

No. 662,862.

Patented Nov. 27, 1900.

E. HETT.
PRINTING PRESS, &c.
(Application filed Jan. 5, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 3.

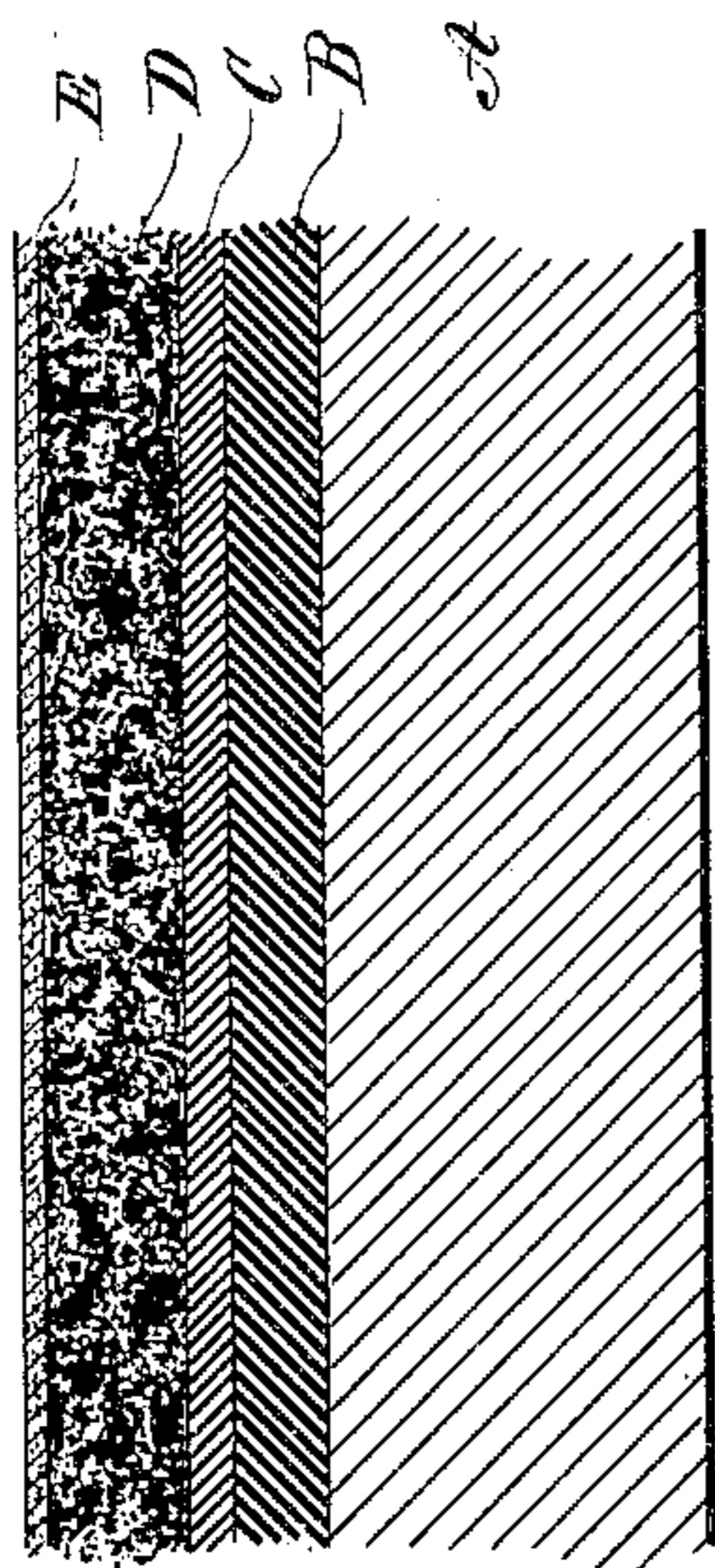


Fig. 4.

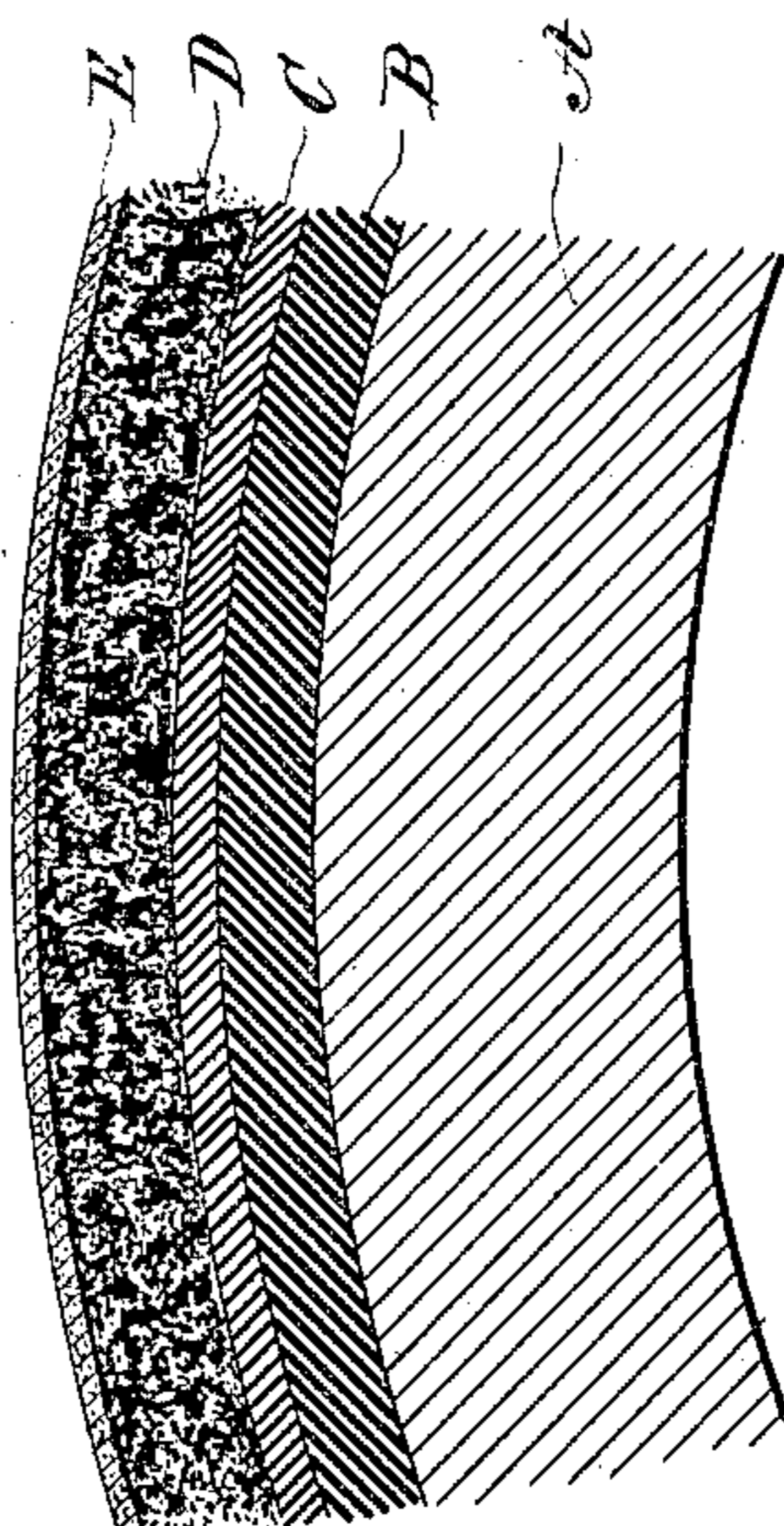


Fig. 1.

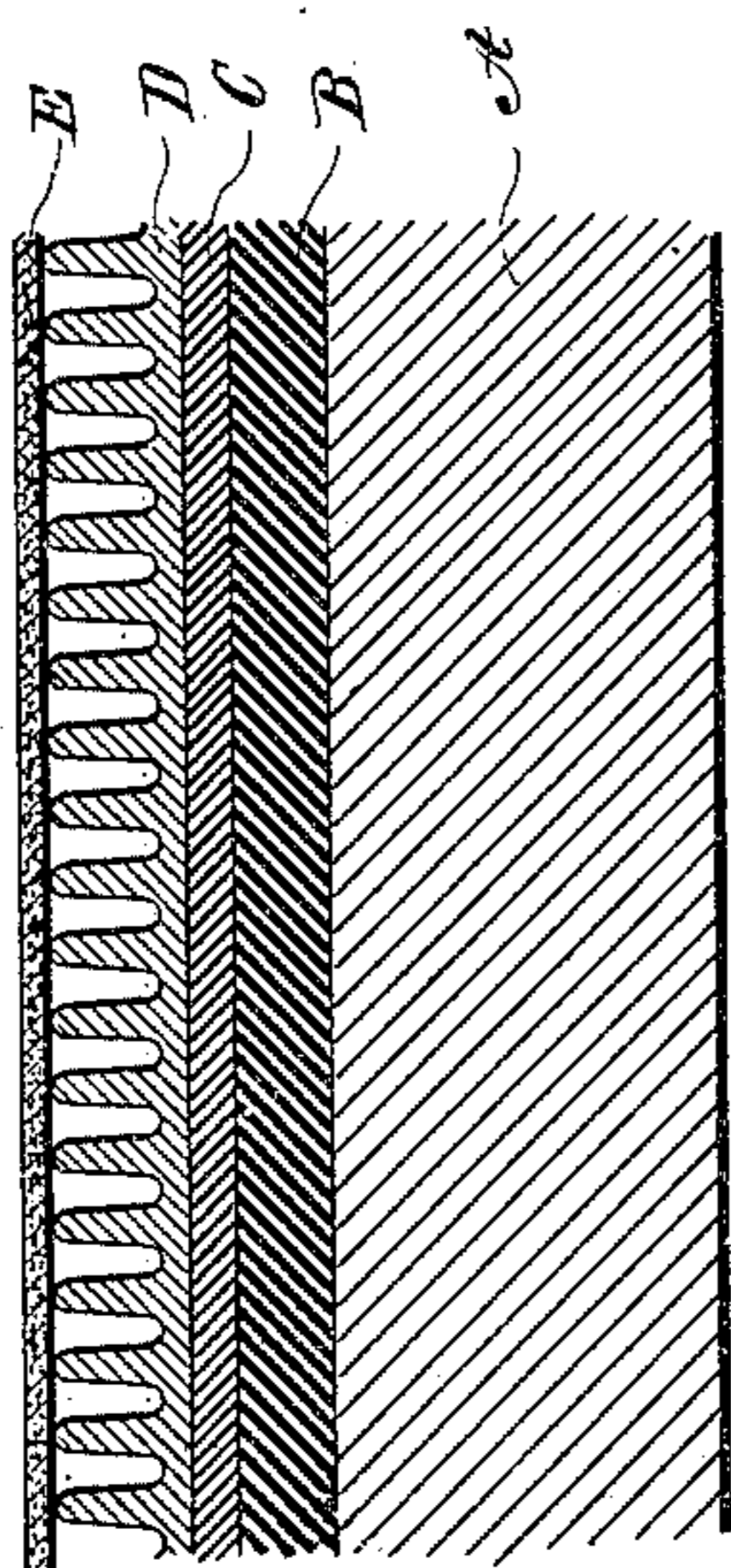
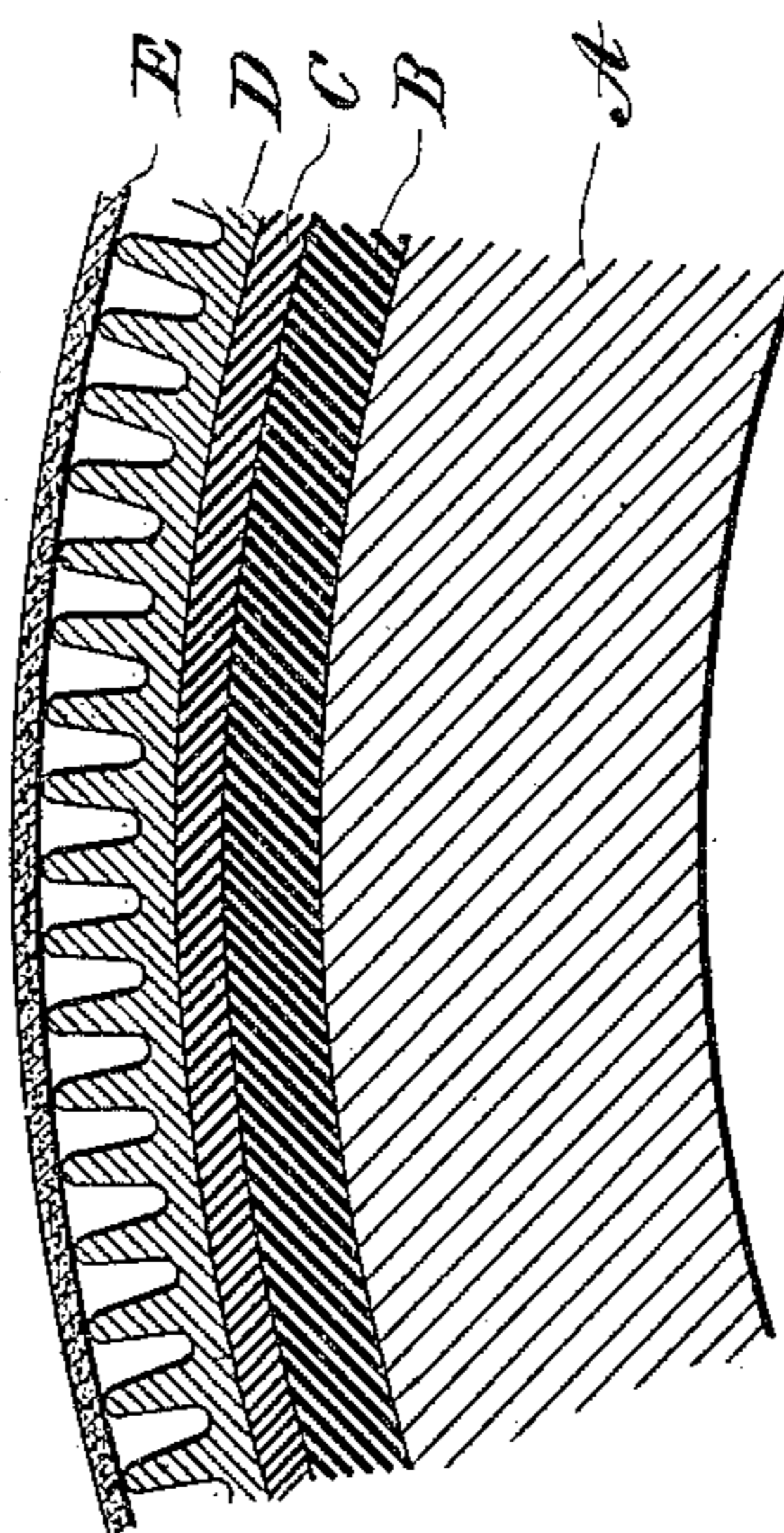


Fig. 2.



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Fig. 5.

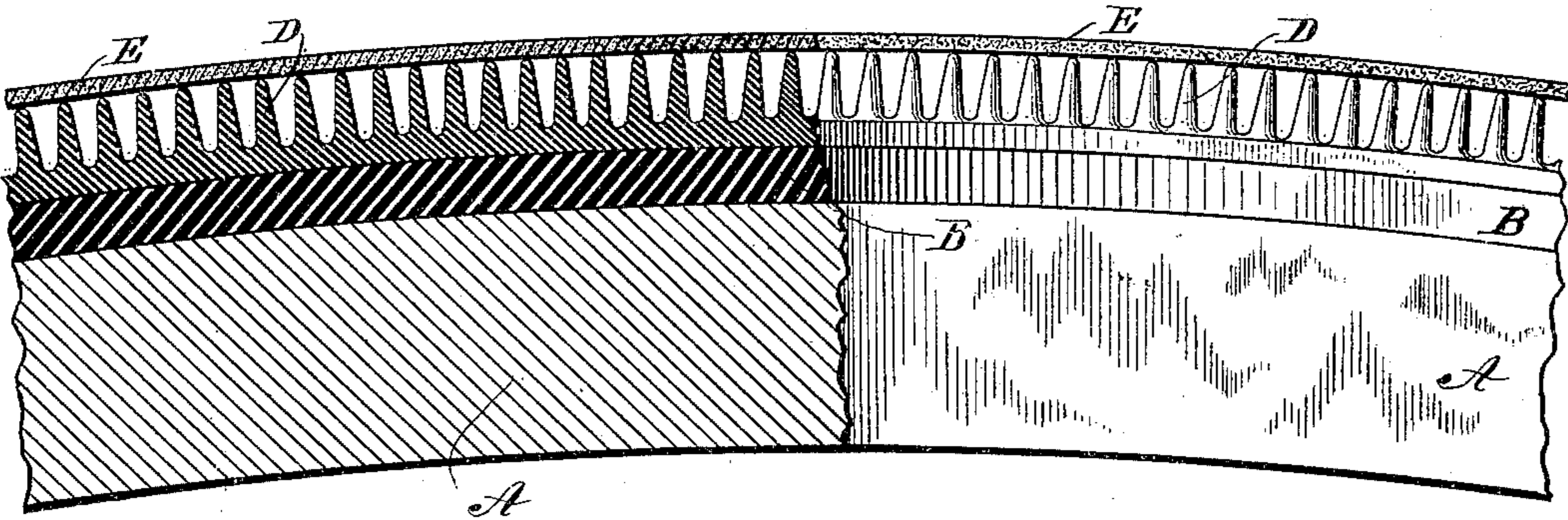
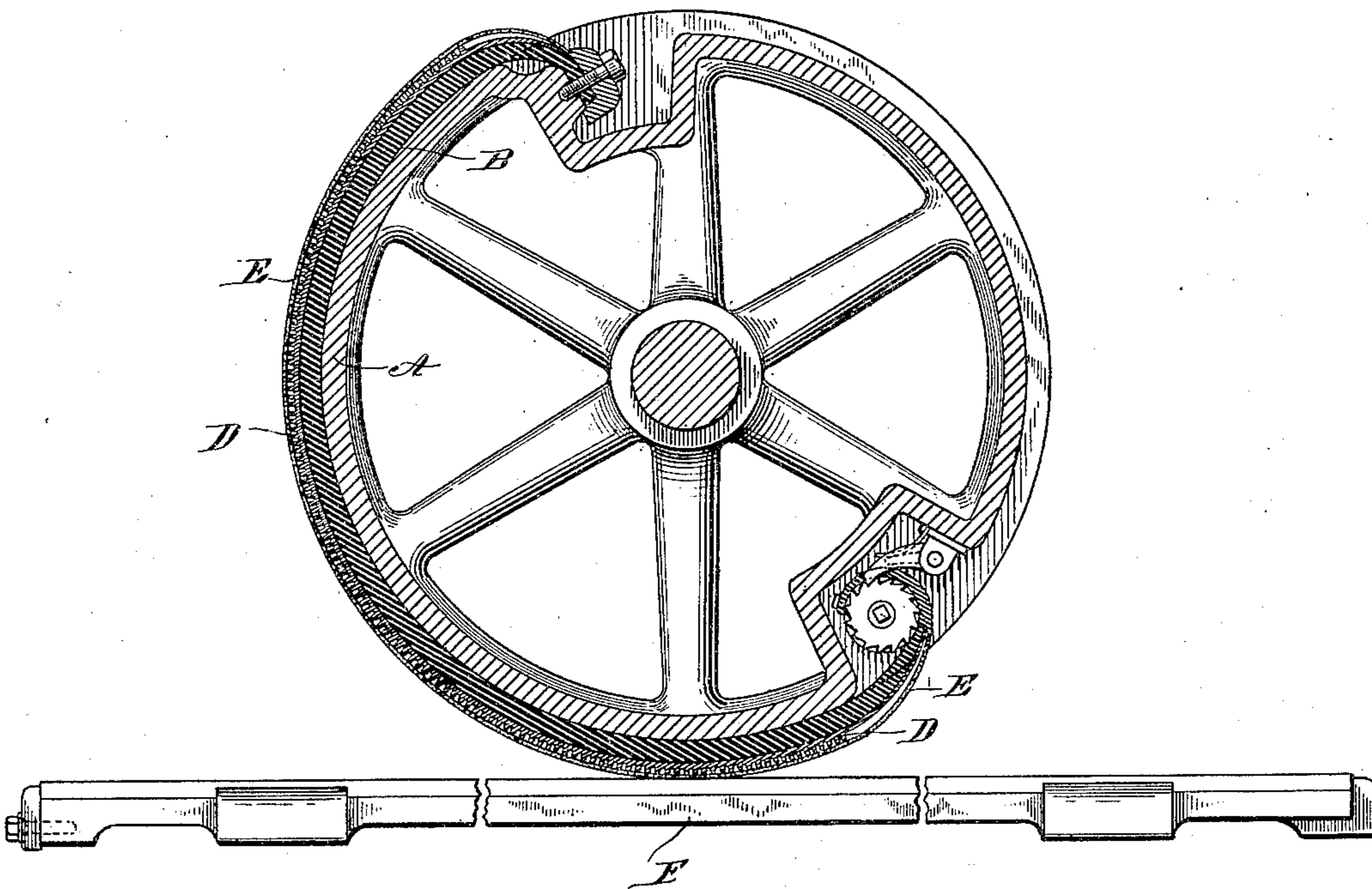


Fig. 6.



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UNITED STATES PATENT OFFICE.

EDWARD HETT, OF NEW YORK, N. Y.

PRINTING-PRESS, &c.

SPECIFICATION forming part of Letters Patent No. 662,862, dated November 27, 1900.

Application filed January 5, 1899. Serial No. 701,200. (No model.)

To all whom it may concern:

Be it known that I, EDWARD HETT, a citizen of the United States, and a resident of New York, (New Dorp,) in the county of Richmond, State of New York, have invented certain new and useful Improvements in Printing-Presses or the Like, of which the following is a specification.

My invention has reference to impression-surfaces for printing-presses or the like, and has for its object the production of a uniform impression and without the necessity of make-ready in typographic or relief printing. It is applicable to any kind of printing.

The invention consists in providing between a suitable base or foundation layer and a suitable continuous facing layer of the impression-surface an intermediate soft yielding layer consisting of pillared or sponge or other open-work rubber, whereby the surface is uniformly and controllably yielding and resilient, and its yielding under pressure at any particular point is compensated for at that point by the internal construction of the layers, whereby irregularities in the printing-surface and in the adjustments of the printing-surface and in the paper are accommodated. Many forms of impression-surface have been constructed to secure a uniform impression in printing generally, and especially to obviate the necessity of extensive make-ready in typographic and relief-plate printing. The present invention is an improvement to that same end.

Referring to the drawings, which represent my invention in different embodiments, Figures 1 and 2 respectively represent sections of a flat and of a cylindrical impression-surface embodying my invention in its preferred form. Figs. 3 and 4 represent a different embodiment of the invention. Figs. 5 and 6 represent still different embodiments of the invention.

Like letters represent like parts in the several drawings.

Figs. 1 and 3 represent a flat impression-surface. The other figures represent curved impression-surfaces.

A represents the iron support. B is a base or foundation layer or blanket consisting, preferably, of hard rubber adjacent to the iron. C is an inner intermediate layer or

blanket of soft rubber. It is found in the constructions of Figs. 1 to 4. D is an intermediate or an outer intermediate layer or blanket of pillared or sponge or other open-work rubber. E is an outer continuous facing layer or blanket, preferably of rubber, which may be hard or soft, as desired, or which may be hard on the inside and soft on the outside, or vice versa. For lithography I prefer a facing layer that has a soft face, and for typography and relief-printing I prefer a facing layer that has a harder face. The thicknesses of these several layers or blankets in the final impression-surface are preferably as follows: A is one inch, or more or less, as desired, B is one-quarter of an inch, C is one-eighth of an inch, D is three-eighths of an inch, and E is one-sixteenth of an inch. In the best form of my invention at present known to me I integrally and permanently connect the different layers or some of them, and to that end I prefer to apply the different layers of rubber in suitable thicknesses to the iron support and then simultaneously vulcanize all the different layers *in situ*. In this way the parts are integrally connected, whereby all motion and creeping of one layer upon the other are substantially prevented.

Figs. 1, 2, 5, and 6 show the rubber on the intermediate or outer intermediate layer to be arranged in such regular open-work as that the rubber of that layer constitutes pillars separated from one another by intervening spaces, and this is the form I prefer. Figs. 3 and 4 show this layer as consisting of a form of open-work rubber known as "sponge-rubber." In any case this layer must have interspaces or small openings to take up locally the compression exerted locally in the act of printing. The base or foundation B might be of any suitable material other than rubber, and so with the facing layer E, and the inner intermediate layer C may be wholly omitted, and any one of these layers may consist of more than one material or of more than one thickness. Fig. 5 shows a portion of a large curved impression-surface in which the several layers are integrally connected. Fig. 6 shows the invention in the form in which the layers are separate, like separate blankets, and are tightly stretched one over

the other, as shown. A flat lithographic stone is shown as the printing-surface F in this case. Of course any shape or form or character of printing-surface could be employed.

5 In operation the facing layer E presents an even and uniform resisting-surface to the printing pressures, which with my improved impression-surface may be reduced below
10 the pressures now found necessary. Moreover, irregularities in the form and differences in the pressures at different points and variations in the pressure of adjustments are compensated for without varying the uni-
15 formity of the impression.

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

An impression surface or platen for printing-presses or the like having a support of iron or other metal, a base or foundation 20 layer of hard rubber, an inner intermediate layer of continuous soft rubber, an outer intermediate layer consisting of pillared or sponge or other open-work rubber, and a continuous facing layer of soft rubber, all in- 25 tegrally connected together, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD HETT.

Witnesses:

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GEO. W. MILLS, Jr.