

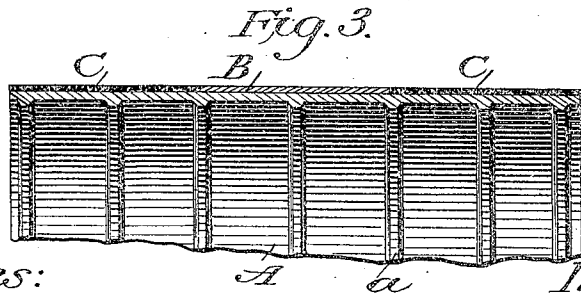
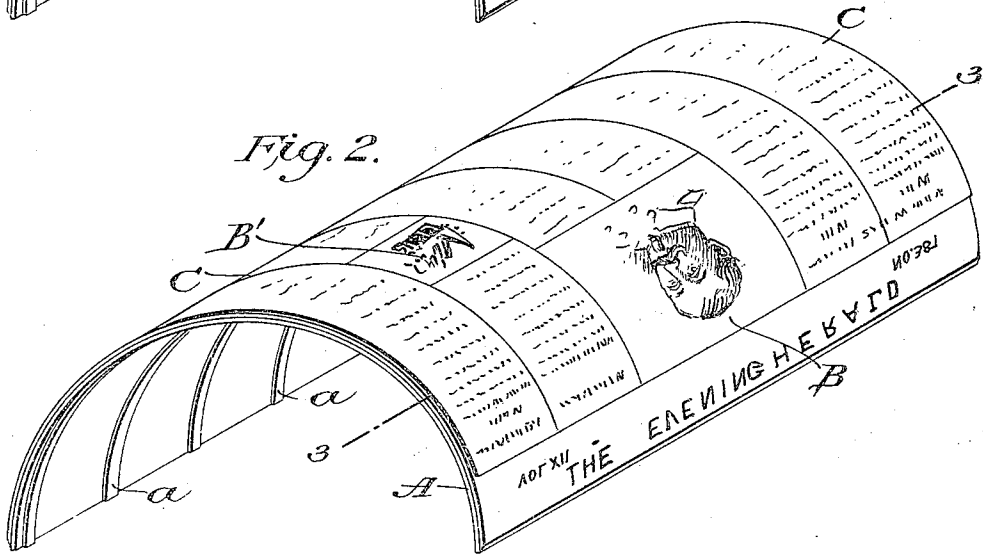
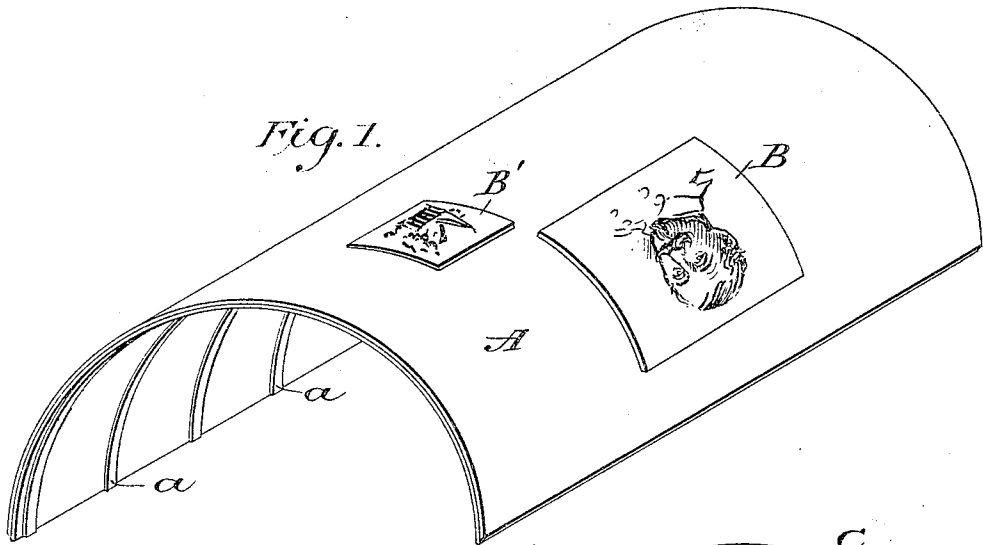
No. 801,291.

PATENTED OCT. 10, 1905.

H. A. W. WOOD.

COMPOSITE PRINTING PLATE AND METHOD OF MAKING THE SAME.

APPLICATION FILED NOV. 15, 1901. RENEWED JAN. 14, 1905.



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UNITED STATES PATENT OFFICE.

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COMPOSITE PRINTING-PLATE AND METHOD OF MAKING THE SAME.

No. 801,291.

Specification of Letters Patent.

Patented Oct. 10, 1905.

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To all whom it may concern:

Be it known that I, HENRY A. WISE WOOD, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Composite Printing-Plate and Method of Making the Same, of which the following is a specification.

At the present time the process of stereotyping is not sufficiently perfect to reproduce half-tone or analogous printing-surfaces. Yet there is a great demand on the part of the public for papers printed with half-tone plates. In order to supply this demand, a number of newspaper publishers have inserted half-tone printing-surfaces in their stereotype-plates in the following manner: Blank pieces, which represent the portions of the printing-surface which are to be occupied by the half-tones, are placed in the form before the matrix is made from it, so that the matrix will be a mold of the type with blanks where the half-tones come. This matrix is then taken to the casting-box and after being inserted therein the original half-tones are inserted in the casting-box upon the proper part of the matrix which they should occupy. When the half-tone plates have been thus disposed, the casting-box will be closed upon them, so that when the metal is poured in it will run around the half-tone plates, and while flowing into the mold to cast and form the printing-plate it will secure the half-tones within the plate, so as to form practically a single piece. In this way some of the newspaper publishers have succeeded in printing half-tones with stereotype-plates. Another method that has been tried has been to make a completed stereotype-plate with depressions and then to bolt or screw the half-tones in position on the stereotype-plate; but the methods above described are very tedious—the first method, because it is difficult to place the half-tones properly in the curved casting-box and to retain them in exact position and also because it is difficult to place the half-tones toward the head and tail of the mold, because this portion of the mold when open is almost vertical. The second method above described is difficult, because it is a very hard matter to secure the half-tone plates to the blank portions of the stereotype-plate in the short time that can be allowed and to get them exactly type-high. Another difficulty is encountered in making

plates in the above manners in that the half-tones will weaken the printing-plates, so that the plates will often break. It also frequently happens that with the above methods the half-tone plates will drop out of the completed plate.

The aim of my invention is to provide a new method by which a composite stereotype printing-plate can be expeditiously made. To do this, I make or secure the copper or zinc half-tones or analogous printing-surfaces upon a part I call a "basic plate." The half-tones may be made either as part of this plate and the rest of its face tooled away, as by a routing instrument, or the half-tones may be secured to a flat or curved plate. If a flat plate is used, the same is curved to have substantially the shape of the stereotype-plate. This basic plate, with the half-tone surface thereon, is then placed in the casting-box with the half-tones against the blank portions of the matrix which represent them, and when the casting-chamber is closed and the metal poured in the new metal will make up the difference between the basic plate and the matrix and adhering to the basic plate, which has been previously roughened or fluxed, will become part of it—that is, an applied printing-surface.

Referring to the drawings forming part of this application, Figure 1 is a perspective view of the basic plate with the half-tone surfaces applied thereto or formed therewith. Fig. 2 is a view of the completed composite plate; and Fig. 3 is a section taken on the line 3 3 of Fig. 2, illustrating my improved printing-plate.

My improved method is practiced as follows:

A basic plate A is first taken. Formed on or secured to this basic plate are the half-tone or analogous surfaces B B', which may be etched, engraved, or electrotype plates with various portions in relief. These portions B B' may be separate surfaces, which may be applied and secured to the plate A, or they may be formed integrally with the plate A. The plate A may be made flat and then bent to semicylindrical form or may be made semicylindrical in form in the first instance. The preferred way to make the plate A is to make it out of a thin semicylindrical shell of suitable metal, which may have the usual ribs *a a*, which are to fit the printing-cylinder, and the half-tones plates are made of

thin copper or zinc plates and are secured in proper position to the plate A.

When the basic plate is prepared, as shown in Fig. 1, the same is placed in the casting-chamber, the portions B B' resting against the blank parts of the matrix, which are formed by blank pieces placed in the form. The casting-chamber is then closed, and type or stereotype metal C is forced or run in between the basic plate and matrix, and when it hardens it will adhere to the basic plate, which is preferably slightly roughened or fluxed on its surface, which is not occupied by the plates B B'. In this way the stereotype-surface is applied to the plate, and in this way both the stereotype and half-tone surface will be of the same height. In this way the half-tones will accurately and rigidly form part of the completed plate. Further, but one part or piece has to be matched in the casting-chamber with the matrix.

A special advantage of my method lies in the fact that plenty of time can be taken in preparing the basic plate with the half-tone surfaces, and the form can be kept open until the last minute, and the composite plate can be very quickly made from the basic plate and the matrix.

Of course my invention is applicable to producing a flat composite plate instead of a curved plate.

Having thus fully described my invention,

what I claim, and desire to secure by Letters Patent, is—

1. The method of making a composite printing plate, which consists in forming a printing-surface with or securing the same to a basic plate, and then casting stereotype matter on the remaining part of the face of the basic plate.

2. A composite printing-plate comprising a basic plate having printing-surfaces formed therewith or secured thereto, and a facing of stereotype matter cast upon the remaining part of the face of the basic plate.

3. A composite stereotype and half-tone printing-plate comprising a basic plate having half-tone surfaces secured thereto, and a facing of stereotype matter cast upon the remaining part of the face of the basic plate.

4. A composite stereotype printing-plate comprising a semicylindrical basic plate having printing-surfaces formed therewith or secured thereto, and a facing of stereotype matter cast upon the remaining part of the face of the basic plate.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

H. A. WISE WOOD.

Witnesses:

SEYMOUR CONOVER,
JAS. H. CRAFT.