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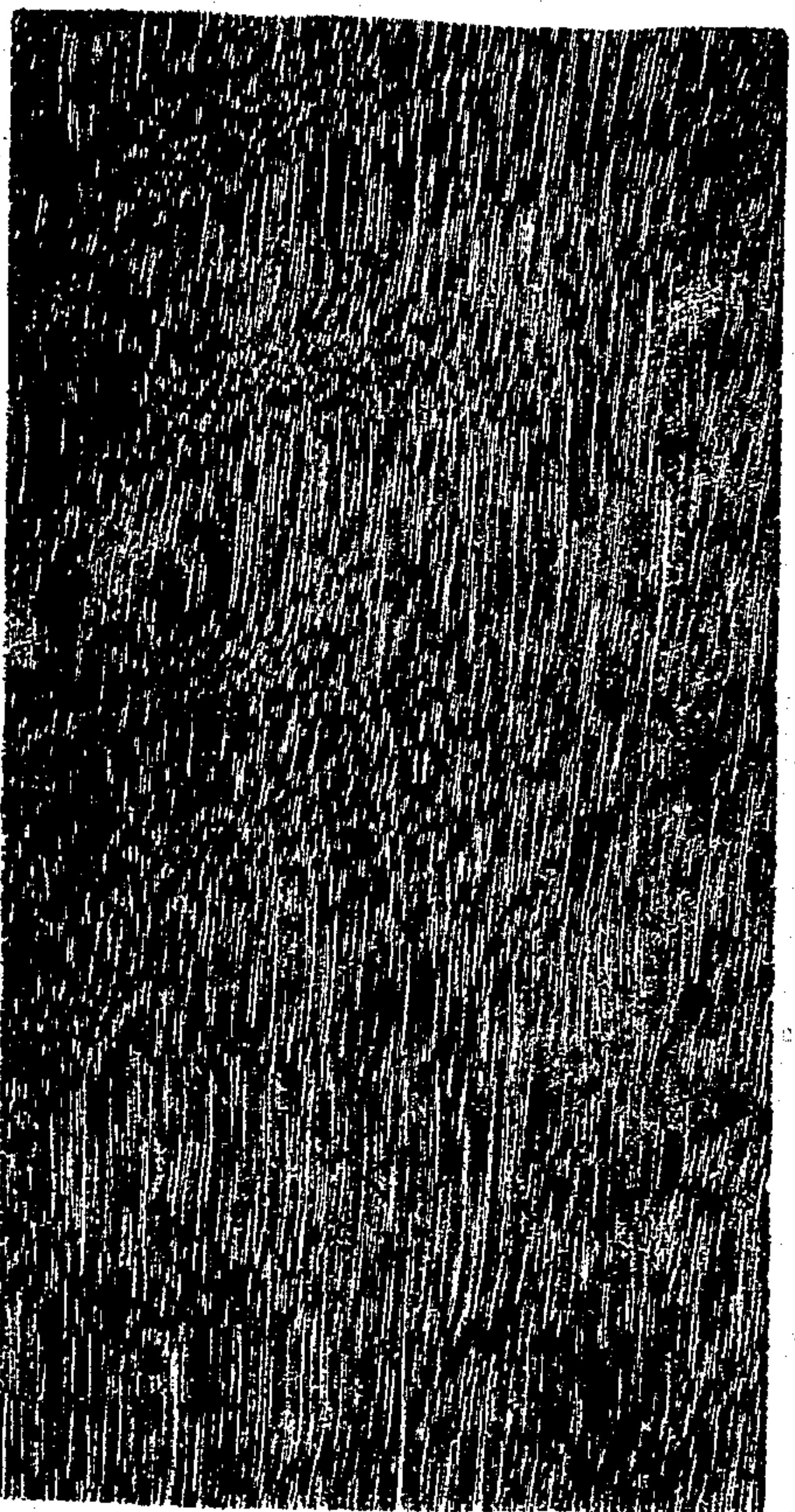


Fig 1.

Witnesses

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MODE OF PREVENTING THE COUNTERFEITING OF BANK-NOTES, &c.

Specification forming part of Letters Patent No. 84,606, dated December 1, 1868.

To all whom it may concern:

Be it known that I, SIGISMUND BEER, of the city, county, and State of New York, have discovered a new Means of Preventing the Counterfeiting of Bank-Notes and similar articles; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, and the letters of reference marked thereon, in which the same letter represents the same thing in each figure.

Figure 1 is a specimen of the inimitable paper employed.

Bank-notes, stock-certificates, and the like, are mostly printed from engraved plates. To prevent imitation, most elaborate engravings are produced by skillful artists. Sections of such plates are cut with exquisite minuteness by machinery, and photographic copying is guarded against by covering the paper with a colored tint from a plate of fine and faint lathe-work, before the note is printed. These precautions are insufficient as well as expensive. What skillful hands have produced other skillful hands can successfully imitate, and the cuts a machine produces can be obtained by like mechanical arrangement. Furthermore, if the work is complicated, it is difficult to detect the differences between counterfeit and genuine notes.

My discovery consists in preventing imitation of such articles by printing them upon material first made inimitable by use of surface-plates on which the designs have been in whole or in part produced by nature herself in the structural formation of the fiber of plants by gradual growth.

A piece of well-grained walnut, ash, chestnut, or similar wood, or a veneer thereof, is cut the size of the note wanted and carefully planed. If thin, it may be fastened to a thicker board before planing.

If only a few prints are wanted, the so-prepared block is sufficient and ready to print from by the common printer's press; but if the wood is soft, and many prints are wanted, an electrotpe is to be taken of the surface of the block, in the usual way of the art, and the paper printed therefrom in colored tints will show every grain or fiber of the wood with

wonderful exactness and delicacy. On this paper, thus covered with natural designs, the bank-note is to be printed in the usual way.

If it is desired to keep the matrix, the wood ought to be well seasoned, to prevent swelling, shrinking, or decay. I therefore prefer to use Beerized wood, seasoned according to the process described in the Letters Patent of the United States to me of January 21, 1868, No. 73,565.

There are manifold variations to which my process of producing inimitable printing-plates of natural design for bank-notes, &c., is open.

Instead of using the surface-design as it is grown, part of the surface of the wood may be covered with any drawing or letters or figures on gypsum or other suitable mass, so that the open grain is evenly filled up as far as such drawing or lettering is desired to be seen on the print.

Another way to produce drawings on such plates is to soften the wood, by steaming or otherwise, and then impress such drawings evenly deep. When the wood is again hard, plane it down to the surface of the impression. The difference in the structure of the impressed part will be seen in the prints with a very agreeable effect.

The easy way of stamping, cutting, and sawing such wooden plates before the electrotpe is taken therefrom furnishes another means of producing designs in various shapes and of blanks of any desired effect, or to insert such, or to compose the whole plate or parts of different-grained surfaces.

Another variation of marked effect is offered by the use of corrugated surfaces.

If such veneers are used, they may be straightened, as is commonly done when put on a thicker board, before the electrotpe is taken therefrom.

When thicker pieces of wood with a corrugated surface are used, the electrotpe-plate may be straightened after it has been taken.

Instead of using the surface of wood across the grain in a plane plate, I sometimes use, for better effect, the surface of round cut wood or veneers, and straighten them, either before or after electrotyping, in the manner just described; but I do not confine myself to plane

plates for printing. Wood turned in the form of cylinders may be used either directly or electrotypes taken therefrom for printing.

The advantages derived from my process are obvious. Successful imitation of a bank-note so produced is impossible, for the forests of the globe grow no two pieces of wood alike; and neither the human hand nor machinery is equal to producing anything so like the varied and multiform effects of the processes of nature in the growth of plants as not to be instantly recognizable by a practiced eye.

Besides, producing such plates and print-

ing therefrom is most simple, and nearly costless compared with all methods heretofore employed.

What I claim as my discovery, and desire to secure by Letters Patent, is—

Making a bank-note or other printed article inimitable, substantially in the manner and by the means described.

SIGISMUND BEER.

Witnesses:

S. J. GORDON,
GEO. H. COLLINS.