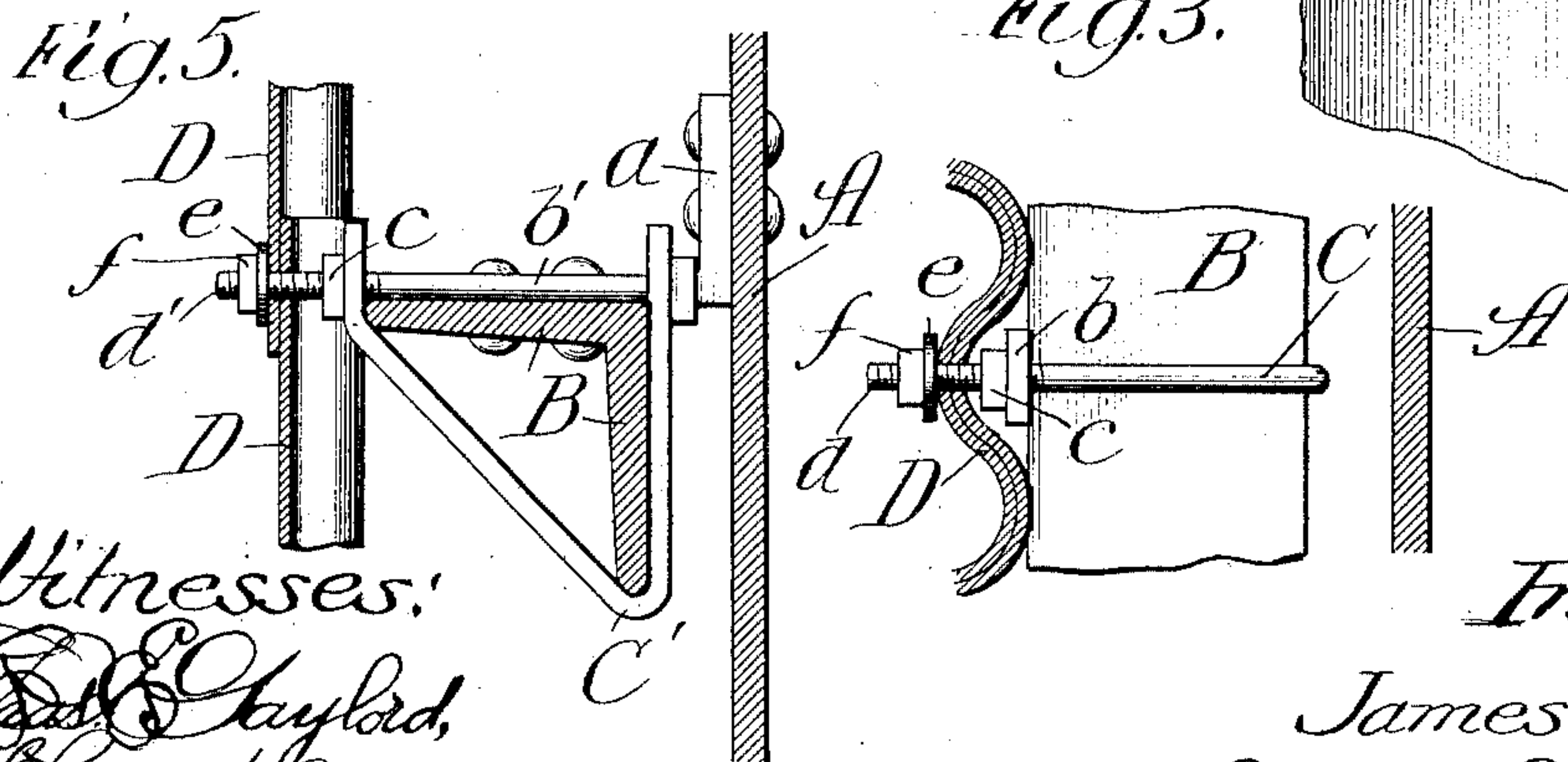
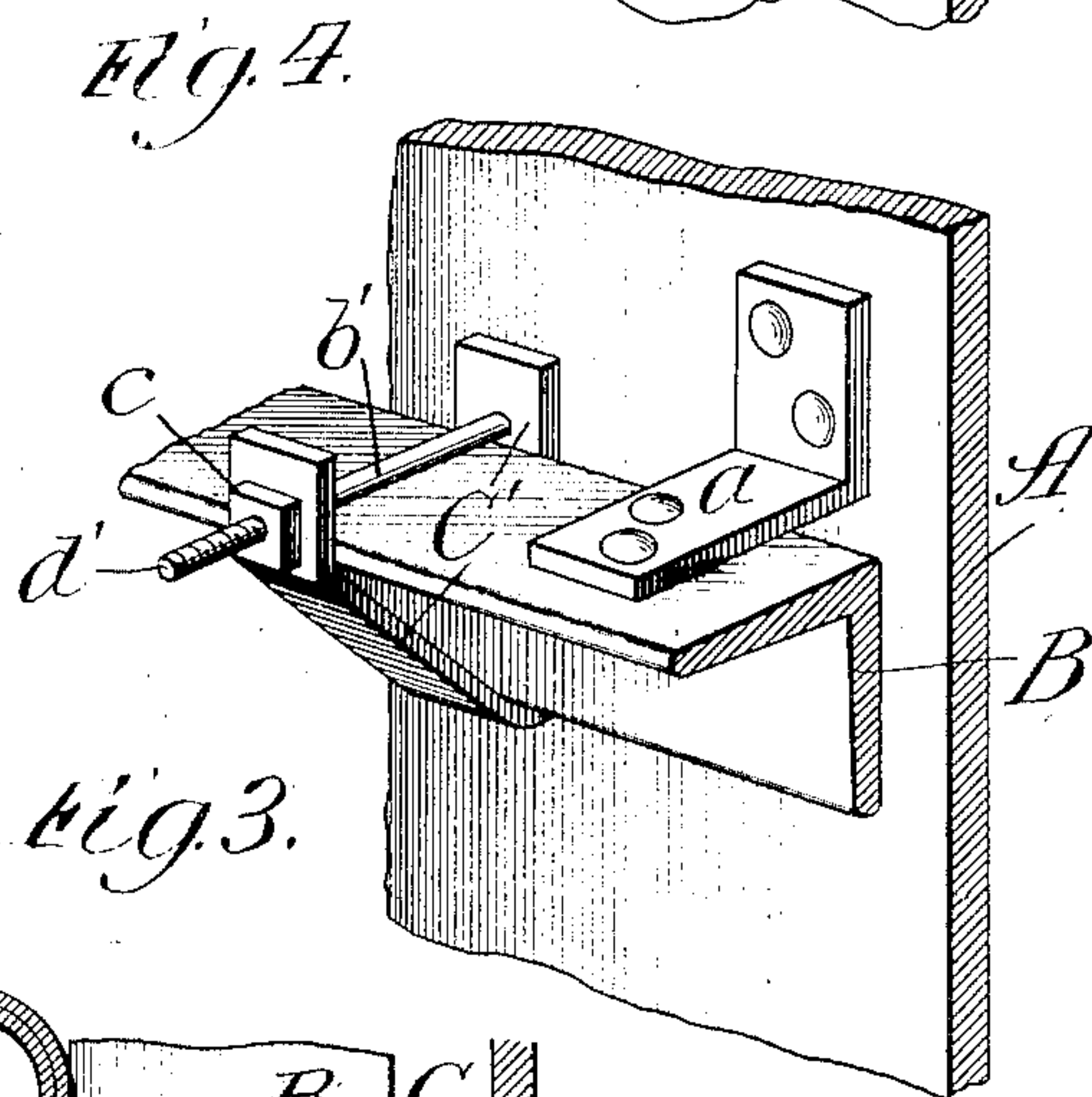
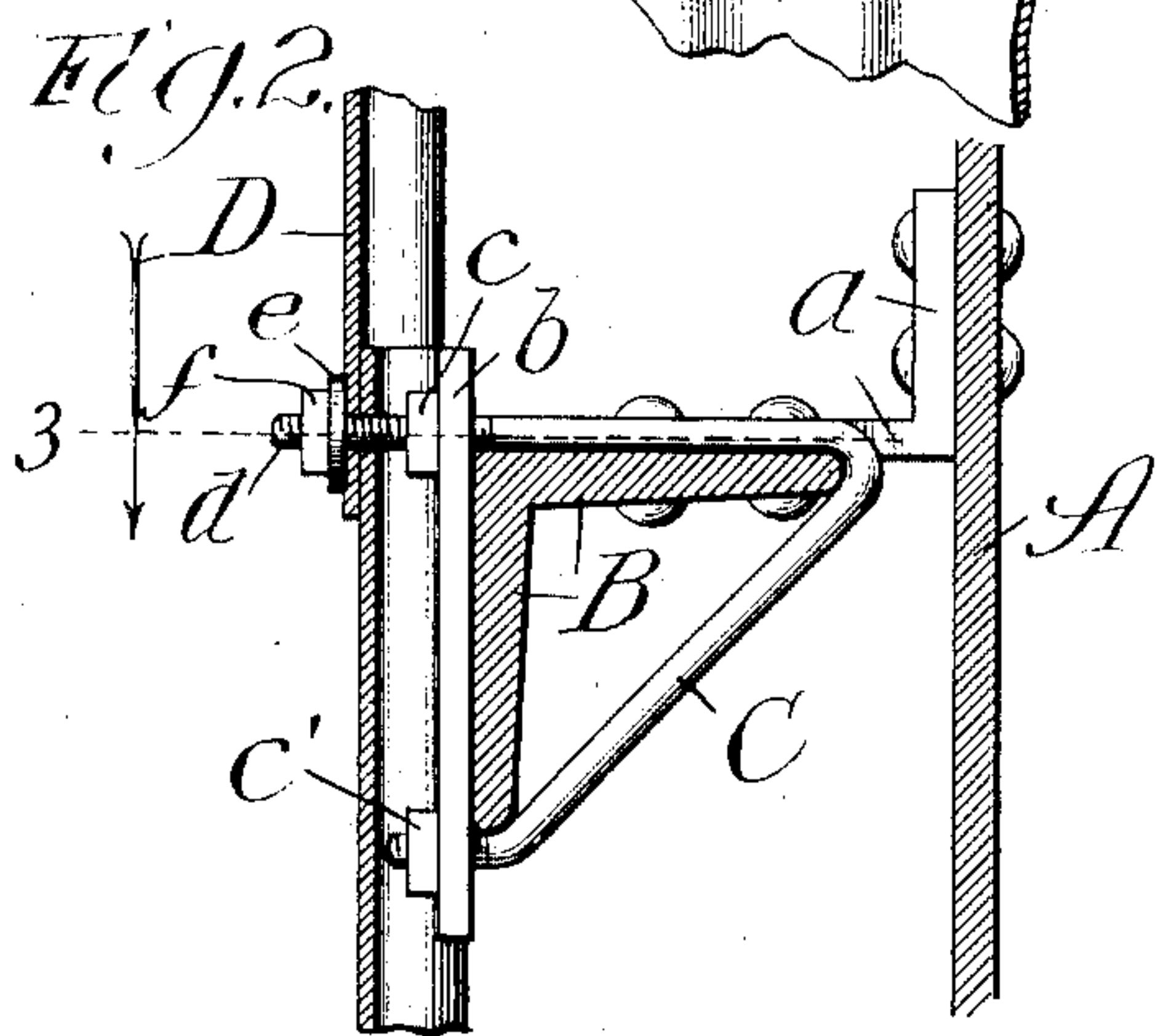
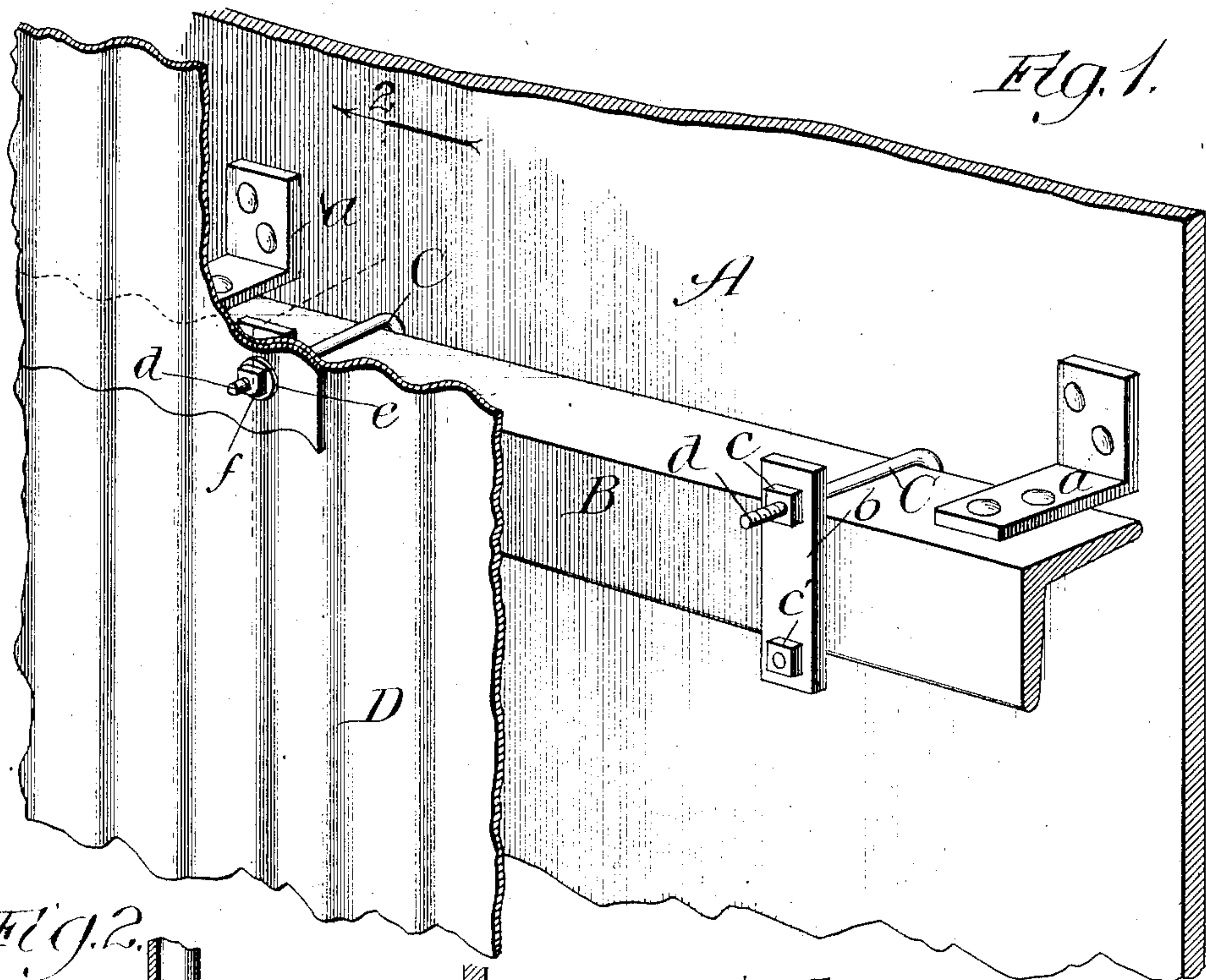


No. 826,904.

PATENTED JULY 24, 1906.

J. SPELMAN.
BUILDING SHEATHING MEANS.
APPLICATION FILED JUNE 19, 1905.



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UNITED STATES PATENT OFFICE.

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BUILDING-SHEATHING MEANS.

No. 826,904.

Specification of Letters Patent.

Patented July 24, 1906.

Application filed June 19, 1905. Serial No. 265,901.

To all whom it may concern:

Be it known that I, JAMES SPELMAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Building-Sheathing Means, of which the following is a specification.

My invention relates to an improvement in the art of applying to metal buildings—as bins, sheds, and other steel structures—the sheet-metal sheathing commonly provided, most usually in corrugated form, on their outer surfaces (particularly the walls, and also the roof) for protecting them against the weather and, furthermore, with relation to the walls for producing insulating air-space between them and the sheathing.

To facilitate securing the sheathing on the walls, it is common to provide rigidly supported on the outer surfaces of the latter at vertical intervals of about four feet angle-bars in horizontal position on each of which to fasten means for securing the corrugated metal sheathing-plates; but a difficulty encountered in fastening the sheathing by the means referred to is that due to the shallowness of the space between the wall and the sheathing, which excludes workmen therefrom to coöperate in the fastening work, as by opposing solid abutments to the points of riveting from the outside the plates to the fastening means. The consequence is that the work of fastening is done, as it were, in the dark and is therefore usually defective, rendering the sheathing loose and causing it to rattle in the wind and liable even to be torn off and carried away by the wind when it blows with great force.

My primary object is to provide a medium for fastening the sheathing in place which shall render it rigidly secure, thus avoiding rattling, and effectively resistant to displacement or dislodgment and which shall enable the sheathing to be fastened in place with facility from the outside thereof; and to this end my invention consists in the general, as well as the more specific, construction of the means I have devised for accomplishing my aforesaid object.

Referring to the accompanying drawings, Figure 1 is a broken perspective view illustrating the application of my improvement; Fig. 2, an enlarged section taken at the line 2 on Fig. 1 and viewed in the direction of the

arrow; Fig. 3, a section taken at the line 3 on Fig. 2 and viewed in the direction of the arrow; Fig. 4, a broken perspective view illustrating a modification, and Fig. 5 shows the said modification by a view like that presented by Fig. 2.

A denotes a wall of a steel building having fastened to its face by angular brackets *a* at suitable intervals an angle-bar B, shown spaced from the wall-surface. As will be understood, a desired number of these angle-bars is provided on each wall of the building, similarly fastened in place at suitable vertical intervals—say about four feet apart. As the bar B is shown in Figs. 1 and 2, its position on the wall places its angle outermost. On each angle-bar are applied, as by hooking them about it to extend transversely thereof, clips C in desired number to be placed at suitable intervals—say of about twelve inches—the ends of each clip, which is of general yoke shape, being screw-threaded and one longer than the other. To secure the clip rigidly and firmly in place upon the angle-bar, the edges of which its yoke-like body is adapted to fit, the ends, which project beyond the forward plane of the bar B, are connected by a bar *b*, and nuts *c* and *c'* are applied, respectively, to the longer threaded end *d* of the clip and its shorter threaded end to fasten the clip in place, causing it to tightly and stably embrace the angle-bar.

At D are shown corrugated sheet-metal plates forming the sheathing. The wall-covering operation is performed by applying the plates in the usual manner, with their lateral edges overlapping one another, and bolting or riveting them together. To fasten a sheathing-sheet near an end edge thereof, the operator taps it with his hammer until he ascertains by tapping the position or point behind the sheet of a protruding clip end *d* with regard to which the setting of the plates C is such as to cause each end *d* to coincide with a corrugation. Upon ascertaining the position referred to the operator applies his punch or "set" at the point and drives the end *d* through the plate D, whereupon he applies a washer *e* on the protruding end and screws against it a nut *f*. With all the plates D forming the sheathing thus fastened to angle-bars B the sheathing is made rigidly secure and permanently durable throughout. When, as represented in Fig. 1, the end edges

of two plates D overlap one another at points to be fastened, the longer clip ends *d* are punched through both layers, enabling the fastening to be performed in each instance with one nut *f* and washer *e*.

Sometimes it is desirable to position the angle-bars B on the building-walls, (and more especially under a shed or other roof,) as represented in Figs. 4 and 5—namely, with their angles innermost or adjacent to the wall or other surface. For such use I prefer to provide the clip of the form thereof represented at C, wherein it is made of bar-metal to fit about the angle-bar B, to which it is applied in the manner illustrated, and its then upwardly-projecting ends are coincidently perforated above the plane of the angle-bar for inserting through the perforations a nut-headed bar *b'*, affording the connection for the ends and threaded on its forwardly-protruding extremity *d'* to receive the nut *c*, which tightly fastens the clip on the angle-bar. The protruding end of the bar *d'* serves the same purpose as that of the end *d* of the form of the clip represented at C—namely, of presenting a tapping-point to be ascertained in the manner described and punched through the sheathing, and thereupon receive a securing-nut *f* and a washer *e*. The drawings represent only the corrugated form of sheathing-plates fastened through the medium of my improved clip, and that is the form thereof more commonly used. However, the clip affords an equally desirable means for fastening any other form of metal sheathing in place upon metal structures.

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

1. As a new article of manufacture, a sheathing-fastening clip for the purpose set forth, composed of a body of general yoke shape adapted to fit about a support and provided with screw-threaded ends, one of which is longer than the other to afford a point for penetrating the sheathing, a bar through which said ends pass for connecting them, and nuts screwed on said ends against said bar, and another nut on said longer clip end.

2. In combination with a metal structure of the character described, clip-supports secured thereon, sheathing on said structure, and clips, each comprising a body of general yoke shape embracing a support and provided with an adjustable connection for its ends, by which to fasten it stably in place, and with a projecting point penetrating and fastened to said sheathing.

3. In combination with a metal structure

of the character described, clip-supports secured thereon, corrugated sheathing on said structure, and clips, each comprising a body of general yoke shape transversely embracing a support and provided with an adjustable connection for its ends by which to fasten it stably in place, and with a projecting point penetrating and fastened to said sheathing at an outwardly-bulging section of its corrugation.

4. In combination with a metal structure of the character described, angle-bars secured thereon, sheathing on said structure, and clips, each comprising a body of general yoke shape transversely embracing a bar and provided with an adjustable connection for its ends by which to secure it stably in place and with a projecting screw-threaded point penetrating said sheathing and carrying an outer fastening-nut.

5. In combination with a metal structure of the character described, angle-bars secured thereon, sheathing on said structure, and clips comprising body portions of general yoke shape transversely embracing said bars at intervals thereon and each provided with an adjustable nut-fastened connection for its ends by which to secure it stably in place and with a screw-threaded point penetrating the sheathing and carrying an outer fastening-nut.

6. In combination with a metal structure of the character described, angle-bars secured thereon, sheathing on said structure, and clips comprising body portions of general yoke shape transversely embracing said bars at intervals thereon, each having a bar, connecting its ends, adjustably fastened in place for stably securing the yoke on its support, and provided with a screw-threaded point penetrating the sheathing and carrying an outer fastening-nut.

7. In combination with a metal structure of the character described, angle-bars secured on the walls of the structure, and sheathing thereon, and clips comprising body portions of general yoke shape transversely embracing said bars at intervals thereon and each having screw-threaded ends and a bar connecting said ends, with nuts on the latter adjustably fastening the clip stably on its support, one of said ends being longer than the other and presenting a point penetrating the sheathing and carrying an outer fastening-nut.

JAMES SPELMAN.

In presence of—

A. U. THORIEN,
J. H. LANDES