

(No Model.)

J. F. MUNSIE.

TESTING STATION FOR CONDUIT SYSTEMS.

No. 348,572.

Patented Sept. 7, 1886.

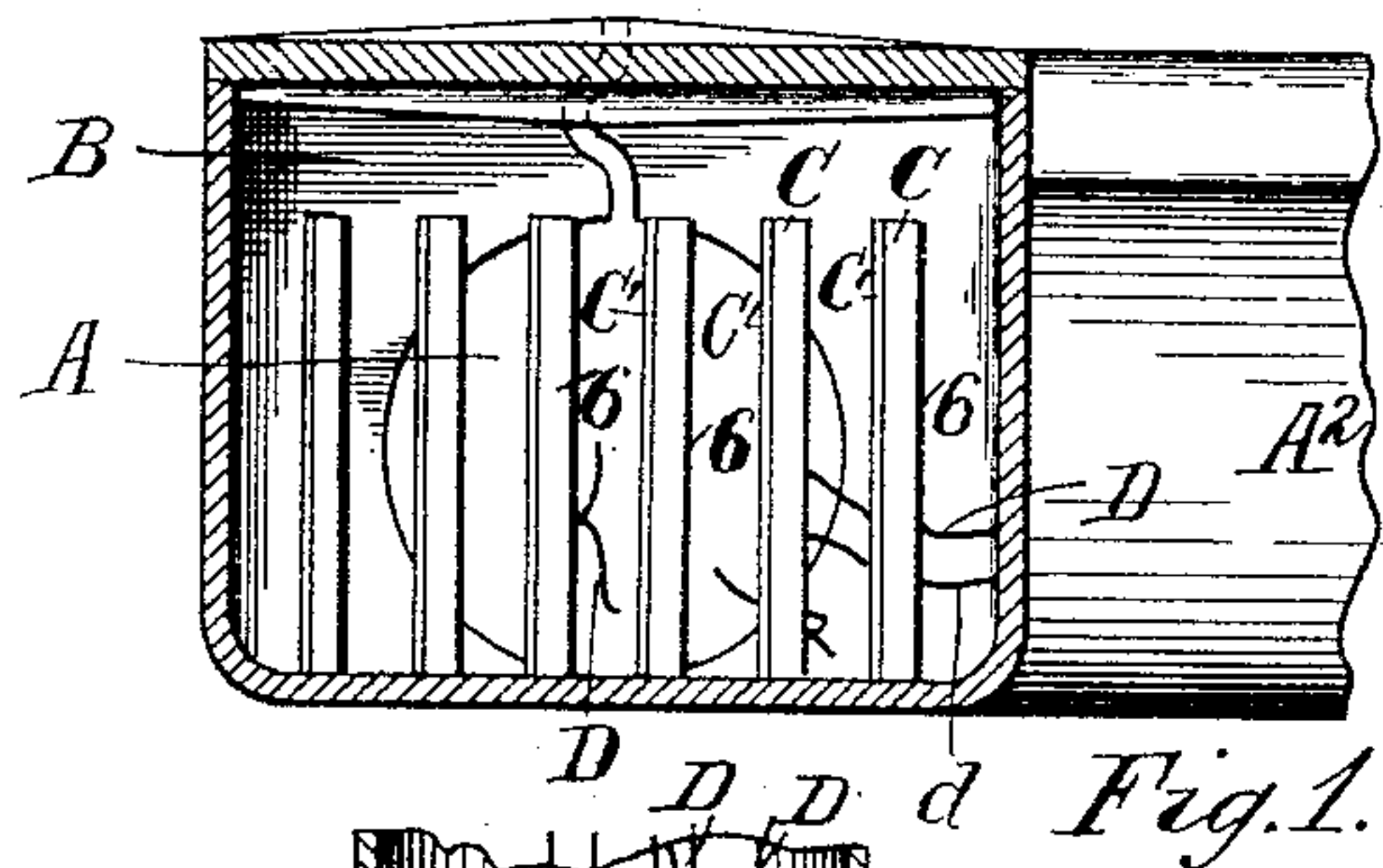


Fig. 1.

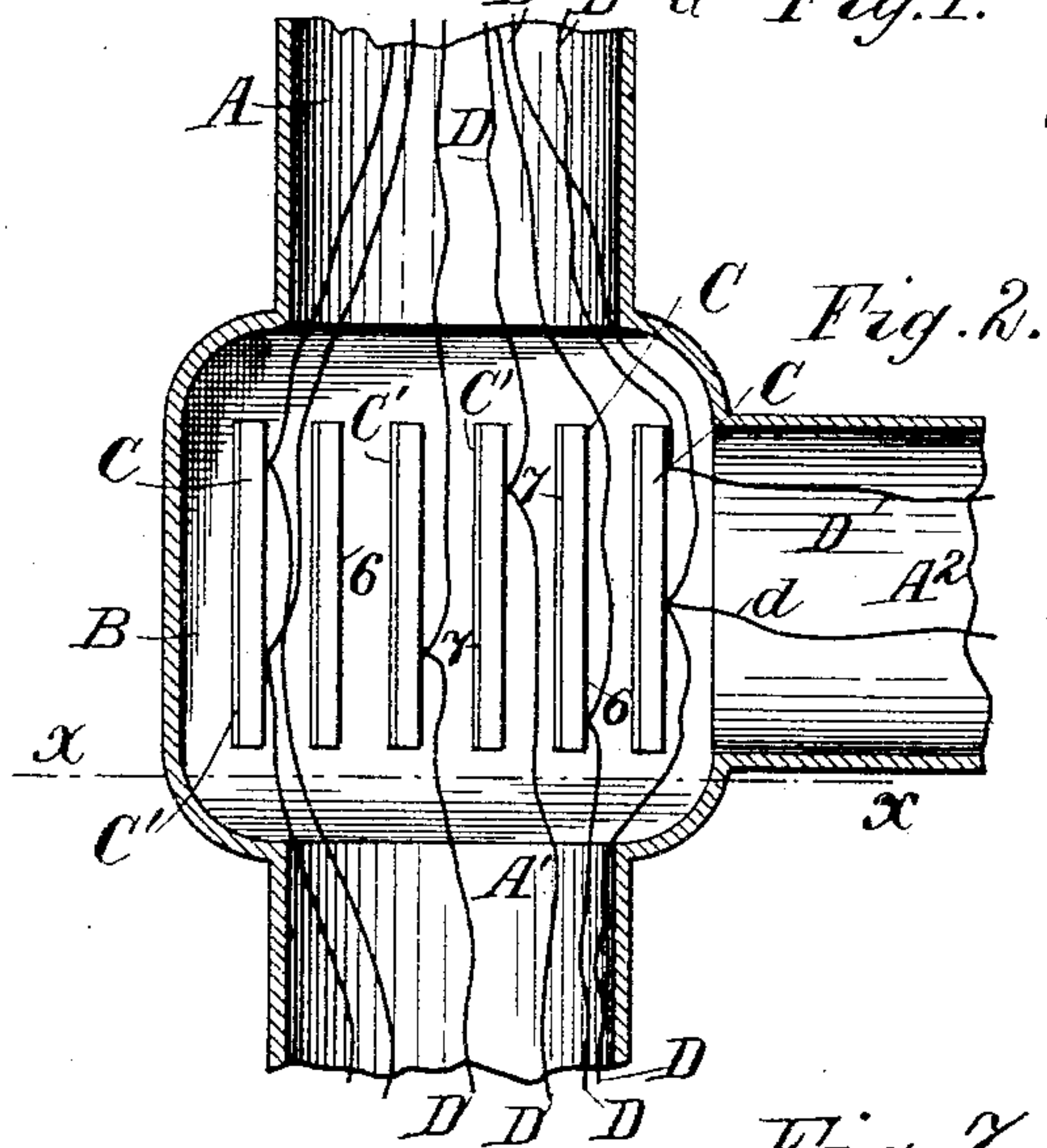


Fig. 2.

Fig. 7.

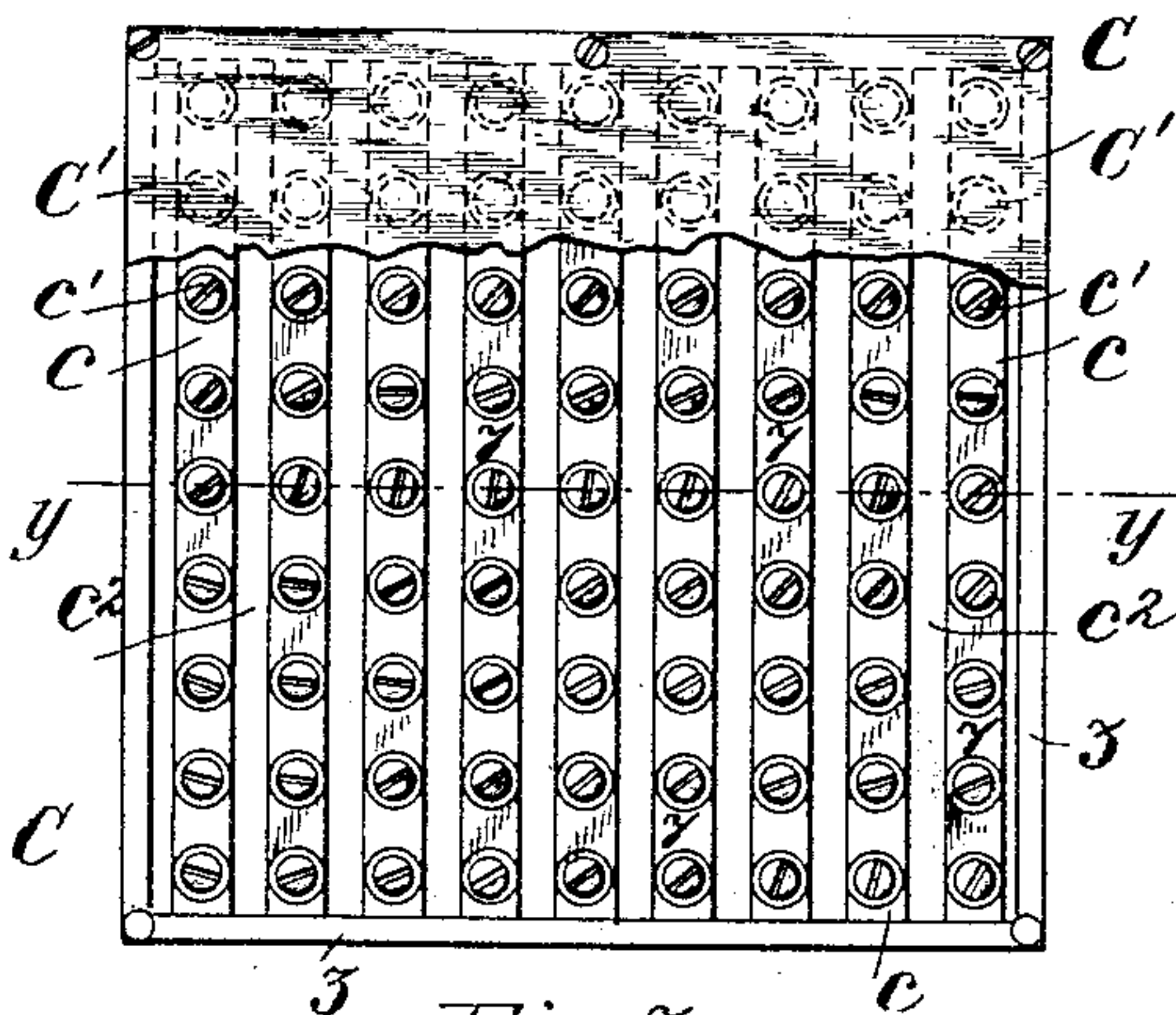
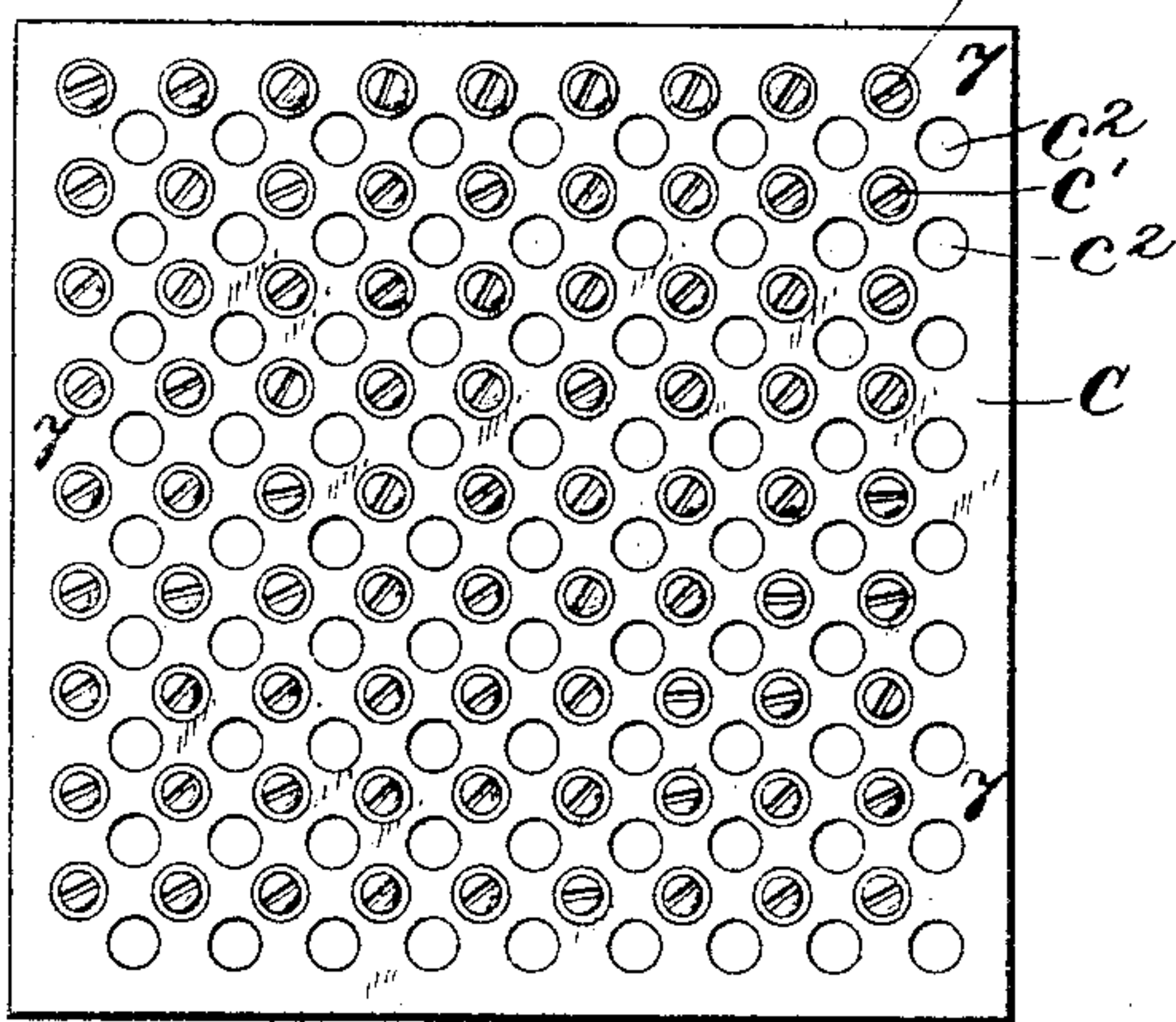


Fig. 3.

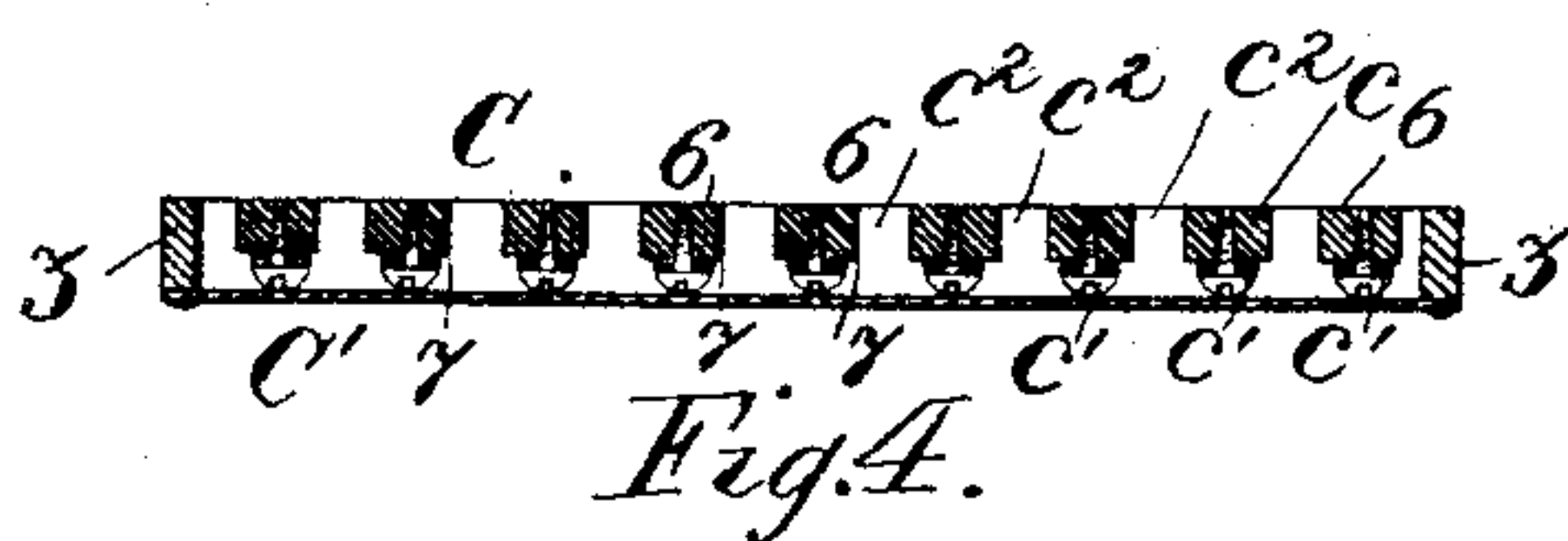


Fig. 4.

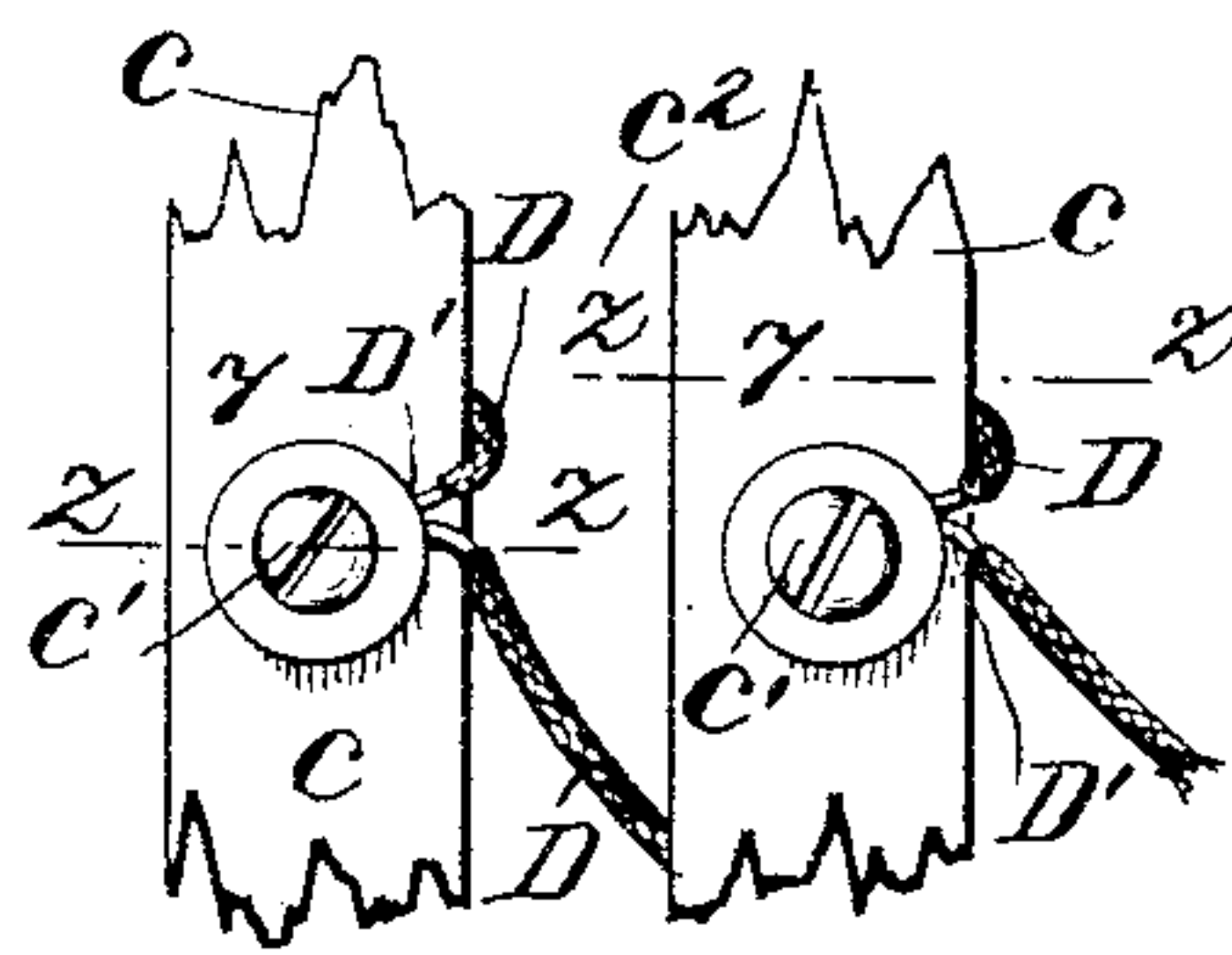


Fig. 5.

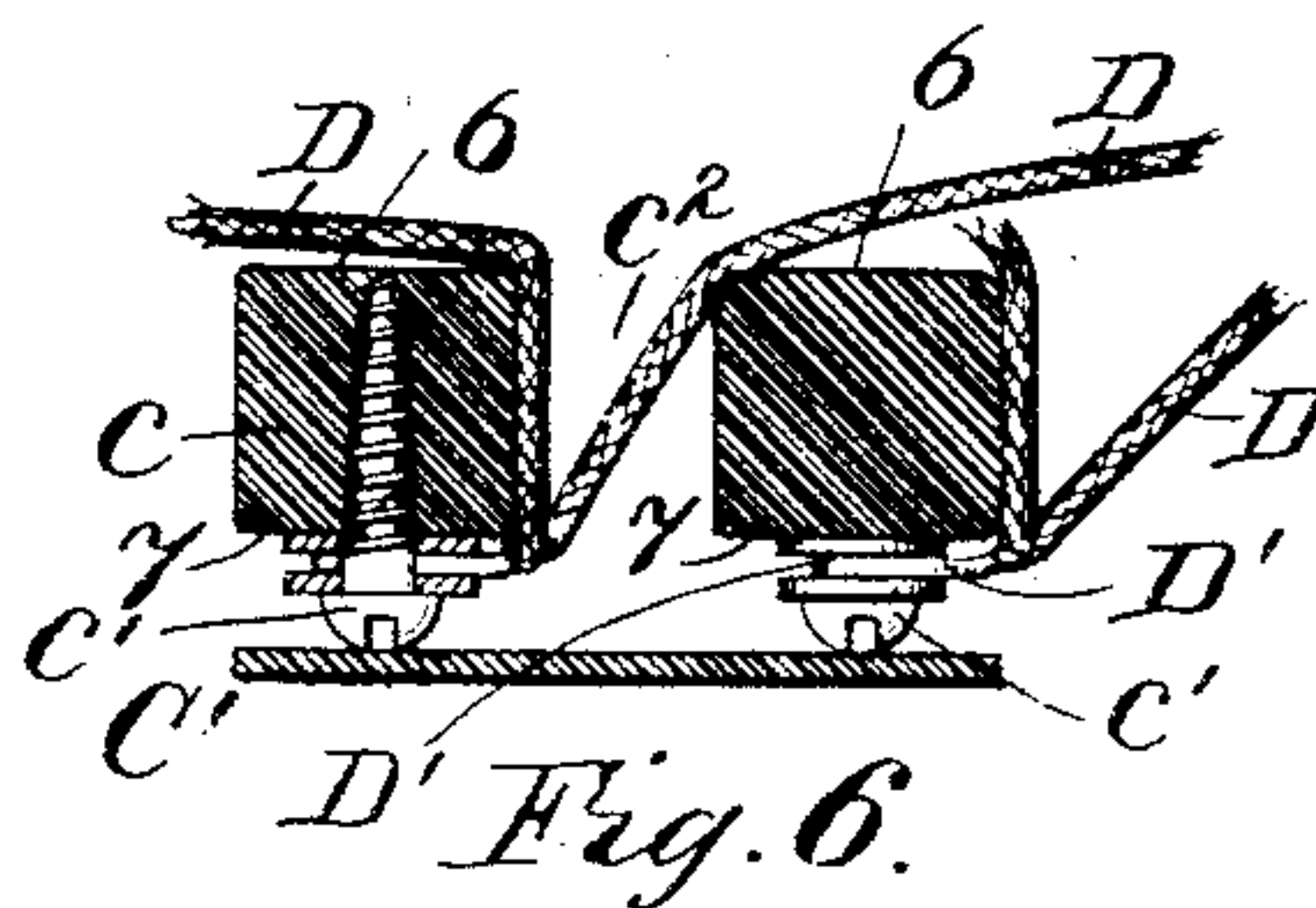


Fig. 6.

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UNITED STATES PATENT OFFICE.

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TESTING-STATION FOR CONDUIT SYSTEMS.

SPECIFICATION forming part of Letters Patent No. 348,572, dated September 7, 1886.

Application filed March 22, 1886. Serial No. 196,064. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. MUNSIE, a British subject, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Testing-Stations for Conduit Systems of Electric Wires, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

Although I have entitled my invention "improvements in testing-stations for conduit systems of electric wires," and in the accompanying drawings have illustrated the same as applicable to a conduit system, affording means whereby the wires contained therein are accessibly secured for accurate and expeditious testing and repairing purposes at convenient distances intermediate their initial and terminal points, likewise affording means for making auxiliary line-connections, I wish it distinctly understood that certain of my hereinafter-described improvements are applicable for analogous purposes independently of a conduit system.

To these ends, as will further appear, my invention consists in the matters hereinafter set forth, and pointed out in the appended claims.

In the drawings, Figure 1, I have shown partly in sectional elevation a two-way section of a conduit, within the station B of which are located a series of binding-post boards C, which I employ for securing the main and other wires of a conduit system for said above-mentioned purposes, said view being taken on the line *xx* of Fig. 2, which is a horizontal section taken so as to generally illustrate in plan view the operative arrangement within the station B of the binding-post boards C, and the manner in which the main and auxiliary wires D *d*, respectively, are secured thereto and extended therefrom.

In Fig. 3 I have shown in rear elevation a binding-post board, C, composed of a frame or marginal portion, 3, and bars *c*, carrying binding posts or screws *c'*, said board being provided with a binding-post insulating-shield, C', a section only of said shield being shown,

which is deemed sufficient for the purposes of this specification.

In Fig. 4 I have shown a cross-section of the binding-post board illustrated in said Fig. 3, said view, except with reference to the insulating-shield, which is also shown in section, being taken on the line Y Y of said Fig. 3.

In Fig. 5 I have shown in enlarged detail several of the bars *c*, which form a part of the binding-post board C, illustrated in said Figs. 3 and 4, said detail also illustrating the manner in which the wires are secured by the binding posts or screws *c'*, the insulating-shield being removed.

In Fig. 6, which is a transverse section of Fig. 5, taken on the lines Z Z thereof, I have further shown the manner in which the wires are held to the bars *c* by the binding posts or screws *c'*, the insulating-shield C' being shown.

In Fig. 7 I have shown a modified form of construction of the binding-post board C illustrated in said Figs. 3, 4, 5, and 6, a tablet or board, C, of non-conducting material, provided with suitable holes, *c''*, being employed in substitution of the frame or marginal portion 3, and the binding-post carrying bars *c*, likewise composed of non-conducting material, and laterally arranged with relation to each other so as to leave slots or open spaces *c''*.

To comprehensively describe the operative arrangement of my invention as illustrated in said described views, wires D being laid within the main portion A of the conduit up to the station B, and one or more binding-post boards C being unfixedly located within said station, the wires are brought each to the front face, 6, of the binding-post board and carried, by means of a loop, D', through an open space or slot or hole, *c''*, to the rear face, 7, of said board and around the shank of a binding post or screw, *c'*, by which it is securely held in position, the running end of said wire extending from said looped and securing point through said station into and through the continuation A' of the main line of conduit, or from said securing-point into and through the diverging branch A², or through such other branch which may be present and through which it may be desirable to run the same.

To run an auxiliary wire, *d*, from any main

wire D, I connect said auxiliary wire, as is substantially shown in Fig. 2, with the binding post or screw over which said main wire is looped, thus enabling the taking of the electric current transmitted over said main wire from said binding post or screw, it being understood that whenever a wire is looped around a binding post or screw or otherwise held thereto, the insulating substance covering said wire is removed therefrom at the point of contact with said binding post or screw. After the wires are secured to the board C by the binding posts or screws *c'*, the insulating-shield *C'*, which is preferably composed of soft rubber, but which may be of any suitable material, is adjusted to the rear face of said board, so as to fully cover the heads of the binding posts or screws, as substantially shown in Fig. 3.

While the binding-post boards may be fixedly located in position within the station B for operative purposes where a limited number of wires are employed, it is obviously of great advantage where it becomes necessary to employ a large number of wires within one system that said boards should be unfixedly located within said station. Thus, for illustration, the binding posts or screws being thoroughly insulated by the shield *C'*, and said boards being flexibly sustained by the wires secured thereto or resting by their lower ends upon the floor of the station, said boards may be in actual contiguity with each other, enabling the employment of a much larger number thereof than would otherwise be possible. When it becomes necessary to reach a certain binding post or screw forming a part of any one of the series of boards for testing or other purposes, but little effort is required to remove said boards from such contiguity, and thereby enable the desired post or screw to be reached. The stations B being

located at convenient intervals through the conduit system, the same may be entered in consecutive order from the point of current-supply, and any defect existing in a wire accurately located between two of said stations or between the point of supply and the station next thereto, by the employment for such purpose of a suitable testing apparatus, which would be applied to the binding post or screw securing said wire to the board C, said apparatus being capable of transmitting or receiving a signal through said binding post or screw and wire to or from the main office or source of supply, which would be designated the "initial station." When a defect is located between any two of the stations of a system, the defective section of the wire would be removed from between the said two stations and such removed portion replaced by another wire which would be connected with the binding posts or screws originally securing said defective conductor to their respective boards.

Having thus sufficiently described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a conduit system of electric wires, a station or series of stations, B, provided with a series of binding-post boards, C, unfixedly located within the interior thereof and securing the wires contained within said conduit, said binding-post boards being provided each with an insulating-shield; *C'*, all arranged substantially as and for the purpose described.

2. A binding-post board, C, for electric wires, provided with slots or holes *c'*, binding posts or screws *c'*, and an insulating-shield, *C'*, substantially as described.

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Witnesses:

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