

THE UNIVERSAL

COUNTERFEIT

BANK NOTE DETECTOR,

AT SIGHT,

A System of Infallible Detection, applicable to all
modern plates of all

BANKS IN THE U. S.

NOW IN CIRCULATION OR HEREAFTER ISSUED.

Complete in eight rules, with diagrams for self-
instruction,

ARRANGED AND IMPROVED

BY H. C. FOOTE,

NEW-YORK.

~~~~~  
PRICE TWO DOLLARS,

Including a Magnifying Glass, enclosed and sent  
by mail to any part of the U. S.

-----  
New-York:

OLIVER & BROTHER, STEAM PRINTERS,  
89 Nassau-street, Sun Building.

1849.

Entered according to Act of Congress, in the  
year 1848,

BY WHEELER M. GILLETT,

In the Clerk's Office of the District Court for  
the District of Ohio.

## UNIVERSAL

# COUNTERFEIT DETECTOR.

---

The principle in universal Counterfeit Bank Note detection at sight consists in explaining the process of engraving a genuine bank note plate, describing the perfect and costly machinery used, and the insurmountable difficulty counterfeiters have in imitating by hand, which is the only way it is in their interest to imitate it, as, even it was in their power to get all the necessary machinery and stock, it requires a heavy capital invested, \$50,000 to \$100,000, besides the assemblage of a company of first-class workmen. If counterfeiters should invest the necessary capital for machinery, &c., it would then be their interest, as a matter of policy, to do an honest business, or else they would be liable every hour to be detected and their property confiscated, when they would lose more than they could ever make by counterfeiting. But a knowledge of this

fact, to benefit the public, must be attended with an explanation of the principles of the genuine work, to enable any one to detect any counterfeit at sight. This is the object in getting up this pamphlet. Why so important a fact as this has never before been introduced to the public, is a mystery, unless it was through a groundless, over-cautious fear of counterfeiters getting too much information. This system protects itself, and the more counterfeiters know of its principles the more they will despair of overcoming them. The system is arranged, for the sake of order, into eight rules, three of which are infallible, the rest are general rules. This pamphlet is intended for general circulation for self-instruction. Simplicity of style and explicitness will be aimed at, so that the mechanic, the farmer, or the banker, merchant or business man, or even a boy twelve years old, who can see the difference between a square and a circle, can, with this pamphlet, a magnifying glass, and any genuine and counterfeit bill, together, either on the same or different banks, apply the rules and master the system in from one to two hours, though perfected afterwards of course by practice. The magnifying glass helps in learning, but afterwards the naked eye is sufficient, though, it is always convenient to have it on hand, in cases of worn out notes, &c.



## RULE I.

## GEOMETRIC LATHE.

(Infallible when imitated.)

The Geometric Lathe is a perfect and costly machine, used by all Bank Note Engraving Companies to engrave peculiar ornamental patterns on the dies on which the figures, the denomination of the bill are often placed. A sketch of this machine is quoted from "Nicholson's Operative Mechanic."

"One of the most important securities to the paper currency of nearly the whole commercial world at the present time, arises from the invention of transferring engravings and the work produced by the Geometric Lathe, invented by Mr. Asa Spencer, while a resident of New London, in the State of Connecticut. The application of this Lathe work for the security of bank notes was first made by Messrs. Murray, Fairman & Co., of Philadelphia, in 1816; and, from its great beauty and difficulty of imitation, Mr. Spencer was induced to repair to England, in 1819, for the purpose of securing the paper currency of that country. As had been expected, this work was put to the severest test which the combined talent of its great metropolis could invent, and having passed this trial in a very satisfactory manner, it was subsequently adopted very generally by the banks and bankers of England and Scotland.

“The Geometric Lathe differs very materially from any other turning engine hitherto invented. The only one which has any similarity in the work produced, is the Rose Engine, but that is only capable of *copying* patterns previously made upon ‘guides,’ while the Geometric Lathe forms its own patterns, which are all *originals*, and as various and unlimited as the Kaleidoscope. \* \* \* \*

\* \* \* \* The impossibility of successfully imitating this work, by any process of hand-work within the reach of the whole combined talent of counterfeiters, will not be doubted when the severe test to which it has been submitted, since its first introduction into use, is recollected, and even supposing any combination of counterfeiters to be in possession of the different machines and appendages necessary to effect their object, they would soon learn that the time which would be required to learn the use of these implements in secret could be much more profitably employed in any honest occupation.”

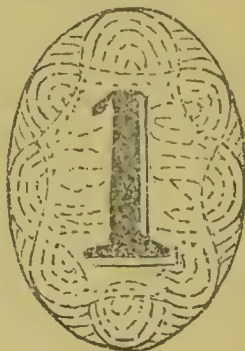
The patterns produced by the Geometric Lathe are beautifully interwoven eccentric circles. The original die would print *black* circles on a white ground, but by being transferred, hundreds of transfers from one original pattern—another security invented by Perkins,—the transfers print *white* circles on a black ground, be-

ing reversed from the original. But one single original pattern is ever suffered to be made by the Geometric Lathe, and transfers to an almost unlimited quantity can be taken from this one die, and two or four transferred dies, all exactly alike, are generally put into the same plate; but counterfeiters cannot make two exactly alike, not having the transferring machinery, they are obliged to engrave each one separately by hand, and though sometimes closely resembling, a difference can plainly be seen. So that whenever there are on a genuine note two or more dies of Lathe work, that pretend to be alike, they are always white circles upon a black ground, and all the dies exactly alike, being all transferred from the same original. No one can fail in comprehending this. There will therefore be two ways in which counterfeiters will inevitably fail in imitating the Lathe work dies. First, in imitating the beautifully interwoven eccentric white circles, second, failure in getting two or more dies exactly alike in the same bill. The Geometric Lathe is used for turning the pattern on backs of watch cases, called "Engine-turned backs." The following diagrams will serve to illustrate the style of the Lathe work. No. 1 represents something of the style of a genuine transferred die; No. 2 an imitation of it done by hand; No. 3 the style of a square

or horizontal die; No. 4 an imitation by hand, dots pricked in by hand instead of interwoven white serpentine lines.

Genuine, No. 1.

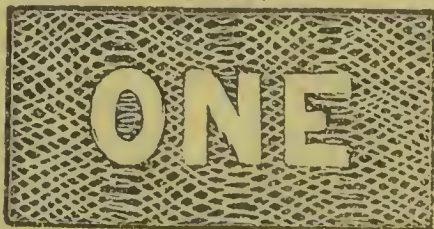
Counterfeit, No. 2.



No. 3.



No. 4.



RULE II. (INFALLIBLE.)

RULING ENGINE.

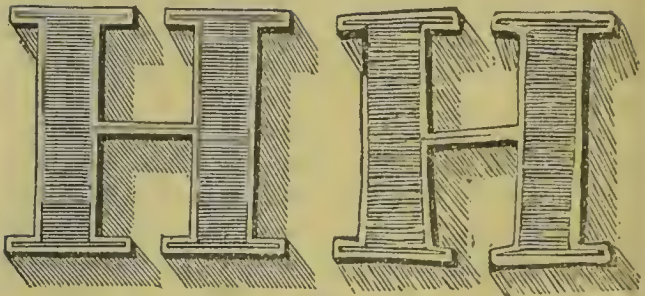
This machine is perfect, inimitable, and

costly. It is used for ruling the shade underneath and on the face of the large letters, title, &c. This shading is composed of fine parallel lines, generally so fine and smooth as to appear to be all in one solid pale body, as though it had been done with a brush. The point is—the lines to be genuine Ruling Engine work, should be all perfectly straight, all exactly of the same calibre, equidistant, and perfectly parallel to each other. The shading in counterfeits is done by hand, with a graver, and the lines are irregular in the distances apart, some coarser than others, some crooked, and some not parallel, which gives a scratchy, uneven appearance, easily detected. Diagram No. 5 represents the style of the shading of the genuine Ruling Engine work, and No. 6 its imitation done by hand.

The skies in the vignettes in genuine bills are sometimes done with a Ruling Engine, when the lines which are horizontal are perfectly even, straight, and smooth, as though it was done with a brush; when imitated by hand, the lines will appear uneven and scratchy. But sometimes genuine skies are in heavy rolling clouds, and in some they slightly wave and fade off in fine dots at the edge, but they always look soft, smooth, and natural, while in counterfeits it is generally coarse, harsh, and scratchy.

Genuine, No. 5.

Counterfeit, No. 6.



## RULE III.

## PENTOGRAPH OR MEDALLION RULING.

The Medallions, so called because they are intended to imitate the raised impressions on medals and coin. They are full-length-line engravings; the patterns, heads, or other ornamental patterns are ruled in by the Pentograph Ruling Machine. They always appear remarkably smooth and perfect, beautiful specimens of art. The lines are all of the same calibre; they never cross or touch each other, and never break off in the midst of the pattern, but every line of which the pattern is composéd can be traced with the magnifying glass completely through, unbroken from one side or end to the other. This is what gives it such a transparent and perfect appearance. The imitations of this work done by hand always look dead, dull, and flat, lines broken and forked together, and not of the same calibre

all through the pattern, easily detected. This work is also transferred, and two or four medallions, generally two, on which are the figures, the denomination of the bill are often put into one plate, and whenever there are two or more that pretend to be alike in the same bill, they are always exactly alike, being all transferred from the same original; but there cannot be two medallions made alike by hand but that the eye can detect a difference at a glance.

Diagram No. 7 will serve to show the style of the medallion work as it is counterfeited. The lines across the whole pattern should be full length in the genuine, and never break off in the midst of the pattern, as they do in the cut.

Counterfeit Medallion, No. 7.



RULE IV.

FACES, EYES, HAIR, DRAPERY, AND SCENERY.

This is a general rule, and not infalli-

ble as to the perfection of the work, being always done by hand, by the best talent the country produces—in the genuine bills. Counterfeiters generally fail, particularly in the most difficult point, the human face and eyes, which is always well done in the genuine, and the eyes have a natural expression, and bears magnifying. But counterfeiters fail at least in nine cases out of ten in the eyes, appearing like dots without expression. The hair in genuine bills is soft and silky, but it is generally coarse and harsh in counterfeit. The drapery should be soft, flowing easy, and natural, closely resembling cloth, even when magnified; but it is generally stiff and dead looking, like cast iron or a heap of dirt, or like coarse wire-cloth twisted up in a gale of wind, in the counterfeit. The scenery; back-ground, and sky should be perfect, and bear magnifying.

#### RULE V.

##### LETTERING AND ENGRAVERS' NAMES.

This relates to the perfection in lettering, the shape, size, uniformity, and regularity in distances of the letters of the title or name of the bank, which, as it always strikes the eye first, there is always pains taken in having it perfectly done. The engraved writing "Promise to pay on demand," &c., in the genuine is always done very perfect, by the best workman. The most universal deficiency in the letter-



ing of counterfeits is in the imprint, or names of the Engraving Co. at the bottom of the note, generally. This is always beautifully neat and perfect in all genuine modern plates, being a transferred die, while it fails in counterfeits at least in 49 cases out of 50; instead of being perfect, the letters are cramped, not on a straight line, not uniform in size or in slant. Therefore this often proves to be the most important point in the fifth rule.

#### RULE VI.

##### SIGNATURES AND FILLING UP.

A general rule. To notice whether the number and date appear to be written by a bank Clerk in a neat, business like hand, or whether it appears to be done in a slow, awkward, clumsy school boy hand, which is often the case in Counterfeits. The signatures of the President and Cashier in counterfeits are generally in a cramped, disguised hand, a want of ease, freedom and originality; and also the President and Cashier's names often appear both in one, though a disguised hand. But a case may occur, though rarely, in which the President, having a 'power of Attorney,' signs both his own and the Cashier's name, as in the Commercial Bank of Friendship, N. Y. Sometimes in counterfeits, the signatures are engraved fac simile's, and often traced over with a pen, but the hair strokes are not touched, and a difference in

color can be seen. Lithographed signatures always have a greyish, dull stamped appearance, not lively like writing. They are easily detected.

#### RUEE VII.

##### ✓ PAPER AND GENERAL APPEARANCE.

This is easily understood, as genuine Bank Note paper is only manufactured expressly for the Banks and the Bank Note Engraving Companies' use, and cannot be obtained by every one.

#### RULE VIII.

##### ANASTATIC TRANSFERS.

This is a new way of counterfeiting, done by transferring the impression from a genuine note upon a smooth plate of zinc. (See *Webster's Unabridged Dictionary* "*Anastatic Printing*.") All that have been issued by this process fail in three important points, therefore, it seems inevitable from the nature of the process. 1st. Blurred. 2d. Indistinct in places. 3d, and most important point, an almost entire failure in transferring the hair strokes. See 5's counterfeit New Haven Bank, 1849. The fourth point will, of course, be counterfeit signatures.

#### ALTERED BILLS.

These rules help one hundred per cent. in detecting altered notes. The process of altering is done in several ways. One way is in altering a ONE to a TWENTY ; all

he ONE's are cut out and TWENTY's pasted  
 in their place. This is easily detected.  
 Hold it up to the light. Another way is  
 in dissolving the letters in the title or  
 name of the bank of some broken bank  
 bill, by some alkali or chemical fluid, and  
 printing in the name of some sound bank  
 in its place. For instance, Madison coun-  
 ty Bank, N. Y., One's, Vignette, three  
 ennales, altered from some old broken  
 bank plate. The words MADIS— were in-  
 serted in the place of some other word  
 that ended in ON, perhaps "Clinton."  
 The shading on the —ON COUNTY BANK  
 is perfect, being done by the ruling en-  
 gine, while in MADIS— the shading is  
 done by hand, being coarse and uneven.  
 This is at once detected, as an alteration  
 by any one understanding the ruling en-  
 gine work, and confirmed also by the bun-  
 gling appearance of 'NEW YORK SAFTY  
 FUND' and 'CAZENOVIA,' and the signa-  
 res appearing to be both done by one  
 hand, though disguised. Thus there are  
 generally three places besides the signa-  
 res to detect a bill altered from any  
 broken bank, viz.: 1st—the State. 2d—  
 title or name of the bank. 3d—town or  
 location.

#### TRANSFERRING.

This is an invention of Perkins, and is  
 a great check to counterfeiters. All the  
 ornamental work in a genuine bill is

transferred; the lathe work, medallions, portraits and vignettes are all transferred—hundreds of copies from one original die, all of course, exactly alike. If a bank, for instance, got out a set of plates, 1's, 2's, 3's, 5's, 10's, 20's and 50's, and wanted to get a portrait of Franklin in each plate, they would all be exactly alike, not each engraved separately by itself, but all transferred from one original die.

#### CONCLUSION.

No matter how much a bill is worn, provided it is not completely used up, and the denomination, title, &c., can be read, the application of these rules will decide at once whether a plate is genuine or not. The first point to examine is the lathe work. If it is imitated by hand, no matter with how much care and labor, a glance will detect it; but it is sometimes possible for a counterfeit to have stolen genuine dies in it. A few years ago, a Bank Note Engraving Company failed, and their stock and machinery was sold at auction. The other companies bought in all the machinery, but some old worn out dies were sold to the highest bidder. Some of them got into the hands of counterfeiters, who used them in their issues. The 2d rule; the ruling and shading of the letters by the ruling engine cannot be bought, stolen or imitated. Next, the 3d rule:

this cannot be imitated, the medallion ruling. The 4th rule next; the eyes are very apt to be poor in counterfeits. The 5th rule; look to the lettering, and especially to the engravers names. 6th rule; the filling up and signatures. 7th rule; paper and general appearance. 8th rule; Anastatic process. I have never yet seen a counterfeit plate but that from two, three, four to six of these rules would condemn it at sight. Some of the rules may be good, but there is always enough by which to detect any counterfeit. •

---

### Recommendations and References.

---

I have examined Mr. Foote's method of detecting Counterfeit Bank Notes, and have no hesitation in saying that, in my opinion, it will be exceedingly serviceable to any one who will give it their attention.

F. W. EDMONDS,  
Cashier, Mechanic's Bank, N. Y.  
New York, Sept. 18. 1849.

I concur in the above opinion.

W. J. SMITH,  
Book-keeper at Levi Cook & Co.'s,  
71 Broadway,

E. H. ARTHUR,  
Assistant-Cashier, Union Bank, N. Y.  
New York, Sept. 18. 1849.

I have examined Mr. Foote's method, &c., and do not hesitate to say that I think it worth all the thanks for instruction.

G. W. ROBINSON,  
Exchange, 212 Broadway, N. Y.

- G. T. Warner, Exchange, 316½ Byoadway  
 J. T. Burr, Baker's Exchange office, 1 Chatham square.  
 H. Wood. Exehange, 32 Bowery,  
 Joseph Hough, Exchange, 220 Broadway, under  
 Am. Museum

I fully coneur in the foregoing reeommenda-  
 tions.

CHARLES COLGATE.

Exchange, 67 Wall-street.

- W. S. Alton, Exchange. 33 City Hall Square  
 E. N. Hyde, Exchange, 246 Greenwich-street.  
 Jas. S. Cadle. " "  
 Thomas H. Braisted, Exchange. 146 Chatham-st.  
 James McChesncy, Exchange. 71 Wall-street.  
 J. M. Glover, Exchange, 160 Greenwich-street.  
 S. H. Jessup, of Jessup & Cole, Exchange, 191  
 Greenwich-street.  
 Wilson Defendorf, Exchange. 82 Wall-street .  
 S. B. Cotte, Exchange, 133 Bowery.  
 S. Drury, 38 Wall-street.  
 A. Bininger, 141 Broadway.  
 John G. Fisher, "  
 Lewis St. John, Exchange, 118 Chatham-street.  
 A. Finley, Exchange, 36 Fulton-street.  
 Benjamin Waterbury, 259 Broadway.  
 E. O. Tompkins, of Tompkins & Blaek, Jewellers,  
 247 Broadway.  
 B. Warner. Book-keeper, Ward's India Rubber  
 Depot, 159 Broadway.  
 S. G. Paddock, Book-keeper at McDougal & Rush-  
 more, cloths, 84 Cedar-street-  
 B. F. Robinson, of W. T. Jennings & Co., 231  
 Broadway.  
 L. L. Bennet, 251 Broadway.  
 S. W. Dauchy, Teller, Bank of Troy, N. Y.  
 C. P. Hartt, Teller, Troy City Bank.  
 B. A. Manchester, Broker, Buffalo, N.Y.  
 R. A. Goodenough, " "  
 A. J. Rich, Cashier, Bank of Utica, Bnffalo.  
 C. H. Avery, Teller, State Bank of Michigan, De-  
 troit, &c. &c,

# APPENDIX.

---

## **The Piecing Operation.**

This famous process of making 10 bills out of 9, or 6 out of 5, is done as proved by a specimen seen lately—a “20” on a S. Carolina Bank.—by cutting out perpendicularly a piece one eighth of a bill, and inserting in its place a piece of a counterfeit to match. A piece of another bill would then be cut out in a different place, and a counterfeit piece inserted, and so on with the requisite number of bills, when the pieces of genuine left surplus are pasted together with one piece of counterfeit, making a complete bill which will be the profit on the operation. The counterfeit part of the bills which is inserted is then defaced and made illegible to escape observation.

---

### *Note to Rule 2d.*

Another item in distinguishing in this rule, is, that the lines in the shading of the letters done by the ruling engine, come to an end, square, abrupt, and even, while the shading done by hand is generally apt to *taper* off fine and uneven lengths.

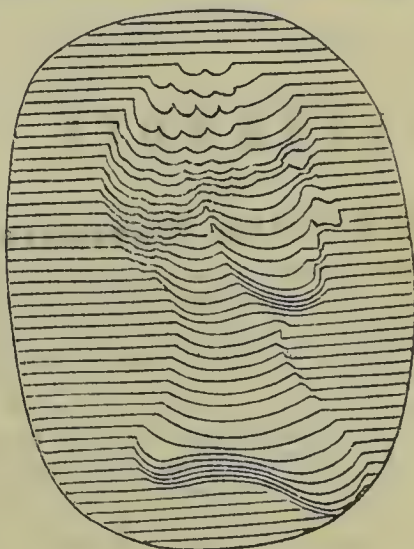
---

### *Note to Rule 3d.*

#### MEDALLIONS.

In Medallion ruling there is a medal with the actual raised impression on it, used as a guide to

the ruler in the Pentograph Ruling Engine. The following cut serves to show the principle.



MEDALLION.

*Note to Rule 8th.*

The new counterfeit 5's New-Haven Bank, Ct. is supposed however from late revelations to be fraudulent, but miserable impressions from the genuine plate. The 8th rule will apply to 5's counterfeit National Bank, Providence, which has the appearance of a mezzotinto drawing, or a miserable *daguerreotype* or *Talbotype, on paper*. Any one would know it was not a steel or copper engraving at sight.

*Note to Altered Bills.*

Broken Bank bills are sometimes altered by extracting the *name* of the Bank, also the *State* and *town*, by some chemical fluid or alkali, and substi-



tuting in its place the name of some sound Bank, and the state and town. The substituted letters in the title will have to be *shaded by hand*, which is the surest way of detection; also the letters are apt to be bungled in shape, and the chemical fluid generally bleaches the paper wherever it touches, and it will look whiter around the edges of the substituted letters, than the rest of the bill.

REMARKS.—Some (not all) on learning this system, are at first a little puzzled in applying the rules readily, sometimes condemning genuine bills which are rather mean looking and worn; but all that is necessary to obviate this difficulty, is a little practice and familiarity with the rules. Examine genuine bills. It is said that one gang of counterfeiters have succeeded in getting hold of a Ruling Engine, and another gang have got a Geometric Lathe, and miserable work they make with it too; but though they may get part of the machinery, &c. they cannot get *every thing complete*. It is not their interest to invest the necessary capital, even if it was possible for them to get all the machinery which is always guarded against.

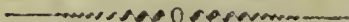
In some old genuine plates the shading sometimes appears to have been done by hand on the *edge*, but never prominently on the *face* of the letters. This may be accounted for by some Banks ordering a set of plates in which *economy* is their chief aim, and if while getting them up, the Ruling Engine happens to be engaged on other work, the Company, to save time, shade the letters by hand. The reason there are so few or no counterfeits on the Canada Banks, is because the Banks there spare no expense and get splendid and *costly* plates, (engraved in this country,) a policy which some of our Banks would do well to imitate.

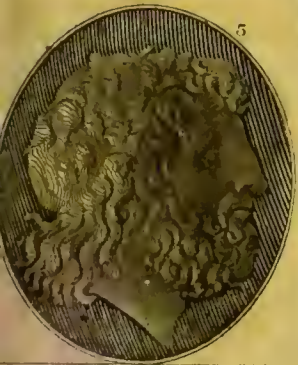
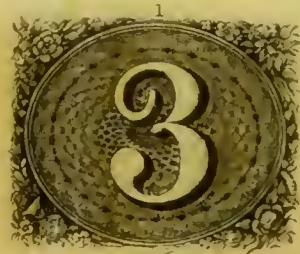
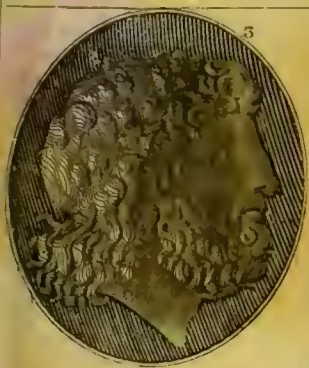
The testimony of Bankers, Brokers, and Merchants, continues to pour in, approving of and recommending this really splendid system which supplies a want the community have long and severely felt.

Persons at a distance wishing a copy of this pamphlet with a magnifying glass, by mail, may enclose \$2.00 by mail, at my risk, to my address.

Agents wanted, and their cash orders supplied wholesale, on liberal terms. Address

H. C. FOOTE, 763 Greenwich-st. N. Y.





# Universal COUNTERFEIT Detector

Applicable to all Banks in the UNITED STATES By H. C. Folsom

