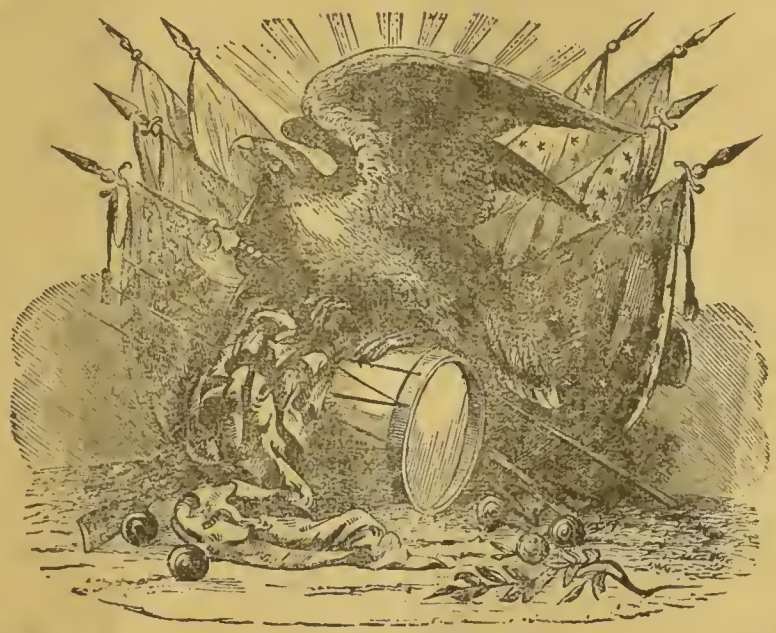
UNITED STATES

COUNTERFEIT DETECTOR,

— FOR —



INSTANTANEOUS DETECTION

— THE —

— OF ALL —

Counterfeit Paper Money,

— FROM —

Five Cents up to a Five Thousand Dollar Bond.

By John F. Beazell.

Chas. Vogt, Printer, 204 Fulton St., N. Y.

United States

Counterfeit Detector.

RULES FOR DETECTING COUNTERFEIT

"Greenbacks" & National Bank Notes,

MAKING THE

GEOMETRIC LATHE-WORK, RULING ENGINE-WORK,
AND KEY TO THE MYSTIC NUMBERS,

THE TEST ON ALL GOVERNMENT PAPER.

By John F. Beazell.

NEW YORK:
Printed by Charles Vogt, 204 Fulton Street.

The following Key will be fully explained by the Teacher. As the Counterfeiters have this test already, it must not be relied upon.

OFFICIAL
SECRET KEY,
FOR THE DETECTION OF
Counterfeit Greenbacks.

Letter **A**, *Remainder*,	-	1
" **B**, "	- -	2
" **C**, "	- -	3
" **D**, "	-	0

INTRODUCTORY.

BANK NOTE ENGRAVING, &c.

It is not our purpose to present to the public a book of such magnitude as to prevent its perusal by men of business, but to condense, as much as possible, a few plain facts on the subject of Bank Note Engraving, and the mode by which counterfeits may be detected. We have been led to this, from the fact, that no work has been published devoted exclusively to the present paper currency. Those we have seen, treat of the Old State Banks, whose notes are obsolete, and much that is said in regard to them is inapplicable to the present Bank Paper.

When Bank Note or Paper Currency was first introduced as the circulating medium, no engravings were used: the notes were printed with only common type. Such were easily imitated, and rogues soon put into circulation notes so well executed, that they could not be distinguished from the genuine issues. Engravings were next added as barriers to counterfeiting; but these, too, were in a short time so well imitated, that even good judges of money were often deceived. This led Engravers to the practice of using private marks on the notes they printed for the different Banks; and Bankers, with a pen, marked their issues in such a manner that they might know them again.

Since the year 1816, numerous and important improvements have been introduced by Bank Note Engravers, and, at the present time, the amount of artistic skill employed, and the elaborate and costly machinery used, as well as the large capital invested, render it impossible for counterfeiters to produce notes equal in beauty of execution to the genuine.

THE USE OF DIES---THE GEOMETRIC LATHE, &c.

The greatest obstacle to counterfeiters is the use of *dies* and the Geometric Lathe, as well as the invention of transferring engravings by means of a powerful machine, called the "Transfer Press"—but, perhaps, the greatest security to the paper currency of nearly the whole commercial world, is the work produced by the Geometric Lathe. This wonderful machine was first used by Murry, Fairman & Co., of Philadelphia, in 1816, and in view of the great beauty of the work, and the difficulty of imitation, its inventor, Mr. Asa Spencer, an "ingenious Yankee," repaired to England soon after, where it was also adopted by the Bankers, both of that country and Scotland.

The value of the Geometric Lathe for Bank Note Engraving does not consist simply in the beauty of its work, but from the fact, that it cannot be made to imitate any figure previously executed. It works out an original figure every time it is used, so that if a counterfeiter even had a lathe, he would be no better off than without it. The beauty and variety of lathe-work may be seen on all government paper, and is the test-work, from a five cent note to a five thousand dollar bond. It has been made the bulwark of defence to the present paper currency, the Medallion ruling, Perkin's plate and large lettering, formerly used on the State Bank Notes, being very properly discarded, as, after a long trial, it was found that the Geometric Lathe-work was the most difficult for counterfeiters to imitate.

There are many other obstacles to counterfeiters. They consist principally in the perfection of genuine work, and the power of producing, by means of *dies*, a number of plates of any given picture or ornamental portion of work needed on a Bank Note, each plate being an exact copy of the original, even to the smallest line or dot. Thus, when any of the Bank Note Engraving Companies produce a *portrait*, a die is made from the engraved portrait, and by means of this die, the plates with this portrait

upon them can be multiplied by those who have the die, and by *no one else*, not even the engraver who executed the original portrait from which the die was made, because the smallest shade or dot about the features materially changes the expression of a face that might be perfect in all other respects.

HOW DIES ARE MADE, &c.

The Engraver selects a piece of the best cast steel, of the proper size, and having carefully annealed, or softened it, and smoothed its surface, proceeds to engrave upon it the intended device. When this is done, the steel is hardened, and is termed a *matrix*. A cylinder of soft steel is now prepared, and being properly polished and adjusted, is made to roll over the engraved surface of the matrix, under a heavy pressure, until it receives a perfect impression—*in relief*—of the work upon the matrix. The cylinder is then hardened, and is called a *Die*, and being made to roll over the polished surfaces of soft steel plates, transfers its impressions to them.

These plates are exact *fac-similes* of the original matrix, and are used in the process of printing Bank Notes.

Another difficulty is found by counterfeiters in imitating the shading of letters and portraits, which is done by the Ruling Engine, and consists of a succession of *perfectly parallel* lines, all equally deep in the plate, and, taken altogether, produce a shade resembling one sweep of a painter's brush, and does not look as if made up of separate lines, which will be found to be the case when examined closely. The imitation of this work by counterfeiters is done with a graver, and the lines will be found to be uneven, some darker and some closer together than others, and this produces a *scratchy* appearance. The same Ruling Engine is often used to produce skies, or clouding on landscapes, or the back-ground of portraits seen on genuine bills. This being also imitated by the graver, will have a scratchy appearance, as before mentioned.

WHY GENUINE WORK EXCELS COUNTERFEITERS.

The large amount of capital required to perfect a Bank Note Engraving Establishment, the number of first-class artists employed, and the use of elaborate machinery, render it impossible for counterfeiters to equal the work done by regular Bank Note Engravers.

The preparation of a plate for a genuine note is the work of at least ten first-class artists. In whatever branch the artist excels, he is employed. One may excel as a portrait engraver, another in lettering, &c., &c., whereas one counterfeiter may be compelled to do all the work on his plate, and he would be a prodigy if he were a proficient in all the branches. This accounts for the difference in the several parts of a counterfeit. Sometimes the lettering will be well executed, while the vignette, or some other parts of the note, will be very defective.

The counterfeiter, not having machinery for transferring dies, engraves directly on the plate he prints with. This gives his notes the appearance of having been printed with wood-cuts—rough and scratchy.

There is always a defect in the eyes of portraits on counterfeit notes, as well as want of natural expression in the countenance. For example, see the failure on counterfeit Greenback ones, tens and fifties, respectively, of Chase, Lincoln and Hamilton, and their general failure in the small human figures in the representations of the historic paintings on the counterfeits of the National Banks.

THE DESIGN OF THE U. S. TREASURY---SUCCESS OF COUNTERFEITERS.

It was the expectation of the Treasury Department, that the Government paper should excel all previous issues of Bank Notes in beauty of execution and suitable devices. For this purpose, the best artists in the world were employed, and no expense spared to

attain this object. It was supposed, when the elegant Greenbacks were issued, that the counterfeiters' occupation was gone, but this proved to be a serious mistake, as counterfeits of several denominations soon made their appearance, so well executed, that they found their way into Banks; and at this time "all sorts and sizes" are afloat, from the diminutive three-center to the thousand dollar Treasury bond, and counterfeits of various denominations on several hundred National Banks are scattered broadcast, so well executed as to deceive all who have not the government tests.

As the country is now deluged with counterfeits, it is absolutely dangerous for those not having the government tests to receive paper money. Every man of business, and especially young men, should give the matter of counterfeit detection their careful attention. The faculty of judging money heretofore has been acquired by a frequent examination of perfect work. Our system is acquired in five minutes, enabling the person instructed to detect a counterfeit instantaneously without the aid of a magnifying glass.

Bankers and others who daily handle large sums of money, have an advantage over those who do not—yet, with all their experience, they are imposed upon with counterfeits. Their only safety is in our system of instantaneous counterfeit detection, embracing the five government tests.

The student should take well printed notes and examine them carefully with a microscope, looking at them intently every day, and in a short time a test will be formed in his mind of what perfect work should be, and the moment he sees that which is imperfect, it will arrest his attention. He can then compare the counterfeit with the genuine test work in this book, and soon settle the question as to its genuineness.

We will again repeat this fact, that the greatest security against counterfeiters is the machine-work on genuine notes. This the counterfeiter attempts to imitate by hand. The most remarkable is the beautiful work of the Geometric Lathe. This *net-work* of cur-

vilineal lines is found encircling the denominational figures in various forms, as perfect as nature. THE PERFECTION OF THIS WORK IS THE CHIEF TEST ON ALL GENUINE NOTES. *There is no lathe-work* on a counterfeit—it is only an imitation, executed by hand with the *graver*.

At least four kinds of engravings are used in perfecting a bank note plate, viz: *Geometric Lathe*, Parallel Ruling, Vignettes and Portraits.

The devices which beautify the notes of foreign countries, are all executed by machines executed by Americans, and for fifty years our countrymen have owned and managed the largest Bank Note Engraving Establishment in London.

The exquisite lace work which will be found surrounding the denominational figures on genuine notes, is the work of this remarkable piece of mechanism previously mentioned—the *Geometric Lathe*—and its varied and beautiful patterns will be found on all Government notes, and is one of their principal tests of genuineness. The machinery used by Engraving Companies, is beyond the reach of counterfeiters in price, costing from $250,000 to $300,000, and its magnitude would prevent its concealment.

The numerous circles, ovals, ellipses, borders, backs, &c., of genuine notes, are all composed of a beautiful net-work of delicate white lines crossing each other at certain angles, producing an endless variety of *Geometric* figures. This fine white line is the gem which beautifies this description of engraving, and cannot be found successfully imitated on any counterfeit. Sometimes this geometric lathe line is black, being the original production of the Lathe—but by an elaborate process, it is converted into the white line, on a black or green ground. The white line, however, has been adopted in preference to the black.

The ink used in printing genuine notes is of a very superior and costly quality, manufactured by a secret process, expressly for this purpose. Counterfeiters, therefore, are obliged to use inferior ink, both red, black or blue, which, when examined closely, will be found

to present a dim, gray, muddy appearance, whilst the genuine has a jet black, bright red, or deep blue, glossy surface, giving the note a beautiful metallic lustre.

The eyes are an important point—the principal characteristic in the genuine being, that the *pupil is distinctly visible*, the white of the eye showing clearly, whilst in the counterfeit they are hollow and unnatural, the white seeming to mix with the pupil, and the pupil resembling dots of ink.

The nose, mouth and chin, on figures of genuine notes, are well formed, natural and expressive ; the lips slightly pouting, and the chin prominent. The contour of the neck is displayed by the most delicate shadowing, and its proportions harmonizing perfectly with the rest of the figure. The arms have a graceful curve, the flesh represented by delicate dots and fine lines, so exquisitely blended, as to convey an idea of plumpness. The hands and feet are also delicate and beautifully formed, the *fingers and toes clearly and accurately defined.*

The counterfeiter's attempt at lathe-work is easily detected, when compared with genuine, represented in this work. It has a *blurred, flat, scratched appearance*, where the lines intersect each other. *Counterfeits are entirely destitute of those fine white curved lines which stand out* from the dies on a genuine note, like delicate white wires over an oval bird cage.

In conclusion, we would suggest to all the great importance of *scrutinizing closely every note offered*, and also a *frequent examination with the microscope* of the beautiful *genuine Lathe-work, and Ruling Engine work*, represented on the elegant plate in front of our book. This will *impress indelibly* upon your mind what *genuine test-work is—so, when a counterfeit is presented, you can detect it instantaneously.*

Certificates from Bankers and Business Men.

Office of LOCKWOOD & Co.,
Bankers,
NEW YORK, 28th SEPT., 1868.

Genl. J. W. Beazell:

Dear Sir:—We have examined your method for detecting counterfeits on the issues of the United States Treasury, and consider it of very great value to all parties handling bonds or currency.

Yours, &c.,
LOCKWOOD & Co.,
Bankers.

WATERTOWN, N. Y., 1868.

Genl. J. W. Beazell:

Dear Sir:—Having thoroughly examined your copyright for the detection of Counterfeit money, I take great pleasure in recommending it to Bankers and business men as invaluable, and the only true method.

Yours, very truly,
G. F. PADDOCK,
Cashier 2d National Bank.

NATIONAL BANK OF FAYETTE COUNTY,
Uniontown, Pa., Oct. 1st, 1867.

I am acquainted with the mode of detecting counterfeit money, copyrighted by J. F. Beazell, and have no doubt of its great value, when thoroughly understood. *In fact, it is the only correct method.*

Signed,
JNO. K. EWING, *President.*

We fully concur in the above recommendation.

N. HOLMES & SONS, *Bankers.*

PITTSBURGH, Oct. 20, 1867.

MECHANICS SAVINGS BANK,
Pittsburgh, Sept. 20th, 1867.

I am acquainted with Mr. Beazell's mode of detecting counterfeit money, and until I learned that system, had little confidence in my judgment. I take pleasure in recommending it to the business men in this city. *His rules are infallible.*

GEORGE D. TINDLE, *Treasurer.*

FIRST NATIONAL BANK OF FRANKLIN, PA.
December 5th, 1867.

I have examined Beazell's system of counterfeit detecting, represented by Mr. Shannon, of Pittsburgh, and endorse it fully, as tho only true method of detecting counterfeits. His tests are infallible, and no one understanding them can be imposed on with countorfeits. Would recommend it to the consideration of all business men. Have adopted the system in our bank.

R. L. COCHRAN, *Cashier.*

I have examined Beazell's system for counterfeit detection, and heartily concur in the recommendations our Bankers have given it.

A. M'DOWELL, JR., *Editor Venango Citizen.*

FRANKLIN, PA.

MERCHANTS NATIONAL BANK,
Meadville, Pa., Dec. 13th, 1867.

I have examined carefully, Beazell's great system for detecting counterfeit money, and take pleasure in recommending it as invaluablo to all persons handling money, and worthy their patronage.

CHAS. E. McFARLAND, *Cashier.*

FIRST NATIONAL BANK,
Titusville, Dec. 27th, 1867.

Have examined Beazell's splendid system for detecting counterfeit Greenbacks and National Currency, and pronounce it the only true system, and worthy universal patronage.

C. C. DUFFIELD, *Cashier.*

FIRST NATIONAL BANK,
Conneautville, Pa., Dec. 24th, 1867.

I have examined Beazell's system of detecting counterfeit money instantaneously, and can recommend it as the only perfect mode of detecting counterfeit legal tender notes and National Currency.

D. D. WILLIAMS, *Cashier.*

J. R. DICK & CO., BANKERS,
Meadville, Pa., Dec. 11th, 1867.

We have examined carefully Beazell's valuable system for detecting counterfeit paper money, and know it is the only correct and perfect method. It is invaluable to all classes of business men.

J. R. DICK & CO.

Recommendations from Leading Merchants of Pittsburgh.

PITTSBURGH, Oct. 20th, 1867.

The system for detecting counterfeit money at sight, by Mr. J. F. Beazell, is invaluable to all persons handling money, and is so plain and complete that it can be thoroughly understood in five minutes time. It is certainly the only true method, and we speak knowingly when we say it is worth one hundred times what it costs to learn it. No Banker or Business man should be without it.

Very Respectfully,

John Stevenson & Son, Jewelers, 93 Market Street,
Smithson, Palmer & Co., Auctioneers, 59 Fifth Street,
John I. House & Co., Groceries, Water Street,
Reymer Bros., Confectioners, Wood Street,
R. Robison & Co., Merchants, 225 Liberty Street,
Wm. Carr & Co., Merchants, Liberty Street.

Gray, Possiel & Reese, Merchants, Fifth Street,
Alex. McCallum, Merchant, Fifth Street,
Wm. Sumner & Co., Sewing Machines, Fifth Street,
Macrum & Carlisle, Merchants, Fifth Street,
Richard E. Breed, Merchant, Wood Street,
Meyers, Schoyer & Co., Post Building,
Joseph Horne & Co., Merchants, 77 Market Street,
J. H. Richards, Merchant, 30 Fifth Street,
J. Porterfield & Co., Merchants, 15 Market Street,
J. M. Burchfield & Co., Merchants, Market Street,
C. H. Love & Bro., Merchants, Market Street,
Dunseath & Hallett, Jewelers, Fifth Street,
Bates & Bell, Merchants, Fifth Street,
Graff, Hugus & Co., Stove Dealers, Liberty Street,
Geo. Malin, Merchant, 69 and 70 Water Street,
James Robb, Jr., 89 Market Street,
A. L. Hawkins, Merchant, 79 Wylie Street,
E. Reineman, 67 Smithfield Street,
J. J. Snodgrass, 24 St. Clair Street,
Rutledge, Perry & Co., 345 Liberty Street,
Henry Miner, Newsdealer, 71 and 73 Fifth Street
W. W. Knox, 137 Liberty Street,
J. C. Thompson, 17 Market Street.

NEW YORK, SEPT. 30TH, 1868.

Genl. J. W. Beazell:

Dear Sir:—Have examined your method for detecting counterfeit paper money instantaneously, and think it of great value to all persons handling either money or bonds.

Yours very truly,

H. B. CLAFLIN & Co.

Merchants.

1st Nat Bk Boston

Central Nat Bk of City

Government Nat Bk C. 9

2d Nat Bk Cin. O.

Nat'l Banks

2 "

10 "

20 "

50 U.S. – 550 on back

56720

5000

56720

20

UNITED STATES

10

COUNTERFEIT DETECTOR

FOR EXPOSING FRAUDULENT

Counterfeit Paper Money,

DESIGNED TO BE

FROM FIVE CENTS UP TO A FIVE THOUSAND DOLLAR BOND.

BY SOLON ROBINSON

1000

100

CONTINENTAL BANK NOTE CO NEW YORK