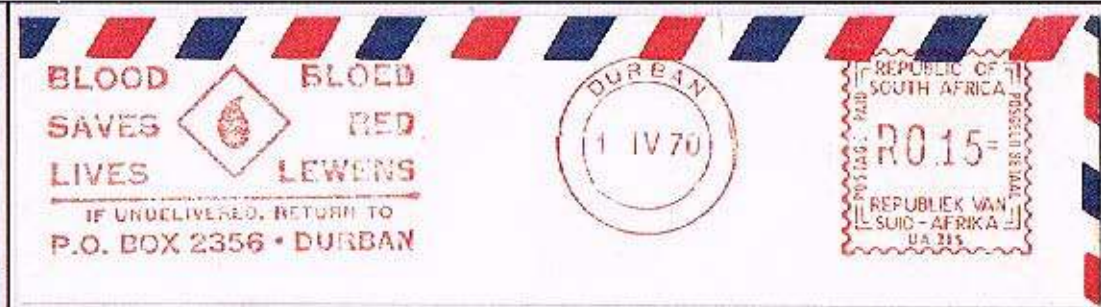
Another approach is to emphasise the life saving contribution that blood donors can make

A drop of blood to save a patients life

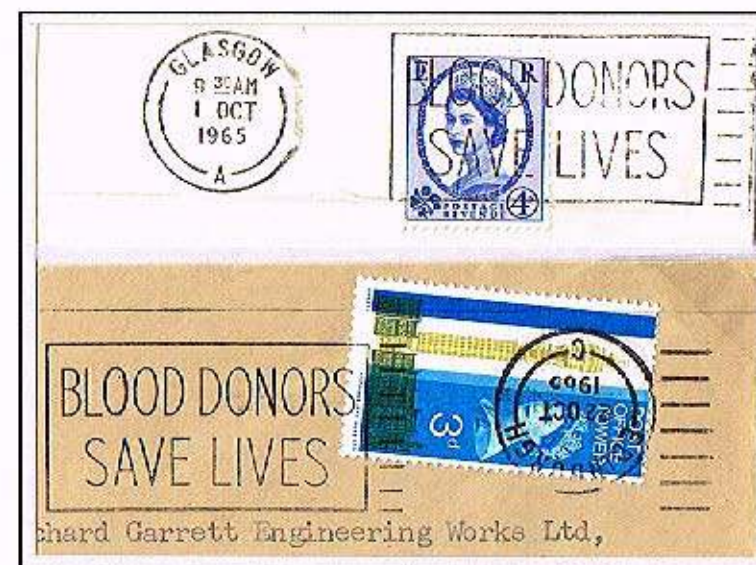
inscription on reverse

Redesign.

Stamet Sugiyanto.
Kobal - 22 April 81.



Meter: Universal automax



Slogan used from 1st to 31st Oct, standard die (top) at 5 offices, and transposed die (bottom) at 3 offices.

inverted town die ▲



This advert within a stamp booklet is a convenient way of getting the message across

Australia stamp booklet, 1962, edition 3.



Final artwork in watercolour with redesign note on reverse, windowed on posterboard with acetate overlay for lettering, and final issued stamp

6.4. BLOOD DONOR APPEALS

the outstretched arm

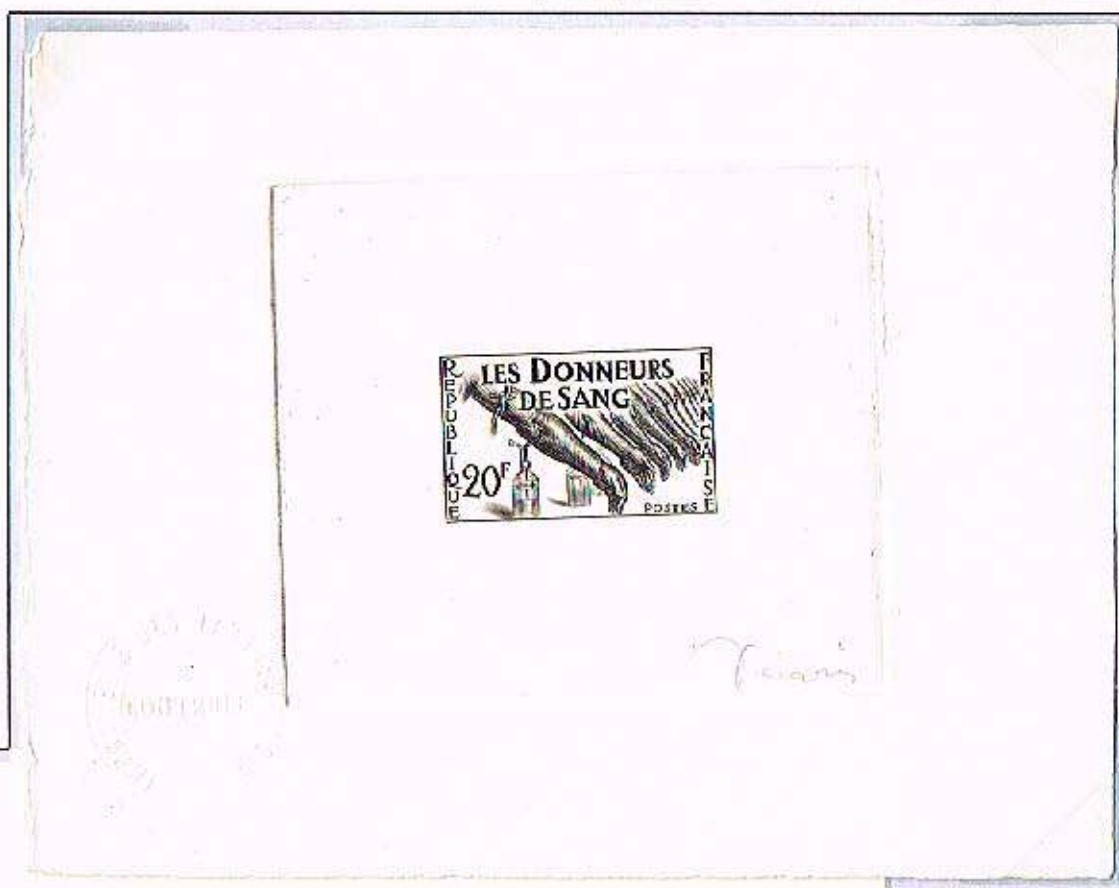
From the first blood donor stamp issued in 1947, the outstretched arm is symbolic of blood donation



1st blood donor stamp, issued 1947



An unfortunate combination of postmark and stamp, no arms no blood donation!



Left: Artist die proof, made from the unhardened die, with embossed control seal and artists signature, and without the engraved name of the artists at lower left of stamp.

Below left: Sepia printer's die proof made from the unhardened original die to detect minute defects that could cause problems during the printing process, shows the characteristic Printing Works 3 hole control punch - confirming that the printings were made by the Government's stamp printing plant, only 3 - 5 were printed.

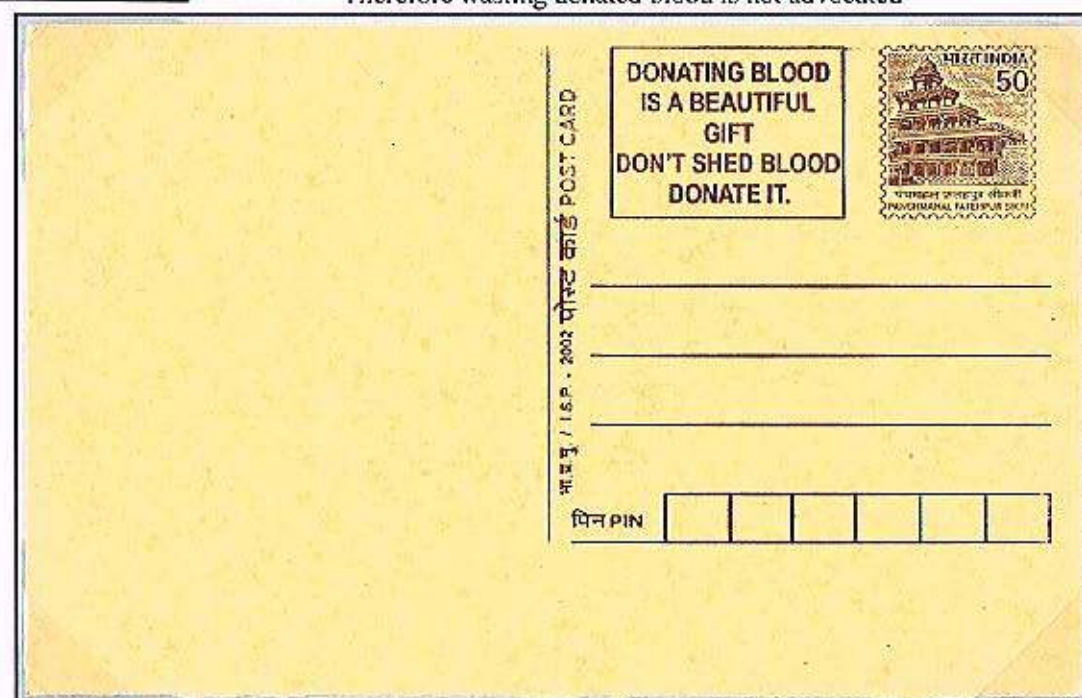
The sepia die proofs left, do not convey effectively the process of blood donation, whereas the issued stamp, below does, the minor colour shift on the right stamp is contraindicated to blood donation as it shows blood leaking down the donor arm!



Issued stamp

Minor colour shift

Therefore wasting donated blood is not advocated



6.4. BLOOD DONOR APPEALS.....

from the heart

Symbolic use of the heart is a frequently used in appeals.....



Date transcription errors - do not help the donor to attend the correct sessions ▲



The change of colour from blue to red of the heart dramatically improves the symbolism in the issued stamp

Trial colour plate proof with issued stamp



Meter: Pimey-Bowes-GB 6300

Both the heart and blood drop are synonymous with blood donation...



6.4. BLOOD DONOR APPEALS

blood drops

The blood drop is a powerful symbol of blood donation but it can go wrong!

In 1971 President Nixon quoted during 'National Blood Donor Month', "Among the Noblest Acts of personal generosity is the gift of one's blood for the benefit of another".



This was followed in March by a special issue to appeal for blood donation. The 6c stamp was a simple design of a red blood drop with an appeal printed over.



Issued stamp

The stamp was printed using 2 different printing methods, lithography and engraved (Giori press). The green background and red blood drop were printed using the lithographed method and the red and black lettering by the engraved method.



However, this simple design led to a number of printing errors, and gave a different perspective to the stamp

A variety of colour shifts of the engraved red and black print are found:

Faded red blood drop ►



The colour shifts of the engraved text shown above gives the appearance that "giving blood" is falling - blood donor levels must not fall too low!



Blood drop in correct position but red ink smear error on stamp face

Red ink smearing giving an impression of blood smearing - donated blood must not be wasted! Red ink smear error on reverse only



Perforation shift

Under-inked along right margin. ►
Wording omitted bottom right stamp.
Part of plate number missing.
"Mail early" almost completely disappeared

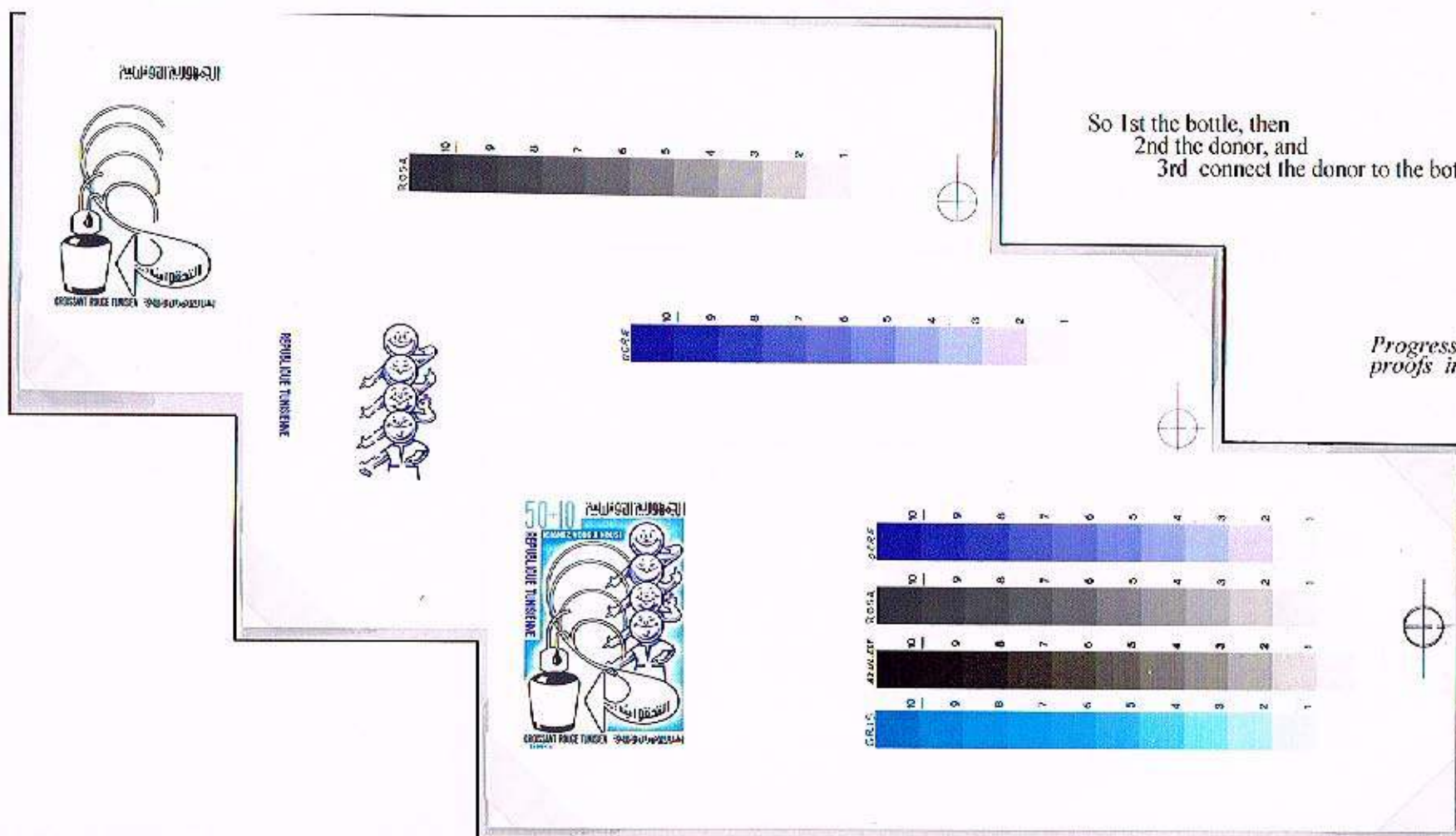


Wording of message starting to disappear on lower two stamps.

6.4. BLOOD DONOR APPEALS.....

in the bottle

Blood is collected into a bottle, thus the blood bottle itself has become an evocative symbol of blood donation,



Final issue ▼



In the USA during WWII, blood collected from 'black' donors was kept separately from 'white' blood.



In the 1950's the practice of segregated blood was stopped, also in 1950 the plastic bag for the collection of blood was introduced, making blood collection safer (sterility) and reducing the risk of breakages



6.4. BLOOD DONOR APPEALS

the direct approach

Sometimes a more direct approach to becoming a blood donor is necessary -



USA Pitney Bowes 'R' series meter cancellations

◀ Bulk postage reduced rate (Blk. Rt.)

Meter: Francotyp-Postalia EF3000 with incorrectly set date die, corrected by hand

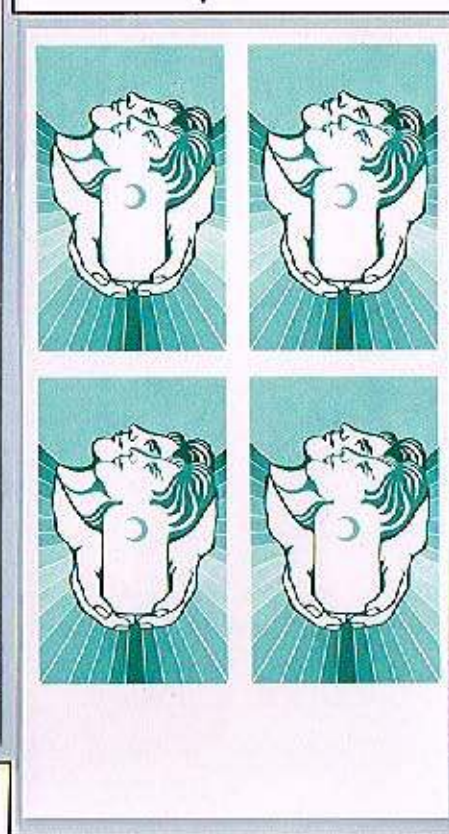


but without ...

... the bottle,



... the donor



... the donor appeal



... there is nothing!



Fournier progressive die proof in issued colours and final issued stamp



Even although only a little (un peu) is needed



Trieste Zone A (Allied Military Government - Free Territory of Trieste, AMG-FTT), postmarked 5-4 1951, TRIESTE CORRISP. PACCHII (Correspondence and Parcels). Zone A was taken over by Italy's civil administration in October 1954.



A GIFT OF LIFE.

1. MAINTAINING SUPPLIES.

donating and receiving the gift of life
how much is needed?

Vast quantities of blood are used, this must somehow be replaced.

The Southampton BTS covering the southern counties of England uses 4½ litres in 3 minutes that's 9 donations of blood.

2nd class pre-printed postage paid impression envelope, with applied postcode phosphor dots

The postcode is converted to 2 rows of blue phosphor dots. Bottom row is the 1st part (PO14) of postcode and upper row the final part (1SW). The black vertical markings are called idents. They identify either the coding desk or the operator at which the envelope was coded. After 1987 optical recognition machines read the postcode and applied the phosphor dots automatically.



If undelivered please return to:
NATIONAL BLOOD TRANSFUSION SERVICE
SOUTHAMPTON SO9 5UP



Mr P. Weir,
42, Cleveland Drive,
FAREHAM,
Hants.
PO14 1SW



EVERY 3 MINUTES
WE USE A GALLON OF BLOOD.
PLEASE HELP US REPLACE IT.

◀ 1SW
code

◀ PO14
code

▲ faint black ident markings



Meter: Pitney-Bowes, R series



400,000 people donate blood in the Netherlands, under the auspices of the Sanquin Blood Supply Foundation

Sanquin ▶



With these rates of blood usage, even in developed countries, only about 4% of the population are blood donors



▲ 400,000 donations

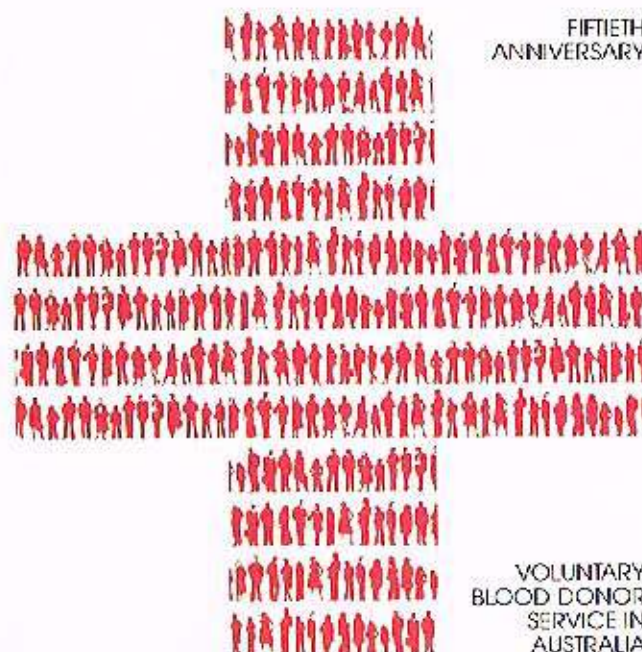
7.1. MAINTAINING SUPPLIES

how many blood donors are needed?

Large numbers of blood donors are required to maintain this rate of usage of blood

From virtually nothing in 1929 the Australian Blood Transfusion Service in 1979 collected 454,000 litres of blood annually

1979 20c Red Cross PSE with all missing colours except the phosphor helicon bars



FIFTIETH
ANNIVERSARY

VOLUNTARY
BLOOD DONOR
SERVICE IN
AUSTRALIA



AUSTRALIA 20c

Section from reverse

The foundations of the Australian Blood Transfusion Services were laid in 1929 and the first hospital blood bank was established in 1937. During World War II, the Red Cross assisted the Army in supplying blood and serum to the Australian Armed Forces, and has continued to administer Blood Transfusion Services throughout Australia. Australian blood donors contribute almost 454,000 Litres of blood annually.

Designer: Australia Post, Graphic Design Section.
Pre-stamped envelope No.014

 Australia Post



The 50 million stamp was issued on the 26th October 1923 for a foreign registered letter under 20 grams between 26th and 31st October for either 1. Added advice of receipt service or 2. surcharge for airmail. Stamp rarely used as a single on cover.



There are estimated to be between 45 million and 50 million blood donors worldwide
Ref: NBTS, www.blood.co.uk/

45 million marks (5 million x 9) rate for a foreign 2nd weight letter (20 to 40 grams), between 20th to 31st October 1923.

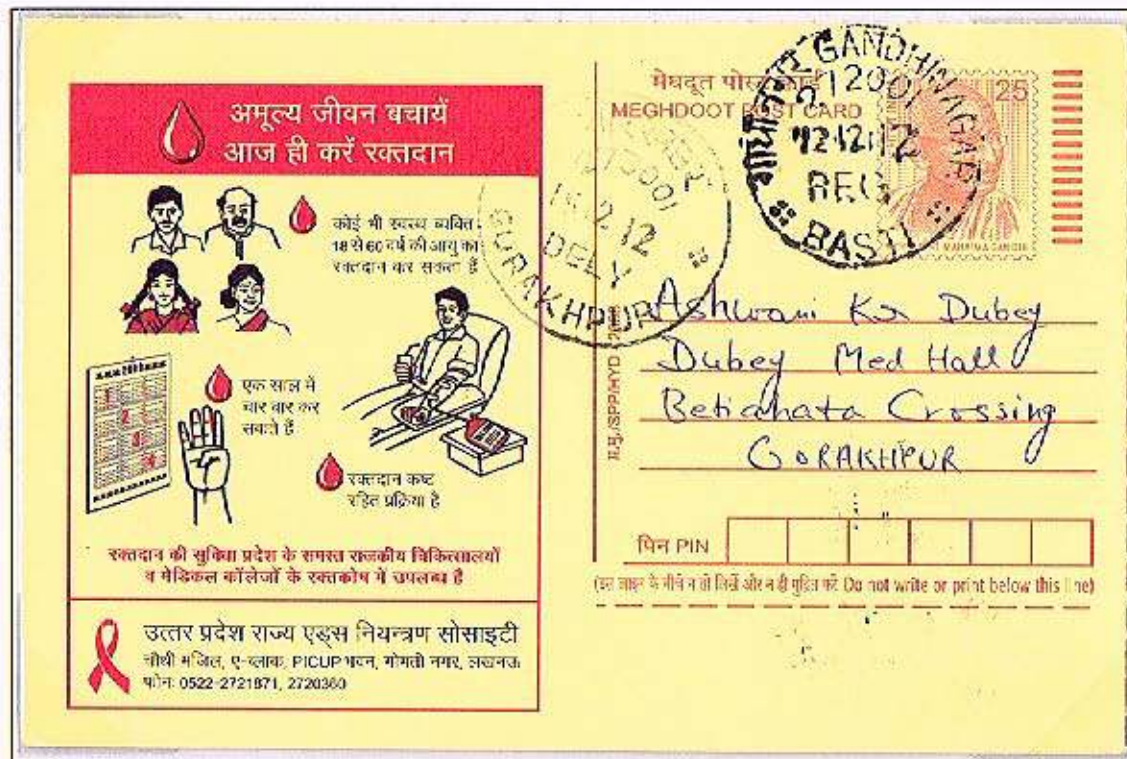
International Reply Coupon, 1912, Rome type IV (not redeemed)



7.2. THE PROCESS OF BLOOD DONATION

the giving of the gift of life

A simple painless procedure for all ages

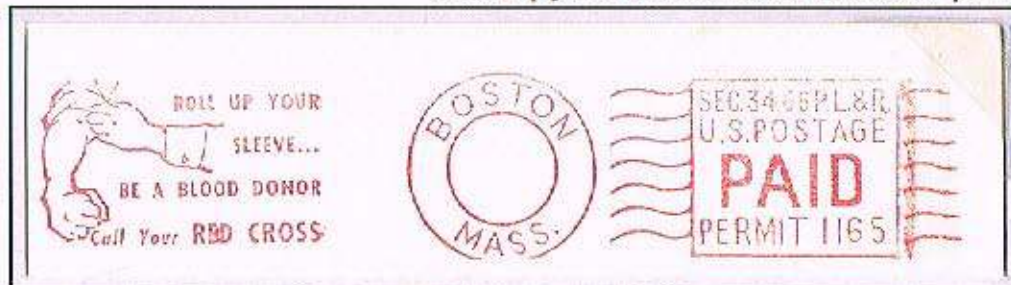


Blood donors aged between 18 and 60 and can donate up to 4 times a year

Up until the 1960's consent was necessary in the UK for donors under 21 years of age, parental consent is now no longer required.



So roll up your sleeve and blood is collected painlessly from the arm,



Permit franker: Inserting and Mailing Machine Company - applied the stamp but did not keep track of the amount of postage generated. Postage was determined by the post office after weighing and counting the franked mail.

originally taken into glass bottles, however, since the late 1960s plastic containers/bags were introduced for blood storage



Meter: neopost



Missing date in margin text error ▲

It is improbable that the scenario portrayed on this stamp of South Africa, 1986 is genuine. It is unlikely glass bottles were still in use then, plastic bags for blood collection were introduced in South Africa in 1973, and blood could not be sucked into the bottle against gravity, if all stamps had been issued with the missing date then who would have known?!(see also page 93)

plastic container



The plasma can be removed directly from the donor by a process known as plasmaphoresis, in which the red cells are returned to the donor. Note the yellow plasma container attached to the Plasma Collection System ▶



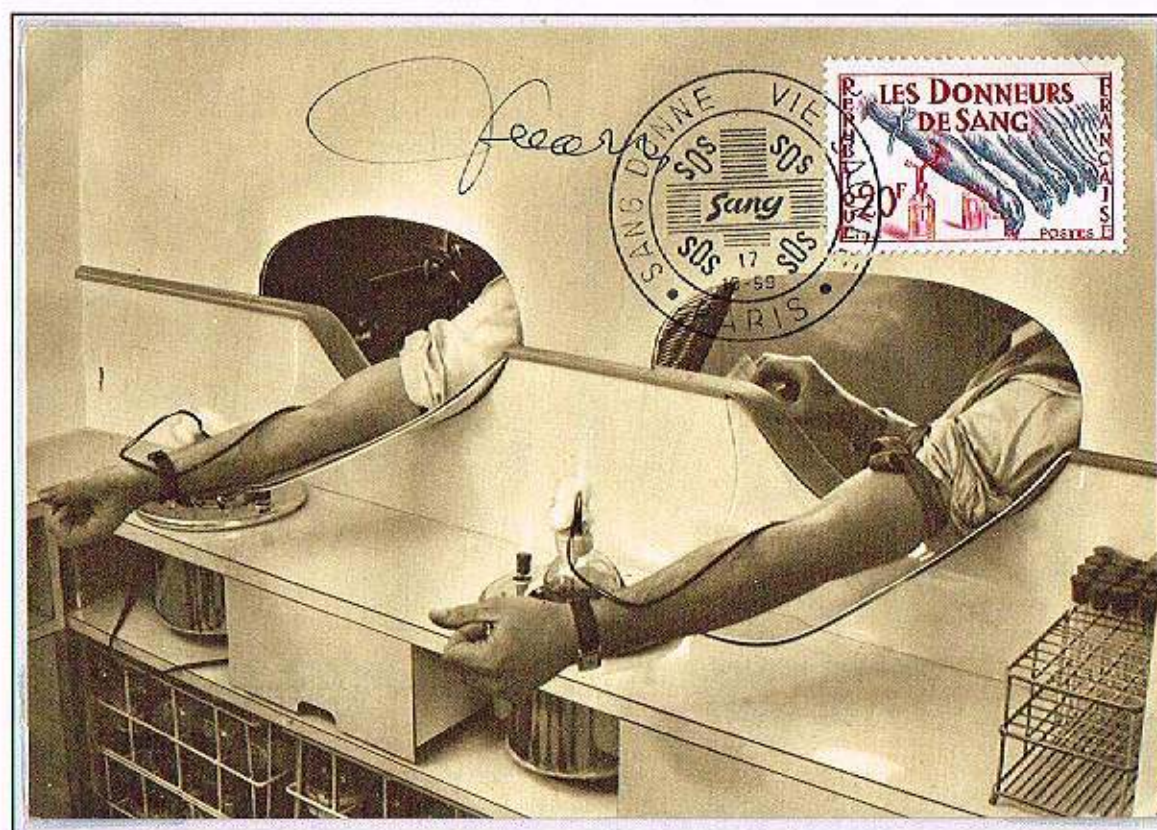
An alternative is to take the donor team to the people, with a mobile blood donor unit



Italian Voluntary Blood Donor (AVIS) mobile blood donor unit



specimen overprint

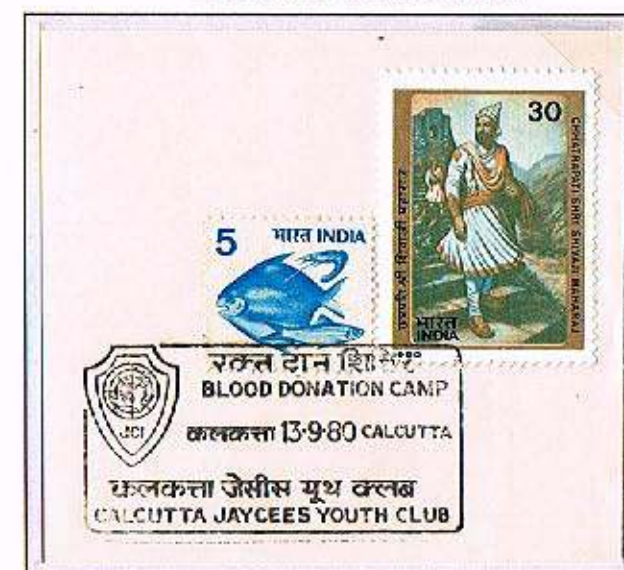


Interior of a mobile blood donor unit Postcard signed by stamp designer, Decaris

Chinese postal stationery card incorporating lottery ticket number sponsored by The China Post



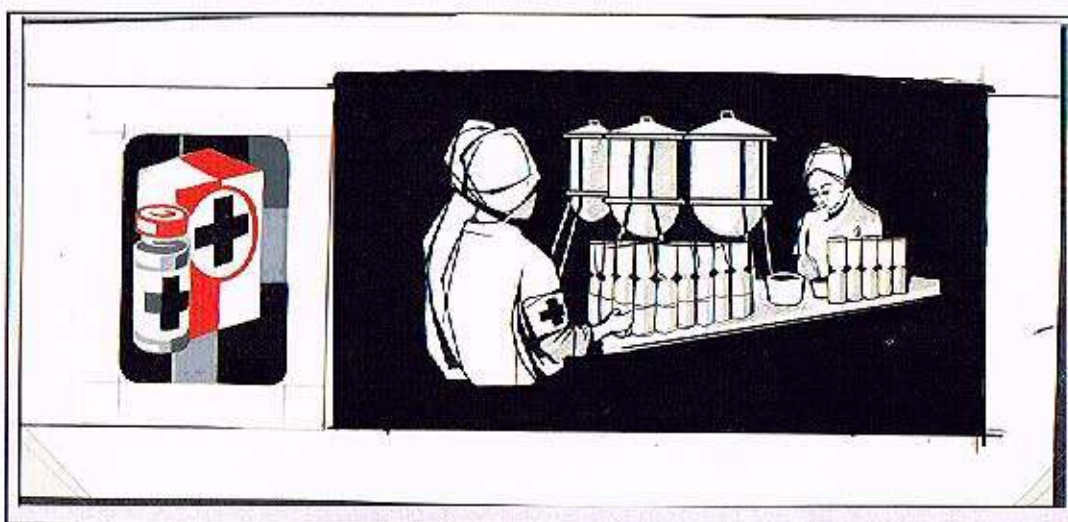
Blood camps are also utilised



7.3. BLOOD PREPARATION

and how this gift is prepared

Once collected the gift of blood is taken to the transfusion centre for testing and preparation, both red cells and plasma can be transfused



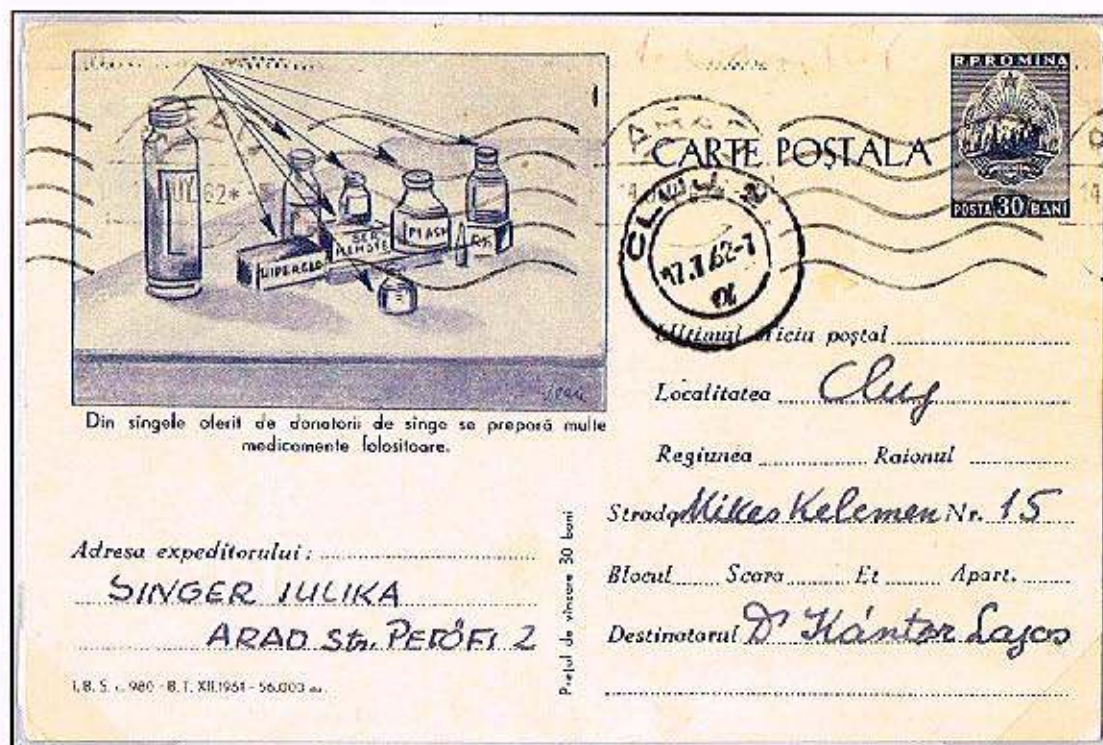
▲ Original artwork by artist Isabel, in ink and acrylic on art paper mounted on black card with issued stamp



Red Cross workers processing donated blood



The liquid plasma is separated from the cells and plasma fractions such as fibrinogen, albumin and SPPS (Stable Plasma Protein Solution), anti D (Rh), and other useful medicines



Din singele olerit de donatori de singe se prepară multe medicamente folositoare.

Adresa expeditorului:

SINGER IULIA

ARAD Str. PERŐFI 2

L.B.S. 980 - B.T. XII.1951 - 56.003

Strada Mihail Kelemen Nr. 15

Blocul Scara Et Apart.

Destinatorul D. Hănter Lajos

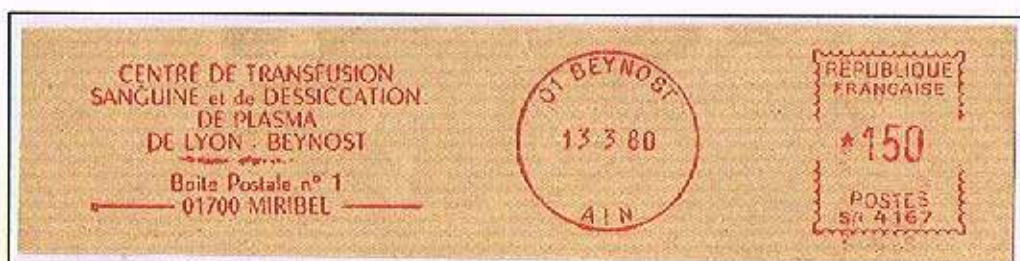


This process of plasma fractionation is undertaken in specialised centres.

◀ Fieldpost letter from serum conservation laboratory, Kipsdorf to serum conservation laboratory at Leipzig



The plasma fractions are prepared by freeze drying or desiccation



◀ Meter: Satas SR

Meter: Postalia MS4/5 ▶



7.3. BLOOD PREPARATION

blood groups

The donated blood is grouped or typed, the most important blood groups in transfusion medicine are the ABO and Rh blood group systems



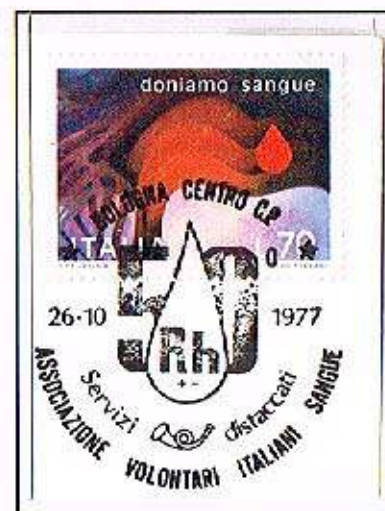
The incidence of the ABO groups varies in different countries:

In Japan and PNG group O > A > B > AB



Design error - group A is shown as more common than O

But in Thailand O > B > A > AB



The rhesus (Rh) group is divided into positive (+) or negative (-)

The ABO blood group substances are not only found in the blood but also in other body fluids such as urine and tears



1935 weeping princess error, probable caused by an indentation of the plate. (top L of block of 4) Enlarged section x4



Bromalin an enzyme extracted from the pineapple has been used in blood grouping procedures.



Jamaica pineapple watermark. Photocopy of stamp face on left - not reduced

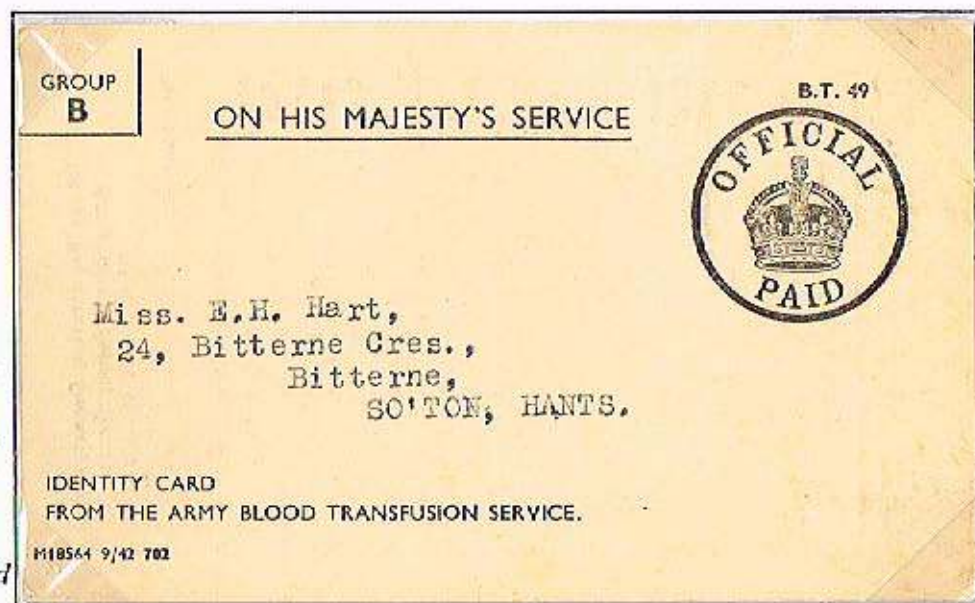


Red cells from different ABO blood groups form unique patterns of agglutination when mixed with different antibodies on a glass slide.

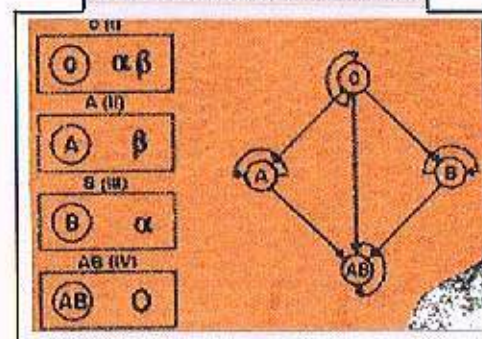


Design error B and O are transposed

It is essential that the groups are correct, the design error shown on the stamp if occurring in reality such as if the person on this Army Blood Transfusion identity card was mistyped as group O, then she as a blood donor, her group B blood could be given to an O group person which could be potentially life threatening.



Group O is regarded as the universal donor and can be given to all other groups as this enlarged diagram explains



Donor Registration Department, Army Blood Transfusion Service, OHMS postage paid.

7.4. WHY AND HOW A TRANSFUSION IS GIVEN.

distributing the blood

After blood grouping the precious liquid is now distributed to local blood banks and hospitals,

01 732
Stockholm 60

EXPRESS-UTDELNING
EXPRESS

Urgent ilpaket

Anvisningar på
Anvisningar på

Avsändarens namn och adress
Statens Rättskemiska Laboratorium
Blodgruppsserologiska Avd.
104 01 STOCKHOLM 60

Adressat
Laboratoriet

Postutdelningsadress (adress för paket etc.)
Länslasarettet

Postutdelningsnummer
08057

Adresspostanstalt
BOX 158
C11 C1 NYKÖPING 1

Paketets innehåll
Termos

Paketet kvitteras
(ej med blyerts- eller förepennor)
3013 1972

Adressatens namnteckning
S. L. Magnus

Budets namnteckning (endast betr. öspaket)

Budets adress

Utlämningsdag
30.12.72

Paketets onk. dag

Vikt i kg
4

Sign.

Bj 2010.02 (Sept 68) *Py fr 5th 1968

Official parcel service card for 4Kg package. Dianste postage privilege label

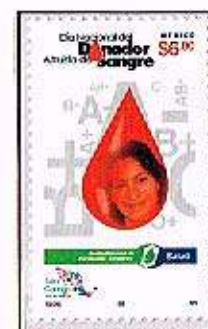
Specialised blood group laboratories undertake the blood grouping procedures.

The blood is classified into its ABO and Rh groups eg group O+ or O-



Meter: Pitney-Bowes, R series

The correctly labeled blood bags are stored until required



And are now ready to be sent to the hospital blood bank.

Hospitals are stocked daily with donated blood (spitalele sint zilnic aprovizionate cu sange) and is delivered in refrigerated vehicles

CARTE POSTALA

SEP 02

Spitalele sint zilnic aprovizionate cu sange conservat, clarit bolnavilor de donatorii de sange.

Adresa expeditorului
Ripeanu
George, Timisoara
str. Sucea Velea 9

Localitatea
Timisoara

Regiunea
Suceava

Strada
30 Decembrie Nr. 5

Blocul
Scara

Destinatorul
Ing. Dominte Nistor

BLOOD'S Penny Post PHILADA.

BLOOD'S JAN 14 10 1/2 A.M. 1856 DESPATCH

Thomas B. Gould
Newport
Rhode Island

L.B. S. c. 980 - S. T. XII 1961 - \$6.000

Great care must be taken to ensure the blood is kept free of any contamination with chemicals such as acid which can denature the blood.



Blood's Penny Post private post, 1856, part of the Philadelphia Despatch Post, in use between 1853 and 1860. The stamp is tied to cover by acid, note lighter stain on stamp.

7.4. WHY AND HOW A TRANSFUSION IS GIVEN

finally receiving the precious liquid

Giving a blood transfusion

When required the blood bag is attached to a giving set and the blood is passed through a filter...



...occasionally the blood is required to be warmed first, through a warming coil before it is transfused into the patient...



...then the blood is transfused into the arm of the recipient



医用输血输液加温器
Blood and infusion warmer

温暖呵护
兴润心田

佛山市奇汇医疗器材有限公司

地址：广东省佛山市南海区桂城海六路御景苑景阁B10号 网址：www.qihuichina.com
电话：0757-86260839 86260855 86260100 (传真) 13318324086

新春阳光价
9800 元/台

广东省佛山市邮政局发布 2007-1904(BK)-0353

China postal stationery card incorporating lottery ticket number sponsored by The China Post

As we have seen the demand for blood is great, so for the treatment to be effective in saving lives, blood must always be available...

...to all hospitals, regardless of distance, and at any time...morning, day or night!



Scan of reverse not reduced ▲

Posted at Edgeworthstown (Ireland) 9th Aug 1824., with Edgeworthstown 52 mileage mark, to Dublin in Irish miles. Free postage handstamp applied for use by Royal Hospital Chelsea. 'Crown circle frees' with single morning duty ring. Arriving 13 Aug. Noon & night time/date stamp applied by General Post on reverse

7.4. WHY AND HOW A TRANSFUSION IS GIVEN

who requires a transfusion

The sick need blood, what do you expect? (des malades ont besoin de sang qu'attendez-vous?)



...the chronically ill...



...patients undergoing surgery and depending on the type of surgery, will have varying degrees of blood transfusion requirements...

...major surgery such as heart surgery - may require large quantities of blood, 6 or more donations



Cardiac centre, King Hussein Medical City



The use of a cardiopulmonary bypass machine or 'heart-lung machine' shown above, usually requires, more blood



On left Prof. Yi Shan Wang performing open heart surgery under acupuncture anaesthesia, on a 15 year old girl, with congenital septal defect, aided by anaesthetist Prof. Liang-fu Quin



During childbirth, bleeding complications may necessitate the mother needing a transfusion...

children are therefore an important group of blood recipients...

Domestic use postal stationery envelope



Kate Campbell collaborated with medical scientists, in Melbourne Red Cross Blood Bank, into Rh incompatibility of mother and child, the treatment of consequent haemolytic disease of the newborn and the development of exchange blood transfusion, and transfusion of the unborn child within the womb



...and newborn premature babies also frequently require a blood transfusion

◀ It is improbable that the scenario portrayed on this stamp is genuine. It is unlikely glass bottles were still in use in South Africa in 1986, also blood would not have been given to a premature baby by this method (see also sheet No 87)



7.4. WHY AND HOW A TRANSFUSION IS GIVEN.....

who may need a transfusion

Treatment of anaemia and bleeding as a result of blood disorders such as leukaemia, haemophilia, and thalassaemia,



Postage due

Postage due

STT Vujna overprint
(Yugoslavia Military Administration, Free Territory of Trieste.)



Meter: Havas, K

These disorders often affect children, and thus they are often recipients of a blood transfusion



Leukaemia treatment, especially after stem cell transplants (DKMS – German Stem Cell Donor Registry) matches donors to leukaemia patients.



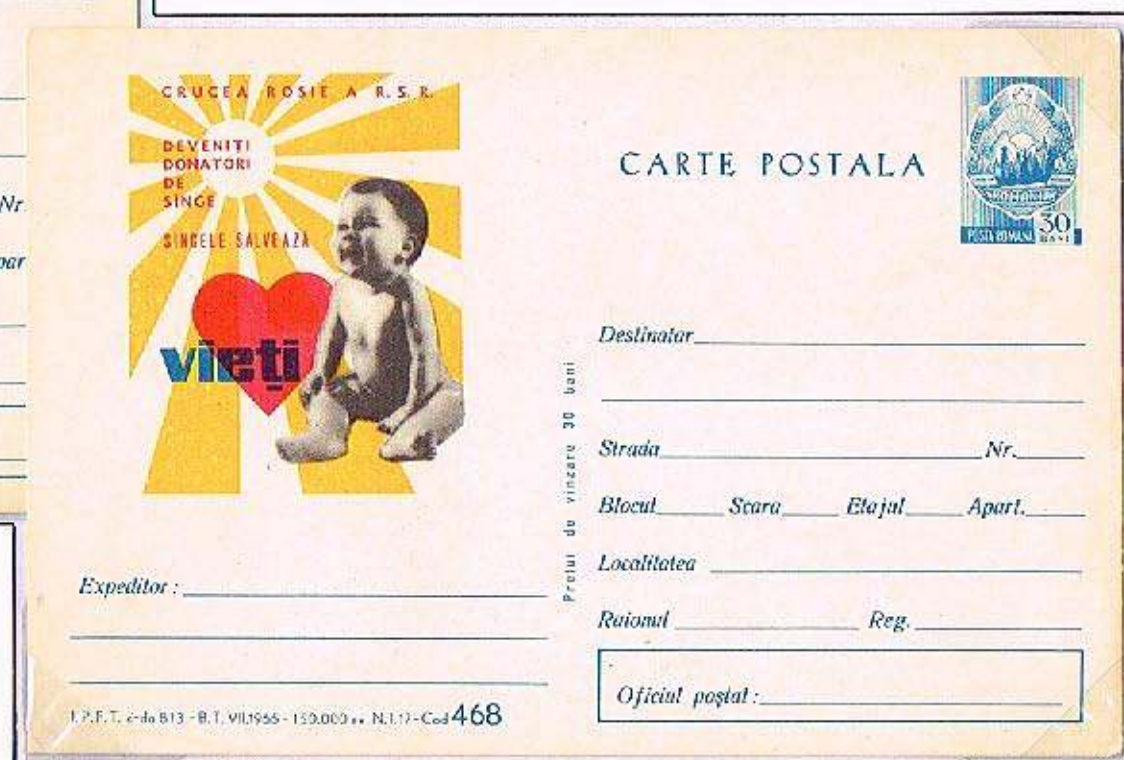
haemophilia treatment



thalassaemia



Domestic use postal stationery with black colour and child omitted.



"singlele salveaza viet" - blood saves lives, and has saved the life of this child, who without blood would not exist!

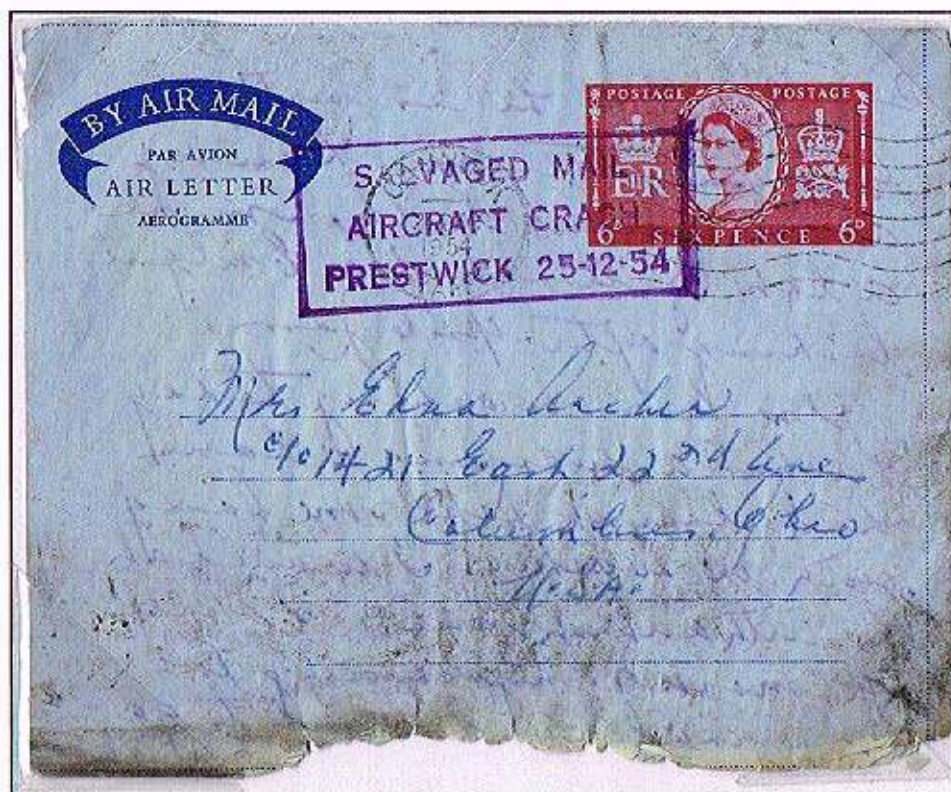
7.4. WHY AND HOW A TRANSFUSION IS GIVEN.....

.....emergency transfusions

Emergency blood transfusions are often required for the treatment of road traffic accidents and other casualties...



A single road traffic accident victim may require over 20 units of blood and other blood components



... some of the 8 survivors of this plane crash almost certainly received blood transfusions as part of their emergency treatment in hospital

Salvaged mail from BOAC Boeing 377 which crashed on landing at Prestwick Airport on 25th Dec 1954. Most of the 250 mail bags were salvaged in a badly burned state and returned to London where the cachet was applied and forwarded on.



War casualties are another major reason for requiring blood or plasma - since the pioneering transfusions during World War I,



Blood can now be given before the casualty is transported from the battlefield



7.5. CONCLUSION

blood = life!

From the ancient myth of the pelican...

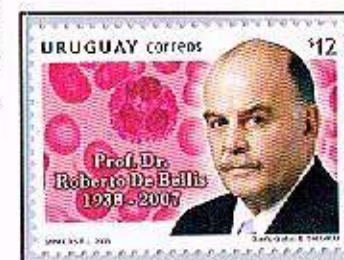


... feeding its young on its own blood...

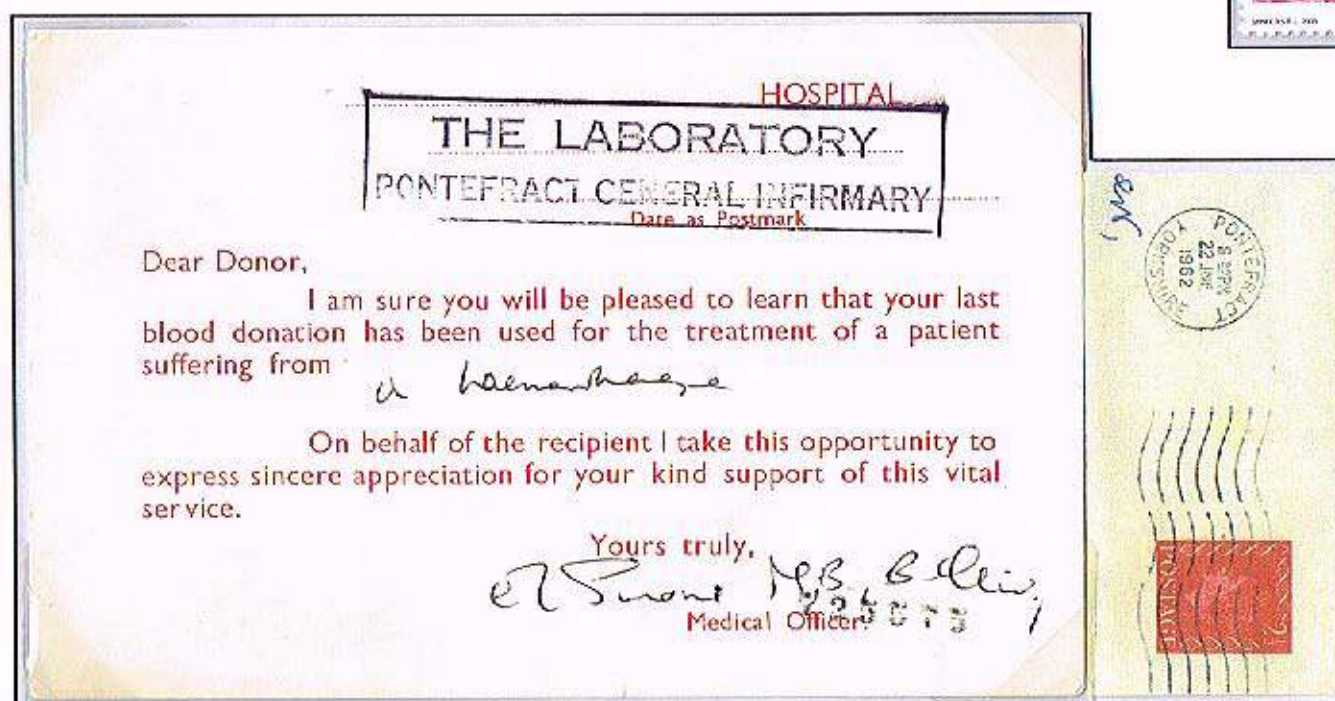


Meter: Pitney-Bowes, R series

...the development of blood transfusion as a modern medicine by organisations such as the Wadley Research Institute & Blood Bank formed in 1951 in Dallas, Texas, in 1968 it became the Wadley Institute of Molecular Medicine, and research into molecular biology would then lead to advances in future medicines such as bone marrow stem cell transfusion, pioneered by De Bellis.



The life saving gift of a blood transfusion is always appreciated, blood donors are regarded by many as heroes (Cada donante de sangre es un heroe)



Pre-printed insurance questionnaire with postage paid handstamp of the Metropolitan Life Assurance Co. and post office paid handstamp dated 1839, with a faint 2 manuscript denoting 2d postage. The form was completed by the surgeon, and returned.

... and the assurance that the lives of potential recipients of a blood transfusion, may be saved by the goodwill of blood donors, - a truly exceptional form of 'life assurance', then undeniable...

BLOOD = LIFE!

Meter: Satas

