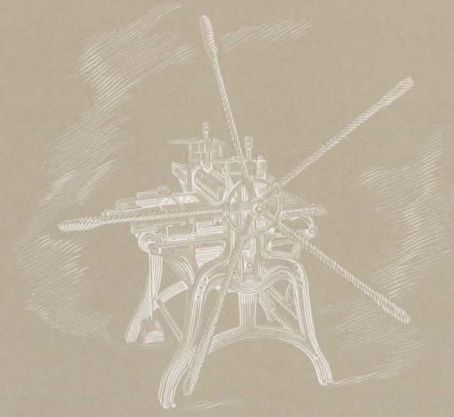


★ THE STORY OF AMERICAN BANK NOTE COMPANY ★



THE STORY OF  
AMERICAN BANK NOTE COMPANY



THE STORY OF  
AMERICAN BANK NOTE COMPANY

BY WILLIAM H. GRIFFITHS



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IN WRITING FROM AMERICAN BANK NOTE COMPANY

PRINTED IN THE UNITED STATES OF AMERICA

THE STORY OF AMERICAN BANK NOTE COMPANY

## Foreword

ONE HUNDRED SIXTY-THREE YEARS AGO the organization that is now the American Bank Note Company first took root. One hundred years ago the skills, resources and goodwill of seven distinguished firms were combined to form a unique institution which throughout the years has been accorded the confidence of business men and government officials in most of the countries of the world, and which has dedicated itself to meriting that confidence.

The carefully preserved records of the Company must in great part remain confidential, in accordance with its long-established policy, for the protection of its customers. But the material that does not relate to the affairs of its customers — whether corporations or governments — or is already in the public domain yields a story which I believe will be interesting to all who are concerned with documents of value, and perhaps also to others who find romance and inspiration in the achievements of the men who have built America's greatness.

We who today bear the responsibility for preserving the Company's good name owe a great debt to the many individuals whose vision, talent and integrity have illumined its distinguished past, and our earnest hope is that we shall so acquit ourselves that our Company may have an equally illustrious future.

A handwritten signature in black ink, appearing to read "W. C. Sewing", with a long horizontal line extending to the right.

*Chairman and President*

December 1, 1958

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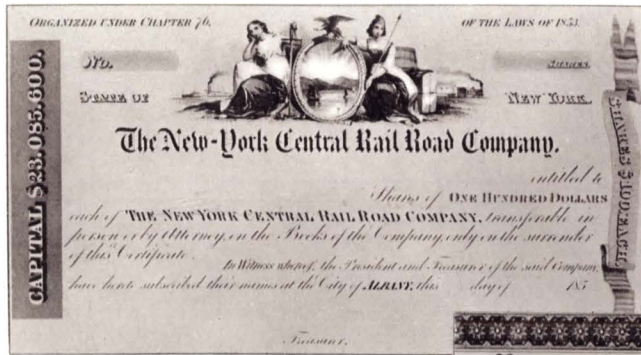
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- 44 American Bank Note Company's Map of the World

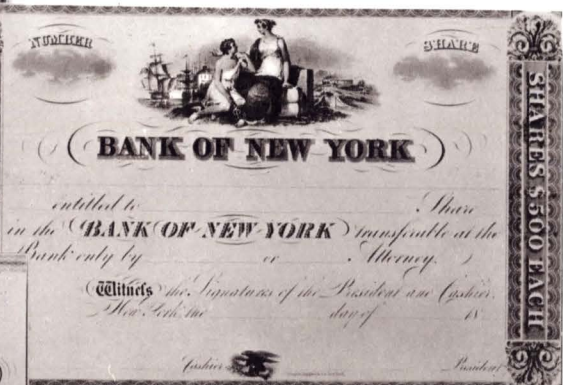


Foreword by W. Frederic Colclough

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Some of the early stock certificates engraved and printed by American Bank Note Company





## Precious Paper

Everywhere in the world, people have found that in the conduct of their business and financial affairs they gain efficiency and convenience by using symbols or tokens of their rights, powers or possessions. In technologically advanced areas of the world, these symbols generally take the form of paper documents. They may be as small as postage stamps or as large as coupon bonds. They may be as specialized as gold certificates or as widely used as paper money and travelers cheques.

Whatever their names or purposes, these documents share the feature of having a generally accepted worth equivalent to whatever they are stated to represent. For that reason bank notes, stamps, corporate, state and municipal bonds, stock certificates and other types of securities for listing on the exchanges, travelers cheques, letters of credit and similar forms of commercial paper are conveniently referred to as documents of value.

The successful use of such documents rests upon the confidence which can be placed in their validity. The cost of manufacturing a document of value is very small when compared with what it may represent, and its intrinsic value is practically nil. Yet every day hundreds of millions of dollars are paid with confidence in exchange for these special pieces of paper.

If there ever should arise ground for general doubt of the validity of documents of value, whether bank notes, stock certificates, bonds, travelers cheques or stamps, the ensuing paralysis of economic life would be appalling. That is why a world which is divided on so many of its other beliefs agrees on the importance of maintaining confidence in documents of value. Throughout the world stringent penalties are imposed on convicted counterfeiters. In a more forthright age, a century and a half ago, bank notes in

English-speaking countries frequently bore the words “ ’Tis Death to Counterfeit,” and statutes made the threat a real one. In the present-day United States the Federal Government has one special organization, the Secret Service, with the prevention and detection of counterfeiting as one of its two duties, the other being the protection of the President of the United States, members of his family, the President-elect, and the Vice President at his request.

But the use of police power alone cannot prevent a serious amount of counterfeiting, even with death and torture as penalties. The evidence of history on this point is clear. A more important safeguard, therefore, is the principle that documents of value must be made so difficult to copy that to do so is unattractive to those undeterred by moral considerations or the threat of punishment.

The task of making documents that defy counterfeiters is the province of what is known as the bank note industry. It is a small industry by comparison with many others. Yet its products probably enter into the lives of more individual men and women throughout the world than do those of any other industry.

### *Exacting Demands of Bank Note Printing*

Security printing is different from most other activities in many respects, but chiefly in that its products represent values which are hundreds, even thousands, of times their cost. Caution, aloofness and secrecy are therefore inescapable, as are many unusual business policies. For example, no customer, whether corporation or government, may obtain possession of the engravings from which its documents have been printed. As another example, all of the important scientific advances of the last century and a half that have related to the graphic arts or visual reproduction have had to be considered first as potentially dangerous weapons in the hands of counterfeiters, and only then as possibly useful adjuncts to the industry. The invention of the camera, for instance, required prompt countermeasures, and the invention of film and filter combinations, by which a camera could select a single color and ignore others, demanded another change in strategy. There would be considerable truth in the statement that, while other industries direct their research to finding easier ways to make their products, the conscientious security printer

seeks to find more difficult ways. There are no open-house nights in a money factory, and no free samples!

A more subtle difference is this: while the general tendency of industry is to eliminate the personal characteristics of individual craftsmen, bank note engraving carefully continues them, even stresses them, because, despite all technological advances, the counterfeiter's most baffling problem is the unique personality of the artist which the engraving process transmits directly to the document.

Since no photography enters into its creation, an engraved document cannot be duplicated by it. (A camera can of course make a picture of an engraved document, but that is very different from duplicating it — a camera can make a picture of a cat, but it cannot make a kitten.) Therefore another engraving would be necessary, which under comparative examination could not fail to reveal a personal touch different from the original.

Beyond defeating counterfeiters from the standpoint of expert examination of documents, every effort is put forth to make their spurious products apparent even to cursory or nonexpert examination. The most advanced achievements of the industry have been strikingly successful in both respects.

### *Three Methods of Printing*

Security printing has its technicalities, which are an integral part of its history. A few terms and principles can be explained here better than in the chapters which follow.

There are three fundamentally different ways to make printed impressions on paper. To see how they differ, we can imagine a man sitting at a table with sheets of paper, ink (not liquid, but thick like tooth paste) and a piece of some smooth washable material, say a piece of linoleum. He wants to print an "X" on each sheet of paper.

The man has three choices:

(a) He can mark an "X" on the linoleum with ink, then press each sheet of paper in turn against it, renewing the ink on his "X" as necessary. This is *surface* printing, of which the principal commercial example is lithography. In place of our amateur's linoleum, in this process the paper is pressed against a stone or rubber surface, depending upon whether it is direct or offset lithography.

(b) He may use a knife to cut down his linoleum everywhere except where his “X” is marked. The “X” will then stand higher than the material around it. When he runs an inked roller over his work, only the elevated “X” surface will be coated with the ink. A sheet pressed down on his work will touch the elevated surface only, and will be marked with the “X.” This was originally known as *cameo* printing, but it is more popularly called *letterpress*. It is the method of the traditional printing industry, and also of the woodcut and the humble rubber stamp. The material used is generally a lead alloy, zinc or copper.

(c) He may, however, use his knife for a different purpose — to cut an “X” *into* the surface of the linoleum, the way he once carved initials into the surface of his school desk. Next he coats the linoleum with ink, then thoroughly wipes the ink from the level surface, leaving it only in the recessed cuts. When a sheet of paper is pressed down firmly on the linoleum and into the carved “X,” this ink will adhere to it and be pulled out of the recess when the sheet is withdrawn, so that it remains as an “X” with appreciable thickness on the paper. This is *intaglio* printing. Typical examples include security printing, other forms of engraving such as that used for fine wedding announcements, and gravure, which is the photo-mechanical version of intaglio printing. The material used is steel, copper or zinc.

In this book, the text is an example of letterpress printing, the illustrations on text pages are printed in gravure. The map is printed by lithography. The inserted display pages are intaglio printed from steel engravings.

### *American Bank Note — the Trail Blazer*

Because of its institutional position and the service it renders throughout the free world, and because its roots trace directly back to the early days of this country, the story of American Bank Note Company is scarcely separable from the story of security printing as a craft and an industry. All significant technical advances in the field have been closely identified with the pioneer names which are embedded in the Company’s history, and its standards have been a world-wide influence.

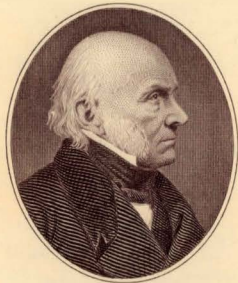
The history of security printing has its share of stirring incidents. There was the time Paul Revere cut up one of his precious engraved copper plates in order to make a new plate with which to manufacture independent

THE PRESIDENTS OF THE UNITED STATES

THE PRESIDENTS OF



JAMES K. POLK  
1845 - 1849



JOHN QUINCY ADAMS  
1825 - 1829



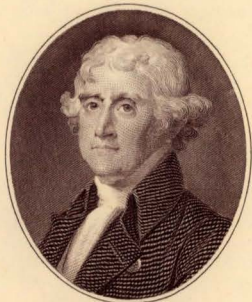
ZACHARY TAYLOR  
1849 - 1850



JAMES MONROE  
1817 - 1825



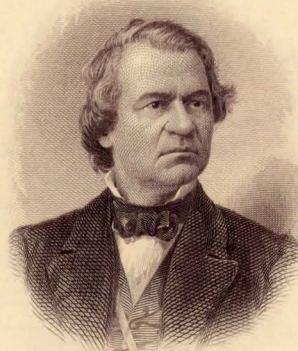
JOHN TYLER  
1841 - 1845



THOMAS JEFFERSON  
1801 - 1809



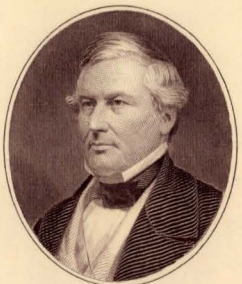
RUTHERFORD B. HAYES  
1877 - 1881



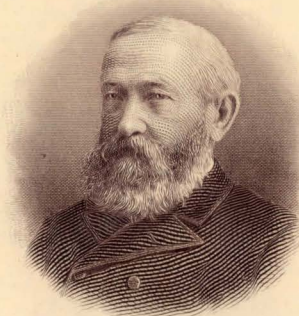
ANDREW JOHNSON  
1865 - 1869



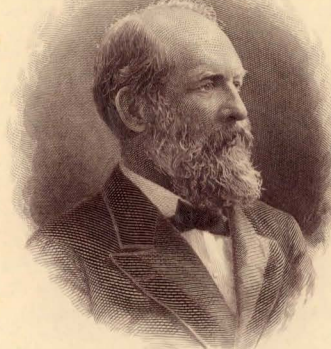
ULYSSES S. GRANT  
1869 - 1877



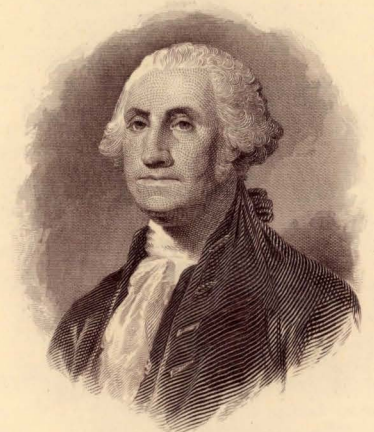
MILLARD FILLMORE  
1850 - 1853



BENJAMIN HARRISON  
1889 - 1893



JAMES A. GARFIELD  
1881



GEORGE WASHINGTON  
1789 - 1797



HERBERT C. HOOVER  
1929 - 1933



FRANKLIN D. ROOSEVELT  
1933 - 1945

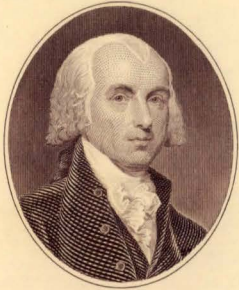


WILLIAM H. TAFT  
1909 - 1913



WOODROW WILSON  
1913 - 1921

THE UNITED STATES



JAMES MADISON  
1809 - 1817



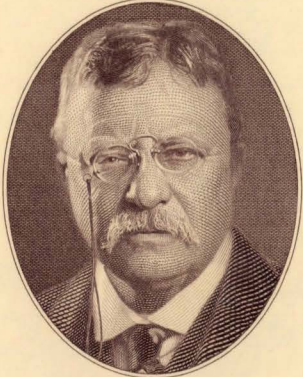
JOHN ADAMS  
1797 - 1801



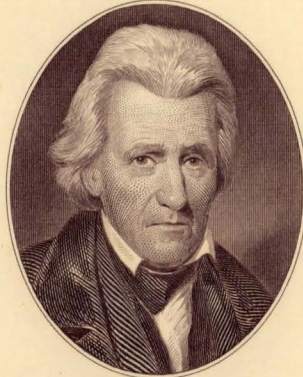
JAMES BUCHANAN  
1857 - 1861



MARTIN VAN BUREN  
1837 - 1841



THEODORE ROOSEVELT  
1901 - 1909



ANDREW JACKSON  
1829 - 1837



WILLIAM MCKINLEY  
1897 - 1901



FRANKLIN PIERCE  
1853 - 1857



ABRAHAM LINCOLN  
1861 - 1865



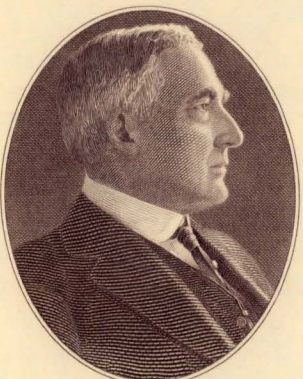
CHESTER A. ARTHUR  
1881 - 1885



GROVER CLEVELAND  
1885 - 1889 1893 - 1897



WILLIAM HENRY HARRISON  
1841



WARREN G. HARDING  
1921 - 1923



CALVIN COOLIDGE  
1923 - 1929



HARRY S. TRUMAN  
1945 - 1953

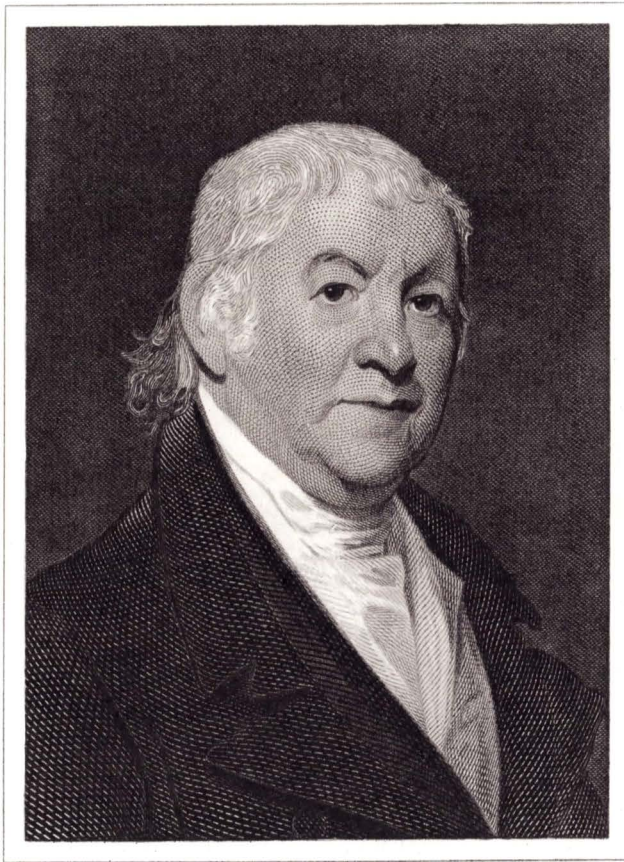


DWIGHT D. EISENHOWER  
1953 -

America's first money. There was another time, in early nineteenth-century England, when a group of leading citizens, appalled by the number of pitiful wretches their nation had to hang every year to discourage counterfeiting, met to consider the problem. The deliberations of this group will be referred to subsequently. There was the issuing of "Continental currency" in our War of Independence. And there was the New York postmaster who, after the Congress decided on prepaid mail by means of stamps, ordered his stamps from a bank note printing company in his neighborhood, the first provisional stamps in the United States.

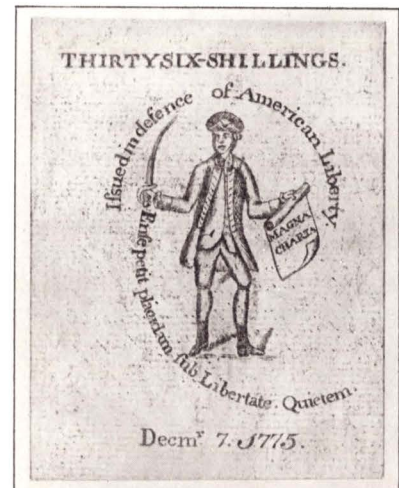
On a larger scale, and continuing into the present, the story of security printing is a part of the great industrial growth of America, in which the spreading ownership of millions of stock certificates and bonds played and continues to play an essential part. Finally, the story of security printing includes the engraved postage stamps of the United Nations, issued by no government but honored by all, token of men's desire to have a more peaceful and prosperous world.





PAUL REVERE

Father of America's security engraving industry



SWORD HAND MONEY

Engraved and printed by Paul Revere

## The Early Days

1795–1823

**A**merican Bank Note Company traces its beginning back to 1795. The place was Philadelphia, and the man was Robert Scot.

The year 1795 was the midpoint of the important first decade of the American Constitution, when the existence of a long-needed orderly government permitted an expansion of the economy to meet pent-up demands which could not be satisfied under previously existing political conditions. One of the most pressing needs was for banking service and circulating bank notes, and this need resulted in the development of the bank note printing industry.

Even in the decade of its birth the young industry had a long ancestry. Here in the new world there had been paper money in use, in one form or another, for more than one hundred years. A private bank in Massachusetts was issuing circulating notes in 1681, and in 1690 the Massachusetts Colony itself issued bills of credit, which circulated as money, to pay the cost of a military expedition against French-held Quebec.

This Massachusetts note issue of 1690 was studied by the organizers of the Bank of England, which was established in 1694 and issued its first notes shortly afterward.

The first note engraver of the American colonies whose name has been preserved was one “Jno. Conny.” He rendered a statement to the Massachusetts colonial government, bearing a 1702 date, for “engraving three bills of credit.”

Counterfeiting is older than recorded history. The first American counterfeiter probably worked in wampum, but his name is unknown. The first recorded counterfeiter in America was Peregrine White, Jr., of Rhode Island, who worked in bills of credit and was convicted in Massachusetts in 1704.

The first artist-engraver in America, Nathaniel Hurd of Boston, did not himself create any bank notes but preserved for history an interesting sidelight on the problem of safe money. In 1762 a native of Lexington, Mass., Dr. Seth Hudson, was apprehended, along with his henchman, for forging and passing provincial notes. The two culprits were convicted, Hudson was pilloried and his henchman was whipped. Hudson lived out his life in West Hoosuck, Mass., now Williamstown, where he defrauded sundry people, including Ephraim Williams himself. Hudson is remembered only because Nathaniel Hurd engraved the punishment scene and sold prints of it, some of which are still in existence.

Nathaniel Hurd will serve to introduce an important point. It is possible to be an artist without being an engraver. It is also possible to be an engraver without being an artist. Very few men combine both accomplishments, and the rarity of the combination is a crucial factor in safeguarding documents of value.

### *Paul Revere — Father of the Industry*

While Hurd's prints were being circulated, Paul Revere, his reputation as a silversmith well established, was adding engraving to his activities. His first major production as an engraver was a 1770 hymn book, *The New England Psalm Singer*, which contained the words and music of composer William Billings. Each of its pages was engraved by Revere. In following years he engraved and published pictures on political subjects, of which prints done in 1768 and 1770 are extant, and designed and engraved the seal of Phillips Academy in Andover.

A contemporary's catalog of the engravers in pre-Revolutionary America is interesting for their geographical distribution: it named five in Boston (Revere, Hurd and three others), one in New Haven and one in Philadelphia (a Mrs. Dawkins, who does not again appear).

Picture engraver Revere became a bank note engraver in 1775. Moreover, inasmuch as the money he manufactured was the first issued here by an independent government not under British sovereignty, he was the first bank note engraver of independent America, and with good logic has therefore been considered the father of the industry in the United States.

Boston was under a sort of military siege in 1775, and the leaders of the

rebellious part of the population were assembled in suburban Watertown. They decided on May 3 to issue £100,000 of notes maturing June 1, 1777, and bearing 6% interest, in denominations of not less than £4.

Revere was given the assignment of manufacturing the notes. He established his hidden plant in the residence of a man named Cook, and faced the problems created by the fact that his equipment was in his shop in Boston and therefore unavailable, and that blockade and open hostilities had shut off all other possible sources of supply. He apparently had a small supply of copper sheet on hand, but he had to eke it out with his inventory of previously engraved plates. One of these he cut in half, and on the back of one of the pieces engraved his note. Ink and paper were not problems, but a printing press was. He solved this by building one, and delivered the notes on time.

Revere promptly received and filled a second order, this one for £20,000 of notes in small denominations from 6 to 20 shillings. A few months later he was commissioned to prepare a third issue, amounting to £100,000 of notes in many denominations. Notes in this third lot were dated December 7, 1775. They bore a picture of a man holding a sword, and became popularly known as "sword hand money."

Other colonies quickly followed Massachusetts in issuing their own notes, including Rhode Island, New Hampshire, South Carolina, Pennsylvania, Georgia and Connecticut.

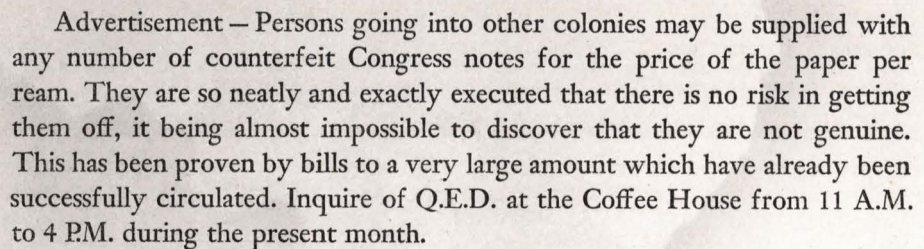
### *British Helped Make Notes "Not Worth a Continental"*

On May 10, 1775, just one week after the Massachusetts leaders authorized their first notes, the Second Continental Congress convened in Philadelphia. The first day's business included a measure providing for paper money backed by the faith of the United Colonies. This was the money that came to be called "Continental," and in later years gave rise to the phrase "not worth a Continental," because by the end of 1779 the notes had lost almost all value.

There were two reasons for the tragic depreciation of these notes. One was the inevitable inflation that accompanies a difficult war. The other was the widespread counterfeiting of the notes, under the auspices of the British army, as a measure which was intended to demoralize the rebels and their government, and which came close to succeeding. An unfortunate decision of the

Continental Congress had left the door open for the counterfeiting operation. The delegates to the Congress believed that it would be impossible, with the equipment existing in areas under their control, to produce enough notes by intaglio printing, and they therefore decided to be content with letterpress-printed notes.

The notes were printed from a combination of type and decorative blocks, in which white lines were cut into soft type metal (giving a woodcut effect) by a gun engraver named Smithers, who had emigrated from England in 1773. These notes were crude, nonuniform and easy to copy. Sir Henry Clinton, British Commander in the City of New York, was head of the country-wide counterfeiting operation, which was established early in 1777. Assisting him was the same Smithers who had worked for the Continental Congress. *The New York Mercury* of April 14, 1777, while the city was occupied, carried the following notice:



Advertisement – Persons going into other colonies may be supplied with any number of counterfeit Congress notes for the price of the paper per ream. They are so neatly and exactly executed that there is no risk in getting them off, it being almost impossible to discover that they are not genuine. This has been proven by bills to a very large amount which have already been successfully circulated. Inquire of Q.E.D. at the Coffee House from 11 A.M. to 4 P.M. during the present month.

In 1780 the Continental currency was superseded by new money known as “New Emission.” Strictly speaking, Continentals were not a part of the story of bank note engraving, except in a negative sense as demonstrating the unhappy consequences of using the wrong printing process. Also, they left in America a residue of mistrust of all paper money which lasted a long time.

### *First Engraved Notes Circulated by a Bank in 1790's*

The first engraved notes in the United States to be put into circulation by a bank, as distinguished from a governmental agency, were those of the Bank of North America. This Philadelphia institution was chartered by the

provincial Congress meeting under the Articles of Confederation in 1781, the year in which the Articles went into effect. After the Constitution superseded the Articles in 1789, the bank received a Pennsylvania charter.

The examples of these notes which have been preserved are dated “179-,” for completion by hand, leaving their actual date somewhat vague. They combined intaglio and letterpress printing, the promissory text being printed from type. The engraved portion, however, was interesting. It included a “vignette” (the engravers’ term for a small decorative picture) which had been executed by an English copperplate engraver of book and magazine illustrations, Charles Heath.

Under the Articles of Confederation the new nation had a difficult time. Tariffs between states, financial problems and conflicts of local laws hamstrung economic development. In 1787 the Constitution was adopted, providing for free trade and uniform laws for interstate commerce; and a regime of growth and prosperity began promptly when the Constitution became effective two years later.

The Federally chartered Bank of the United States opened in 1791. With its main office in Philadelphia and branch offices in other important cities, this bank was to perform many of the functions of a central bank. The new economy also needed a mint; this, too, was established in Philadelphia, the city selected to serve for a period as the capital of the nation, following New York and preceding Washington.

### *Robert Scot — First Engraver to New Mint*

The new mint needed an engraver, and it appointed the best man available. Robert Scot was born in England about 1750 and settled in Philadelphia in 1788, where he was listed as “Engraver” in the 1791 City Directory. He was essentially a lettering engraver, not a portrait engraver. The mint appointment, which he retained until 1824, the probable year of his death, did not preclude his doing other work, and he held himself ready to execute notes for the innumerable state-chartered banks which were being discussed and planned in every important city.

The 1790’s were an extraordinary decade. They followed a quarter-century of trade repression, war and semianarchy, which in succession had held down the energies of a vigorous people. Now those people were free, and the conse-

quent economic expansion was unparalleled. For example, tonnage of American vessels in foreign trade increased from 18,000 in 1789 to 146,000 in 1801. The need for banks rose accordingly, but the unavoidable time required for organizing personnel and mobilizing capital limited their formation until 1795. As a consequence it was in 1795 that Scot's bank note business became a reality, instead of the quiet hope of the four preceding years. The business so begun was destined to continue through Scot's assistant, and through him to various successor firms and corporations and, finally, to American Bank Note Company.

Scot's assistant was John Draper, a Pennsylvanian, who had been attracted to Philadelphia in 1794, when he was twenty-four years old, by an opportunity to make engravings for an encyclopaedia which was being published, a volume at a time, by Thomas Dobson, a printer. The text was derived from the third edition of the *Encyclopaedia Britannica*, but the illustrations required new engravings. Draper's connection with this publication continued until 1803. The date of his first association with Scot is not recorded but may have been the same year.

### *Yankee Genius Contributes to Engraving Craft*

While the bank note engraving business was thus becoming established in Philadelphia, an interesting genius was working out some of his ideas in Newburyport, Mass., many miles away. Jacob Perkins, born in 1766, had ended his schooling at thirteen to become apprenticed to a goldsmith, had taken over the business at fifteen when the master died, had run it successfully — inventing a method for silverplating shoe buckles — and when he was twenty-one had been hired by his state to make dies for coins. After inventing a nail-making machine, Jacob Perkins turned to bank note engraving.

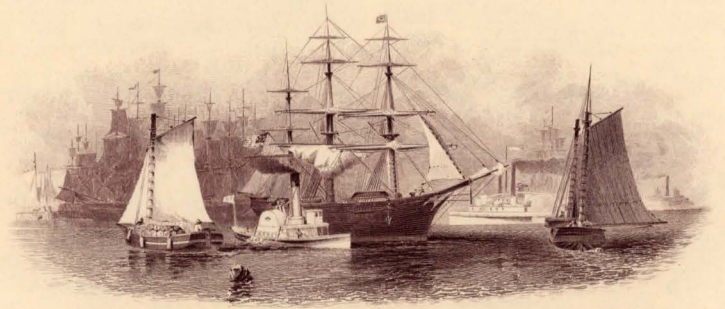
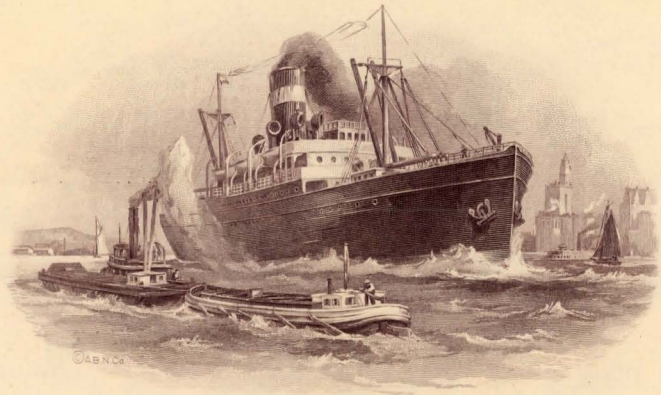
Before Perkins' time the engraving craft had been faced with a dilemma: any metal soft enough to permit recessed lines to be sunk into its surface would not be hard enough to yield many impressions before wearing down to the point where it had to be repaired or replaced. With copper plates, about 5,000 impressions was the practical limit. The obvious handicap of this dilemma was the high cost of repairing or replacing plates. An even more serious effect was the loss of protection against counterfeiters which is provided by maintaining uniformity. If all bank notes of a given issue are uniform in appearance,

MARITIME VIGNETTES

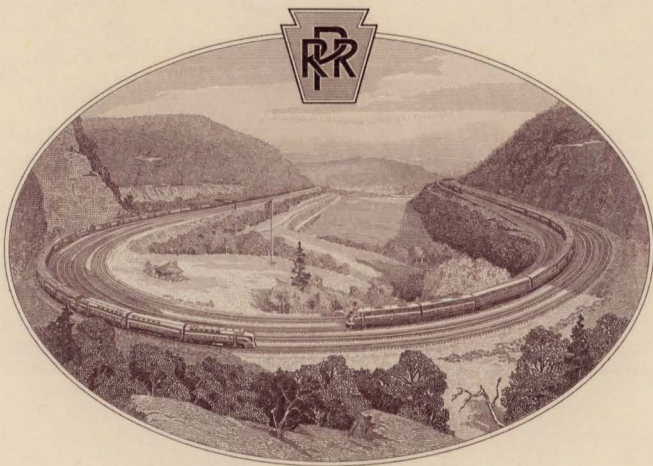
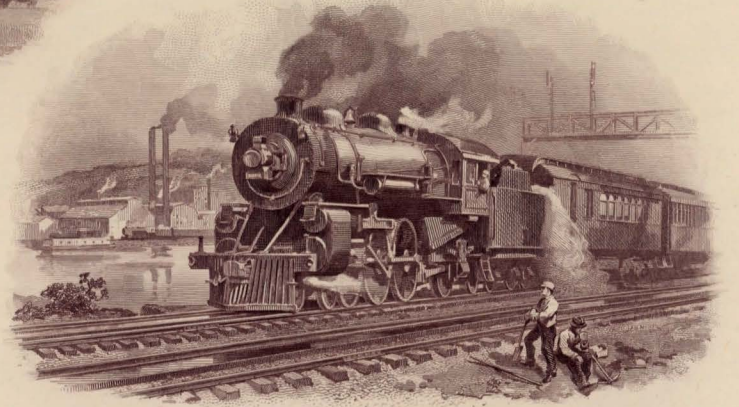
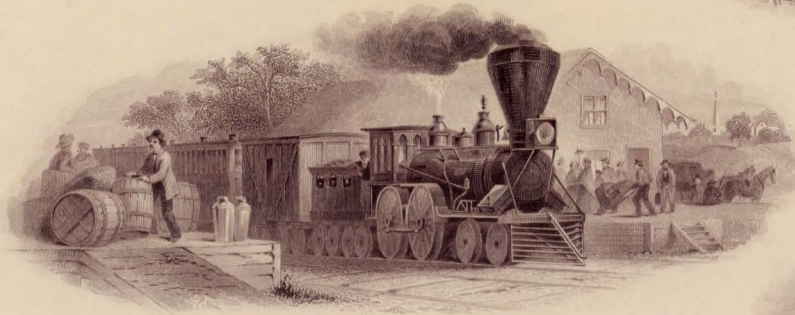
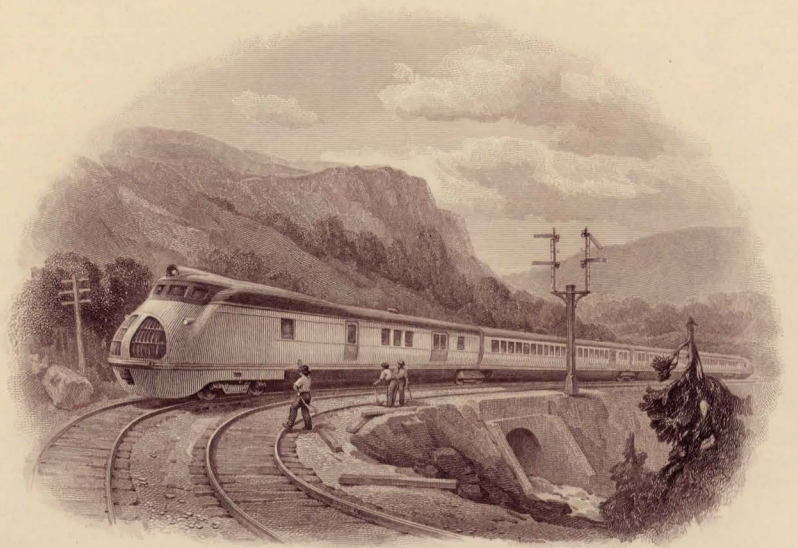
RAILROAD VIGNETTES



MARITIME VIGNETTES



RAILROAD VIGNETTES



then any note that looks even slightly different is suspect. But if dozens of repaired or substituted plates are required for a single issue, uniformity of appearance is not expected, and the counterfeiter is faced with a far less exacting challenge.

While Perkins did not introduce steel into the craft, he made practical its use in place of copper, a metal which cannot be hardened as steel can. The engraver was now able to do his work on the surface of a soft piece of steel and then harden it without damaging the fine lines cut into it. In this way the practical number of impressions that could be taken from a plate became 30,000 instead of 5,000. In later years the number became still larger.

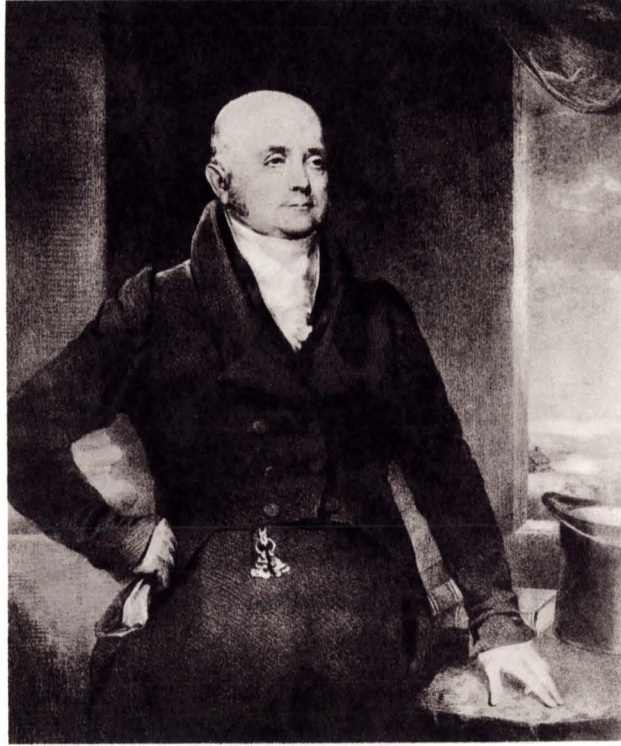
From the standpoint of security, one of the greatest gains resulting from this development is that much finer and cleaner lines can be engraved into steel than is possible with a softer metal such as copper.

Perkins also took a leading part in developing the method whereby an engraved steel die can be mechanically duplicated, a process known as "siderography," or "transferring."

The principle is simple: the engraved die is hardened, and a soft steel cylinder, or "roll," is rolled over it under considerable pressure, so that it takes a reverse impression of whatever had been engraved on the original die; that is, the impression on the roll is raised wherever the die is recessed. That roll is now hardened, and then rolled over a soft steel printing plate, which duplicates the original die; this plate can now be hardened for printing.

While the principle is simple, in practice it was difficult to accomplish. An aggravating factor was the lack of uniformity in the steel. Each ton Perkins received from the steel makers had to be painstakingly culled to find a few pieces suitable for use.

With the transfer problem solved, Perkins devised a new scheme to foil counterfeiters. He clamped several strips of steel, each about one-half inch wide, tightly together, so that they presented a single smooth surface, to which he transferred engraved scroll work and into which he punched fine lettering and numbering. The steel pieces were then unclamped and separated with bars of metal, after which all were re-clamped together; then sheets were printed from the assembly. The bank note so produced had vertical blank strips in the design to enable a bank teller to put corresponding parts of the designs of two notes, one suspected as counterfeit and one genuine, next to each other for direct comparison.



### JACOB PERKINS

The Yankee inventor who advanced the art of engraving and plate printing

Somewhere along the way Perkins hit upon a method of inking his plates with a roller instead of a dauber. He was brilliant enough to have little ideas as well as big ones.

He seemed to favor combining hand engraving and mechanical punching on the same plate, and mixing intaglio and letterpress printing. He left descriptions of how he would engrave on a transfer roll, from which he could then obtain a raised design on a flat metal surface for letterpress printing.

It is clear from his writings that he believed uniformity was the key to the counterfeiting problem. Uniformity of notes merely of one issue or of the issues of one bank was not enough, he contended, because, for example, a man might receive a note of one Boston bank when he had in his pocket, for comparison, notes of banks in other cities or other Boston banks but not of the same bank as the note tendered. Therefore Perkins devised a note printed from plates con-

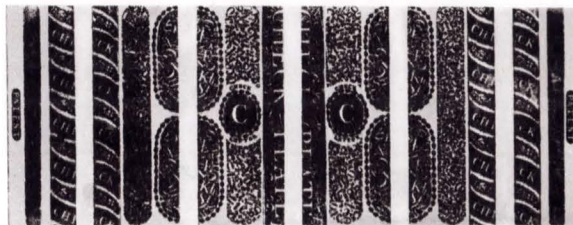
taining rectangular holes into which slugs bearing the name and address of the issuing bank could be dropped; and he advocated the use of a single design for all bank notes of the same denomination throughout Massachusetts. He also advocated having a different design for each denomination, because altering a note to a higher value would thereby become impossible. (The latter principle was adopted by our Federal Government more than a century later.)

In 1799 Perkins secured the public endorsement of three Philadelphia engravers for his protective measures, which he used in promoting his ideas. Robert Scot's name was first on the list. Second was James Smithers', the same name and doubtless the same person who had served both sides in the war; and third was James Akin's, a name which does not otherwise appear.

The Massachusetts legislature passed a law reflecting the Perkins theories, and after May, 1809 all banks in that state were required to use his protective methods.

Before leaving Perkins temporarily, to observe developments in Philadelphia, we might critically examine his strategy in the war against counterfeiting. Perkins' advances were important, and were effective for a long time; but eventually two latent weaknesses became apparent, which in time required a drastic revision in basic thinking. One weakness was the very uniformity which Perkins believed in; for, while it made the counterfeiter's work more difficult, it also tempted him with a greater prize. The counterfeiter had greater difficulty in making an issue of notes that would deceive the public, but once he had done so, everybody in Massachusetts became his potential victim. The other weakness was that Perkins' money relied too much on mechanical procedures, such as ruling and punches, and not enough on the artistry of talented men whose work carried a recognizable personality.

Back of a Perkins note,  
showing the vertical blank strips



### *Master Engravers Merge Talent*

One further piece of strategy was needed: to combine on one note the work of two or more artists whose work had different characteristics, so that no lone outlaw could turn out a successful copy. This final step called for a team of master engravers joined into a firm. The time was ripe, and it came about in Philadelphia in 1810.

The three men who took the step were George Murray, John Draper and Gideon Fairman, and they joined together in a firm bearing their names.

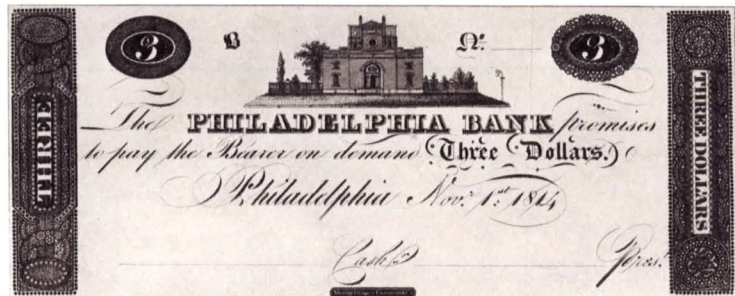
John Draper was the man who since 1803 had been assistant to Robert Scot. Scot was sixty years old in 1810 and secure in his mint appointment, which probably explains why he did not take part in the merger.

George Murray was a forty-year-old Scotsman who had learned his craft in London and had just moved to Philadelphia to work for the publisher employing Draper.

Gideon Fairman was four years younger. He was a native of Connecticut and had made a good name for himself in Albany, N. Y., where he had designed and engraved notes for banks in New York and New Orleans. Fairman had started out as a blacksmith, and then had learned to engrave on silver as a jeweler's apprentice. He did some excellent portrait engravings, including two of George Washington from a Stuart painting. He later engraved on steel the Bank of North America vignette, originally done by Charles Heath on copper, which was continued in use for many years. Fairman, too, had arrived in Philadelphia in 1810.

The company formed by Murray, Draper and Fairman was immediately successful and, with a combination of engravers, could offer a degree of security protection not otherwise available. The partners soon made even

A three-dollar bank note of 1814, made for the Philadelphia Bank by Murray, Draper, Fairman & Co., a predecessor of American Bank Note Company



greater strides. They engaged a mechanic, respectfully referred to in the records as "Mr. Brewster," who made a steel die of fine complicated punch marks, to further confuse counterfeiters.

Next they added to the staff a gentleman from Connecticut named Asa Spencer, who was to make a significant contribution with his geometric lathe. This was a machine which slowly rotated a piece of steel in complicated patterns while a stationary graving tool sank a line into its surface. The resulting swirls were too complex to be repeated mechanically by one who did not know the settings of the machine, and too precise to be copied freehand. The border of every stock certificate, bond, bank note or travelers cheque in common use today exhibits the work of the geometric lathe. Spencer was not the inventor; he improved the work of one Christian Gobrecht, and the principle of its operation came from French watchmakers of an earlier century, who decorated the backs of watches with similar devices, known as engine-turning lathes. Examples of work done by the geometric lathe, as well as other types of engraving, are shown on the inserted pages following page 28.

The firm was fortunate a year later in an even more important addition to its roster, when Jacob Perkins, the Newburyport genius, became a partner. He not only inspired Asa Spencer's mechanical work but impressed his thinking upon all of the firm's work, so that the company soon had an international, instead of merely a national, reputation.

This reputation led to participation by these gentlemen in one of the notable events in bank note engraving history, an event which took place in 1818 in London.

### *England Once Hanged Its Counterfeiters*

There are only two ways to discourage counterfeiting: (a) make it difficult or (b) make it dangerous. Both ways are generally used, but with varying emphasis. In the United States in 1818 the emphasis was on method (a), as it still is; in England, it was on method (b). But it is repugnant to good men to inflict penalties, including hanging, when no end is in sight, and that seemed to be the situation in England. Therefore a responsible English organization, the Society of Arts, attacked the problem through an elaborate investigation in London.

The British Minister in Washington, Sir Charles Bagot, urged the members of Murray, Draper, Fairman & Co. to go to London and offer their services to the Bank of England, because he was convinced that, with the facilities available here in 1818, notes made from Perkins' plates could not be counterfeited.

Two partners went, Fairman and Perkins, taking with them two associates, Asa Spencer and Charles Toppan, the latter a twenty-two-year-old native of Perkins' home town, and several machinists.

The Society's committee received proposals and suggestions from experts of varying competence. The recommendation of the committee was for its day eminently sound. The important paragraphs were:

It appears, therefore, as the result of this Investigation, that there are at least three or four practical methods of constructing Bank Notes, each of which will, in a greater or less degree, prevent the successful competition of the Forger; namely, the highest perfection of design and of engraving, executed on steel, — the adoption of figured borders, like the American Notes, — the union of variety, evenness, and mathematical accuracy, in engine engraving, — and the perfection of type combined with stereotype.

But the employment of any one of the three first of these modes is not in the least incompatible with the combination of any other or of all the three; and this combination is in fact contemplated by the authors of all those communications that have been approved by this Society.

Despite the uncontested superiority of American practices, Messrs. Fairman and Perkins did not get the Bank of England business. One historian's explanation is that it was too soon after the War of 1812.

Fairman, Perkins and Heath formed a company in England, which in later years was to play a major role in the production of postage stamps, and Perkins remained there. Fairman and the other Americans returned home in 1823 and resumed direction of their old company, reorganizing it with additional personnel and filling the gap caused by the death of Murray.

The firm of Murray, Draper, Fairman & Co. will be remembered for two fundamental contributions: (a) it established the value of combining arts and techniques as a safety measure; and (b) it established world supremacy of American methods. These two contributions gained in significance in the era which began in 1823.



## Toward One Great Institution

1823–1858

In the period that began in 1823 with the reorganizing of Murray, Draper, Fairman & Co. as Fairman, Draper, Underwood & Co. and culminated thirty-five years later, in 1858, with the formation of American Bank Note Company, the bank note industry grew apace with the expanding nation. During those thirty-five years the successor partnerships went through various changes in personnel and name, and divided and redivided until finally, just before the 1858 merger, there were four firms: Danforth, Perkins & Co.; Bald, Cousland & Co.; Toppan, Carpenter & Co.; and Jocelyn, Draper, Welsh & Co. These were four of the seven firms which were to make up American Bank Note Company. For these four, therefore, the 1858 merger was in a sense a reunion.

The seeds for that reunion were planted in Hartford, Conn., early in the period, when two young men, fellow employees of the Hartford Graphic Bank Note Company, became lifelong friends. Years later, as important figures in the bank note industry, they applied their influence to the creation of its leading company.

The Hartford company which taught them their trade was a venerable one, established in 1791 by a young man named Abner Reed. In 1818 it accepted as apprentice a boy named Moseley Isaac Danforth, who, on completion of his training in 1821, opened his own shop in New Haven, Conn., and three years later moved to New York. In 1839, after a sojourn in England, he joined one of the successor firms of Murray, Draper, Fairman & Co., and its line of descent carried on to Danforth, Perkins & Co., one of the seven components of American Bank Note Company in 1858. Danforth descendants

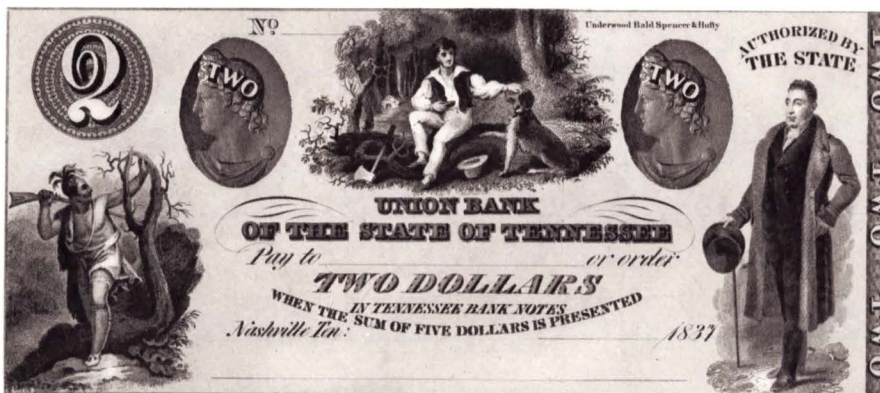
continued to play important roles in the story of American Bank Note Company until the death of George H. Danforth, secretary of the Company, in 1923.

The other young employee of the Hartford company who later rose to importance was Nathaniel Jocelyn. He formed a New York company, Jocelyn, Darling & Co., in 1831, and later made his office for a time with Toppan, Carpenter & Co., another of the successor firms of Murray, Draper, Fairman & Co. Jocelyn subsequently joined John Draper, who was then working independently, and this move ultimately resulted in Jocelyn, Draper, Welsh & Co.

Thus, to summarize these complicated shifts and changes, Nathaniel Jocelyn (a) was a partner in one of the four successor firms, Jocelyn, Draper, Welsh & Co.; (b) had worked in the office of another, Toppan, Carpenter & Co.; and (c) had a close friend who was the principal partner of another, Danforth, Perkins & Co.

The fourth of the successor firms, Bald, Cousland & Co., was a late (1853) offshoot from Moseley Danforth's firm.

To return to Moseley Danforth, for many years he employed as a lathe engraver the same Asa Spencer who had visited London in 1818 for the famous Society of Arts study of bank note printing. Asa Spencer had a hand in developing a technique known as "medallion engraving," although two other gentlemen, Saxton and Gobrecht, probably contributed more to it than he did.

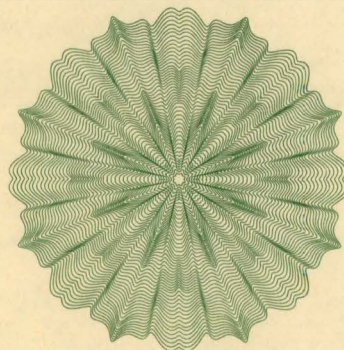


A Tennessee two-dollar bank note, bearing a portrait of the Marquis de Lafayette

SPECIMENS OF VARIOUS STYLES OF ENGRAVING



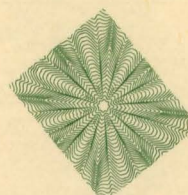
WHITE LINE ROSETTE



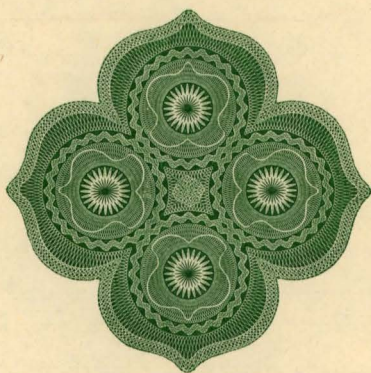
BLACK LINE ROSETTE



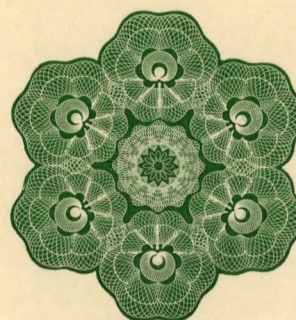
SELECTED SEGMENTS



BORDERS



BUILT-UP ROSETTES

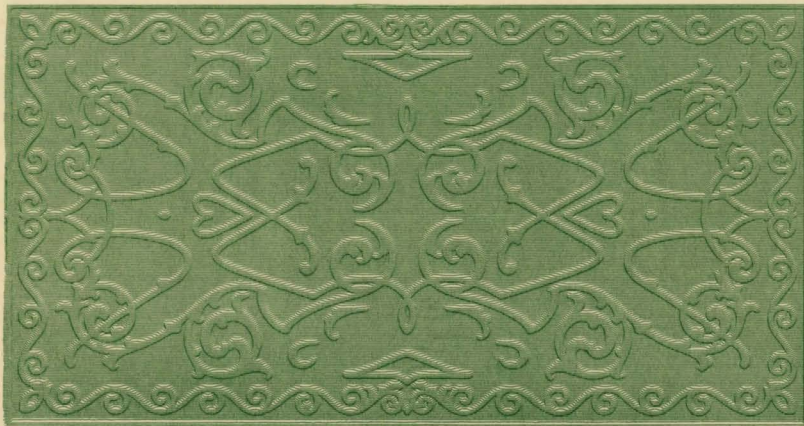


COMPLEX BORDER



COMPLEX BORDER

MEDALLION ENGRAVING

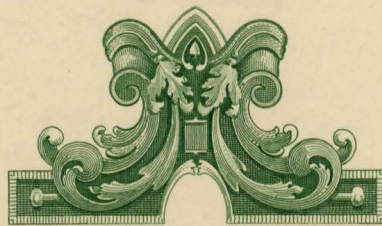
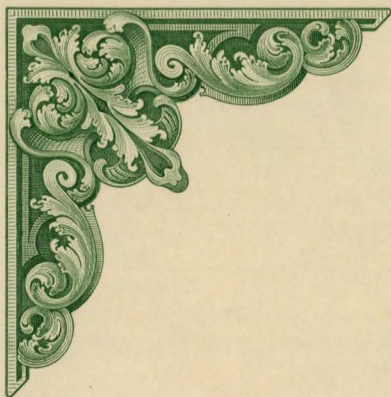


WITH PARALLEL LINES



WITH CROSSING LINES

SCROLL ENGRAVING



SCRIPT ENGRAVING

*American Bank Note Company*

SQUARE LETTER ENGRAVING

AMERICAN BANK NOTE  
COMPANY

Medallion engraving is a method of mechanically engraving a reproduction of a subject which is in relief, such as a seal, medal or bas-relief. This is accomplished by a machine which, if not interfered with, will engrave fine, closely spaced, straight lines on a die. Attached to the engraving point, however, is a stylus which feels the surface of the subject and changes the regular parallel path of the engraving point accordingly, so that the impression printed from the engraving reproduces the appearance of the original relief subject. An example of medallion engraving can be seen in the reproduction of a corporation seal on stock certificates of many corporations.

### *Durand Brothers' Place in Engraving History*

When Asa Spencer died in 1847, he was succeeded as lathe engraver by Cyrus Durand, a man who earned a permanent place in the history of bank note engraving by reason of his technical contributions.

There were two Durand brothers, Cyrus and his older brother, Asher. The older one had learned his trade under Peter Maverick, New York's first engraver. The two Durand brothers joined forces in 1824 in New York.

Cyrus is credited with introducing or improving many of the tools of engraving, including machines for engraving straight lines, wavy lines and ovals, and a pantograph size-reducing machine. He made a transferring machine without benefit of Perkins' design, as the latter was a trade secret. Finally, he designed a geometric lathe, which he operated for many years. His long career extended even beyond 1858, for he practiced his craft with American Bank Note Company for many years after its formation.

Brother Asher had a different claim to fame — he was the first to popularize Greek gods and goddesses in vignettes on documents of value. These supernatural beings have many advantages: their significance is generally recognized, they are aesthetic, they are hard to copy, and they are timeless. Without Asher Durand, certificates of companies formed in the 1890's might carry pictures of ladies in bustles, and those of companies of the 1920's might be perpetuating the shapeless styles of that decade.

In later years the man who was perhaps the greatest allegorical artist of them all was Alonzo E. Foringer. For more than thirty years, until his death in 1948, he created the paintings from which most of American Bank Note Company's vignettes of that period were engraved.

### *The Three Other Firms*

The shifts and realignments of the bank note industry between 1823 and 1858 are not significant in their details so much as in their patterns and frequency. The leaders of the industry possessed unusual talent, ability and pride; their realignments were often merely indicative of artistic feelings. The important steps in the evolution of American Bank Note Company can be seen more readily in chart form, in the diagram on the next page.

Three of the seven firms which were to constitute American Bank Note Company in 1858 remain to be mentioned. One of these three, John E. Gavit, of Albany, N. Y., could trace its beginning to 1839, when there was organized a company in that city known as Hall, Packard & Cushman. John E. Gavit succeeded them and until 1858 continued the business under his own name with little change. The firm is remembered in postage stamp history for having produced a private stamp, Pomeroy's Express, in 1844.

The second of the three firms which were not successors of Murray, Draper, Fairman & Co. was a relatively late starter. Beginning in 1848 as Wellstood, Benson & Hanks, by 1858 it had become Wellstood, Hay & Whiting. John G. Wellstood had been associated with Rawdon, Wright, Hatch & Edson. The chief significance of his firm was that it had a Chicago office, the only one in the group.

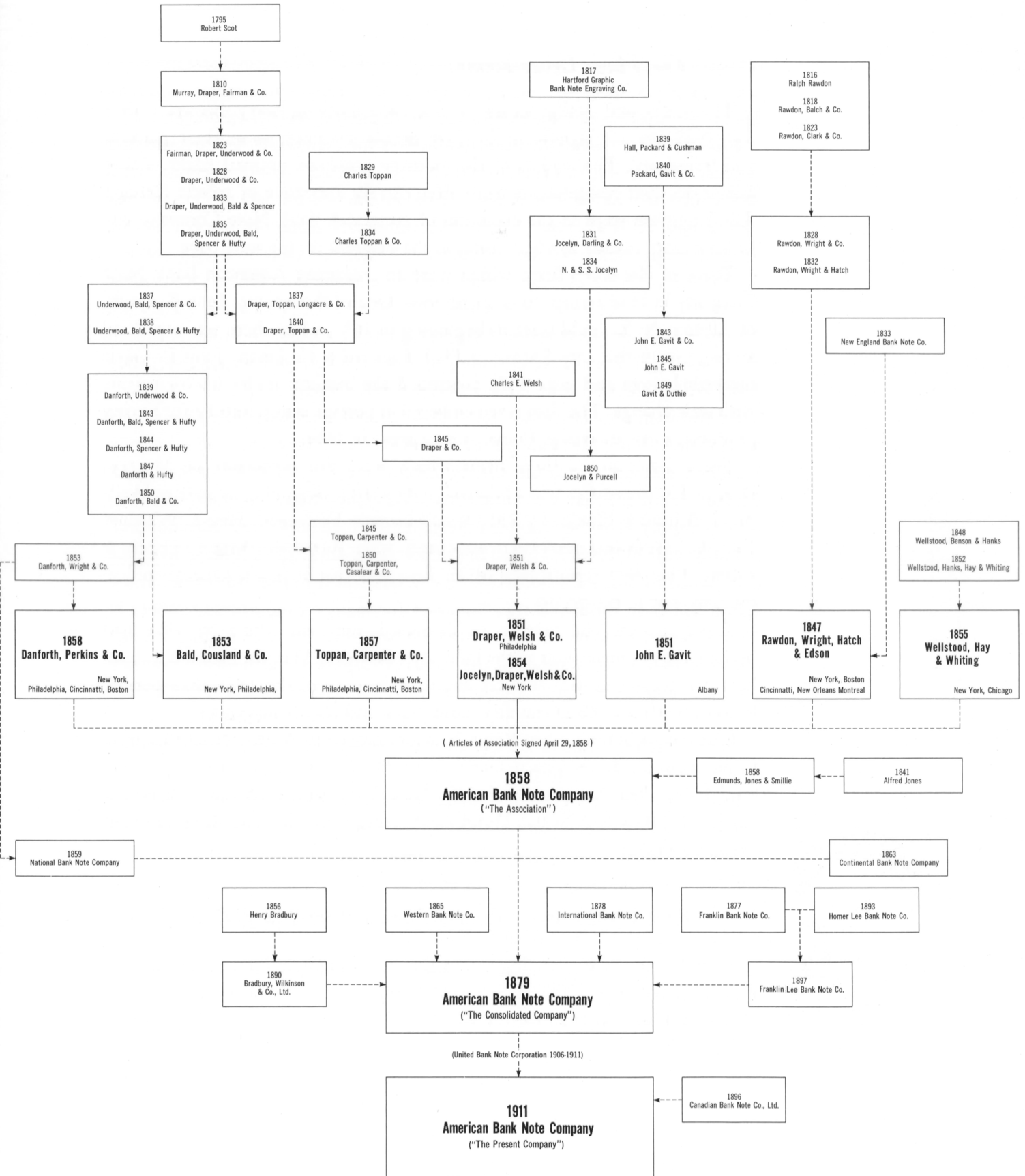
There remains one firm to be described, the firm which by 1858 had become the dominant unit in the industry—Rawdon, Wright, Hatch & Edson. In many ways this firm was far ahead of its time in the 1823-1858 period. It consistently exhibited stability, continuity and able management.

It had its beginning when Ralph Rawdon moved to Albany from Cheshire, Conn., about 1816, to practice engraving. He worked with various partners until 1828, when he opened a firm in New York named Rawdon, Wright & Co. In 1832 Rawdon, Neziah Wright and George Hatch constituted Rawdon, Wright & Hatch.

### *First United States Postage Stamps Printed in 1847*

An indication of its standing and of the wide-ranging efforts of its traveling representative, Tracy Edson, is found in the bank notes made by Rawdon, Wright & Hatch in 1840 for the Republic of Texas. In 1842 it manufactured

# Historical Evolution of American Bank Note Company





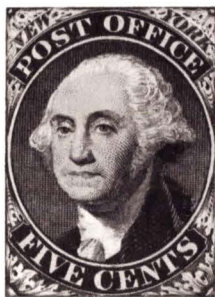
stamps – precursors of postage stamps – for a private message-carrying company in New York. In that same decade the firm established its niche in history by making postage stamps for the United States Government.

Prior to 1845, postmasters accepted letters for delivery either by receiving payment in advance, in which case they marked “Paid” on the wrapper, or by noting on the wrapper the amount of the established fee which the recipient was to pay. In 1845, postmasters were authorized to use stamps to indicate prepaid postage and were also authorized to arrange on their own responsibility for the manufacture of stamps until such time as the Post Office Department could do so for the system as a whole. The New York postmaster, Robert H. Morris, promptly put Rawdon, Wright & Hatch to work, and they produced the “New York Postmaster’s” stamps of 1845. Two years later, in 1847, they produced the first issue of United States postage stamps.

Stamps won popularity slowly. A Postmaster General’s report about them said in part: “Notwithstanding they have been found very convenient in many localities, and under various circumstances, there has not been that great demand for them that was anticipated. Many important commercial towns have not applied for them, and in others they are used only in trifling amounts.”

In this year of the first United States postage stamps, 1847, leadership of the firm passed to Tracy Edson, and his name was added to the firm name. Tracy Edson had been the firm’s traveling man for many years, opening offices in New Orleans, Cincinnati, Boston and Philadelphia. He was visiting branch offices in 1847 when another of the recurrent dips in the American economy produced a credit and collection crisis in the home office. The energetic traveler hurried home, straightened things out and took command. Rawdon, Wright, Hatch & Edson under its new management was to become the leading firm in the bank note industry.

In 1848 the firm purchased a half-interest in the New England Bank Note Company, a Boston company which had been in existence since 1833 and had grown to become one of the principal makers of bank notes. (Colonel Asa Law, who was connected with this company in 1833, sixty-three years later, in 1896, was still associated with American Bank Note Company!) The other half-owner of the New England company was Isaac Carey, its manager.



The “New York Postmaster’s” provisional stamp, 1845  
(black, 5¢, Washington),  
printed by Rawdon, Wright & Hatch

In 1849 Rawdon, Wright, Hatch & Edson established another milestone in postage stamp history, when it executed an order from the Canadian Post Office for 3-, 6- and 12-pence stamps.

During these years the firm had a superb location in the imposing stone-columned building on Wall Street, between Hanover and William Streets, which was then the Merchants' Exchange and is now (1958) the main office of the First National City Bank of New York. The firm had been a tenant in the original Merchants' Exchange, which was destroyed by the fire of 1835, and, when the new building was designed, space especially adapted for bank note printing was provided.

Among the important landmarks in bank note printing history identified with this firm was the establishing of green as a traditional "money color."

The green color is associated with the firm's Montreal partner, George Matthews, and it was a factor in the continuing battle with counterfeiters. The invention of the camera had given to counterfeiters a new weapon which facilitated the making of plates for the printing of spurious money — money which could fool the unwary, however crude it might appear on close examination. To foil this operation, the obvious thing to do was to print money in two colors, say black and green, in entangled patterns, because the primitive photographic plates of those days "saw" all colors as black and could not be used to make two plates, one for each color. Other engravers advocated different second colors, such as the reddish brown of Jocelyn, Draper, Welsh & Co., but the green tradition has survived and is largely the result of the popularity of the Matthews tint. How optical filters and panchromatic film, which enabled cameras to "see" only one color at a time, reopened the struggle in a later generation is another story.

### *Bank Note Printing Institutionalized*

For the entire nation, the first six years of the 1850's were years of extraordinary prosperity, expansion and optimism. The discovery of gold in California, the opening of large areas in the West and European wars and famines all stimulated trade and investment in the United States. The inevitable reaction came in 1857, when there was another of the sudden depressions that have seemed to be part and parcel of American history. Once again leaders among bank note engravers were prompted to do some sober thinking about

the peculiar importance of the industry and its continuing responsibility to keep its dies, plates, techniques and records concentrated in the safe shelter of a strong institution.

The clear need for institutionalizing the practice of bank note printing led to the establishing of the American Bank Note Company by Articles of Agreement signed April 29, 1858.

The seven firms participating in this merger were, with their affiliates, the principal bank note printers of the United States. Their relative importance is suggested by the number of shares each firm received in the "Association."

	<i>Shares</i>
<i>Rawdon, Wright, Hatch &amp; Edson</i>	5,951
New York, Montreal, Cincinnati and New Orleans; with <i>Isaac Carey</i> , the New England Bank Note Company, Boston; and with <i>George Matthews</i> , Montreal	
<i>Toppan, Carpenter &amp; Co.</i>	5,577
New York, Philadelphia, Cincinnati and Boston	
<i>Danforth, Perkins &amp; Co.</i>	5,428
New York, Philadelphia, Cincinnati and Boston	
<i>Bald, Cousland &amp; Co.</i>	3,312
New York and Philadelphia	
<i>Jocelyn, Draper, Welsh &amp; Co.</i>	2,092
New York; with <i>Draper, Welsh &amp; Co.</i> , Philadelphia	
<i>Wellstood, Hay &amp; Whiting</i>	2,042
New York and Chicago	
<i>John E. Gavit</i>	498
Albany	

The name adopted for the Association, "American Bank Note Company," was well chosen but not original. It had been used in 1854 by Jocelyn, Draper, Welsh & Co. in addition to their regular name, with the thought that it could one day be used by a bank note printing institution.

Nathaniel Jocelyn, Moseley Danforth and Tracy Edson were the men who worked actively to bring the Association into being. A man outside the engraving profession, George D. Lyman, also did much to bring together the several firms. As secretary of the New York Clearing House, Lyman was in a position to know the engravers personally, and his office was a convenient

“neutral ground” for meetings and discussions. He received twenty shares of stock in the Association (valued at \$50 a share) for his “valuable aid in effecting the formation of the Company.”

There were special problems to be ironed out. Edson arranged for Isaac Carey to throw in his interest in the New England Bank Note Company for part of the shares to be issued to Rawdon, Wright, Hatch & Edson. The Danforth firm entered the Association as “Danforth, Perkins & Co.,” rather than as “Danforth, Wright & Co.,” because some of the partners elected not to go into the new institution. Toppan, Carpenter & Co. was permitted to continue a United States Post Office contract which it held.

The Articles of Agreement provided for a full-fledged merger of assets and business. Transferability of shares was restricted, and other partners could join the Association only after approval by four-fifths of the members.

The broad powers necessary to administer the enterprise were vested in elected trustees, who originally were:

FREEMAN RAWDON

TRACY R. EDSON

CHARLES TOPPAN

SAMUEL H. CARPENTER

MOSELEY I. DANFORTH

EDWARD J. DANFORTH

J. DORSEY BALD

NATHANIEL JOCELYN

WILLIAM H. WHITING

Charles Toppan was chosen to be the first president of the Association, largely because of his prestige and long years of service in the industry — the same Charles Toppan who forty years earlier had accompanied Perkins and the others to London. Most of the burden of administrative details, however, was assumed by Tracy Edson.

The official announcement of the Association, issued May 1, 1858, expressed the purpose of the Association as follows:

For the purpose of placing the Bank Note Currency of the country upon a basis of greater security, with the same features of stability and perpetuity that appertain to Banking Institutions . . .

The creation of American Bank Note Company was apparently very well received by banks and corporations, because it promised the stability, continuity and security which users of documents of value had long desired.

chapter IV

## The Twenty Years of the Association

1858–1879

The Association, formed April 29, 1858, continued for two decades. It was succeeded in 1879 by a larger corporate structure, referred to as the “Consolidation.”

The period from 1858 to 1879 was momentous and dramatic. The Civil War began in 1861 and lasted four years; it had a profound effect upon the bank note industry. In 1863, while the war was still in progress, the monetary system of the nation was radically changed with the passage of the National Bank Act, under the provisions of which locally issued bank notes were superseded by notes made under Federal control and direction. Accompanying and following the war there was a great wave of industrial expansion which continued at a high level until the depression of 1873-79 set in. This industrial expansion gave rise to an increased use of engraved certificates for securities. With three powerful stimulants – the war, the National Bank Act and the industrial expansion – the volume of bank note printing in these two decades was surely greater than any of the founders of the Association could have envisioned in 1858.

American Bank Note Company began its institutional life under President Charles Toppan with all the personnel and organizational problems that face any merger. The members continued for some time to look upon themselves as joined together in something more personal than a corporation, and they referred to themselves as “Associates.”

Charles Toppan retired from the presidency March 4, 1860, and Tracy Edson assumed the office. Since Edson had been active in the management of the Association, the change was easily effected. His problems included the

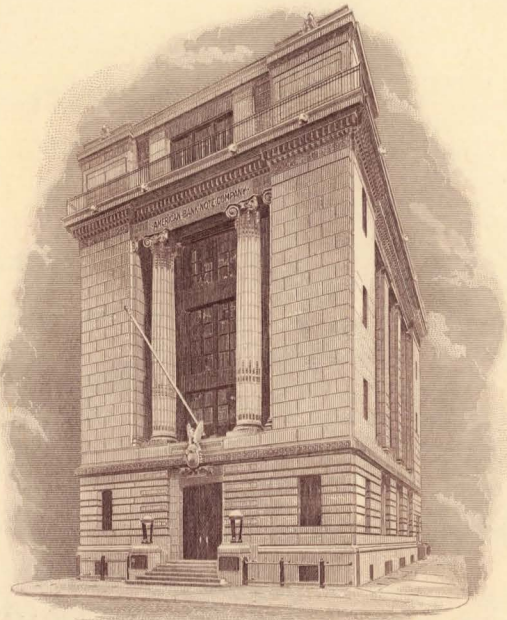
DOMESTIC SUBJECTS

SUBJECTS OF OTHER COUNTRIES

DOMESTIC SUBJECTS



NEW YORK STOCK EXCHANGE



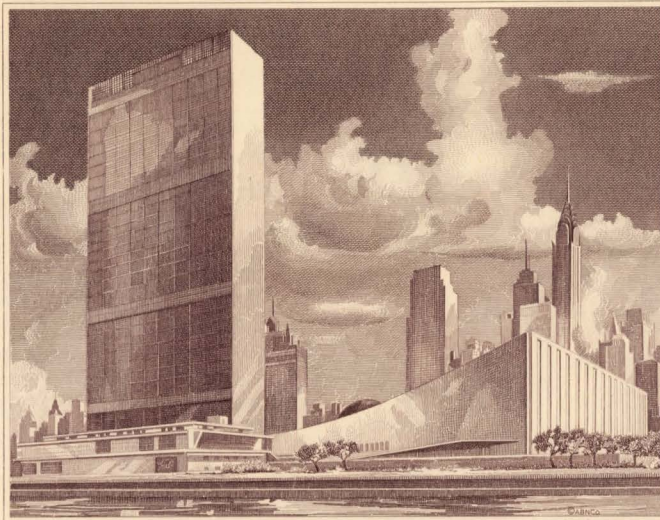
EXECUTIVE OFFICES OF  
AMERICAN BANK NOTE COMPANY



NEW YORK CITY HALL



STATUE OF LIBERTY



UNITED NATIONS HEADQUARTERS

SUBJECTS OF OTHER COUNTRIES



ACROPOLIS  
GREECE



NATIVE  
CONGO-BELGE



NOTRE DAME CATHEDRAL  
FRANCE



COMPAÑIA DE JESÚS  
ECUADOR



THE JOSS HOUSE  
CHINA



AZTEC CALENDAR  
MEXICO



existence of a larger working force than could be kept busy and the varying salary schedules inherited from the predecessor firms. Reduction in personnel was unavoidable, and salaries throughout the organization had to be adjusted.

Edson had to weigh the excellent business and profits of the Boston office against the alleged hardships of the "sickly seasons" in New Orleans and conclude that the branch managers in these two cities should each receive \$2,000 a year, the same salary as was received by each trustee devoting full time to the business. He had to induce George Matthews, in Montreal, to permit a more active solicitation of business in Canada, which apparently had been Matthews' territory. To Cyrus Durand, the geometric lathe man, Edson had to give the special pay and contract he asked for (Cyrus left the Company a year later, so apparently he was not satisfied after all). Pride, sensitiveness and self-interest took no holiday. Edson must be accounted a man of extraordinary tact, patience and integrity.

The seven constituent firms were reluctant to give up their separate accounting departments. Four months after organization the books of the Association still awaited the first entry in them.

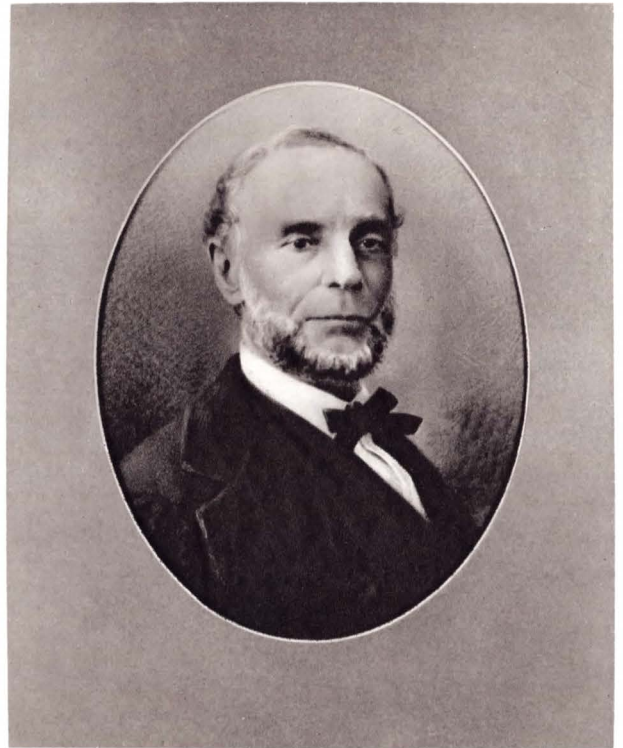
The Association had 4,880 unissued shares, and Edson drafted a plan of employee ownership, financed through earnings, which was as thoughtful and thorough as many of the plans which experts were drafting a century later.

### *A "Gentleman of Character"*

One of his proposals was especially interesting: that the Association appoint a "Gentleman of Character," at the handsome salary of \$3,000 a year, who should not be a trustee but rather should be independent of them and equal to them in dignity, and who should be qualified to supervise the books and represent the Company. The later evolution in business customs of this country which resulted in the roles of auditors and legal counsel has obviated the need for Edson's Gentleman of Character, but his keenness in foreseeing the need of independent functionaries is noteworthy. American Bank Note Company has since January 19, 1905, employed as its auditors the accounting firm of Price Waterhouse & Co. (known at that time as Jones, Caesar, Dickinson, Wilmot & Co., and by its present name since March 2, 1909). The law firm of Sullivan & Cromwell was first appointed General Counsel to the Company on January 19, 1901, and has represented it continuously since that time.



CHARLES TOPPAN  
President, 1858-1860, 1866-1867



TRACY R. EDSON  
President, 1860-1863

The main offices of the Association were in the old Rawdon, Wright, Hatch & Edson quarters in the Merchants' Exchange, but it was not possible to plan a physical merger of equipment until the landlord offered to create more space by constructing a large "penthouse," to be ready by May, 1860. This offer was accepted, and in due course concentration of equipment became possible. Within a few years the printing rooms at that location contained 100 presses. The decision to stay in these rented quarters released 3,000 shares of stock which had been set aside for building purposes; these shares were therefore distributed to stockholders.

In the spring of 1859 another bank note firm joined the Association. This was Edmonds, Jones & Smillie, of New York, a young firm which had been started there in 1858.

In the fall of 1859 the partners of Danforth, Wright & Co. who had not joined American Bank Note Company, together with certain staff members who had left after the merger, announced a new company which they modeled after the American Bank Note Company and called the National Bank Note Company. It has an important place in the present account, because twenty years later it was consolidated with its prototype.

Some of the Philadelphia partners of Charles Toppan also went their separate ways, probably as a result of the stamp business which had been withheld from the merger, and they continued the use of the old name of Toppan, Carpenter & Co.

### *American Bank Note During the Civil War*

Before American Bank Note Company could complete its internal rearrangements, the Civil War started, and with it began a long period of intense activity for the Association. But first came the difficult dislocations which war inevitably brings.

In the early months of 1861 there was a considerable body of opinion, especially in New York, that the nation would divide into two or three separate governments without hostilities. In this period the Association accepted orders indiscriminately from any legitimate source. However, on April 18, 1861, when the die was cast beyond recall, President Lincoln issued a proclamation forbidding trading with the Confederate area. This ended the relations between the Confederacy and the home office of the

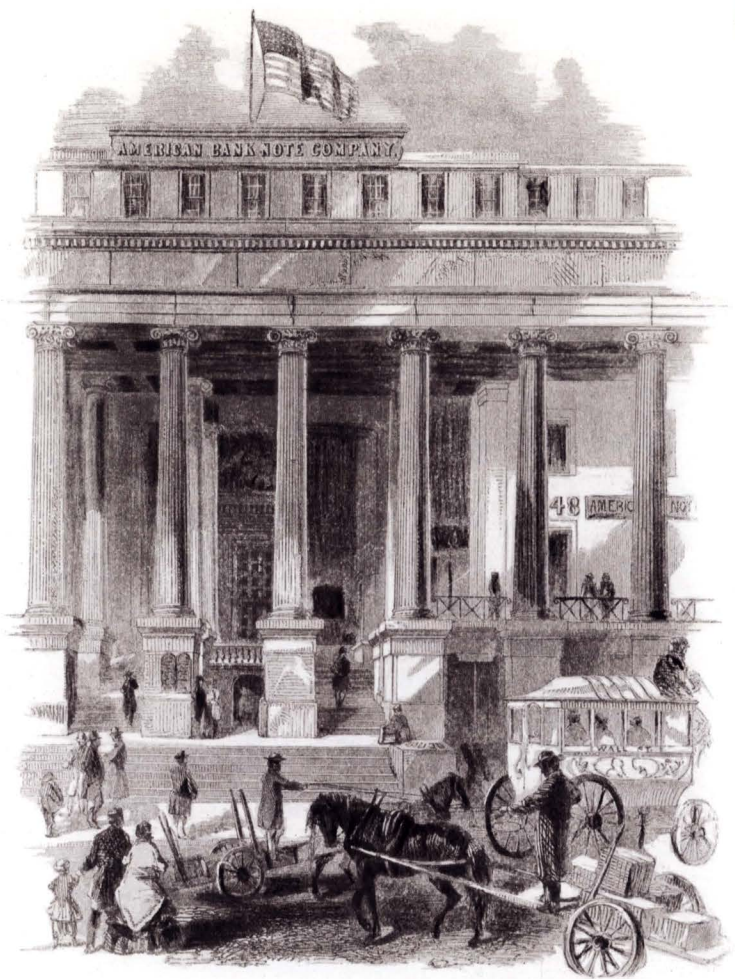
Company. But the New Orleans office was on the other side of the Mason-Dixon Line. On May 2, 1861, Edson wrote to the Company's manager there, ordering him to discontinue all Confederate work at that agency. It has been suggested that, inasmuch as Edson himself had been in charge of that agency from 1838 to 1847, it must have been a painful order to write.

A letter dated May 4, 1861, to the home office from the New Orleans manager, S. Schmidt, was the last word received until July 4, 1862. Between May and September, 1861 the New Orleans office, under Schmidt's direction, produced a small number of Confederate notes bearing the words "Southern Bank Note Company," and kept busy, it appears, serving its other regular customers. New Orleans fell to Northern forces in April, 1862, but before then the Southern forces had seized the Company's equipment and removed it from the city. At the end of 1862 Schmidt remitted to the home office the sum of \$17,000, representing net operating profits of the New Orleans office for the years 1861 and 1862 (this figure was before making provision for replacement of lost equipment). The trustees at the home office, who had for a long time assumed that both the New Orleans office and its manager were lost forever, were unstinting in their admiration for Schmidt's pluckiness and their respect for his loyalty and integrity.

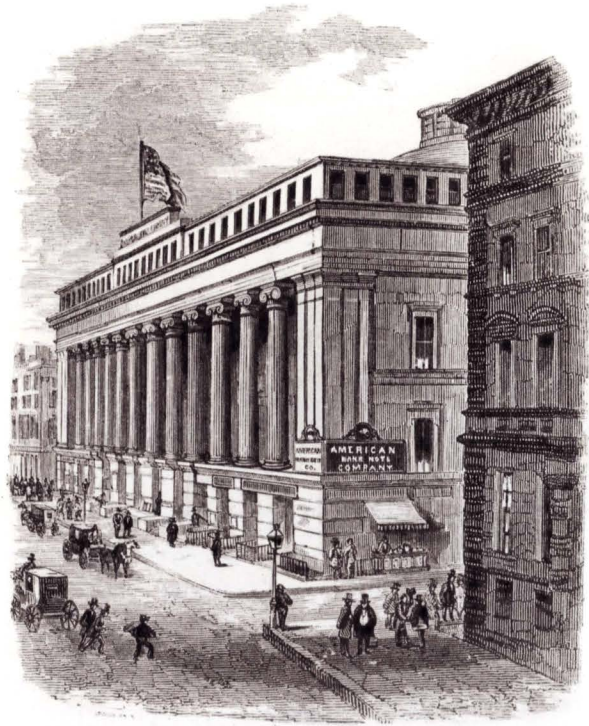
However, most Confederate notes printed during the four years of the war were made in South Carolina by English engravers and printers recruited and brought to the South for that purpose. It is an interesting sidelight that they were scrupulously paid in gold, as provided in their employment contracts, even when the South was in its last throes of defeat and inflation.

In November, 1862 American Bank Note Company was finally able to announce its new offices on the second floor of the Merchants' Exchange building, which had then become the United States Custom House. With the factory in the penthouse of the same building, the arrangement was doubtless an efficient one.

Two important changes in paper currency took place while the war was in progress. One was the introduction of what amounted to circulating promissory notes of the Federal Government, which came to be called "legal tenders." These were issued in large numbers, and since they were uniform they involved much press work and little engraving. Then came the National Bank Notes, issued under the National Bank Act of 1863. Each bank issuing any of the notes provided for in the Act was required to give security for them



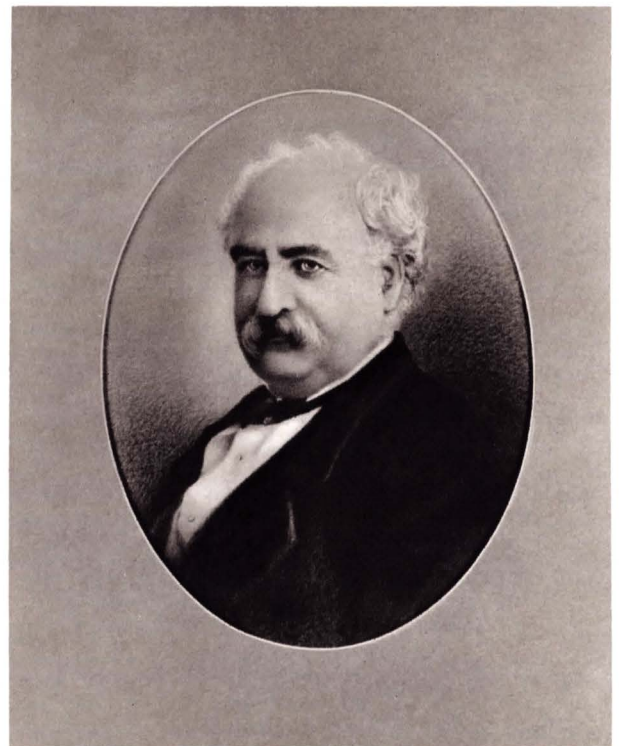
Part of the Merchants' Exchange building, showing the entrance to American Bank Note Company



The Merchants' Exchange building, later the United States Custom House and now the headquarters of First National City Bank of New York, on Wall Street, where American Bank Note Company's executive offices and plant were first located



**GEORGE W. HATCH**  
President, 1863-1866



**JOHN E. GAVIT**  
President, 1867-1874

by buying government bonds and depositing these with the Treasurer of the United States. The Act implied large-scale business for bank note companies instead of the small custom-type business they had done with individual banks. It prompted the formation of a third company, the Continental Bank Note Company, which started business in January, 1863.

The work of producing the new bills was apportioned among the three companies as follows: American, \$10, \$20, \$50, \$100; National, \$500, \$1,000; Continental, \$5.

A year later, smaller denominations in limited amounts were authorized and apportioned as follows: American, \$1; National, \$2.

All three companies were in lower Manhattan – American in the Custom House at 48 Wall Street (which is 55 Wall Street under the revised numbering system), National at 1 Wall Street, and Continental at the corner of Liberty and Greenwich Streets. The volume of business which they did in this period was tremendous, especially in the light of the slow printing processes and equipment then employed.

Before the days of the legal tenders and the National Bank Notes, the quantity of notes printed for the usual order was small – no more than a single bank could use. Now the work was large scale. Notes of the National Currency of a given denomination were similar to each other, except that each bank had its own name plate and on the back of the note was the coat of arms of its state. Incomplete notes could therefore be printed in long runs ahead of orders. Unfortunately, however, there had been little progress in printing methods, as distinguished from engraving methods, so the companies could not derive the full benefit of these longer printing runs.

A description of 1863 printing procedures is of interest.

They had no power presses for banknote work in 1863. The plate was securely fastened to the bed piece of the hand press and the plate kept warm by means of an oil lamp placed under the bed piece – each operation required three printers to cover the whole plate with heavy ink to make certain each line of the engraving of all four notes was filled to the proper depth, then the excess ink was rubbed off so that every vestige of ink was removed from the surface of the plate; the printer would then apply white chalk to the palm of his hand and rub the surface of the plate until it became a shining piece of metal. The dampened sheet would then be placed over the plate for exact registration in the event of two-color printing, and, by turning a winch, passed under a roller which provided an impression of the sheets of notes.

Using this slow and costly process, the three bank note companies turned out tens of millions of National Currency Notes each year, plus postage stamps and fractional currency, plus securities certificates for publicly and privately owned issuers.

### *Bank Notes Printed for Greece and Colombia*

With the Company strong and thriving, Tracy Edson retired as president in 1863 but continued as a trustee and retained an active interest in the management for another dozen years. His industrial and commercial interests were wide and successful. In addition to his unique contributions to the American Bank Note Company, he organized the Celluloid Company and was one of the organizers of the American Speaking Telephone Company and the Metropolitan Telegraph & Telephone Co. He was succeeded as president by George W. Hatch, a veteran of Rawdon, Wright, Hatch & Edson.

Before the Civil War, American Bank Note Company and its predecessors had done some work for other countries, but had not systematically approached the overseas market. Early in the war the Company began to obtain increased foreign orders as a result of the excellent quality of its work. The National Banks of Greece and Colombia were two early customers in this period, for each of which a large order was executed in 1862. Three years later, orders for bank notes were received from several British territories and from Brazil, Ecuador, Uruguay, Peru and Argentina. An order for government bonds came from Peru and one for stamps from Argentina. Albert Goodall, who was eventually to head the Company, did much to promote this field of business by his travels through South America and Europe in 1865 and 1866. In the latter year he received orders from the Lima, Peru, branch of an English bank and from the National Bank of Italy, in Florence. In 1866, with domestic business at a standstill as a result of the postwar letdown in currency needs, almost all of the Company's work was for overseas customers. In this way a permanent and important part of the Company's business was established. Its scope is indicated by the following inserted map, showing the countries around the world which American Bank Note Company and its affiliates have served.

George W. Hatch died in 1866 and, after a one-year interim term served

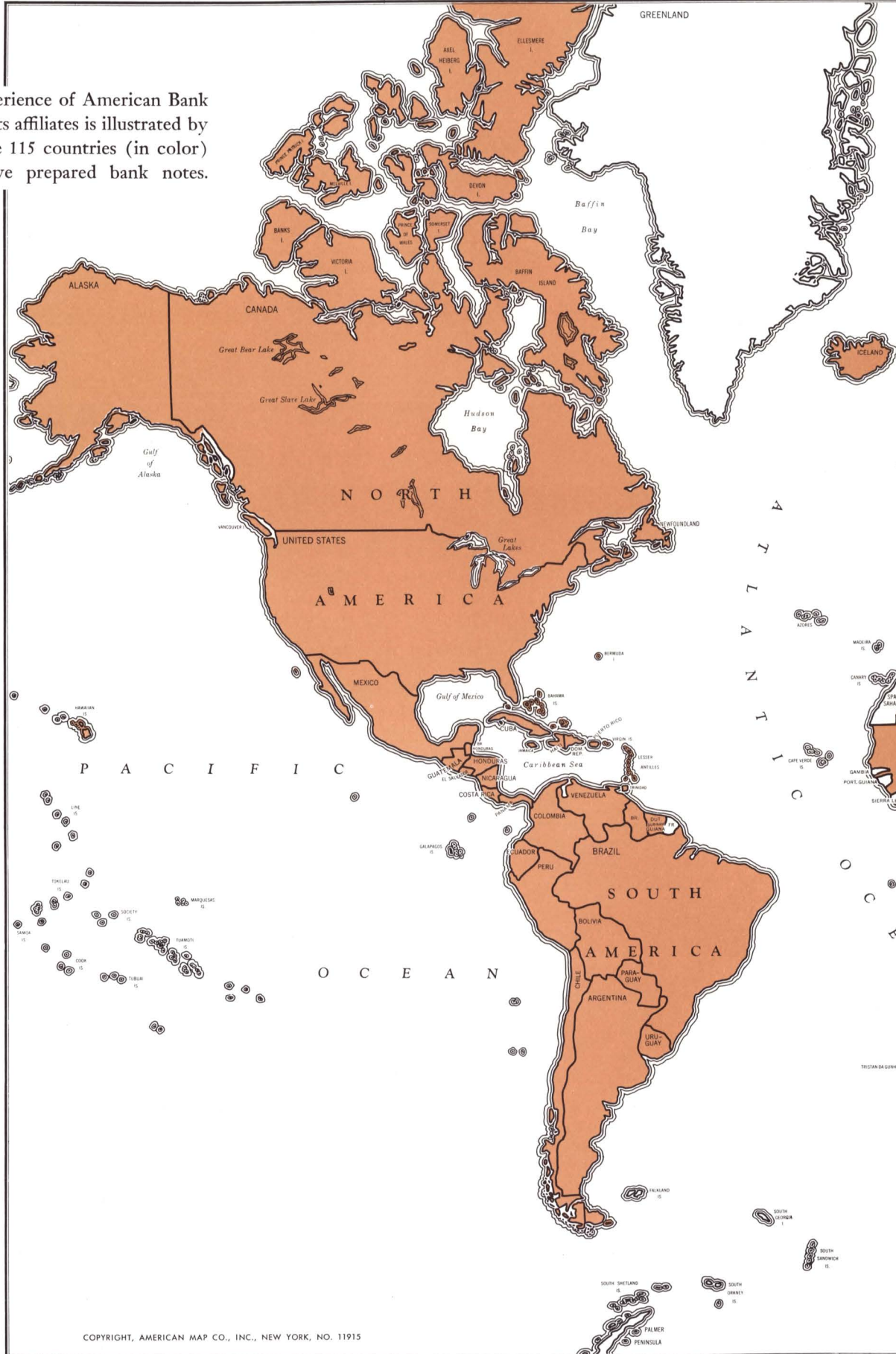


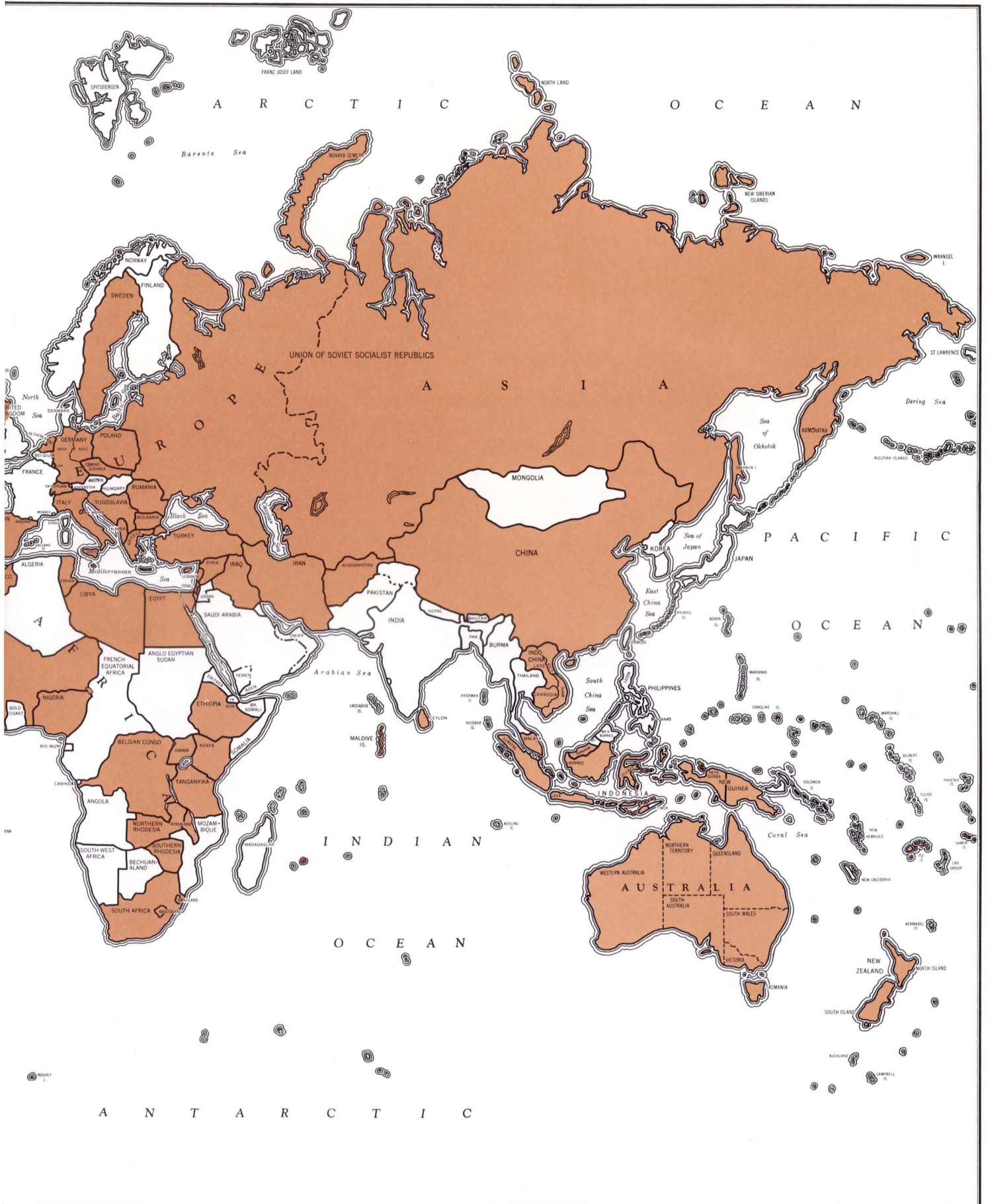
AMERICAN BANK NOTE COMPANY'S

MAP OF THE WORLD

The world-wide experience of American Bank Note Company and its affiliates is illustrated by this map showing the 115 countries (in color) for which they have prepared bank notes.

- AFGHANISTAN
- ALBANIA
- ANTIGUA
- ARGENTINA
- AUSTRALIA
- BAHAMAS
- BARBADOS
- BELGIAN CONGO
- BERMUDA
- BOLIVIA
- BRAZIL
- BRITISH GUIANA
- BRITISH HONDURAS
- BULGARIA
- CAMBODIA
- CANADA
- CEYLON
- CHILE
- CHINA
- COLOMBIA
- COSTA RICA
- CUBA
- CURACAO
- CYPRUS
- CZECHOSLOVAKIA
- DANISH WEST INDIES
- DANZIG
- DOMINICA
- DOMINICAN REPUBLIC
- DUTCH EAST INDIES
- DUTCH GUIANA
- ECUADOR
- EGYPT
- ETHIOPIA
- FIJI
- FRENCH WEST AFRICA
- GERMANY
- GIBRALTAR
- GREECE
- GRENADA
- GUATEMALA
- HAITI
- HAWAII
- HONDURAS
- HONG KONG
- ICELAND
- INDO-CHINA
- IRAN
- IRAQ
- IRELAND
- ISRAEL
- ITALY
- JAMAICA
- KENYA
- LAOS
- LATVIA
- LEBANON
- LIBYA
- LITHUANIA
- LUXEMBOURG
- MALAYA
- MALDIVE ISLANDS
- MALTA
- MARTINIQUE
- MAURITIUS
- MEXICO
- MONTSERRAT
- MOROCCO
- NETHERLANDS
- NEW FOUNDLAND
- NEW ZEALAND
- NICARAGUA
- NIGERIA
- NORTHERN RHODESIA
- NYASALAND
- PANAMA
- PAPUA
- PARAGUAY
- PERSIA
- PERU
- POLAND
- PORTUGAL
- PUERTO RICO
- ROUMANIA
- RUSSIA
- ST. KITTS
- ST. KITTS NEVIS
- ST. LUCIA
- ST. THOMAS
- ST. VINCENT
- SALVADOR
- SARAWAK
- SCOTLAND
- SERVIA
- SOUTH AFRICA
- SOUTHERN RHODESIA
- SPAIN
- STRAITS SETTLEMENT
- SURINAM
- SWEDEN
- SWITZERLAND
- SYRIA
- TANGANYIKA
- TOBAGO
- TRINIDAD
- TUNISIA
- TURKEY
- TURKS AND CAICOS ISLANDS
- UGANDA
- UNITED STATES OF AMERICA
- URUGUAY
- VENEZUELA
- VIETNAM
- VIRGIN ISLANDS
- WESTERN SAMOA
- YUGOSLAVIA





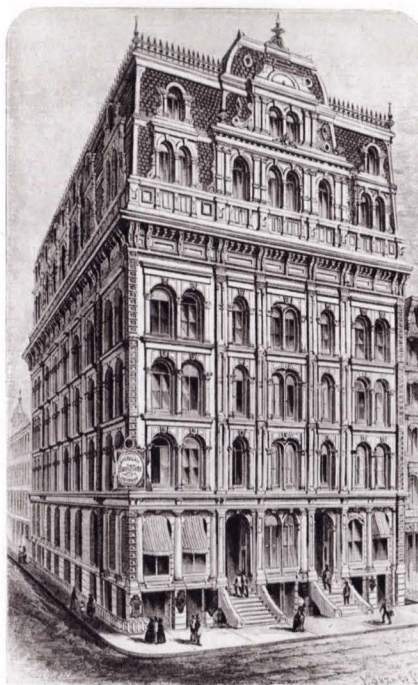
by Charles Toppan, who had been the Company's first president, was followed in the presidency by John E. Gavit, another veteran engraver, then forty-nine years old. Gavit had moved to New York from Albany when the Association was organized and had been made a vice-president in 1863. He had earlier originated facsimile signatures on bank notes and had promoted the use of silk threads in bank note paper.

In 1867 the Company moved its New York office and plant into new quarters at 142 Broadway, at the corner of Liberty Street, and this location was occupied by the Company for the next seventeen years.

### *Stock Exchange Issues Historic Announcement*

The printing of National Currency Notes was the most striking feature of the two decades of the Association, but there was a more enduring importance in the printing of stock certificates and bonds. These are purchased by the issuing corporations, but their safety against counterfeiting is also the concern of all investors, brokers and investment dealers.

Home of American Bank Note  
Company from 1867 to 1884, at  
142 Broadway, corner of Liberty Street



The New York Stock Exchange took formal action in 1874 to protect the investing public from counterfeiters, so far as it had the power to do so, by issuing a historic announcement:

*Committee on Securities,*  
NEW YORK STOCK EXCHANGE,

City of New York, Nov. ———, 1874

The numerous frauds practiced upon the community, in the Counterfeiting of Certificates of Stocks and Bonds, and the altering of Certificates from smaller to larger denominations, have compelled the Stock Exchange to use all precautions in their power against them, and to require in all future applications to place Securities on the List, that they shall be carefully engraved by some responsible Bank Note Engraving Company. They recommend that Certificates of Stock of One-hundred Shares should have the denomination conspicuously engraved thereon, and that Certificates of lesser denominations should be of a different style and color. Many Companies have already adopted this plan, and any that are still using a printed or lithographed Certificate, are requested, for their own protection as well as that of the public, to cease doing so, and to change to an engraved one at their earliest convenience.

Very Respectfully,  
Edward Brandon, Chairman

[*Adopted December 23, 1874*]

In the years that followed, the New York Stock Exchange amplified this original rule to reflect added experience and technical developments, but the substance of it, with its emphasis on engraving as essential to the protection of such documents, and the further point that the work be done by a *responsible* company, has always been maintained. The rule is as sound today as it was then.

President John E. Gavit died in 1874 and was succeeded by Albert G. Goodall. The new president had had an eventful youth. He was born in Alabama in 1825. His father died in 1832 and four years later the family moved to Texas. The next year his mother died, leaving the twelve-year-old boy to make his own way. At fifteen he went to Havana and at twenty-two to Philadelphia, where he entered bank note engraving. He was forty-nine when he became president of American Bank Note Company, an office which he was to occupy for thirteen years, much longer than any of his predecessors.



ALBERT G. GOODALL  
President, 1874-1887



A contemporary view of the printing department of the  
Company in the Merchants' Exchange building

### *Government Takes Over Printing of United States Notes*

The U. S. Government's Bureau of Engraving and Printing was organized during the decade following the Civil War, and in 1875 an act of Congress required that not more than one printing on a National Currency Note could be executed by a private organization, and the final printing must be done by the Treasury Department. Finally another act of Congress, in 1877, provided that the Bureau should print all United States notes and securities.

This brought to a close a colorful chapter in the history of bank note printing. The three companies which had been printing the notes had no alternative but to face the facts. With the United States note business gone, there was enough business left for one major company, but not three. Accordingly the three companies agreed on December 27, 1878, to consolidate, ending the "Association" after twenty years and nine months, and starting the era of the "Consolidation."

The agreement, ratified on January 31, 1879, was to run for fifty years, and the incorporation, on February 4, 1879, provided for a \$100,000 capitalization, to be represented by 72,000 shares of stock. The shareholders of the three constituent companies were accorded interests in the Consolidation as follows: American, 28,800 shares, 40%; National, 24,480 shares, 34%; and Continental, 18,720 shares, 26%. Albert Goodall continued as president of the consolidated company.

The 1 Wall Street office of National and the 146 Greenwich Street office of Continental were soon closed, and only the 142 Broadway office of American was continued.

Since National had been the outgrowth of the faction in Danforth, Wright & Co. which in 1858 did not enter the Association, the Consolidation was to some extent a reunion of former co-workers. Some very able men were included in National, such as James Smillie, Cyrus Durand and James Macdonough. National is credited with having made the first United States stamped postal cards. For a time its engraving department occupied the top floor of Cooper Union, at Astor Place and Fourth Avenue. Continental did not have a similar long history, but in its short life it had done excellent work.

Thus a crisis was met realistically and boldly, and a strong institution was ready to serve an expanding economy.

## The Three Decades of the Consolidation

1879–1911

For approximately three decades American Bank Note Company operated under the charter of 1879 and was informally referred to as the “Consolidation” or the “Consolidated Company,” distinguishing it from the “Association” of 1858 to 1879. During these three decades – the 1880’s, the 1890’s and from 1900 to 1911 – the nation surged forward on all economic fronts and took its place among the foremost nations of the world. Unbounded energy, optimism and ambition were the order of the day.

For the Consolidation it was a very prosperous era. The recurrent business depressions or credit stringencies which afflicted American business during the three decades were met successfully. Much of the industrial expansion of the nation during this period was based upon public financing, and therefore required the printing of stock certificates and bonds in large volume. The business of the Consolidation from this source was substantial.

Another important source of business was the growing number of countries using American Bank Note Company currency notes. The Company was the logical source of supply for many reasons. It had an unrivaled staff of talented engravers, it was financially strong and it had a long history – the centennial of Robert Scot’s entry into bank note engraving was attained in the middle of the period of the Consolidation.

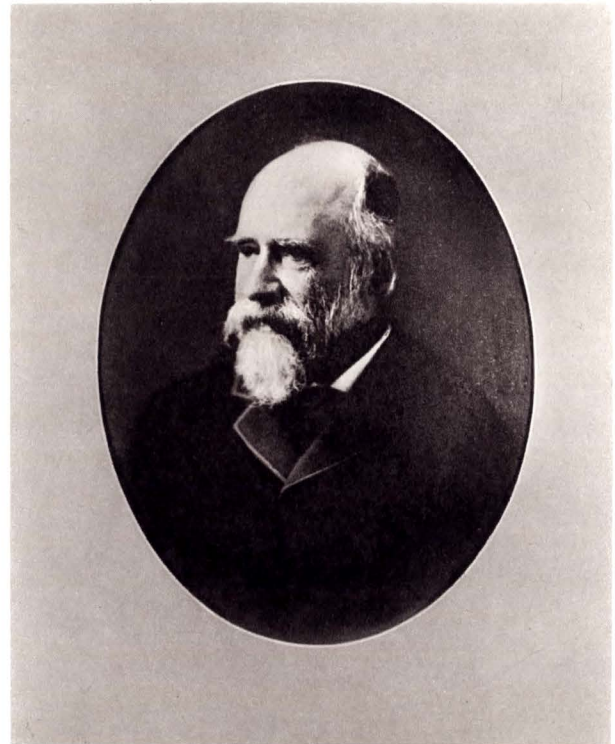
The ability to survive seems to become a recognizable feature of organizations fortunate enough to have it. In a growing number of countries, public confidence in the words “American Bank Note Company” on the currency came to parallel confidence in the currency itself.

The Consolidation obtained new quarters for its New York operations in





Home of American Bank Note Company from 1882 to 1911, at 78-86 Trinity Place (present location of the American Stock Exchange)



**JAMES MACDONOUGH**  
President, 1887-1901  
Chairman, 1901-1903

1882, and concentrated in them the work which before the Consolidation had been done in three plants. These new quarters were in a building facing Broadway across Trinity Churchyard, at 78-86 Trinity Place. Many years later, after American Bank Note Company had moved on, this site was occupied by the New York Curb Exchange, now the American Stock Exchange.

### *Stock Exchange Stands Firm on Requirements*

Early in the 1880's there appeared the first of a series of strongly voiced objections by various engraving firms to the existence of Stock Exchange requirements governing the preparation of securities for listing. These episodes involved American Bank Note Company because the Company was able to, and always did, meet all established requirements with respect to quality and responsibility. Consequently it always produced acceptable work and qualified as a source of supply, whereas there were other organizations that often did not. Similar episodes recurred at intervals until 1914, sometimes involving the baseless charge that the Stock Exchange and the Company were in some way affiliated, or the more reasonable charge that the Company was so strong in artistic and scientific skill, reputation, equipment and resources that it was hard to compete with.

Despite these recurrent episodes, the Stock Exchange never once retreated in its stand on the necessity of adequate standards for stock certificates and bonds and their producers; in fact, it stiffened its rules as experience required. It is probably beyond argument that the public benefited by the courageous actions of the Exchange.

Some of the rules relating to listed stock certificates which were established by the Stock Exchange in the early part of the Consolidation period were:

Specimen certificates must be filed with the Exchange (1885).

Work must be done by an approved company; two plates must be used, a face plate for black printing and a tint plate for color, and signatures must be hand written (1887).

Text must be engraved by hand, and odd-lot certificates must carry punch panels to prevent altering the number of shares written or typed on the certificate (1890).

Additional rules have been adopted from time to time, many of a technical nature, covering preparation of both stock certificates and bonds.

### *Company's "Fifty-Year Honor Roll" Begins in 1884*

In 1884 an employee of American Bank Note Company named J. W. McClure completed fifty years of service that had begun in 1834. His was the first name to appear on the Company's Honor Roll of Fifty Years' Service. Seventy-four years later (1958) the Roll contained eighty-seven names, including six persons still active and eighteen others retired on pension. The Honor Roll at the end of 1958 included the names of fourteen women. One of the latter, Miss Elizabeth Clubb, whose services covered the period from 1873 to 1928, celebrated her 100th birthday on June 27, 1958, a century after the Association was formed.

Vice-President James Macdonough succeeded to the presidency of the Company in 1887. Macdonough had entered the bank note industry in 1846 with Danforth, Spencer & Hufty, which became Danforth, Wright & Co. in 1853. He was one of the founders of National Bank Note Company and had been in charge of designing and engraving for that company. The designing of many of the United States postage stamps of the 1860's is credited to him.

### *Planchette Paper Introduced in 1891*

The year 1891 marked the beginning of American Bank Note Company's "planchette paper," which is well-known to hundreds of millions of people in many countries. Probably more people know about American Bank Note Company planchettes than about the silk fibres in United States money.

The paper story goes back to long before 1891 — it goes back to 1801, soon after Robert Scot started engraving bank notes, because Crane & Co., Inc., world-renowned paper manufacturers in Dalton, Mass., began business in that year. In 1842 Crane began to make paper for bank notes, and soon became an important source of supply for most of the partnerships that later joined the Association. In 1844 Zenas M. Crane first put parallel silk threads into currency paper.

It is an interesting sidelight that one of these early partnerships, which used a Crane paper for printing bonds, reordered in the words, "Send us more of that bond paper" — thereby coining a generic term, "bond paper," now in general use in the paper industry.

Crane continued to supply the American Bank Note Company with its bank note paper requirements and even today is its sole supplier of this and

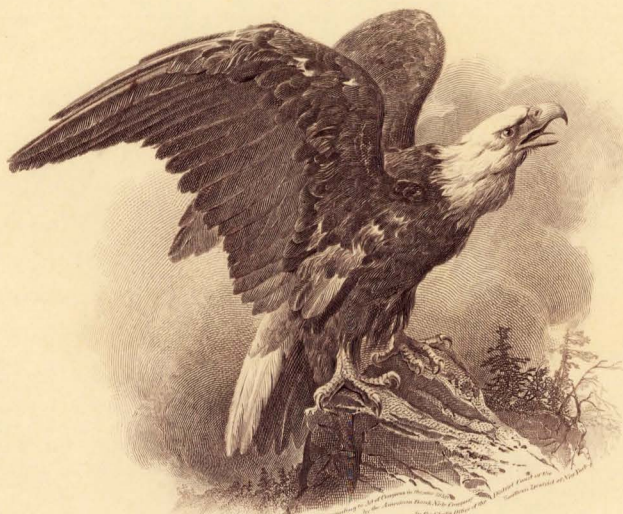
ANIMALS AND BIRDS

ALLEGORICAL VIGNETTES FOR COMMERCE AND INDUSTRY

ANIMALS AND BIRDS



BEAVER



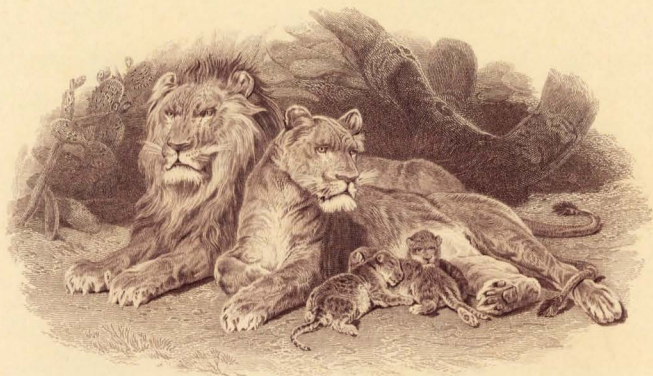
EAGLE



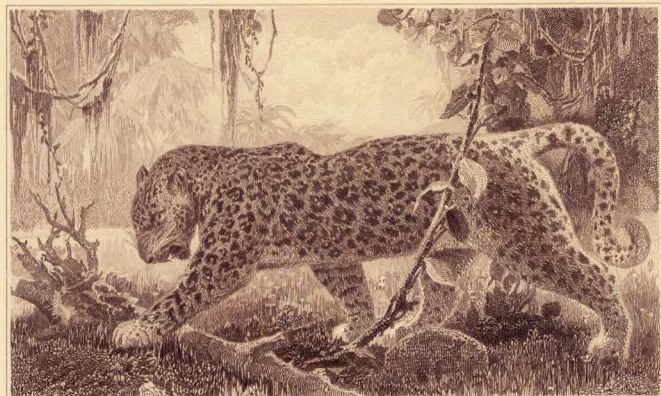
STAG



CONDOR



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LEOPARD

ALLEGORICAL VIGNETTES FOR COMMERCE AND INDUSTRY



WORLD TRADE



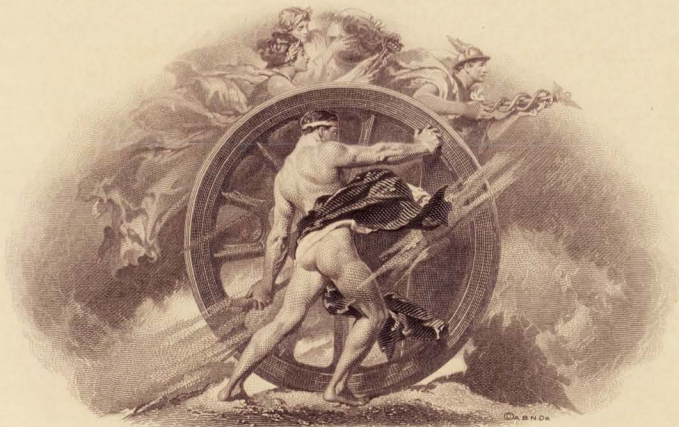
AGRICULTURE



MARITIME TRADE



TEXTILES



PROGRESS



WEALTH

other special papers. In 1879 Crane began to fill the paper needs of the United States Bureau of Engraving and Printing, and, as in the case of American Bank Note Company, is today the Bureau's sole source of supply for currency paper. For these two customers Crane reserves special facilities, distinct from its other operations. These facilities provide the highest safeguards, which are part of the money-printing process. Crane does not supply currency paper to any other bank note printer.

In 1891, after supplying paper for United States currency for twelve years, Crane developed a way to improve this paper by using silk fibres instead of silk threads. In the same year Greece asked American Bank Note Company to print currency for it on paper containing silk fibres. The U. S. Treasury Department objected to the printing of any notes other than its own on this type of paper, even though a company in Europe was prepared to do it if American Bank Note Company should decline the Greek order.

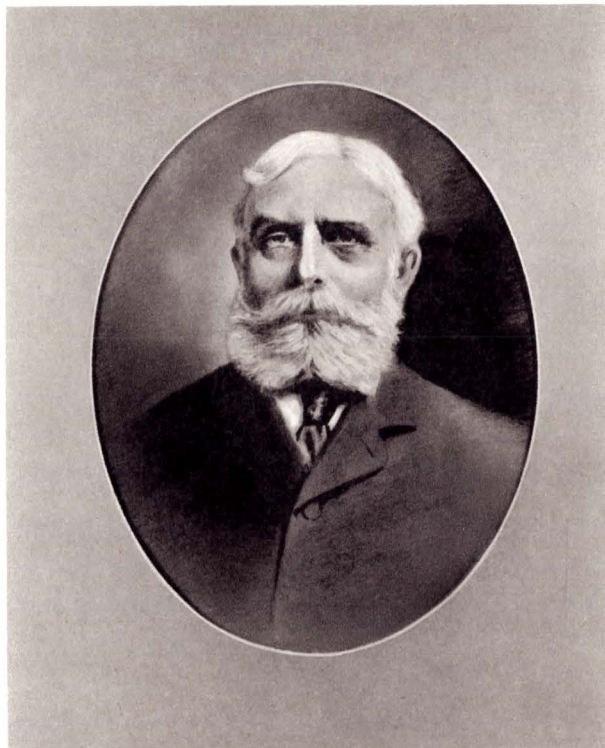
The Company could appreciate the firm attitude of the Treasury Department, but that did not solve the problem. What was needed was something different from silk fibres. It also had to be better, else foreign competitors could attract business by offering a copy of the fibre paper which, by the laws of its own country, American Bank Note Company was prohibited from using.

So the Company set out to find something better, and it succeeded in finding something *far* better. Planchettes are little paper discs, with a diameter somewhat smaller than a match head, embedded in the Company's money paper. They are of various colors and add a pleasing appearance to paper money. They possess various characteristics, some of which are highly secret but all of them revealing instantly a counterfeit document. The planchettes are produced by the Company and sent to the Crane plant for incorporation into its paper.

While other papers now exist which contain colored paper discs, their resemblance to American Bank Note Company's planchettes is only superficial. There is no way of knowing how many thoughtful counterfeiters have turned to copying less frustrating bank notes just because of these planchettes.

Properly made paper is an important protection against counterfeiters. If its quality is far higher than that of paper generally available for purchase by the public, a difficult problem is presented to would-be wrongdoers. Money

paper should have a good appearance, feel, strength and printability; it should also have long life. Since watermarks pressed into the paper in the course of its manufacture necessitate short fibres in the paper and result in reduced strength and shortened life, and since an experienced counterfeiter can imitate them successfully, American Bank Note Company avoids watermarks. Moreover, watermarks may give an uninformed public a false sense of security by their presence, and divert attention from the more reliable evidence found in the engraving and printing. They are useful for identifying or imparting prestige to commercial or personal correspondence paper, but not for safeguarding documents of value.



AUGUSTUS D. SHEPARD  
President, 1901-1903  
Chairman, 1903-1904



### *Travelers Cheques Highly Safeguarded*

In 1891 a customer of long standing, American Express Company, devised the travelers cheque, as a result of a European trip by the head of that company, with its attendant difficulties in cashing checks and safeguarding funds. Travelers cheques have two important characteristics: (a) the traveler signs his name on each cheque when he buys it, and again when he cashes it; and (b) issuers of travelers cheques follow the policy of protecting from loss under all reasonable circumstances those who use or cash the cheques. For many years after their introduction, travelers cheques were little more than simple printed forms; but, as they increased in popularity, the companies issuing them recognized the importance of increased safeguards against alteration or counterfeiting. The protective measures developed by the American Bank Note Company for travelers cheques have been advanced to a point representing the highest existing safeguards against counterfeiting. Today the Company supplies travelers cheques to American Express Company, Bank of America National Trust & Savings Assn., First National City Bank of New York, First National Bank of Chicago and Republic National Bank of Dallas — all of the issuers of travelers cheques in this country. Its affiliated companies also supply travelers cheques to numerous issuing companies in the areas served by them.

### *Historic "Columbian Issue" of Postage Stamps Printed*

In 1893 the Company designed, engraved and printed a notable series of United States postage stamps, issued in connection with the Columbian Exposition in Chicago and constituting what is now known as the "Columbian Issue." The stamps were oblong and double the usual size. Each of the fifteen denominations bore the reproduction of a well-known painting depicting some aspect of the life of Columbus. President James Macdonough collaborated with a representative of the Government in selecting the paintings. The series was intended to excite artistic and philatelic interest, and it did so in full measure. Soon after the single year of sale had terminated, the stamps became leading items for collectors.

These were the last stamps made for the U. S. Government by American Bank Note Company for fifty years. In 1894 the Post Office Department

entered into a contract with the Bureau of Engraving and Printing for the exclusive printing of all its stamps. It was fitting that the Columbian issue was one of the outstanding examples of engraving and printing in philatelic history.

### *The Institution Expands*

In 1896 the Company secured a contract for engraving and printing Canadian notes, stamps and other documents of value. In order to provide adequate facilities there for the execution of this work, a plant was built in the city of Ottawa. The initial delivery of stamps was made from the new plant on June 17, 1897, and bank notes and other documents followed. The first resident manager of the Canadian Division was Warren L. Green, later president of American Bank Note Company, who was succeeded in 1901 by José A. Machado. The plant was staffed by Canadians, many of whom initially received their training in the Company's New York plant.

With the growth of Canada, the volume of work turned out by the Ottawa plant steadily increased, and the plant was expanded in 1904, 1907 and 1911 to handle the growing needs.

In 1897 two subsidiaries — Franklin Engraving and Printing Company, which had been acquired during the years 1880-1885, and Homer Lee Bank Note Company, acquired in 1891 — were consolidated into a single company, the Franklin-Lee Bank Note Company. After 1904 this subsidiary carried on its business as the Franklin-Lee Division of American Bank Note Company.

A Philadelphia plant was opened in 1900. International Bank Note Company, of New York, was purchased in 1902, and its plant in upper Manhattan was operated until 1911.

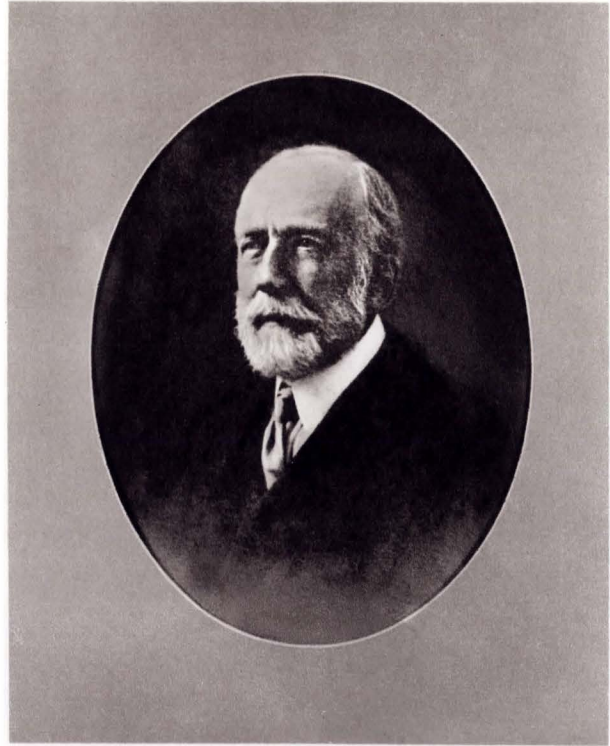
Western Bank Note and Engraving Company, a long-established company located in Chicago, was purchased in 1901. This business was continued as a subsidiary until 1911, when it became the Western Division of American Bank Note Company.

Augustus D. Shepard, who had been made president of American Bank Note Company in 1901, was elected chairman of the board in 1903, and Theodore H. Freeland became president.

Bradbury, Wilkinson & Co., Ltd., the leading British firm of high-quality engravers and steel-plate printers, became part of the American Bank Note family in 1903. This important producer of documents of value traces its



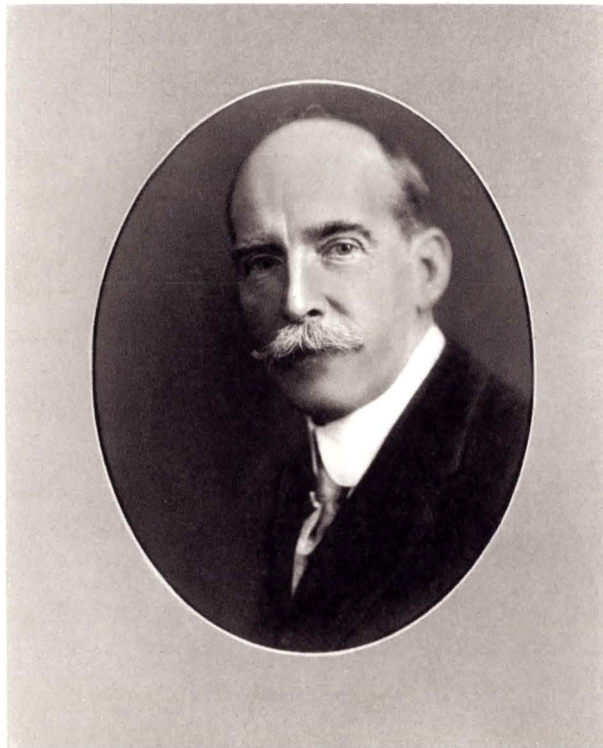
EDMUND C. CONVERSE  
Chairman, American Bank Note Company 1904-1906  
President, United Bank Note Corporation 1906-1911



THEODORE H. FREELAND  
President, 1903-1906  
Chairman, 1906-1911

roots back to 1847, when Robert Wilmot Wilkinson was working for his father, a copperplate printer in Prujean Square, Old Bailey, London. In 1862 William Bradbury, a printer and publisher, joined forces with Wilkinson to produce bank notes, in Fetter Lane, Holborn. The firm's high standard of work resulted in a sustained growth in its business, which soon extended around the world. Bradbury retired in 1890, and Wilkinson converted the firm to an incorporated company. By 1903 it was also time for Wilkinson to step down, and the affiliation at this point with American Bank Note Company was a happy one for both firms. Daniel E. Woodhull, later president of American Bank Note Company, became chairman, and Percy Wilmot Wilkinson, son of Robert Wilmot Wilkinson, became managing director; under these two leaders the firm entered a new era of growth.

Warren L. Green became president of the Company in 1906, beginning an eventful administration which was to continue until his death in 1919. He



WARREN L. GREEN  
President, 1906-1919

was a nephew of former President James Macdonough and had begun his bank note career as a designer at the old 142 Broadway plant prior to 1882.

In 1906 a holding company, United Bank Note Corporation, was formed to acquire the stock of American Bank Note Company. Its president, Edmund C. Converse, who for two years had been chairman of American Bank Note, was a prominent industrialist and one of the founders of Bankers Trust Company as well as president of National Tube Company. He was a brother-in-law of Warren L. Green. In 1911 American Bank Note Company was merged into United Bank Note Corporation, and the resulting corporation was continued as the American Bank Note Company.

### *Employee Pension Plan Established*

In 1906 the Company established for the benefit of its employees one of the first corporate pension systems in this country. It was a noncontributory plan; that is, the Company made all payments necessary to provide the pensions. This pioneer plan was superseded four decades later by a noncontributory trustee plan, with Bankers Trust Company, of New York, as trustee of the fund.

In the period following 1906 the Company put considerable emphasis on other printing lines in addition to its principal business of printing documents of value. For many years the Company had carried on a map-printing business and various other activities, such as the printing of railroad tickets. It offered a completely integrated designing-plating-printing-binding operation for commercial purposes, and it perfected a direct color printing process that was far in advance of its time. The quality of the work then produced was still impressive by standards existing fifty years later. Many of these commercial lines had been disposed of by 1914, however, in order to concentrate exclusively on documents of value.

### *New Offices and Plant Constructed*

During this same period the Company embarked on a major program to establish permanent, carefully planned homes for its executive offices and its principal plant, which had shared the building in Trinity Place for more than twenty years.



70 Broad Street, New York –  
the Company's headquarters for  
the past fifty years

For the executive and sales departments, the Company bought land at 70 Broad Street, between Beaver and Marketfield Streets—three of the oldest streets in New York. The building erected, which was opened April 20, 1908 and is still the headquarters of the Company, has been accorded general recognition as an architectural gem.

For the plant, the decision was to move it away from lower Manhattan to a place where ample land could be had at a reasonable cost. The Hunts Point location in the Bronx was accordingly purchased in 1908, and on it the Company's unique plant was designed and built.

While these long-range plans were being developed, the panic of 1907 occurred. It was essentially a money and credit panic, and the general shortage of liquid assets was somewhat alleviated by the use of scrip, circulating pay checks and similar substitutes for money, which were for the most part printed by American Bank Note Company.

In 1911 the Hunts Point plant was ready. Into it went the equipment, plates, dies and records from the Trinity Place plant and the International Bank Note Company plant in upper Manhattan.

ALLEGORICAL VIGNETTES FOR COMMERCE AND INDUSTRY



RADIO



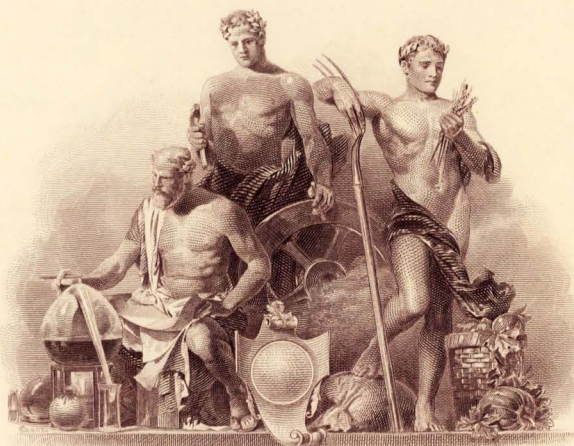
AGRICULTURE AND FOODS



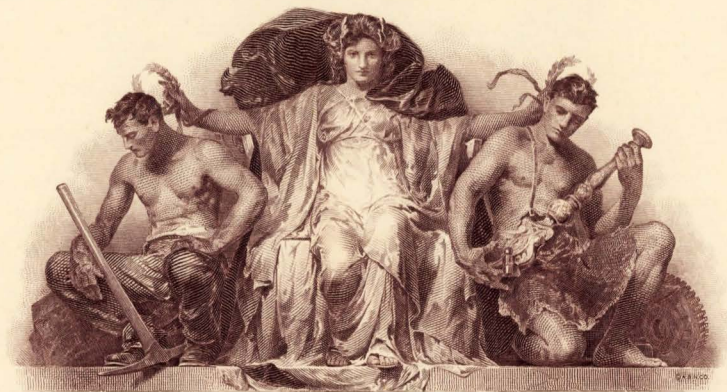
TELEPHONE COMMUNICATIONS



SCIENCE AND MANUFACTURING



CHEMISTRY AND AGRICULTURE

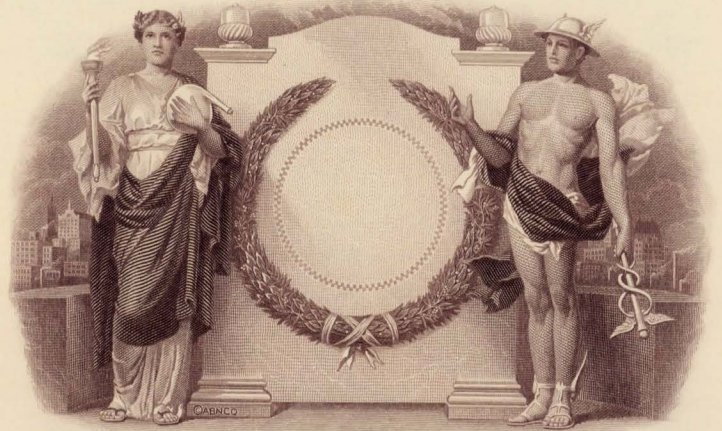


MINING AND MANUFACTURING





AVIATION



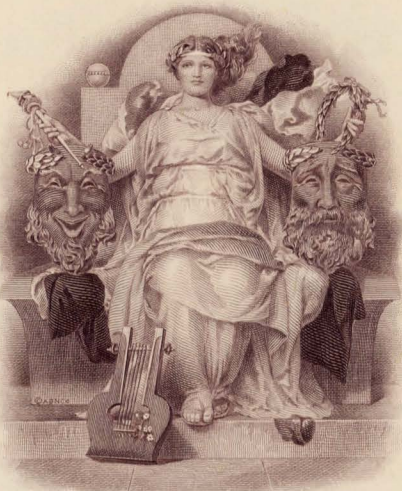
SCIENCE AND COMMERCE



SECURITY



AGRICULTURE AND FOODS



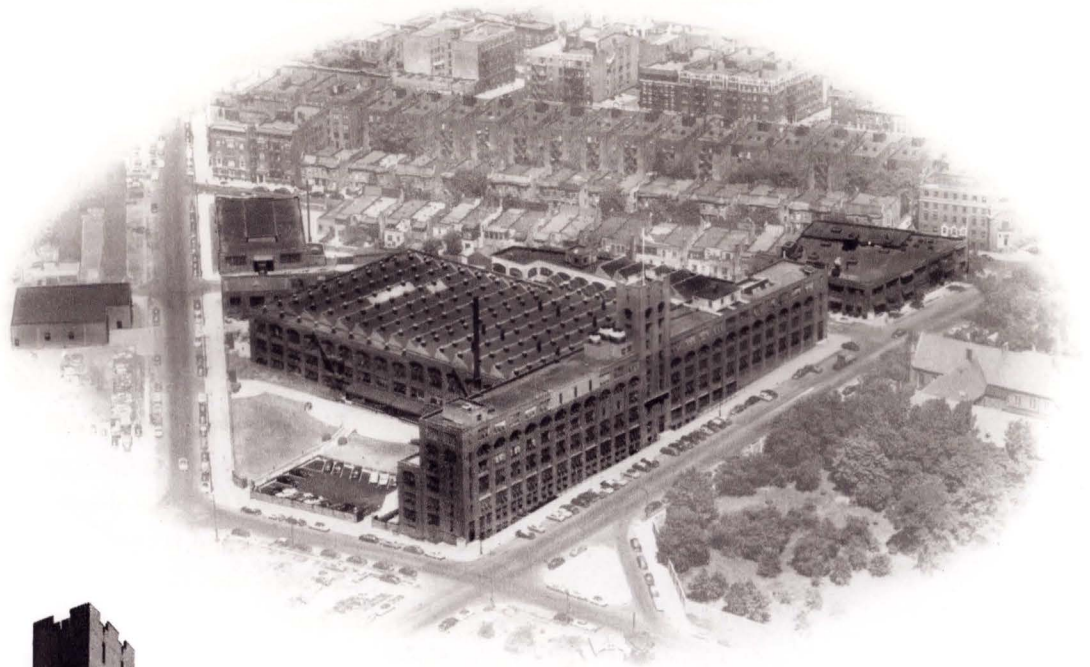
MUSIC AND DRAMA



SCIENCE AND RESEARCH

While undertaking a scientific realigning of its production facilities, which a later generation would have called “streamlining,” the Company also simplified its corporate structure by merging all of its domestic subsidiaries into the parent company.

The eventful period of the Consolidation had come to a close, and a new era had begun. There had emerged an organization with the best equipped plant and finest office building in the bank note world, with the most skilled designers, engravers and intaglio printers, with an advanced employee-welfare program and with a skilled research department. This period was to be, in the history of American Bank Note Company, the era of the “Modern Institution.”



Aerial view of the New York Plant



A wing of the New York Plant

## The Era of the Modern Institution

1911–

The decades since 1911 have witnessed almost every imaginable sort of political, economic and scientific upheaval, including two world wars, a world-shaking revolution, high prosperities, deep depressions, the atom and hydrogen bombs, and initial steps toward the exploration of outer space. Some nations have been wiped out and others have been created, governments have come and gone.

The men who merged their seven companies in 1858 were sure that documents of value should be created under the protection of a strong institution, but it would credit them with too much foresight to say that they sensed the full measure of world and domestic problems ordained for the hundred years which were to follow.

American Bank Note Company's history remains alive as far back as 1795 in the literal sense that it preserves dies, plates and records created from that time on. Its books carry customers' accounts that have continued for 150 years. It can on short notice incorporate into a document a steel-engraved portrait of George Washington, Queen Victoria, Sun Yat-sen, Simón Bolívar, San Martín or Abraham Lincoln – or any of hundreds of other leading figures throughout the world – and the portrait would be the work of a highly skilled engraver who was in most cases a contemporary of his subject. It can also reprint a stock certificate that was first issued before great-grandfathers of grandfathers of people now living were born.

But American Bank Note Company looks to the future more than to the past, because continuity of this kind requires long-range planning. The Company's portrait engravers of A.D. 2000 are now in training!

A potential portrait engraver is selected when he finishes art school. Only an artist with very special talents is chosen for this career. In ten years, if he completes this period of apprenticeship successfully, he will be able to produce certain categories of engraving. In twenty years, if he has the talent and the perseverance, he will be considered a portrait engraver. In thirty or forty years he may take his place among the “immortals” of the Company and of the world – men like Smillie, Jones, Savage, Gunn, Ford and the others.

Some engravers specialize in work other than portraits – flowing script, bold square letters or vignettes based on allegories, characteristic scenes or great seals and trademarks. These men, like those engaged in other specialized crafts throughout the Company, are trained by the Company, plan to live out their careers with the Company, and in many instances are following their fathers and grandfathers in the craft. American Bank Note Company has, in fact, always been a notable example of family tradition in an organization. Many present-day employees can trace impressive family trees revealing Company employees in several generations. One family carries a service record embracing eight people representing four generations. The first member of this family was followed by four sons, two grandchildren and one great-grandchild. Of the eight members of this family, four are on American Bank Note Company’s Honor Roll of Fifty Years’ Service. Another family is represented by seven members from three generations, four of whom are on the Honor Roll. Numerous families are represented by two generations.

In the Company’s vaults are many thousands of “stock vignettes,” usually of an allegorical nature, produced by the world’s most skilled steel engravers for use on the stock certificates, bonds and other security documents of American and foreign firms, and this supply of engraving masterpieces is constantly being augmented by the Company’s present staff.

### *Knotty Delivery Problems Solved*

In 1912 the Chinese Republic superseded the Empire, and it shortly became a customer of the Company – until 1949 a very important one. With its huge population, China required great quantities of paper money.

The delivery of one large batch is still remembered. The notes were being transported in their wooden cases on a ship which was struck by a typhoon off the Japanese coast. The ship broke in two, just at that part of the hold

where the notes were stowed, so that the cases floated to the surface. A current took them to the north coast of Japan, where their presence was reported to the Company many weeks later. The nearest American Bank Note Company man, in Java, received a cablegram to proceed at once to the scene of the wreck and salvage the notes. Traveling as best he could, through one of the terrible storms that infest the region, he arrived to find most of the cases stranded on the beach; but a few lay open, their contents in the hands of nearby villagers. Armed with a revolver, some money and considerable nerve, he gathered, purchased or won by cajolery the entire shipment and assembled it at one place, where he mounted guard until rescue came.

In 1914 American Bank Note Company was faced with an unusual delivery problem which in retrospect points up the great progress in transportation that has since taken place. It seems that two of the principal banks in Mexico were confronted with an extraordinary popular demand for currency. The strength of the banks was not at issue, but the problem of not having enough bank notes on hand was insurmountable, and therefore a bank holiday was declared.

An urgent order for notes needed for the reopening of the banks was received by the Company, and the notes were ready in a few weeks as a result of day and night production. Then came the problem of delivery.

The low-value notes were packed in tin-lined trunks and the high-value notes in a leather suitcase, and they were taken by two Company men to Mobile, Alabama. (One of these men was Eric N. Gibbs, who was destined many years later to become chairman and managing director of Bradbury, Wilkinson & Co. Ltd.) The two men arrived with their luggage before day-break and, while one waited with the money on the station platform, the other walked the waterfront until he found a Norwegian tug willing to take a cargo of "books" to Veracruz. After three days of storm and discomfort, the craft made port. Here the conscientious customs officers insisted on opening the cases on the crowded public floor of the customs office and carefully weighing every bundle. Just as the bank holiday expired, the money was delivered to the banks and the day was saved!

The coming of the airplane ended the need for dramatic journeys such as this one, but the art of making difficult deliveries safely and on time remains an important part of the Company's work in producing documents of value. Many countries came to appreciate this during the recent World War, when it

was necessary in some cases for the Company to enlist the help of our government in making delivery of bank notes urgently needed by friendly nations. American Bank Note Company money is packaged in soldered and sealed metal boxes, which are packed in unassuming wooden cases so constructed that they can be opened only by destroying them. Certain further precautions guard against rifling or substitution.

### *Company's Widespread Ownership*

Unlike most bank note firms, American Bank Note Company is owned by widely distributed shareholders. In 1916 its shares, consisting at that time of 90,000 Common and 90,000 Preferred, were listed on the New York Stock Exchange, where they are traded in today. At present there are outstanding 649,941 shares of Common and 46,575 shares of Preferred stock. Two of New York's leading banks, Guaranty Trust Company of New York and Bankers Trust Company, are, respectively, Transfer Agent and Registrar for the Company's shares.

### *Assistance to the Government During World War I*

The large-scale public financing program undertaken by the U. S. Treasury Department when the United States entered the first World War in 1917 severely taxed the Government's Bureau of Engraving and Printing. It became apparent that the work could not be done by the Bureau alone, and Secretary of the Treasury McAdoo requested help. Warren L. Green took the Company's best experts to Washington, where, after weeks of study, they were able to reorganize the Bureau so that it could turn out the documents required. The specialized knowledge of the Company thus provided to the Government was warmly acknowledged by the Secretary of the Treasury as an important contribution freely given to the nation in its war effort.

Later, in the course of the war, the Government called on the Company for further assistance, and it again responded by producing a total quantity of 61,977,000 War Savings bonds and stamps.

Another important undertaking in connection with the war was the completion of necessary arrangements by the Company, including designing and engraving, for the printing of a new French currency should that nation's



DANIEL E. WOODHULL  
President, 1919-1935  
Chairman, 1935-1939

currency printing plant in Paris fall into enemy hands. The failure of the Central Powers to take Paris made the printing of these notes unnecessary.

In 1919 Daniel E. Woodhull succeeded to the presidency of the Company. He had begun as an office boy in 1887. In 1907, after five years as chairman of the board of Bradbury, Wilkinson & Co., he had returned to New York to become vice-president of the parent company, and in 1912 had become first vice-president. When he retired from the board chairmanship in 1939, he had completed fifty-two years of service. He continued to serve as a director until his death in 1942.

### *Special Papers and Printing Processes Developed*

In 1920 and 1921 the Company introduced a special kind of “safety paper,” made to its formula by Crane & Co., Inc., which was given the name “ABNCO Safety Paper.” The research behind this development had been started in

1910, in a small paper mill rented by the Company for the purpose. In contrast to the conventional safety papers often used for checks, which merely display a faint over-all printed pattern, this special paper looks like white paper of fine quality, or, in some versions, a fine white paper containing planchettes. However, if bleaching chemicals are applied to it (for the purpose of removing a signature or making some other alteration), a strong, stubborn stain makes its appearance. The many years of research were required not so much to find out how to produce a stain as to determine beyond doubt that the chemicals put into the paper would remain stable over long periods of storage and ordinary use.

More than ten years of research and development came to a successful conclusion in the 1920's when the Company put into large-scale operation a distinctive printing process for use in printing currency notes, travelers cheques and similar documents. This process has remained unique in its proved combination of essential characteristics, although, in the nearly forty years in which it has been in everyday use by American Bank Note Company, there have been numerous attempts throughout the printing industry to perfect similar systems.

Since the process is not in general use, there does not exist any common name for it. It is a form of surface printing, using an intermediate cylinder as in offset lithography, but in other features it differs materially from that process. The work it produces exhibits distinctive characteristics: first, a large number of different colors may be used; second, the registration of the various colors is precise beyond all comparison; third, the quality of printing is uniform over long runs.

The presses used in the process, built in the Company's own machine shop, are referred to within the organization as "WLG presses," in honor of Warren L. Green, president of the Company during their development period. The principal type of printed design which they produce has been given the identifying name of "Major Tint," in honor of Alfred S. Major, who was associated with the Company from 1880 to 1929 as a designer, a department head and finally a vice-president, and of his brother, Walter Major, for many years head of the designing department.

Except on certain travelers cheques, people in the United States have a limited opportunity to see the work done by this process. People who travel abroad, in Latin America especially, often remark on the colorful attractive-



ness of the bank notes they see, without knowing that the use of a Major Tint is an important factor in their safety as well as in their beauty.

The counterfeiter tends to rely on his camera. He knows that a perfect counterfeit of a well-designed, engraved and printed note — one that will fool an expert — is practically impossible, and therefore he usually adopts the more modest objective of producing work that will deceive an inattentive person. For this end, plates made by photography and worked over by hand would seem to be a practical means. But when a Major Tint is combined with fine engraving, the counterfeiter is given a frustrating problem, no matter what lenses and filters he possesses. For in the Major Tint there may be colors which are so nearly alike or so intermingled that filters cannot separate them. Lines may cross so cleanly that a camera film cannot reproduce the sharpness of the junction. The color of a line may change gradually along its length. Finally, the color or shade of a line may change *across its breadth*, because the virtually perfect registration of the press makes it possible to print a hairline over one side of a slightly wider line.

### *The “Honest Counterfeiter” Tests Company’s Work*

During the decades in which the broad usefulness of the Major Tint was being developed and utilized, the Company employed a man of exceptional

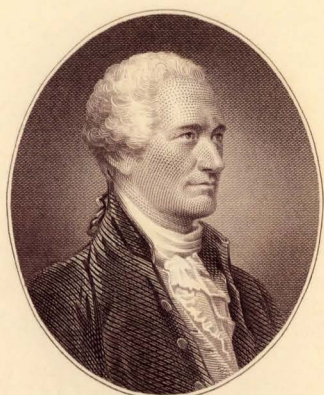


The “Tower,” where Joseph Ford conducted his research

William F. Ford, son of Joseph Ford, and today the Company’s leading portrait engraver



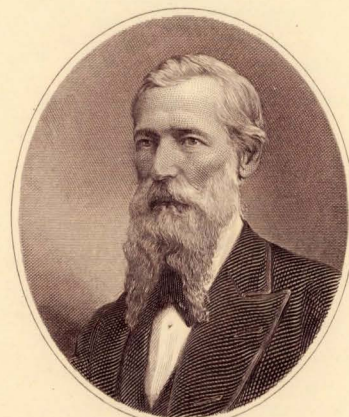
PROMINENT AMERICANS



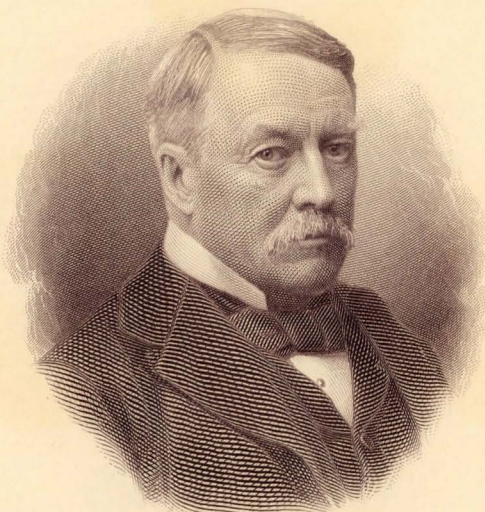
ALEXANDER HAMILTON



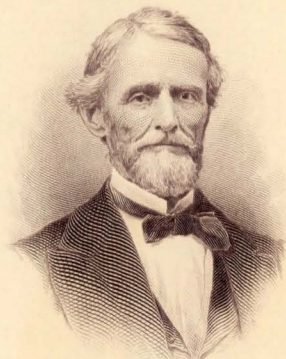
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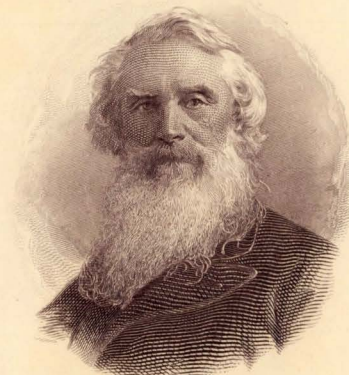
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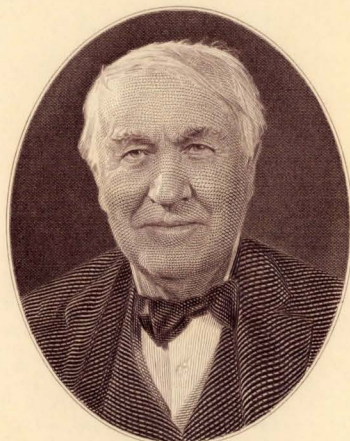
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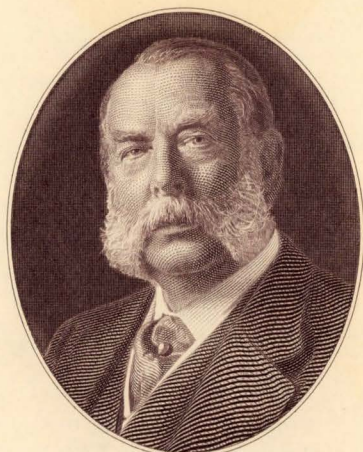
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SAMUEL F. B. MORSE



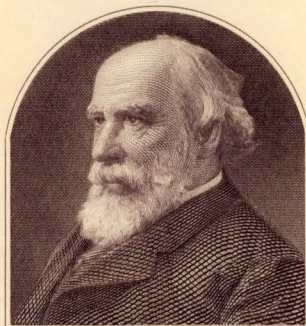
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GEORGE F. BAKER



ADMIRAL DAVID G. FARRAGUT

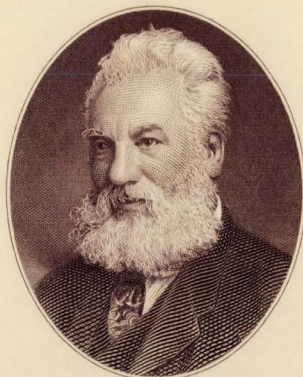


JAMES J. HILL

AMERICANS



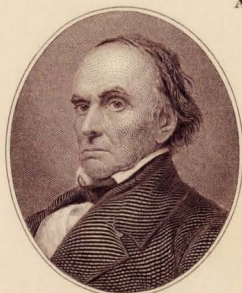
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ALEXANDER GRAHAM BELL



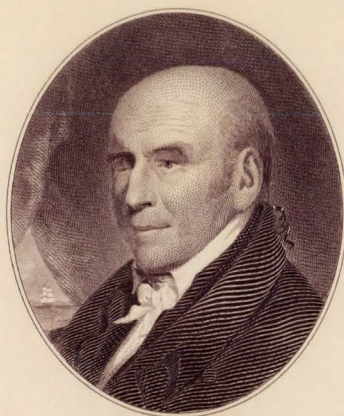
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DANIEL WEBSTER



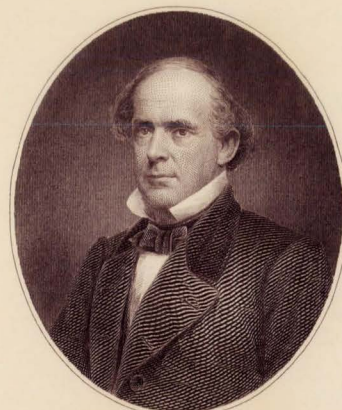
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STEPHEN GIRARD



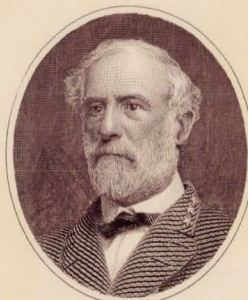
CORNELIUS VANDERBILT



SALMON P. CHASE



JAY GOULD



GENERAL ROBERT E. LEE

ability. He was Joseph Ford, "the honest counterfeiter," as he was genially referred to throughout the Company. He devoted his long career to one of the most bizarre research operations ever known — testing the security of American Bank Note work by attempting to counterfeit it. His secluded quarters, which he always kept under lock and key, were in the tower of the New York plant. He had able assistants and was provided with all the chemical and photographic equipment he desired. His failures were cause for satisfaction; his successes or near successes led to suitable changes in design or production practices. As a result of his life work, American Bank Note Company has been able to attain the highest degree of security and, moreover, to be confident it has done so. Any document beyond the reach of a man of integrity and genius operating with ample facilities in the light of day should be safe from twisted minds forced to work under cover.

In deciding which of two documents to copy, a counterfeiter will usually choose the one which offers the fewer difficulties. Therefore a document which has been given a high degree of protection, relative to most other documents, stands a good chance of being passed over by counterfeiters, who will occupy themselves where the prospects of success are more attractive.

Joseph Ford's dedication to the problem of protecting the public from counterfeiters was an inspiration to the research workers of the Company which continued undiminished even when the modern scientific techniques took over from his more intuitive approaches. It is interesting to note that his son, William F. Ford, is today the Company's and the world's foremost portrait engraver.

### *The Company's Protective Controls*

Providing safeguards against counterfeiting, important as this is, fulfills only one of the two major obligations of American Bank Note Company as a maker of documents of value. The other obligation is to make certain that no unauthorized document is ever produced, that exactly the number of documents properly ordered are printed and delivered.

It can be argued that this problem is more serious than the one posed by counterfeiters, because an "extra" document would not differ in any apparent way from a valid one, and therefore would be infinitely more dangerous.

To be certain that not one single "extra" document ever leaves its plant,

more than one out of every eight employees of American Bank Note Company is occupied full time in counting, checking and verifying. In a century and a half of development, the Company's protective systems and procedures have reached the point of practical certainty.

Many of the techniques of this procedure are confidential but a few may be described as typifying the rest. For each order, paper is furnished in "blind count" stacks; that is, people in safeguarded paper rooms have determined the exact count of each stack and have transmitted the figure only to an independent control room. The pressroom makes its own exact count, then reports it to the control room. Any disagreement in the two independent counts is promptly investigated, and as the work in process moves from one department to another, similar checks and verifications are made. Doors between departments are secured, and each employee has access only to his own department — unless properly accompanied, the Company's officers and executives have no more freedom of movement than anyone else. Spoiled work is canceled and cremated, but first every sheet is accounted for in a detailed paper audit of each job, which is balanced out before final delivery is completed. Any discrepancy of a single sheet at any point is normally discovered within minutes.

Most documents of value are given serial numbers, usually printed in a contrasting color. These numbers require a full measure of protective care in two important respects. First, they must be correct and the documents must be delivered in packages of strict numerical order, as a safeguard against tampering and to facilitate checking by the institution receiving them. Second, they must have protection against alteration, because in many cases an altered serial number could make possible the execution of various felonies.

The correctness of the numbering is assured by an elaborate system of checking which involves every number on every document — there is no reliance anywhere in the Company on mere spot checks or sampling. The unending routine of millions of checking operations each month is livened by interesting inducements to maintain vigilance.

The safety of the numbering is secured by use of special inks that make alterations difficult, and by maintaining such a high quality of printing that the least deviation, such as a broken line, would sound a warning that something may be amiss.

### *American Bank Note Company Makes Its Own Inks*

All of the inks used by American Bank Note Company are made in its own plants, to its own formulas. There are many reasons for this policy. First, it affords an important additional safeguard against counterfeiting, because the matching of ink color and printing quality becomes thereby a difficult problem, one which cannot be solved by purchase of a standard ink from a commercial ink maker. To complicate matters, the inks are usually in off-shades of conventional colors, instead of in straightforward green, red, blue and the like. Second, private formulation and manufacture of ink provide assurance that a color or tone once adopted for a given security or bank note can be exactly repeated, without the ghost of a change, decade after decade and century after century. Third, it aids in producing work of the highest quality, because the various pigments can be ground to the optimum degree, and compounded with the correct oils, for each use. To maintain quality, all the raw materials purchased for ink-making are tested when they enter the plant, and the compounding is as precise as for a pharmacist's recipe.

Inks are weapons against wrongdoers not only in their colors but also in their physical and chemical characteristics. Some inks made by American Bank Note Company are insoluble in water and insensitive to chemical alterations; but some are soluble, some are sensitive, and some are both soluble and sensitive. In certain types of documents of value, the use of two or more of these classes of inks provides an additional set of problems for anyone attempting alteration or similar wrongful acts. (Solubility must be controlled and used with caution, to protect the hands and clothing of people handling documents.)

### *Other Types of Documents*

The ultimate possible protection that can be afforded a document of value is clearly formidable, but for certain documents the ultimate limit of protection is not necessary. For securities of smaller companies, for bonds of smaller issues with limited distribution, and for various other purposes, prudence requires only a reasonable level of protection rather than the ultimate. For this purpose, American Bank Note Company produces documents which combine steel-plate-printed borders with text, and sometimes



The Chicago Office and Plant of American Bank Note Company

vignettes, produced by offset lithography or letterpress. The vignettes may be lithographic reproductions of steel-engraved vignettes or of suitable corporate trademarks or pictures. On such documents the name of the Company may appear with added words — “Franklin-Lee Division” or “F. L. Division.” The Chicago plant produces combination documents with steel-plate borders and offset lithography text. It also produces check forms, money orders, letters of credit, drafts, bills of exchange and letterheads and other commercial material with prestige value. A plant in Boston provides a service in combination certificates with steel-plate borders and letterpress text, adapted to the special traditions of its area.

### *New York Clearing House Places Rush Order*

The Bank Holiday of 1933, which was declared as a result of a wide-scale urge to hoard money, gave to American Bank Note Company one of the most difficult assignments in its history. When it began and all banks were closed, the leaders of the New York Clearing House decided that a supply of scrip certificates must be prepared at once. As it turned out, the New York scrip was



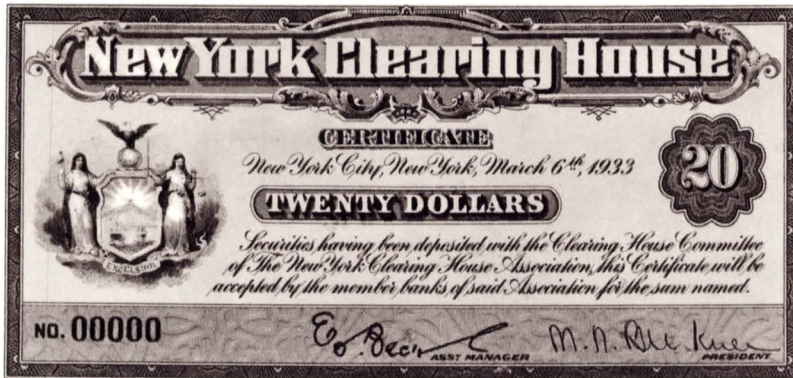
not needed, but its preparation was sound insurance; and it seems certain that the news of its preparation was a factor in loosening the hold of hoarders on their regular currency when the banks reopened.

The request put to the Company on Friday, March 3, to begin delivery of an entirely new issue of scrip notes on Tuesday, March 7, at 8:30 a.m., seemed fantastic. But spurred by their quite valid belief that they were helping all their fellow Americans in an hour of crisis, the American Bank Note people attacked the job in a frenzy. Dies were engraved and plates were made and rushed to the printing department, where work went on day and night as it did in all other departments of the plant. The order was delivered on time!

In 1935 Daniel Woodhull relinquished the presidency of the Company and was made chairman of the board. His successor as president was Albert L. Schomp, who had come to work for the Company in the treasurer's department in 1908 and had become a vice-president in 1917. He was in charge of



ALBERT L. SCHOMP  
President, 1935-1952  
Chairman, 1952-1957



New York Clearing House Certificate prepared for possible use in the 1933 Bank Holiday

securities sales from that time until 1929, when he became first vice-president. Albert Schomp's term as president continued from 1935 to 1952, and was followed by further service until 1957 as chairman of the board.

Additional stumbling blocks for counterfeiters were developed during the era of the modern institution, including certain special inks, some of which are not visible under normal light. When used in combination with a Major Tint, the perfect registration of the different inks, made possible by the use of the WLG presses, is far beyond the reach of counterfeiters, or even of conventional printing methods.

### *“Dry Printing” Method Developed*

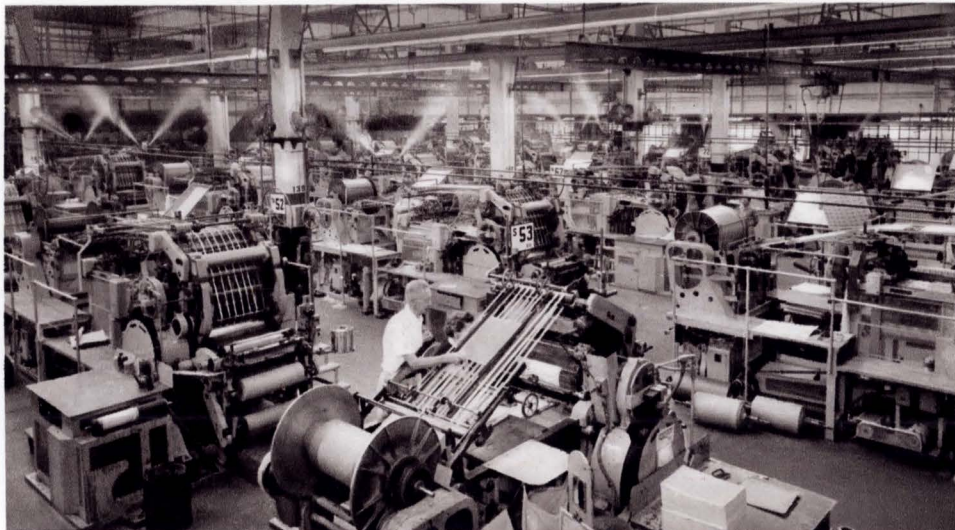
One of the most important improvements in intaglio printing, which was developed by the Company during the late 1920's, resulted in greatly increased production efficiency and far better quality. Traditionally, intaglio printing of securities had to be done on dampened paper – the so-called “wet printing” method – which gave rise to the twin problems of adding moisture before the press operation and coping with the sheet distortion that resulted. To eliminate wetting required major modifications in procedures and press design. A key problem was the use of much greater pressure in the presses without slowing their operation, causing undue cracking of the printing plates or lowering the quality of the printed impression.

The “dry printing” method developed by the Company raised the quality of steel-engraved printing to a new high level, because it preserved more of the three-dimensional quality of the finished work. When wet paper was used, the printed sheet had to be “ironed” smooth under great pressure to eliminate the irregularities in the surface of the paper which had been caused by moisture. After dry printing was perfected, this ironing process, called “calendering,” could be dispensed with or performed with light pressure, thereby protecting the raised-ink effect that gives engraved work its unique appearance and “feel.”

Many years after its development by American Bank Note Company, dry printing was adopted by others in the industry; and in 1957 the Bureau of Engraving and Printing in Washington began to use it in the manufacture of United States paper currency.

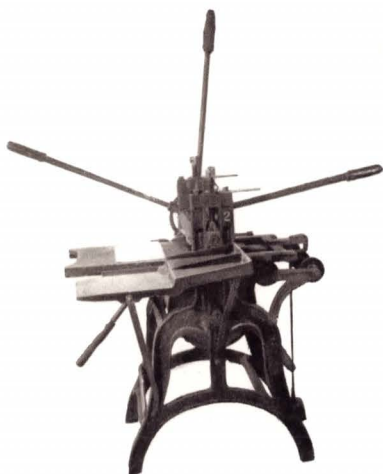
### *Designs and Makes Its Own Printing Presses*

American Bank Note Company has long manufactured its own steel-plate printing presses and other specialized equipment of its own design, but it does not offer such equipment for sale as would a commercial manufacturer.

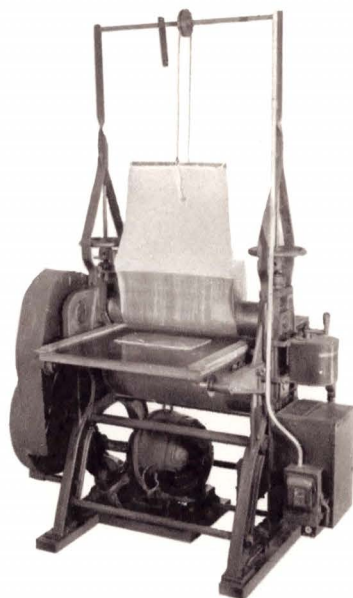


A section of the steel-plate pressroom at the New York Plant

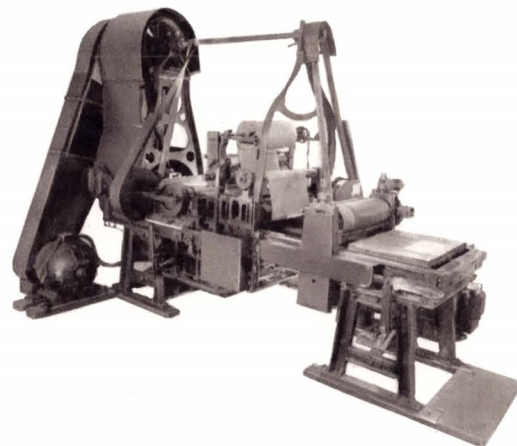
## Evolution of the Steel-plate Printing Press



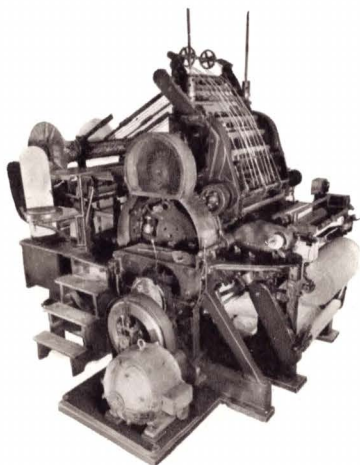
Hand press used a century ago — all operations performed manually



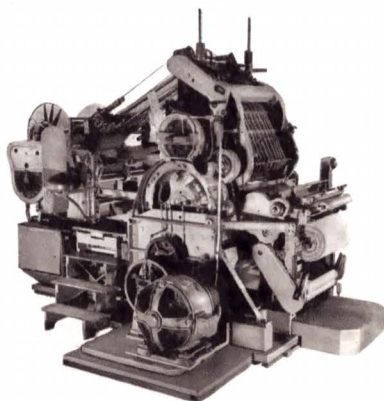
Early power-driven version of flat-bed press — printing plate still inked, wiped and polished by hand



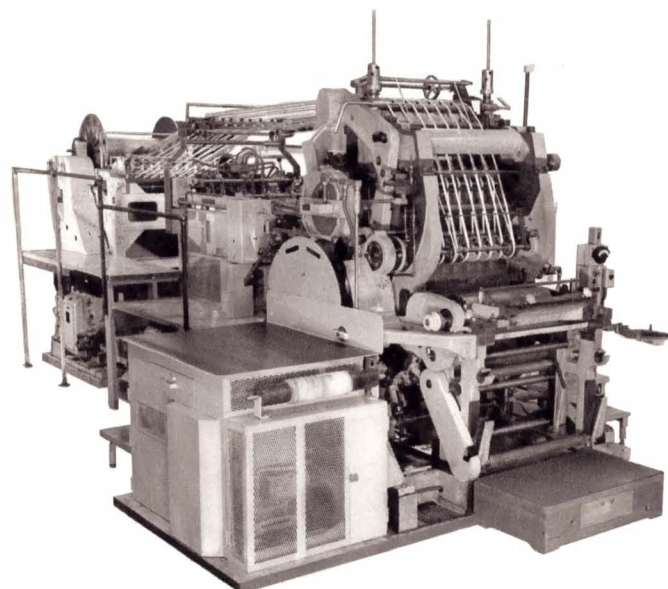
Later version of flat-bed power press — printing plate mechanically inked and wiped, but polished by hand



Early rotary press — printing plate mechanically inked, wiped and polished — first developed by the Company about 1905 and periodically improved until capable of producing intaglio impressions by the “dry-printing” method



High-speed rotary press for “dry-printing” — developed by the Company during the 1930's



The Company's principal press today — a high-speed, automatically fed press developed about five years ago — the finest steel-plate press in the world

PROMINENT PEOPLE OF OTHER COUNTRIES



MARQUÊS DE TAMANDARÉ  
BRAZIL



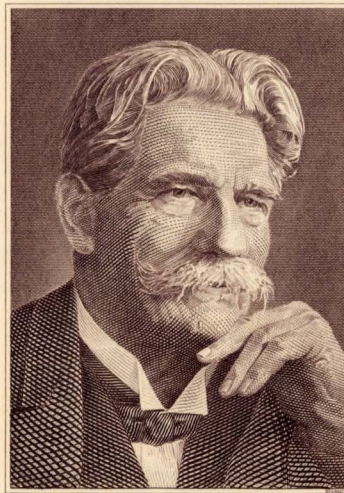
BENITO JUÁREZ  
MEXICO



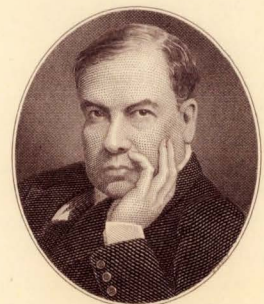
CHIANG KAI-SHEK  
CHINA



RAFAEL TRUJILLO  
DOMINICAN REPUBLIC



ALBERT SCHWEITZER  
FRANCE



RUBÉN DARÍO  
NICARAGUA



DOM PEDRO  
BRAZIL



MUSTAFA KEMAL PASHA  
TURKEY



GRAND DUCHESS CHARLOTTE  
LUXEMBOURG



SIR WILFRED LAURIER  
CANADA



SIR JOHN A. MAC DONALD  
CANADA

OF OTHER COUNTRIES



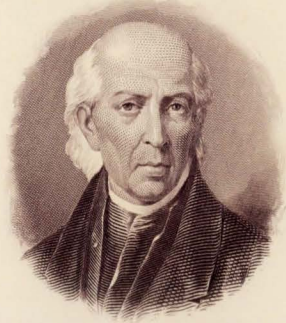
SIMÓN BOLÍVAR  
SOUTH AMERICA



QUEEN VICTORIA  
GREAT BRITAIN



JOSÉ DE SAN MARTÍN  
SOUTH AMERICA



MIGUEL HIDALGO  
MEXICO



KING GEORGE VI  
GREAT BRITAIN



GIUSEPPE GARIBALDI  
ITALY



JOSÉ MARTÍ  
CUBA



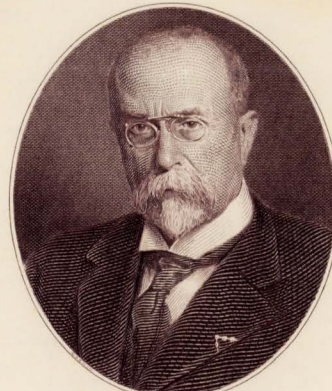
QUEEN WILHELMINA  
NETHERLANDS



JOSÉ RIZAL  
PHILIPPINES



SUN YAT-SEN  
CHINA



THOMAS G. MASARYK  
CZECHOSLOVAKIA

The trend of progress in its presses has been in the direction of greater productivity and closer precision, thus reducing the percentage of spoiled work. Intaglio pressmen no longer ink, wipe and polish plates by hand, as they did a century ago; now these operations are done for them mechanically. The wiping is done by a strip of cloth, as wide as the engraved plates, which after each stroke is moved enough to present a clean area for the next wiping. The final polishing is done similarly by a strip of crepe paper. Pressmen no longer burn a lamp under the plate to keep the ink warm. Presses are larger, faster, more automatic and have not only maintained, but have widened, the quality gap between steel-engraved printing and other forms of graphic reproduction.

The evolution of presses from the earliest hand presses to the present-day machines came about in several steps. An early improvement was a press which mechanically inked and wiped, but still required a final polishing by hand. Then a commercial manufacturer of printing equipment developed a new press, in which four flat plates were used, which went through the successive inking, wiping, polishing and printing stages in turn. A more important break-through was the use of curved steel plates, mounted on a rotating cylinder. The first intaglio presses of this type were made by American Bank Note Company, and all subsequent models have been lineal descendants. The Company's principal press today, shown here together with examples of the earlier presses, was developed about five years ago and is the finest in existence from the standpoint of efficiency of operation and quality of production.

### *Development of "Melamine Paper"*

In the early 1940's American Bank Note Company took the lead in working out the practical use of melamine-treated paper. The project was carried on in conjunction with American Cyanamid Company, the developer of the chemical, and Crane & Co., Inc., the Company's paper manufacturer. Melamine gives to paper increased resistance to folding, tearing and rubbing, and the important quality of "wet strength" or resistance to wear when subjected to moisture. After development in the laboratory it was a long and difficult task to produce mill runs of bank note paper that possessed these qualities and also met all the other requirements of the printing and finishing processes, but it was done!

As soon as this was accomplished, American Bank Note converted all of its bank note production to melamine paper. Accordingly, all its currency notes



since then have had wet strength and the other melamine virtues. Years later melamine paper began to be used by others in the bank note industry, usually at an additional charge.

### *Bank Notes Burned to Keep Them from Enemy*

In December, 1941, after the attack on Pearl Harbor, American Bank Note Company was involved in a strange episode in connection with a shipment of bank notes made to a leading Far Eastern country. The ship carrying the notes was diverted to Manila by our armed forces and its cargo put ashore, so that the craft could be used for military purposes. The Company, after hastily obtaining approval from its customer, requested a representative from the New York office, who was in Manila, to destroy the notes at once lest they fall into the hands of the Japanese army. Since destruction without special facilities would take a long time, the representative's novel solution was to move the notes to the plant of the local gas company and use the gas retorts as giant crematories. He completed the job before he was seized by the enemy forces. Later this Company representative underwent prolonged questioning and punishment by the Japanese at Santo Tomas prison camp in their efforts to obtain information concerning the shipment. But the precious bank notes of an allied country had been kept out of the hands of the enemy.

### *Famous "Overrun Nations" Stamps Produced*

In 1943, fifty years after producing the notable Columbian Issue of postage stamps of 1893 for the United States Government, American Bank Note Company was once again asked to design and print an outstanding series of United States stamps — the "Overrun Nations" or "Flag" stamps. The Post Office Department's announcement included these paragraphs:

A series of eleven new postage stamps, commemorating the heroic and continuing resistance to the Axis powers by the peoples of the over-run and occupied countries of Europe, will be issued at intervals during the next several months, Postmaster General Frank C. Walker announced last night.

The stamps will be exceptional in their designs, which will include a reproduction in colors of the flag of each of the countries honored. The Post Office Department on numerous occasions has issued stamps in two

colors, but never in more than two. Use of colors not only will permit a natural reproduction of the flags, but also will add to the attractiveness of the series. The countries to be honored are Poland, Czechoslovakia, Norway, Luxembourg, Netherlands, Belgium, France, Greece, Yugoslavia, Albania and Austria.

The announcement evoked puzzlement, because the Bureau of Engraving and Printing was not known to have equipment that could produce the stamps described; but a second announcement by the Post Office Department clarified the matter:

The Bureau of Engraving and Printing, Treasury Department, has contracted with the American Bank Note Company, New York, N. Y., for the printing of these stamps to take advantage of their special multicolor printing equipment.

The series received world-wide acclaim, and remains a landmark in stamp design and execution. The stamp was printed by a combination of two distinct processes. The border was intaglio printed from steel plates and the remainder of the stamp printed on the Company's unique WLG presses, which could reproduce each flag in its proper colors in perfect register.

The first United Nations stamps made by the Company were produced in 1952. Its most recent order for the United Nations covered the commemorative issues of 1958. The other stamps issued by the United Nations during the present year were produced by the Company's British affiliate, Bradbury, Wilkinson & Co., Ltd., and the contract for next year's stamps has been awarded to Canadian Bank Note Company, Limited, another affiliate.

The United Nations Day, October 24, 1952, commemorative stamp (blue, 5¢, with the words "United Nations" around the border in the five official languages) produced by American Bank Note Company





W. FREDERIC COLCLOUGH  
President, 1952-  
Chairman, 1957-

When Albert Schomp became chairman of the board in 1952, W. Frederic Colclough became president. He had joined the Company as assistant to the president in 1940, after practicing law in New York with the firm of Sullivan & Cromwell. After service in the U. S. Army from 1941 to 1945, he was elected to the additional offices of secretary in 1945 and vice-president for foreign sales in 1949. In 1957 he became chairman of the board as well as president.

### *New Form of Stock Exchange Bonds*

In 1956 the New York Stock Exchange amended its requirements with respect to the form of listed bonds. Prior to that time buyers of newly issued bonds received temporary or interim documents so as to allow sufficient time to design, engrave and print the definitive or permanent bonds. The new pro-

cedure permitted the elimination of temporary bonds and the delivery of definitive bonds in the first instance. This involved technical changes in the design, layout and manufacturing procedures which at first seemed almost impossible under the necessary delivery requirements.

However, American Bank Note Company, in its customary manner, put its skilled organization to work on these problems and promptly pioneered the necessary changes in its manufacturing operations to meet the challenge, while maintaining maximum protection of the securities involved. The Company has printed the great majority of the bonds issued in this new form.

### *Other Recent Developments*

During recent years security printing and electronics have found many ways to join hands. Magnetic inks and character patterns which electronic brains can read are making it possible to combine the safety and accuracy of steel engraving and printing with the automatic handling provided by electronic techniques. Here again American Bank Note Company is playing a leading part.

One significant feature of the present decade has been the accelerated pace of borrowing by states, cities, public authorities and towns to finance better schools, highways and other public facilities. An increasing number of public bodies throughout the country have recognized the importance of quality in their financial documents, and have called upon American Bank Note Company for bonds appropriate in quality, safety and dignity to the importance of the financing.

### *Canadian Bank Note Company, Limited*

The Canadian and the British branches of the organization meanwhile continued to record impressive progress. In Canada the striking growth of the nation was being reflected in the output of Canadian Bank Note Company, Limited, and in England increased success in foreign markets and the development of advanced production techniques were further entrenching the position of Bradbury, Wilkinson & Co., Ltd.

The Canadian business of the Company was incorporated as a separate company at the close of 1922, with José A. Machado as president. In 1935



ERIC N. GIBBS  
Chairman and Managing Director, 1952-



Bradbury, Wilkinson and Company, Limited, at New Malden, England



DENIS M. COOLICAN  
President, 1952-



Canadian Bank Note Company, Limited, at Ottawa, Canada

Philip B. Toller became president and served until 1952, completing more than fifty years of service in the Company. He was succeeded as president by Denis M. Coolican.

Canadian Bank Note Company was an early pioneer in many employment practices which now have general acceptance. Its physical plant has always reflected careful consideration of employee comfort and needs, and it has been one of the leaders among Canadian firms in providing employee benefits.

In 1946 Canadian Bank Note Company embarked on a major project: the construction of a modern plant in a new location. With the burgeoning growth of Ottawa, the requirement of a location within the city limits had created a problem. It was solved with the decision of the city to expand, and Canadian Bank Note Company bought an excellent piece of property in the western part of the city.

A building of rare beauty and utility was erected, which included the modern lighting and comfort features associated with advanced design. All the special needs of bank note manufacture were provided for: fireproof construction, protective vaults and plant security measures. The new plant began operations in August of 1950, and it has proved to be a highly effective facility in Canadian Bank Note Company's service to the Government and business of its country.

### *Bradbury, Wilkinson and Company, Limited*

The story of Bradbury, Wilkinson and Company, Limited, in England is equally impressive. Among its first major triumphs after 1903 was obtaining the bank note business of Spain, a connection which continued for many years. In 1907, when Daniel E. Woodhull was called back to the parent company, his place as chairman was taken by Percy Wilmot Wilkinson, who served until 1920, including the years of World War I when the increased use of paper currency throughout the world taxed the capacity of the plant.

In 1921 Bradbury, Wilkinson moved its operations from various scattered locations in London to a new plant and office at New Malden, Surrey. The year before, H. Leslie Hendriks had succeeded Percy Wilmot Wilkinson as chairman. In World War II, Bradbury, Wilkinson was comparatively fortunate. While its City Branch and its City Sales Office, both in London, were totally destroyed, its principal plant in New Malden was only super-

ficially damaged. Total loss of production was never for more than a half day, although continuous air raids harassed its depleted working force.

In 1952 Eric N. Gibbs, who had rendered outstanding service for many years as head of its foreign sales organization, became chairman of Bradbury, Wilkinson, climaxing a career which has already stretched over fifty years in service with the organization. The difficult postwar years were followed by a period of accelerated operations, and in recent years the New Malden plant has been enlarged and its machinery and equipment have been greatly increased and improved, in order to enable it to meet with maximum efficiency the heavy demands upon its facilities.

While both Bradbury, Wilkinson and Company and Canadian Bank Note Company operate independently as self-contained organizations, with personnel drawn entirely from their respective countries, they, and the customers they serve, derive many benefits from the affiliation with the American company. The technical knowledge, research facilities and developments of the American company in the field of improved methods and equipment are available to them and enable them to render better and more efficient service. In the same manner the American company benefits from the knowledge and skills of the other two organizations. Finally, the customers of each company benefit through having available the services and facilities of the other companies in the countries where they operate. In these and many other ways this three-cornered union has been a fruitful one for all concerned.

### *The Company Today*

By 1958, a century after the Company was incorporated and 163 years after Robert Scot founded its bank note business, the world of money and investment has grown to amazing dimensions. The importance of documents of value has increased accordingly. The unending battle to make them safe and sure seems close to being won; but in this peculiar war there is no final victory, and temporary victory can last only so long as vigilance is maintained.

The Company is beginning the second century since its incorporation better equipped than ever before to serve its customers, domestic and foreign, private and governmental, for two reasons. First, on the foundation of its extraordinary experience it has built a young, vigorous and resourceful top and middle management organization; its senior officers have an average age of

51 years, and its top New York Plant officials 49 years. The average service of these officers and executives with the Company is 21 years. Second, it has put into operation important technological advances in its manufacturing departments, principally as a result of its own engineering and research. In 1958, for example, approximately 75 per cent of its steel-plate printing is being done on presses that did not exist five years ago. These presses, together with parallel improvements in other production steps, maintain the traditional quality standards of the Company and at the same time reduce costs. The added efficiency has noticeably offset much of the extra costs arising from American Bank Note's unique standards of quality and safety, and therefore the traditional price differentials which reflect these standards have been narrowing. This happy consequence of applied research may be repeated many times in the future, for the Company has just acquired a building adjacent to its New York plant at Hunts Point and is equipping it as its new Research Center.

The records of every company, whatever its field of service, hold an interesting story, because struggle and achievement are inherently interesting. Beyond this feature common to all companies, the American Bank Note story invites thoughtful consideration.

The great age of the Company raises the question, "What does the art of survival consist of?" It certainly does not consist of being inflexible, old-fashioned, or self-satisfied. On the contrary, as this story has shown, American Bank Note and its predecessors have time and again reorganized, reincorporated and realigned, moved plants, replaced equipment, changed methods, adapted to new conditions and found new markets when old ones were lost. Indeed, the art of survival seems to consist of courage, agility, resourcefulness, and a willingness to rush forward and grapple with the future in its own corner.

The art of survival also demands a constant awareness of the paramount importance of the customers and their needs, regardless of the size of the customer. This awareness is abundantly apparent in the Company's ancient order books, showing modest entries for small banks buried so deep in Southern hills or frontier plains that an observer must wonder how the Company salesmen ever searched them out, especially in the days before canal boats and railroad cars. Today's salesman is just as avidly seeking the business of all manner of small as well as large companies on the forthright triple basis of quality, service and price. One rule of business which does not change is that first you must get the business!



Finally, the art of survival, at least in the case of American Bank Note, has included a special way of setting policies and meeting problems that can best be described as “noncompetitive.” That is, American Bank Note has always set its course by determining what had to be done to assure unquestionable quality, safety and service, without regard to what was being done elsewhere. If, for example, careful analysis has showed that the paper for certain kinds of bank notes should be counted 87 times at various stages to assure perfect control, it is counted 87 times – and no voice rises in meeting to object that a competitor dispensing with 80 of those counts can sell for less.

An observer who is able to spend some time in close association with American Bank Note people quickly senses that this noncompetitive attitude is unalterably imbedded in their thinking, that they feel that any other approach could one day lead to short cuts which might be morally equivalent to short-weight delivery. A similar noncompetitive attitude will probably be found more often than not in the venerable leaders of other fields of industry.

### *“Security of Public” Still Company’s Guiding Star*

American Bank Note Company stands steadfast in its determination to discharge to the best of its ability, regardless of the sacrifices on its part that this policy sometimes entails, its responsibilities as the world’s leading “armament maker” in the battle to protect documents of value.

The stated purpose of the original Association – “. . . for the greater security of the public; believing that the same end can be attained in no other way” – is the Company’s guiding star today, as it was a century ago.

# AMERICAN BANK NOTE COMPANY

## DIRECTORS and OFFICERS\*

1858-1958

### Directors\*\*

J. DORSEY BALD 1858-1879, 1888-1890	J. TOURO ROBERTSON 1879-1900	W. MURRAY CRANE 1908-1915
SAMUEL H. CARPENTER 1858-1866	GEORGE H. DANFORTH 1879-1886	DANIEL E. WOODHULL 1910-1942
EDWARD J. DANFORTH 1858-1859, 1860-1863	TIMOTHY H. PORTER 1879-1894	AMBROSE MONELL 1910-1917, 1919-1921
MOSELEY I. DANFORTH 1858-1862	ANDREW V. STOUT 1880-1883	WILLIAM ELLIS COREY 1911-1934
TRACY R. EDSON 1858-1863, 1868-1876	JOSEPH S. STOUT 1884-1904	CHARLES H. SABIN 1912-1916
NATHANIEL JOCELYN 1858-1859	JARED K. MYERS 1887-1900	MOREAU DELANO 1917-1936
FREEMAN RAWDON 1858-1859	WILLIAM J. ARKELL 1888-1898	JAMES L. ASHLEY 1917-1945
CHARLES TOPPAN 1858-1863, 1866-1867	JOHN E. CURRIER 1888-1900	A. CLAXTON CARY, JR. 1919-1929
WILLIAM H. WHITING 1858-1859, 1867-1868	EDMUND C. CONVERSE 1889-1921	JOSÉ A. MACHADO 1919-1935
NEZIAH WRIGHT 1859-1879	JAMES B. FORD 1889-1928	P. CHAUNCEY ANDERSON 1919-1933
GEORGE W. HATCH 1859-1860, 1862-1866	ELLIOTT F. SHEPARD 1890-1893	WINTHROP M. CRANE, JR. 1920-
DEWITT C. HAY 1859-1860	WILLIAM A. SLATER 1894	H. VICTOR KEANE 1924-1939
CHARLES WELSH 1859-1860, 1866-1868	FELIX CAMPBELL 1894-1902	JOHN FOSTER DULLES 1925-1949
FRANCIS W. EDMONDS 1860-1863	ROBERT N. TOPPAN 1894-1901	LOYALL A. OSBORNE 1925-1937
ROBERT DRAPER 1860-1863	CHARLES A. MOORE 1899-1914	ALBERT L. SCHOMP 1929-1957
HENRY PERKINS 1862-1863	WARREN L. GREEN 1900-1919	BRITTON OSLER 1931-1943
HENRY E. SAULNIER 1863-1868	WILLIAM NELSON CROMWELL 1900-1948	JOHN P. MYERS 1931-
JAMES LORIMER GRAHAM 1863-1867	JOSEPH R. DELAMAR 1900-1918	S. SLOAN COLT 1931-
JOHN E. GAVIT 1863-1874	FRANCIS S. SMITHERS 1901-1919	PHILIP B. TOLLER 1935-1952
ALBERT G. GOODALL 1863-1887	JOHN MASON LITTLE 1903-1919	E. ROLAND HARRIMAN 1937-
JOHN G. WELLSTOOD 1863-1868	FRANCIS L. HINE 1903-1912	WILLIAM B. GIVEN, JR. 1937-1941
C. L. VAN ZANDT 1868-1880	FRANCIS L. POTTS 1904-1910	WALTER E. SMITH 1937-1955
O. DEFOREST GRANT 1868-1869	ANDREW V. STOUT 1904-1950	CURTIS E. CALDER 1941-1955
WILLIAM MAIN SMILLIE 1868-1888	GEORGE H. DANFORTH 1906	JOHN F. THOMPSON 1945-
GEORGE H. STAYNER 1868-1888	ALFRED JARETZKI 1906-1925	ALLEN W. DULLES 1950-1951
THEODORE H. FREELAND 1870-1911	GEORGE W. HAWKINS, JR. 1906	GARDNER D. STOUT 1950-
A. CLAXTON CARY 1875-1878	CHARLES R. GANTER 1906	JACOB L. HAIN 1951-
PHINEAS C. LOUNSBURY 1876-1925	JOSEPH FLEMING 1906	W. FREDERIC COLCLOUGH 1952-
CHRISTOPHER MEYER 1878-1888	ALFRED S. MAJOR 1906	DENIS M. COOLICAN 1952-
JAMES MACDONOUGH 1879-1903	MILLARD HUNSIKER 1906-1908	ARTHUR H. DEAN 1952-
JOSEPH W. DREXEL 1879-1888	WALLACE NESBITT 1906-1930	HAROLD J. CASTER 1953-
AUGUSTUS D. SHEPARD 1879-1904		W. ELMER COMBES 1955-

\* Overlapping of periods of service exists in certain cases listed on this and the following two pages because of the simultaneous existence of American Bank Note Company and United Bank Note Corporation from 1906 until their merger in 1911.

\*\* "Trustees" prior to 1911.

# AMERICAN BANK NOTE COMPANY

## Chairmen of the Board

JAMES MACDONOUGH	1901-1903	THEODORE H. FREELAND	1906-1911
AUGUSTUS D. SHEPARD	1903-1904	DANIEL E. WOODHULL	1935-1939
EDMUND C. CONVERSE	1904-1906	ALBERT L. SCHOMP	1952-1957
W. FREDERIC COLCLOUGH 1957-			

## Presidents

CHARLES TOPPAN	1858-1860, 1866-1867	AUGUSTUS D. SHEPARD	1901-1903
TRACY R. EDSON	1860-1863	THEODORE H. FREELAND	1903-1906
GEORGE W. HATCH	1863-1866	EDMUND C. CONVERSE	1906-1911
JOHN E. GAVIT	1867-1874	WARREN L. GREEN	1906-1919
ALBERT G. GOODALL	1874-1887	DANIEL E. WOODHULL	1919-1935
JAMES MACDONOUGH	1887-1901	ALBERT L. SCHOMP	1935-1952
W. FREDERIC COLCLOUGH 1952-			

## First Vice-Presidents

THEODORE H. FREELAND	1901-1903	A. CLAXTON CARY, JR.	1919-1929
WARREN L. GREEN	1903-1906	ALBERT L. SCHOMP	1929-1935
DANIEL E. WOODHULL	1912-1919	WALTER E. SMITH	1935-1955
W. ELMER COMBES 1955-			

## Vice-Presidents

TRACY R. EDSON	1858-1859	JARED K. MYERS	1903-1906	WALTER E. SMITH	1929-1935
MOSELEY I. DANFORTH	1859-1862	JOSEPH FLEMING	1907-1910	PETER AITCHISON	1929-1938
EDWARD J. DANFORTH	1862-1863	DANIEL E. WOODHULL	1907-1912	HENRY R. TREADWELL	1929-1946
JOHN E. GAVIT	1863-1867	A. CLAXTON CARY, JR.	1912-1919	GEORGE H. LYNOTT	1940-1951
ALBERT G. GOODALL	1867-1874	JOSEPH CLAUDET	1912-1934	W. FREDERIC COLCLOUGH	1949-1952
CLARENCE L. VAN ZANDT	1870-1880	JOSÉ A. MACHADO	1912-1935	ARTHUR A. WITTNEBEL	1949-1955
JAMES MACDONOUGH	1879-1887	H. VICTOR KEANE	1912-1940	W. ELMER COMBES	1953-1955
J. TOURO ROBERTSON	1879-1900	GEORGE S. HALL	1917-1925	JAY B. LAWRENCE	1955-
AUGUSTUS D. SHEPARD	1879-1901	ALFRED S. MAJOR	1917-1929	WILLIAM R. BARRETT	1955-
WILLIAM M. SMILLIE	1880-1888	ALBERT L. SCHOMP	1917-1929	ALBERT L. SCHOMP, JR.	1955-
THEODORE H. FREELAND	1900-1901	JOSEPH H. BAGLEY	1917-1933	CHAUNCEY P. FOOTE, JR.	1958-
WARREN L. GREEN	1901-1903, 1906-1911	HARRY F. PAYNE	1926-1939	MURRAY M. WISE	1958-

## Secretaries

WILLIAM H. WHITING 1859-1861	E. C. CONVERSE, JR. 1906-1908
FRANCIS W. EDMONDS 1861-1863	GEORGE H. DANFORTH 1907-1923
WILLIAM R. BLISS 1863-1865	JOHN P. TREADWELL, JR. 1923-1945
CLARENCE L. VAN ZANDT 1865-1870	W. FREDERIC COLCLOUGH 1945-1952
THEODORE H. FREELAND 1870-1900	LINCOLN C. BROWNELL 1952
JOHN E. CURRIER 1900-1906	EDWARD F. PAGE 1953-1957
F. K. JOHNSON 1906-1907	LOUIS T. HINDENLANG 1957-

## Treasurers

NEZIAH WRIGHT 1858-1873	JOHN E. CURRIER 1903-1906
GEORGE H. STAYNER 1873-1886	CHARLES L. LEE 1906-1935
THEODORE H. FREELAND 1886-1903	EDWARD F. PAGE 1935-1957
	LOUIS T. HINDENLANG 1957-

## Comptrollers

JOHN P. TREADWELL, JR. 1923-1945	W. ELMER COMBES 1945-1953
	STEWART B. MEDING 1953-

## BRADBURY, WILKINSON & CO., LTD.

ROBERT W. WILKINSON 1862-1903, <i>Chairman and Managing Director</i>
DANIEL E. WOODHULL 1903-1907, <i>Chairman</i>
PERCY W. WILKINSON 1903-1907, <i>Managing Director</i>
1907-1920, <i>Chairman and Managing Director</i>
H. LESLIE HENDRIKS 1920-1952, <i>Chairman and Managing Director</i>
ERIC N. GIBBS 1952-, <i>Chairman and Managing Director</i>

## CANADIAN BANK NOTE COMPANY, LIMITED

WARREN L. GREEN 1897-1901, <i>Resident Manager</i>
JOSÉ A. MACHADO 1901-1922, <i>Resident Manager</i>
1923*-1935, <i>President</i>
PHILIP B. TOLLER 1935-1952, <i>President</i>
DENIS M. COOLICAN 1952-, <i>President</i>

\* *Canadian Bank Note Company became a separate company at the close of 1922.*

# AMERICAN BANK NOTE COMPANY

## DIRECTORS AND OFFICERS IN 1958

### Directors

WINTHROP M. CRANE, JR. <i>Chairman of the Board, Crane &amp; Co., Inc.</i>	JACOB L. HAIN <i>Investment and Business Consultant</i>
JOHN P. MYERS <i>Director, The National Commercial Bank and Trust Company, Albany, N. Y.</i>	W. FREDERIC COLCLOUGH <i>Chairman of the Board and President</i>
S. SLOAN COLT <i>Director, Bankers Trust Company</i>	DENIS M. COOLICAN <i>President, Canadian Bank Note Company, Limited</i>
E. ROLAND HARRIMAN <i>Partner, Brown Brothers Harriman &amp; Co.</i>	ARTHUR H. DEAN <i>Partner, Sullivan &amp; Cromwell</i>
JOHN F. THOMPSON <i>Chairman of the Board, The International Nickel Company of Canada, Limited</i>	HAROLD J. CASTER <i>Reading, Pa.</i>
GARDNER D. STOUT <i>Partner, Dominick &amp; Dominick</i>	W. ELMER COMBES <i>First Vice-President</i>

### Officers

W. FREDERIC COLCLOUGH, <i>Chairman of the Board and President</i>	
W. ELMER COMBES <i>First Vice-President</i>	WILLIAM R. BARRETT <i>Vice-President</i>
CHAUNCEY P. FOOTE, JR. <i>Vice-President</i>	JAY B. LAWRENCE <i>Vice-President</i>
ALBERT L. SCHOMP, JR. <i>Vice-President</i>	MURRAY M. WISE <i>Vice-President</i>
STEWART B. MEDING <i>Comptroller</i>	LOUIS T. HINDENLANG <i>Secretary and Treasurer</i>
RICHARD K. BRISTOL <i>Assistant Comptroller</i>	ANTHONY J. MUSSLER <i>Assistant Treasurer</i>

## OFFICES and PLANTS

### AMERICAN BANK NOTE COMPANY

*Executive Offices* 70 Broad Street, New York 4, New York

*Plants* NEW YORK

Garrison Avenue and Tiffany Street, New York 59, New York

CHICAGO

118 East 20th Street, Chicago 16, Illinois

BOSTON

150 Causeway Street, Boston 14, Massachusetts

### *Sales Offices or Representatives*

NEW YORK

70 Broad Street, New York 4, New York

CHICAGO

118 East 20th Street, Chicago 16, Illinois

BOSTON

150 Causeway Street, Boston 14, Massachusetts

PHILADELPHIA

Land Title Building, Broad Street at Chestnut  
Philadelphia 10, Pennsylvania

SAN FRANCISCO

68 Post Street, San Francisco 4, California

CLEVELAND

Union Commerce Building, Cleveland 14, Ohio

DALLAS

100 Glass Street, Dallas 7, Texas

DETROIT

Fisher Building, Detroit 2, Michigan

MILWAUKEE

606 West Wisconsin Avenue, Milwaukee 3, Wisconsin

### BRADBURY, WILKINSON & CO., LTD.

*Executive and Sales  
Offices and Plant* New Malden, Surrey, England

*London Sales Office* 58-60 Moorgate,  
London E.C. 2, England

### CANADIAN BANK NOTE COMPANY, LIMITED

*Executive and Sales  
Offices and Plant* 145 Richmond Road  
Ottawa, Ontario

*Sales Offices  
or Representatives* MONTREAL  
360 St. James Street West  
Montreal 1, Quebec

TORONTO

25 King Street West  
Toronto 1, Ontario

CALGARY

512 4th Avenue West  
Calgary, Alberta

## THE STORY OF AMERICAN BANK NOTE COMPANY

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