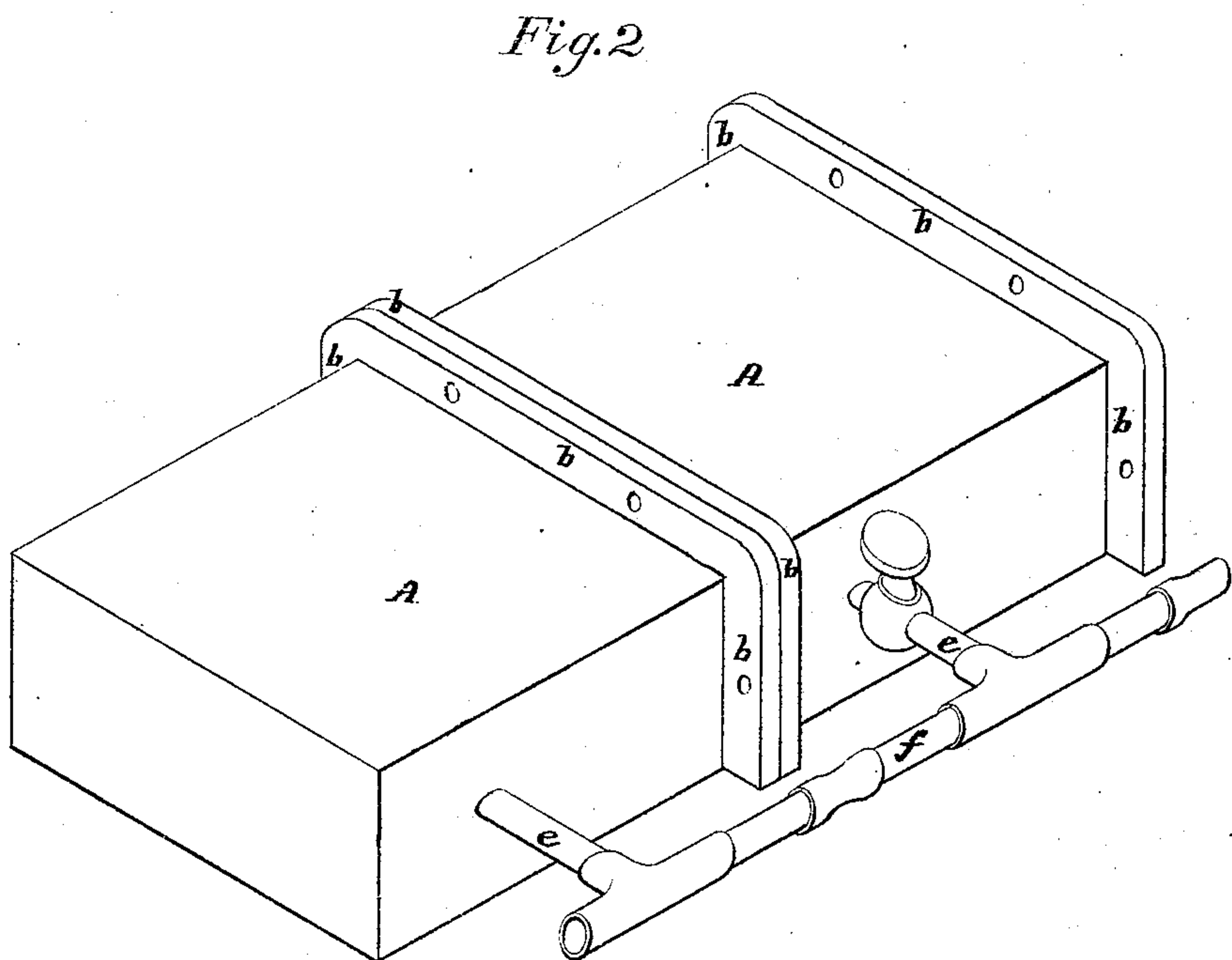
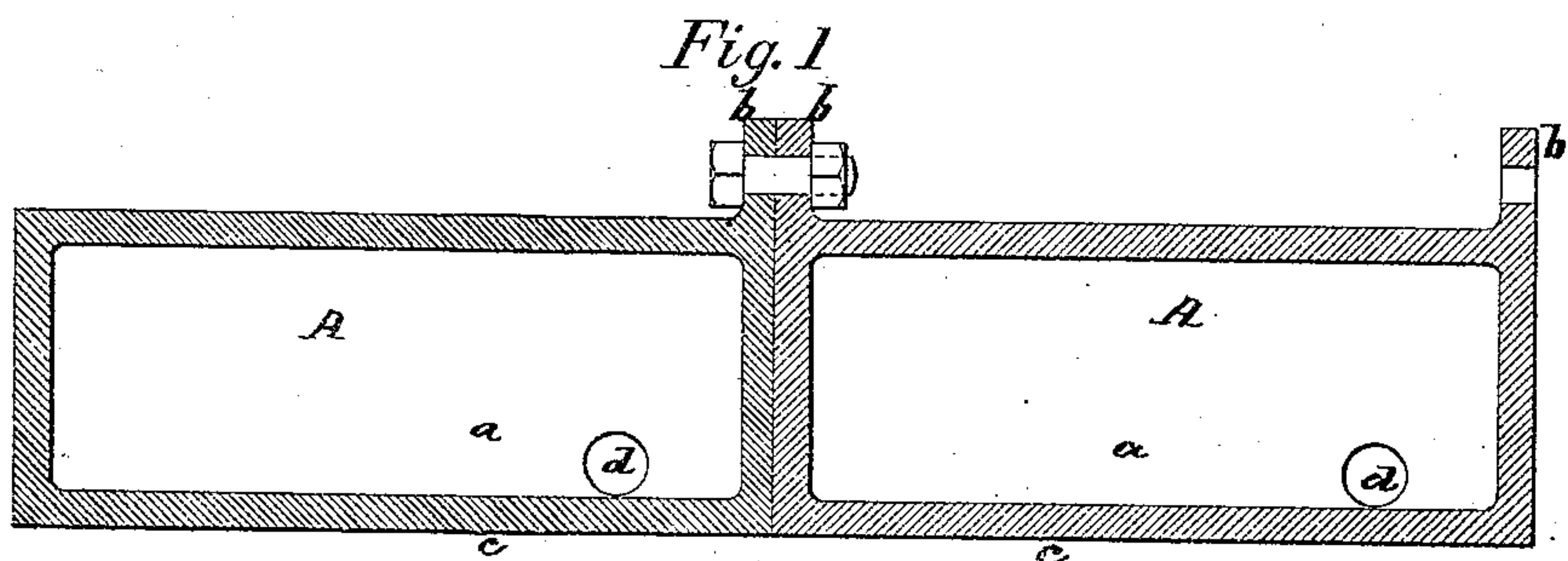


D. C. GATELY.

Plates for Vulcanizing Belting, Hose, &c.

No. 140,494.

Patented July 1, 1873.



Witnesses:

John Duerling
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UNITED STATES PATENT OFFICE.

DENNIS C. GATELY, OF NEWTOWN, CONNECTICUT.

IMPROVEMENT IN PLATES FOR VULCANIZING BELTING, HOSE, &c.

Specification forming part of Letters Patent No. **140,494**, dated July 1, 1873; application filed June 25, 1873.

To all whom it may concern:

Be it known that I, DENNIS C. GATELY, of Newtown, Fairfield county, Connecticut, have invented certain new and useful Improvements in Plates for Vulcanizing Belting, Hose, Packing, and other articles, of which the following is a specification:

My invention relates to what are commonly known in rubber manufacture as vulcanizing-plates, consisting of hollow internally-steam-heated metallic jackets. In the vulcanizing-press there are two of these jackets or plates employed—an upper one and a lower one—one of said plates being arranged to be moved toward and away from the other, as required, in any ordinary or suitable manner.

The belting, hose, or other article to be vulcanized is placed between the plates in a proper mold, either formed in or made separately from and laid in the press, and the two plates are then brought together so as to surround the articles and to heat and vulcanize the same.

In the manufacture of articles such as above specified, and particularly hose and belting, the plates require to be of great length. Owing to danger of warping and to other mechanical difficulties, it has been found impracticable to cast these long hollow plates in one piece; and therefore they have heretofore been cast in sections provided with flanges by which they could be put together, the end of each section which was joined to any other section being open, so that when put together the sections would form one plate with a continuous hollow space or chamber extending from end to end of the plate. The joints of the sections, especially at the top of the plate, were carefully cemented and united, to prevent, if possible, escape of steam at those joints; but it has been found most difficult, and indeed impossible at all times, to prevent leakage of steam through the joints on the face of the plate, and such leakage, although it may be minute and apparently insignificant, still results in injuring the external appearance of the article in the press, forming bubbles and depressions in the surface and sometimes seriously affecting the quality of the article.

My invention is designed to remedy this difficulty; and to this end it consists in forming the plate of independent hollow sections, the

space or chamber within each section being entirely isolated and separated from those of the other sections, each section receiving its own supply of steam or other heating agent, through its own distinct pipe or conduit. In this way each section is a complete box in itself, and there can, therefore, be no possible leakage of steam at the joints where the sections are united together.

The manner in which my invention is or may be carried into effect will be understood by reference to the accompanying drawing, in which—

Figure 1 is a longitudinal vertical section of a portion of a plate placed face downward. Fig. 2 is a perspective view of the same, representing the manner of making the steam-connections with the several sections.

The sections of the plate are represented at A A. Only two sections are shown in the drawing, but it will be understood that the number of them may be indefinitely increased according to the length of plate desired. Each section is made of metal, cast or otherwise, formed in box form, with an internal chamber or space inclosed on all sides. Each section is preferably provided at each end, on three sides, with a vertical flange, *b*, through which the sections are bolted together. The section on the left of the sheet, in the drawing, being supposed to be an end section, is represented with but one flange; but it will be found advantageous to provide all the sections with flanges at each end, so that the plate may be lengthened at either end at pleasure by adding one or more sections whenever desired. In lieu of the flange, other ordinary or suitable means of uniting the sections may be employed.

This valuable feature of the ready extension of the length of the plate is one of the results due to my invention. The fourth side of each section, which constitutes the face part or a portion of the face part of the plate, is not flanged, and is so finished as to be a prolongation of the corresponding face of the adjoining section, as shown at *c c*, Fig. 1. The sections are finished at their ends so as to fit together neatly and snugly, as represented in the same figure.

Each section is provided with an aperture to which is fitted a branch-pipe, *e*, extending from

a main steam supply-pipe, *f*. Each branch pipe should be supplied with a steam-cock, and each section should have a thermometer, whereby the heat of the various sections can be regulated and made uniform. Each section is also provided with a discharge-aperture, *d*, from which a branch pipe leads to a main pipe conveying the steam back to the steam-generator. Thus each section receives and discharges its own steam independently of the others, the plate being, in effect, divided up into a series of non-communicating steam-chambers, each having a distinct and independent steam-supply.

Having described my invention, and the manner in which the same is or may be carried into effect, what I claim, and desire to secure by Letters Patent, is—

A vulcanizing-plate consisting of two or more sections, each section forming a distinct and separate jacket having a distinct and independent steam-supply, as shown and set forth.

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

Witnesses: DENNIS C. GATELY.

I. P. BLACKMAN,
JAS. M. BLACKMAN.