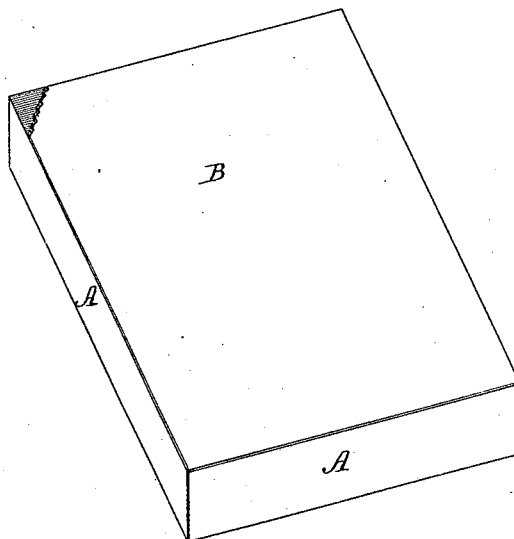


P. GFROERER.  
Printing-Type.

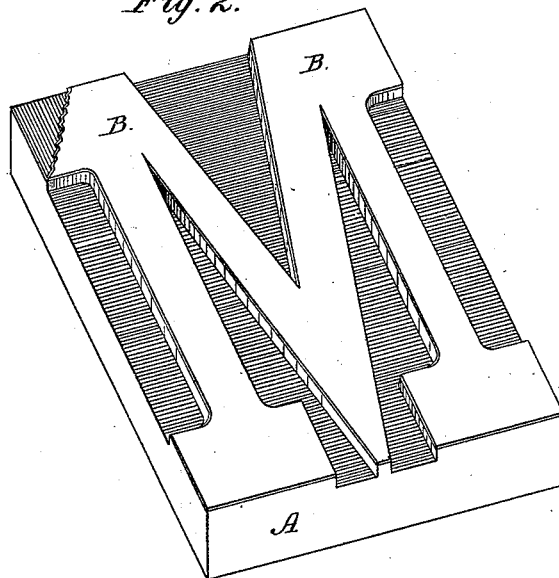
No. 217,607.

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*Fig. 1.*



*Fig. 2.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

PETER GFROERER, OF TERRE HAUTE, INDIANA.

## IMPROVEMENT IN PRINTING-TYPES.

Specification forming part of Letters Patent No. **217,607**, dated July 15, 1879; application filed February 28, 1879.

### *To all whom it may concern:*

Be it known that I, PETER GFROERER, of Terre Haute, in the county of Vigo and State of Indiana, have invented a new and Improved Wood Type; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an isometric view of a tint-block with the rubber facing torn off at the left-hand corner. Fig. 2 is a similar view of a type or lettered block.

In printing from wood type I have always found it to be a great difficulty to print large and small letters together, so that each would receive its necessary amount of ink. This is due to the fact that, the pressure being the same on all the type, the greater area of the face of the larger type does not allow it to be impressed into the surface of the paper as well as the smaller type having less area, and hence if the supply of ink is uniform on all the type the large letters will be paler than the small ones. If enough ink is carried on the rollers to cover the large type, so as to get a good impression from it, the smaller type would be overcharged and would fill up and blurr, and the job would be bad. These remarks especially apply to posters, upon which there are most always very large and very small type used.

Manufacturers have been under the impression that by using hard wood and polishing the surface or face of the type the best results could be obtained. Now, in order that large type should give a good impression, with no more ink on the rollers than the small type require, I have found that it is necessary to make the face of the type not only smooth but soft.

My invention, then, consists in a type cut from a block of wood having a coating or veneering of rubber or other elastic substance on its face.

In the drawings, A represents the wooden block, whose face is provided with a thin surface or veneering, B, of soft elastic material.

In applying this surface I prefer to employ rubber cloth firmly glued to the block with the gum side out; but any other mode of ap-

plying the elastic and smooth face may be employed.

The advantages of using a type cut from such a block are as follows:

First, they render the impressions of different sizes of type uniform with the same quantity of ink.

Secondly, there is a great saving in ink, which is an item of importance, especially when colored inks are used, or where letters of from one to three feet tall are used, as in theater-bills, &c.

Thirdly, soft and cheap grades of wood—such as pine, poplar, &c.—may be made available to receive the rubber facing instead of making the type of the hard and expensive wood now used.

Fourthly, as soft wood is employed, the printer, when provided with the rubber-faced blocks, can, with an ordinary penknife, carve out an additional letter when all of the letters of a kind in his font are exhausted, thus saving great delay and embarrassment. To do this it is only necessary to take an impression on the rubber facing from the type to be duplicated, and the printer, guided by the outlines of the letter, can soon carve the face of the required letter.

In making use of my invention I may use the blocks faced with rubber for tints as well as for all kinds of figured and lettered type.

I am aware that solid rubber type have been heretofore used, and that rubber type for hand-stamps have been constructed with the letter-face raised from a base of the same material, the same being molded, and the base and letter being homogeneous, and the base being attached to a block. Neither of these constructions could attain the results of my invention, because the type has such a thickness of elastic rubber (the sides and body as well as the face of the letter being all rubber) that when under the great pressure of a press the letter would bulge out at the sides and make a distorted impression.

In my invention it will be seen that the face of the letter only is rubber, while the sides of the raised letter are for the most part wood. This gives a smooth printing-face, but reduces the bulk of expansible material to such a thick-

ness that no appreciable spreading of the type occurs.

My mode of forming the type, it will be seen, is first to apply to the block a veneering of thin rubber, and then carve through the same, being guided in the carving by an impression of the type to be duplicated, which impression is clearly defined on the rubber face. This mode possesses distinctive merit in contradistinction to cutting or stamping a letter from an elastic substance and afterward attaching it, for the reason that in the latter case the tension and shape of the letter while being stamped would not be uniformly preserved in pasting it to its block, and a distorted letter would be the result.

Having thus described my invention, what I claim as new is—

1. The method of making wooden type, which consists in coating soft wood with a thin surface or veneering of rubber or analogous material, and then, after said veneering is firmly attached, taking an impression on the rubber face and carving through the same into the wood by the impression taken, substantially as described.

2. A wood type having a face formed by a veneering of rubber or analogous material, and the body and sides of the letter composed mainly of wood, substantially as described.

The above specification of my invention signed by me this 25th day of January, 1879.

PETER GFROERER.

Witnesses:

EDWD. W. BYRN,  
SOLON C. KEMON.