

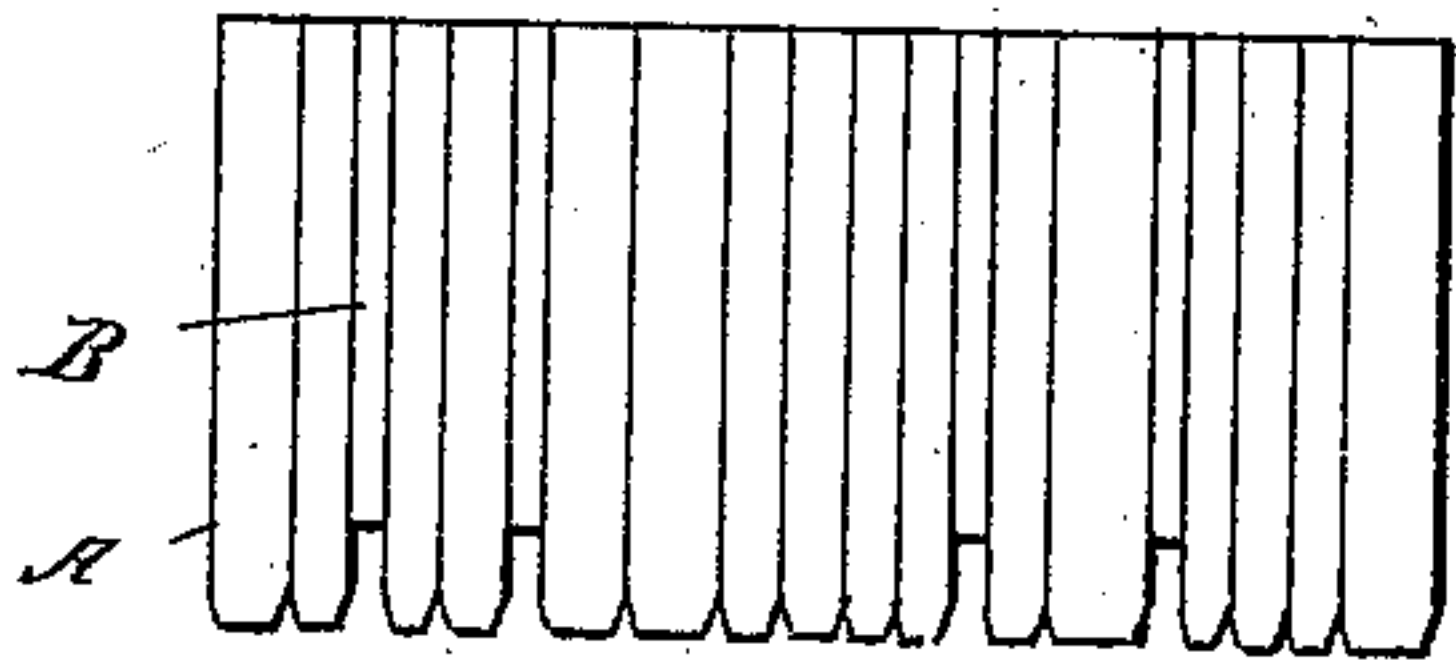
(No Model.)

C. SKATULLA.  
TYPE AND MATRIX.

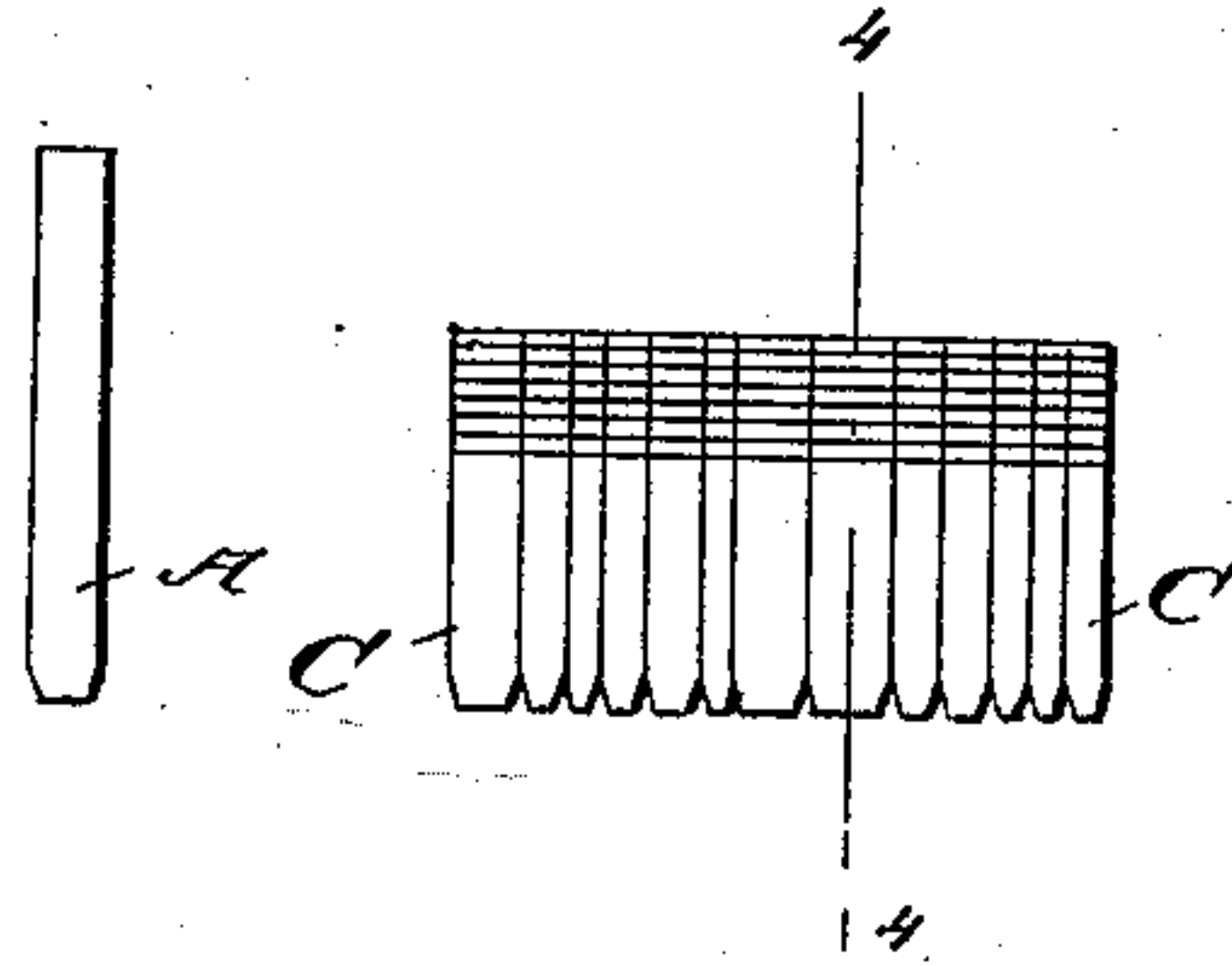
No. 543,272.

Patented July 23, 1895.

*Fig: 1.*

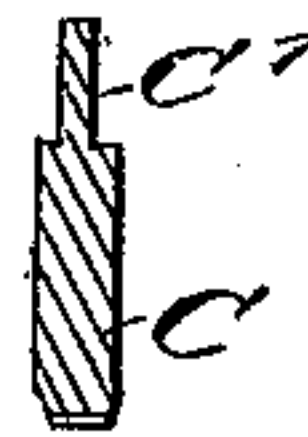


*Fig: 2.*

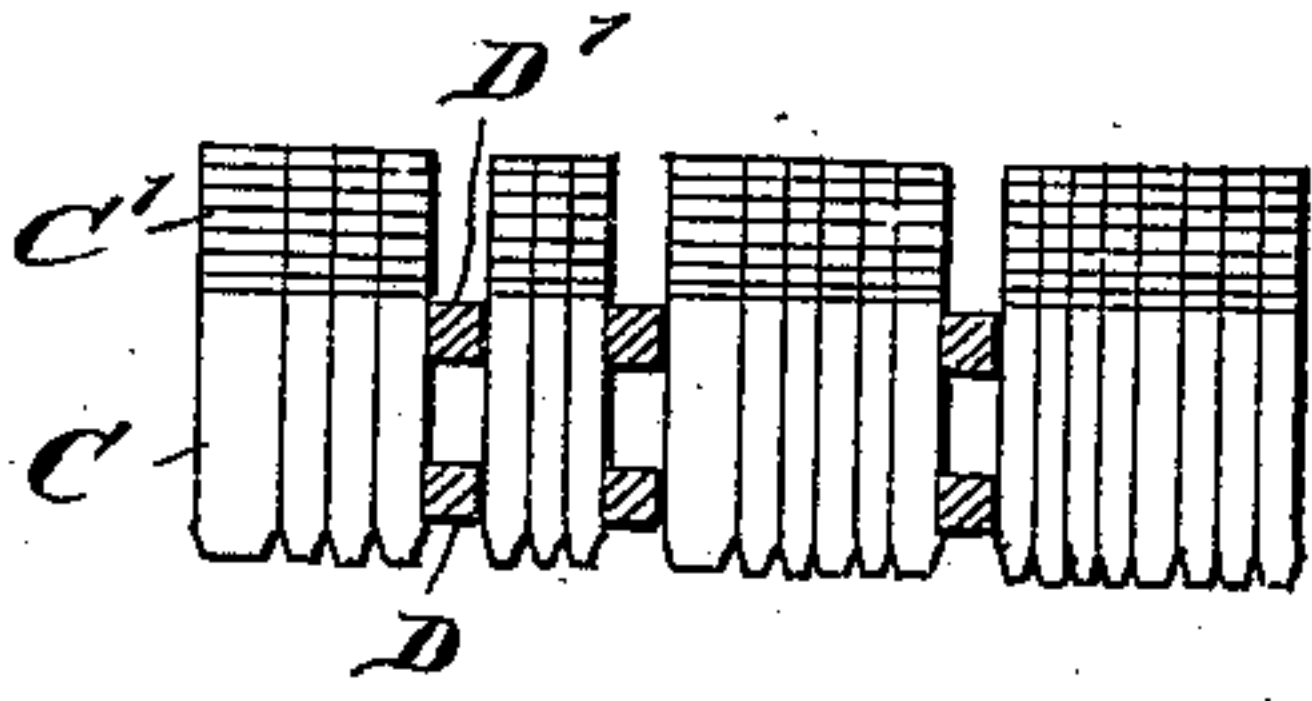


*Fig: 3.*

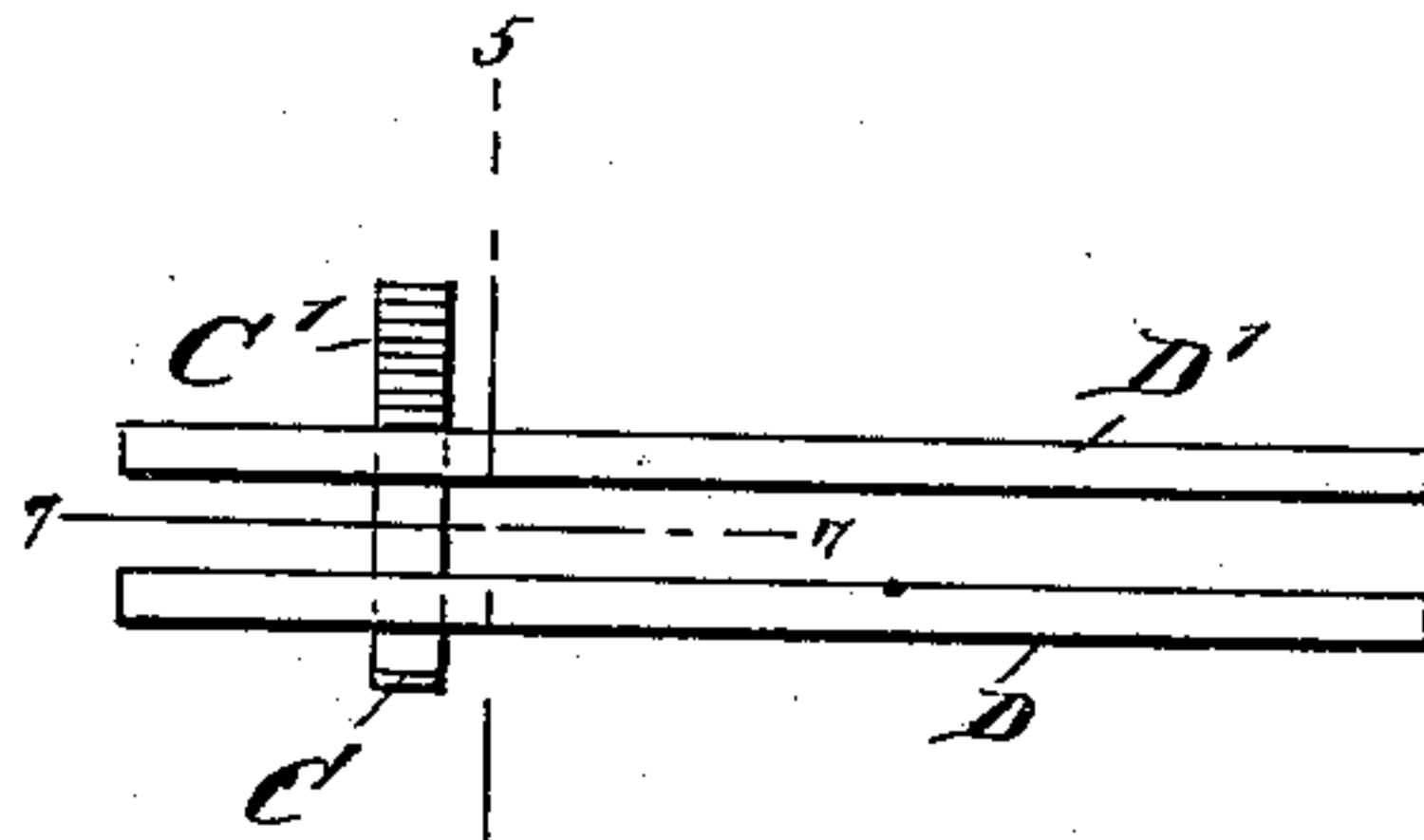
*Fig: 4.*



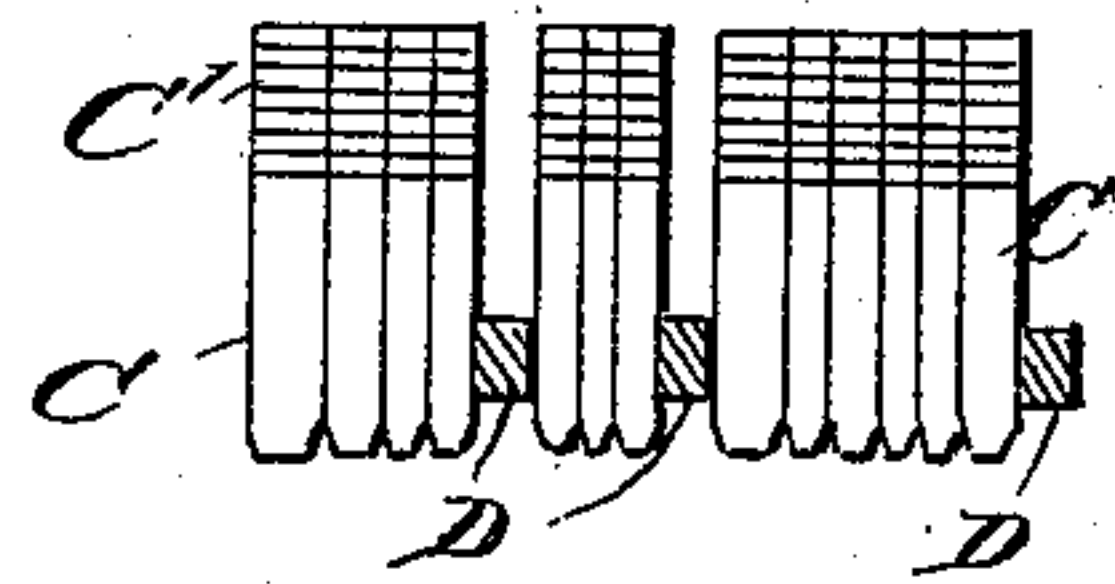
*Fig: 5.*



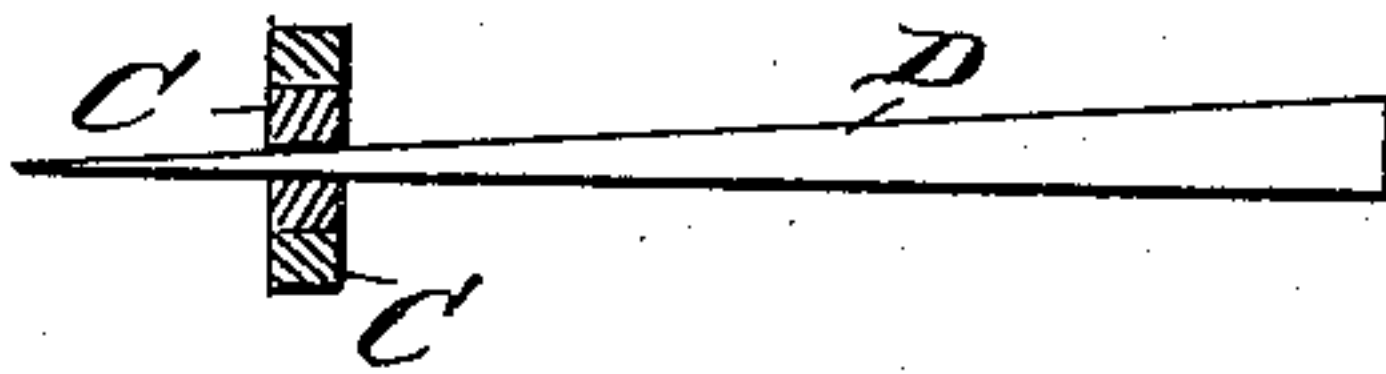
*Fig: 6.*



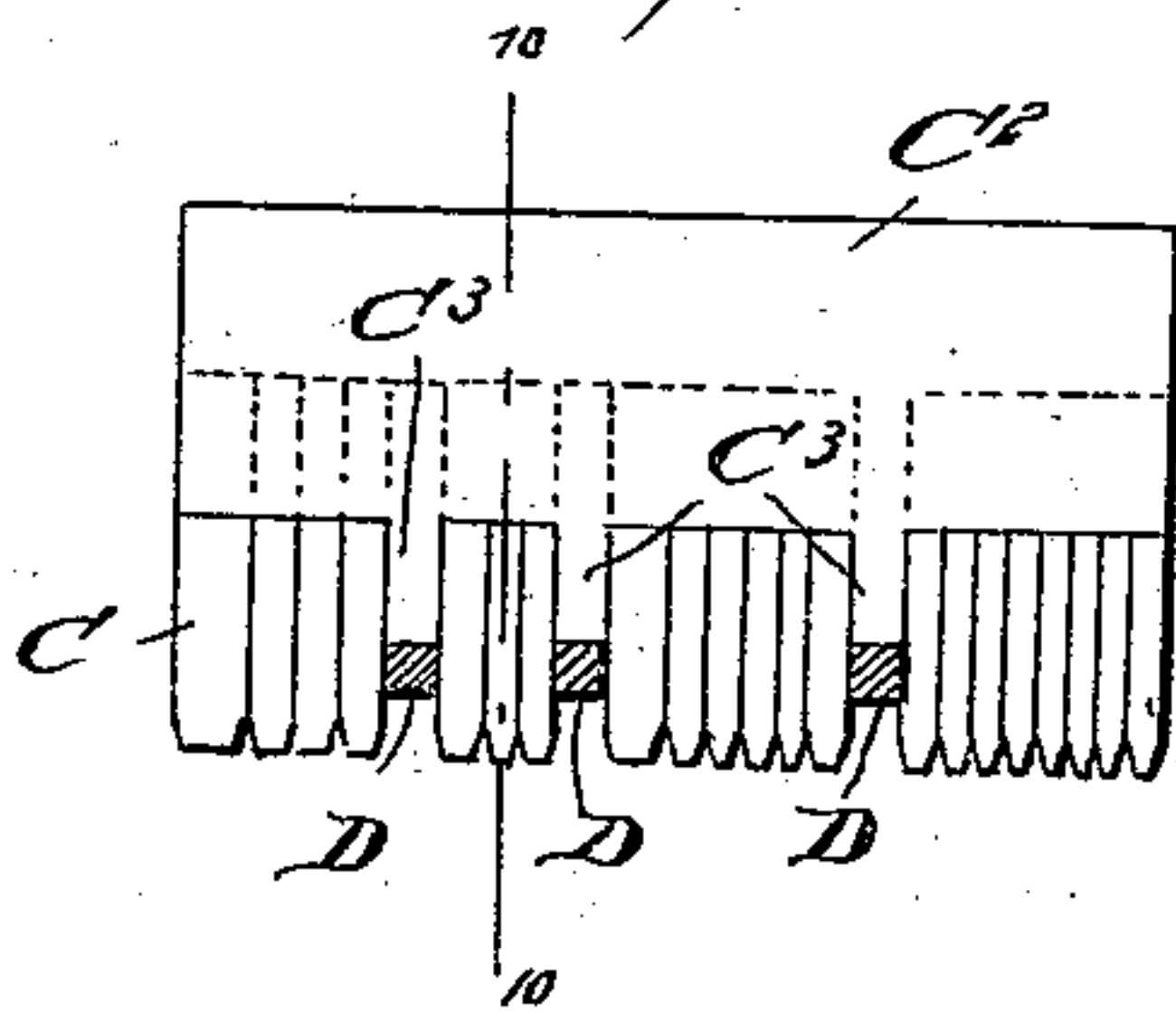
*Fig: 8.*



*Fig: 7.*



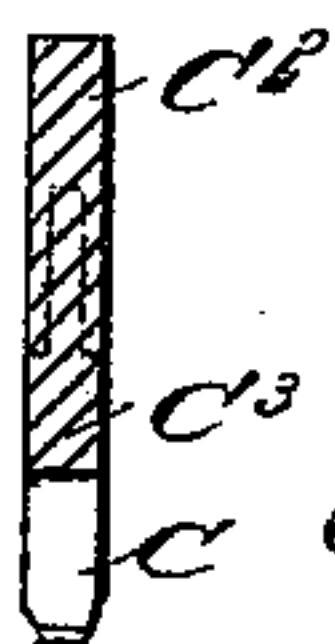
*Fig: 9.*



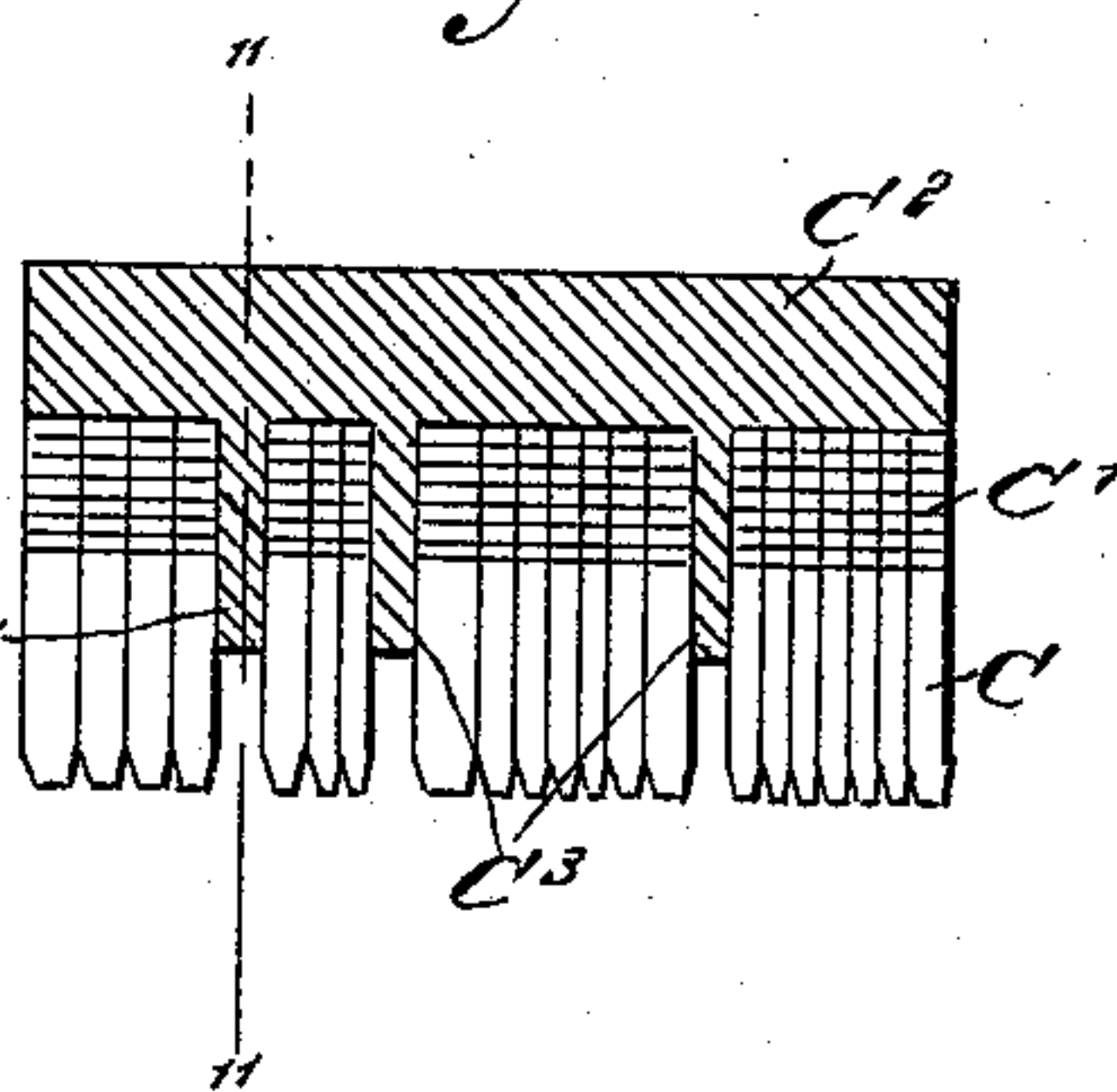
*Fig: 10.*



*Fig: 11.*



*Fig: 12.*



WITNESSES:

Chas. Viola  
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INVENTOR

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# UNITED STATES PATENT OFFICE.

COELESTIN SKATULLA, OF BROOKLYN, ASSIGNOR OF ONE-HALF TO FRANK SCHMIDT, OF NEW YORK, N. Y.

## TYPE AND MATRIX.

SPECIFICATION forming part of Letters Patent No. 543,272, dated July 23, 1895.

Application filed April 4, 1895. Serial No. 544,458. (No model.)

*To all whom it may concern:*

Be it known that I, COELESTIN SKATULLA, a subject of the Emperor of Austria-Hungary, at present residing in Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Types and Matrices, of which the following is a full, clear, and exact description.

The invention relates to linotype-machines; and its object is to provide a new and improved method for forming the matrices in a very simple and effective manner.

The method consists principally in first casting short letters and assembling the same into words, with space-bars between the words to form the proper length of line, and then casting a backing on the line to unite with the short letters and to fill the spaces between the words.

The invention further consists in a line-matrix comprising single short types and a backing cast on the said types to obtain the proper height and fill the spaces of adjacent words in a line.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a line of type as ordinarily set by hand. Fig. 2 is an end elevation of a single ordinary type. Fig. 3 is a side elevation of a series of type-bodies, showing my improvements. Fig. 4 is a cross section of the same on the line 4 4 of Fig. 3. Fig. 5 is a side elevation of a line of type-bodies set up with space-bars between the words, the space-bars being shown in section on the line 5 5 of Fig. 6. Fig. 6 is a plan view of the same. Fig. 7 is a cross-section of the same on the line 7 7 of Fig. 6. Fig. 8 is a sectional front elevation of the same with the upper space-bars removed. Fig. 9 is a like view of the same with the backing cast on. Fig. 10 is a cross-section of the same on the line 10 10 of Fig. 9. Fig. 11 is a similar view of the same on the line 11 11 of Fig. 12 and with the

space-bars removed, and Fig. 12 is a sectional side elevation of the improved matrix.

As illustrated in Figs. 1 and 2, the ordinary type A is set up in the usual manner to form a line, with quads B between the individual words. In order to form a line of type or a matrix according to my improvements, I provide short type-bodies C, each formed at one end with the usual type character and at its other end with a shank C', as shown in Fig. 4, and these type-bodies are set up in a line with transverse space-bars D D' between the words. After this is done a backing C<sup>2</sup> is cast on all the shanks of the bodies in the whole line to make the latter the proper height. The part C<sup>3</sup> of the backing passes into the space between the words of the line, as plainly illustrated in Fig. 12, it being understood that the space-bars are but temporarily employed and form no part of the line after the backing integrally unites the several bodies forming the line. Thus the matrix formed consists of individual short type-bodies C and a backing C<sup>2</sup>, which makes the type the proper height, and also integrally unites the several individual type-bodies in the line.

In order to cast the individual short type-bodies C, I provide a suitable machine, similar to the linotype-machines now in use and having molds with adjustable side walls to cast the type-body C to the thickness required by the letter it represents. The several short type-bodies C are assembled automatically with two single space-bars D and D' between the adjacent words and to make the proper length of line, and then the upper space-bars D are removed and the backing C<sup>2</sup> is cast upon the set-up type-bars to engage the shanks C' and to fill the spaces between the words up to the lowermost space-bars D. (See Fig. 9.) The bars are then removed and the matrix is finished.

Now, by the arrangement described the backing C<sup>2</sup> firmly unites the bodies C with each other, and also holds the words apart by the filling C<sup>3</sup>, so that the matrix is of proper length. It is understood that suitable machines are constructed to carry into effect the above-described method for forming a matrix, and such machines will form the subject-

matter of separate applications hereafter to be filed.

Having thus fully described my invention, I claim as new and desire to secure by Letters  
5 Patent—

1. The herein-described method for forming matrices, consisting in first casting short type and placing the same one alongside the other, to form words separated by space bars, then  
10 removing one set of space bars, and finally casting a backing on the said short type, to make the matrix the proper height, and to fill

the spaces between the words, substantially as shown and described.

2. A line matrix, comprising single short 15 type, and a backing cast on the said type, to make the matrix the proper height, at the same time filling the spaces between the words formed by the short type, substantially as shown and described.

COELESTIN SKATULLA.

Witnesses:

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JNO. M. RITTER.