No. 613,159. Patented Oct. 25, 1898.

P. KÜHNE.

FIREPROOF PARTITION WALL.

(Application filed Apr. 23, 1897. Renewed Mar. 30, 1898.)

(No Model.)

FIG. 1.

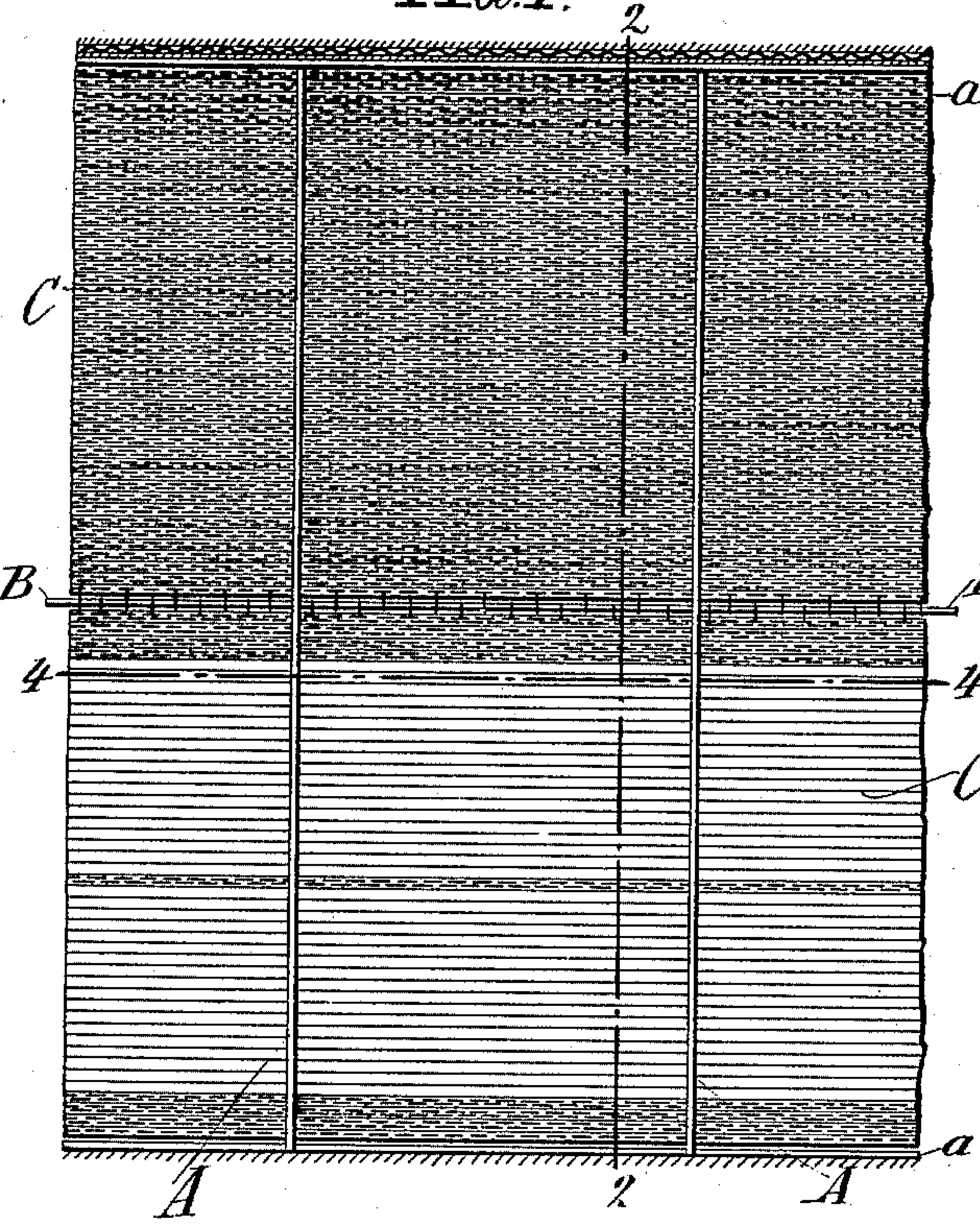


FIG. 2.

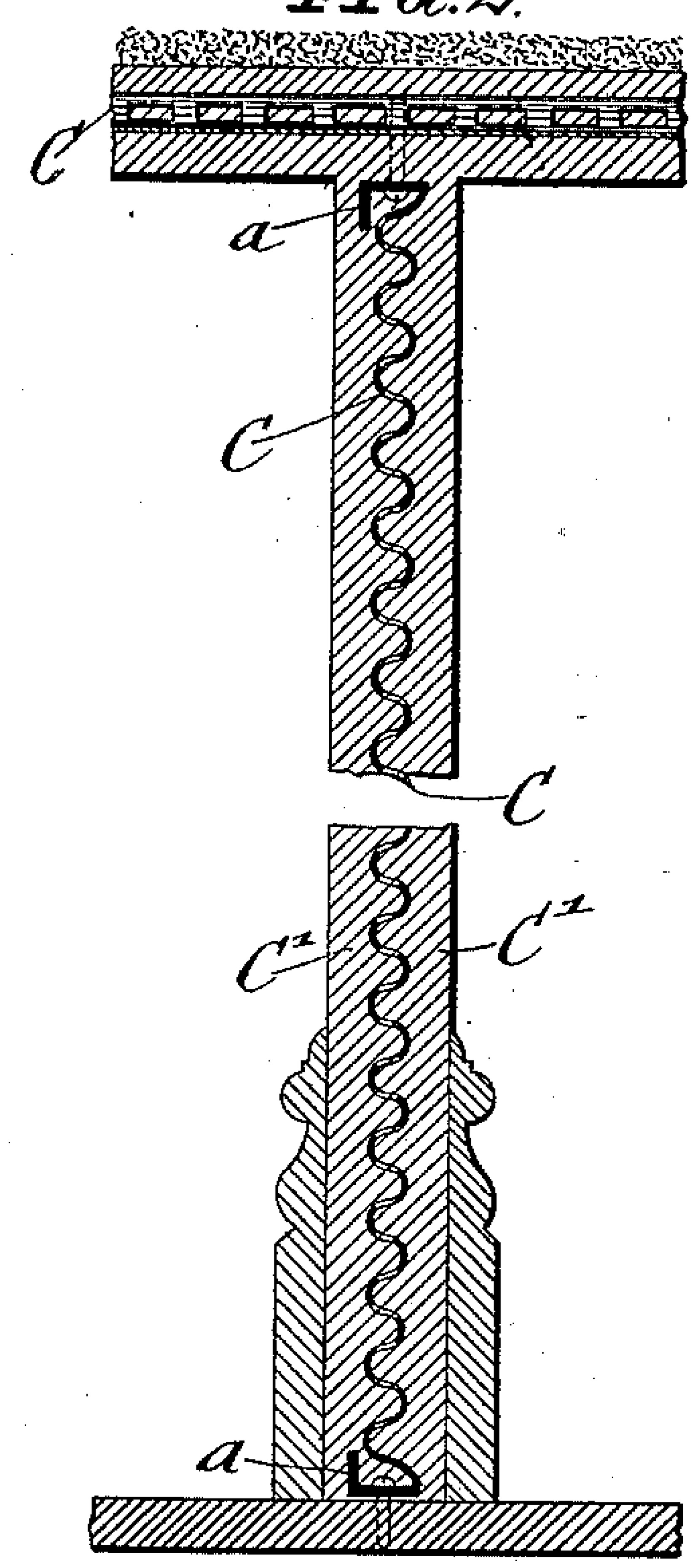


FIG. 3.

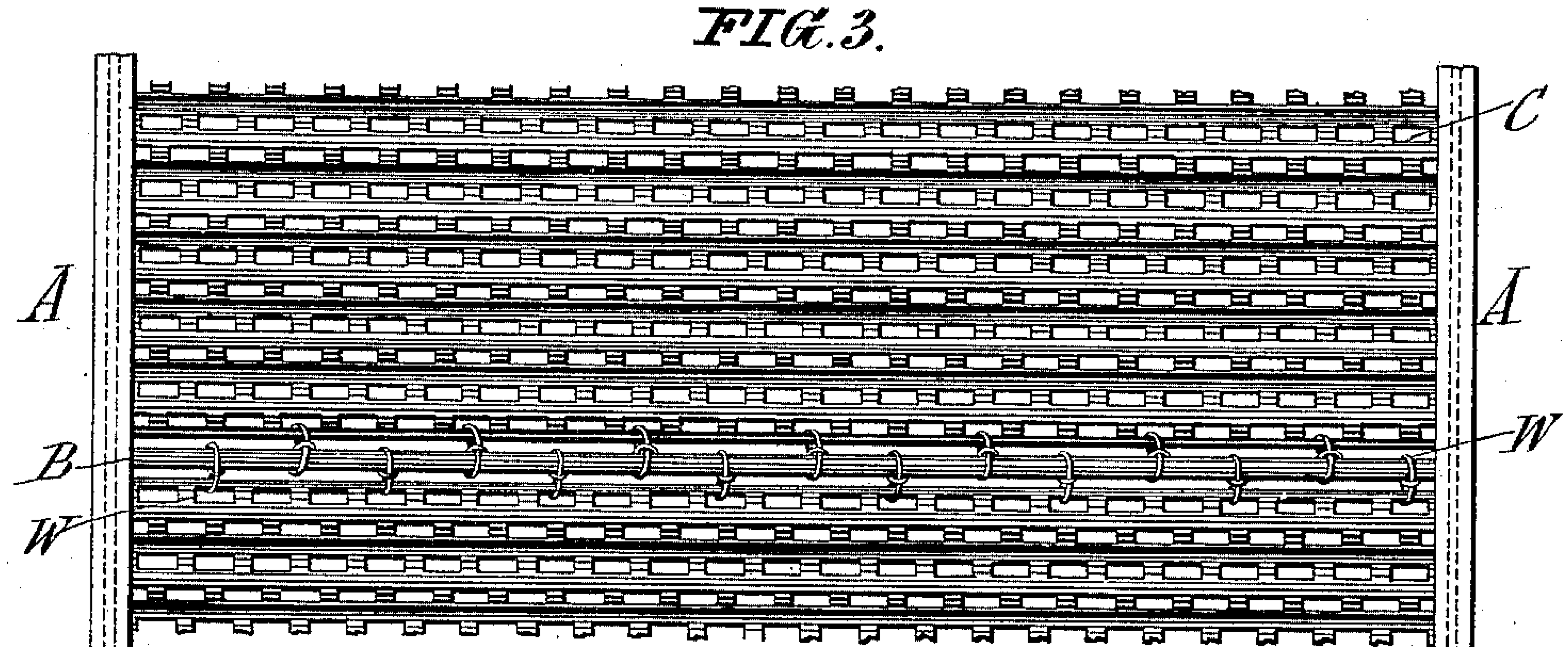
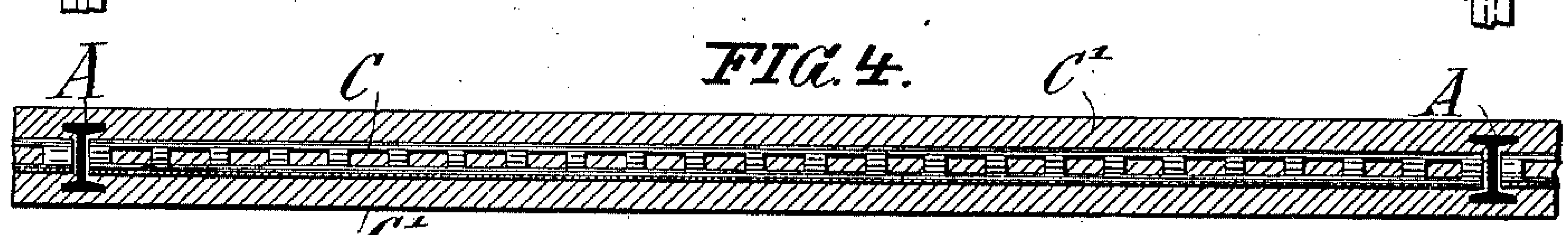


FIG. 4.



WITNESSES

FIG. 5.

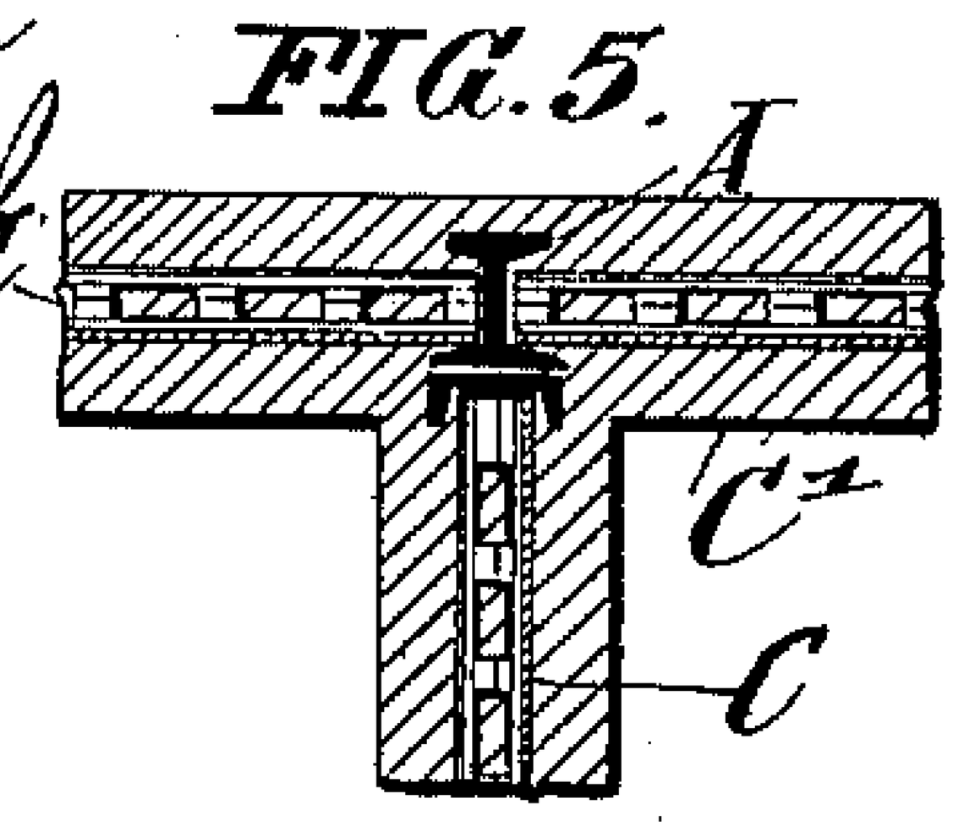
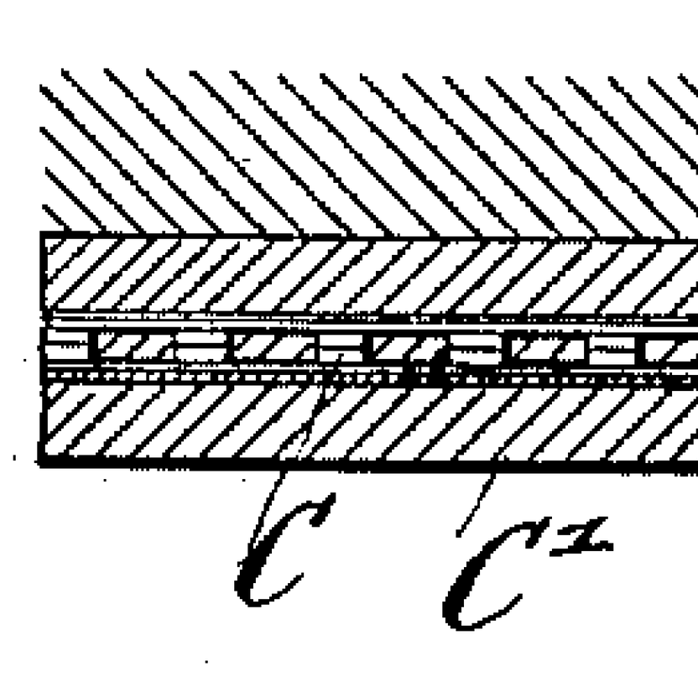


FIG. 6



INVENTOR

Paul Kühne

BY Goepel & Raegener

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

PAUL KÜHNE, OF NEW YORK, N. Y., ASSIGNOR TO THE STATEN ISLAND CONSTRUCTION COMPANY, OF SAME PLACE.

FIREPROOF PARTITION-WALL.

SPECIFICATION forming part of Letters Patent No. 613,159, dated October 25, 1898.

Application filed April 23, 1897. Renewed March 30, 1898. Serial No. 675,803. (No model.)

To all whom it may concern:

Be it known that I, PAUL KÜHNE, a citizen of the United States, residing at New York, (Stapleton,) in the county of Richmond and State of New York, have invented certain new and useful Improvements in Fireproof Partition-Walls, of which the following is a specification.

This invention relates to certain improvements in fireproof partition-walls for fireproof buildings which can be quickly erected and which take up a much less cross-section than partition-walls heretofore in use, so as to save material and floor-space; and the invention consists of a fireproof partition comprising upright I-strips, tie-rods between said I-strips, transverse angle-irons connecting said upright strips at the ceiling and floor, and fireproof panels between said uprights and tie-rods, formed of perforated and corrugated lathing, and a layer of cement, mortar, or like plastic material applied to both sides of said lathing, as will be fully described hereinafter and finally pointed out in the claim.

In the accompanying drawings, Figure 1 represents an elevation of a partition made according to my improved construction. Fig. 2 is a vertical section of the same on line 2 2, Fig. 1. Fig. 3 is a side elevation of the central portion of the perforated corrugated lathing employed in my fireproof wall. Fig. 4 is a transverse section on line 4 4, Fig. 1. Fig. 5 is a detail section showing how the invention is applied to joining partitions, and Fig. 6 is a detail section showing the invention applied to solid walls.

Similar letters of reference indicate corresponding parts.

A represents upright strips, which are made of I shape in cross-section and which are connected by angle-irons *a* at the ceiling and bottom, which angle-irons are attached in suitable manner to the fireproof ceiling and floor. The upright strips A are connected at one or more intermediate points by transverse tie-rods B. The space between the upright strips, angle-irons, and tie-rods is filled by a panel formed of perforated and corrugated steel or sheet-metal lathing C and layers of cement mortar C′ applied to each side of the lathing, said mortar passing into the perforations of the lathing, so as to form rigid anchors for the same. The cement mortar is preferably composed of one part Portland cement and one part of lime mortar, by which a fireproof composition is obtained.

The entire partition, including the metallic lathing, can be made two inches in thickness and is of perfectly rigid construction, inasmuch as the panels are supported by the uprights, angle-irons, and tie-rods, the metallic lathing being attached by wires or other fastening devices W to the tie-rods and angle-irons. The fireproof panels can also be used for forming ceiling-plates, which are supported by suitable tie-rods below the beams. My improved fireproof panels can also be employd for furring walls, in which case the perforated steel lathing is attached to the wall, as shown in Fig. 6, and a coating of cement mortar applied at one side only to the same, it being firmly supported thereon by the portions that pass through the perforations of the lathing, so as to form supporting-anchors for the layer of cement mortar.

My improved partition-wall has the advantage that it has a small cross-section, requires a comparatively small quantity of material, and is a perfectly stable, rigid, and fireproof construction.

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

A fireproof partition-wall, composed of upright I-strips, angle-irons connecting the I-strips at the ceiling and floor, intermediate tie-rods for said strips, corrugated and perforated sheet-metal lathing between the I-strips, angle-irons and tie-rods, metallic loops or ties passed around the tie-rods and through adjacent perforations of the sheet-metal lathing, and layers of suitable filling material applied to both sides of the sheet-metal lathing, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

PAUL KÜHNE.

Witnesses:
PAUL GOEPEL,
GEO. H. JAEKEL.