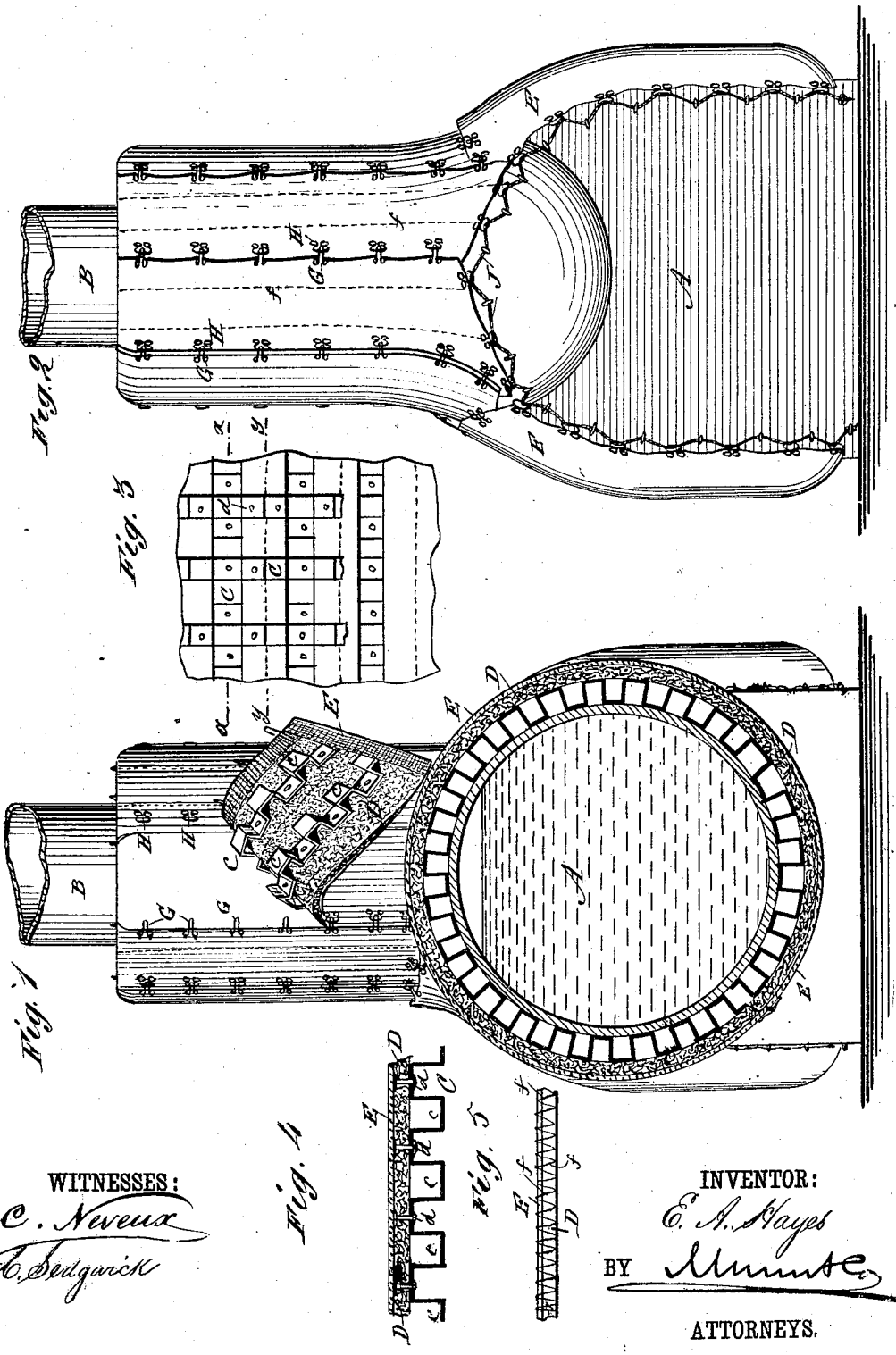
E. A. HAYES.

Coverings for Steam-Boilers.

No. 206,236. Patented July 23, 1878.



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IMPROVEMENT IN COVERINGS FOR STEAM-BOILERS.

Specification forming part of Letters Patent No. **206,236**, dated July 23, 1878; application filed June 4, 1878.

To all whom it may concern:

Be it known that I, EDWIN A. HAYES, of the city, county, and State of New York, have invented a new and useful Improvement in Covering for Steam-Boilers, of which the following is a specification:

My invention relates to a covering of felt or other fabric applied to the exterior surfaces of steam-boilers and various parts of steam-engines for the purpose of protecting them from cold and preventing condensation of steam.

Heretofore felt and other fabrics have been applied directly to the surface of the boiler or other part, and have in time adhered closely thereto, so as to prevent removal of the fabric without tearing it and rendering it useless. In order to inspect the boiler it is necessary to remove the felt, and, as the removal renders it worthless, a new covering must be applied every year, or as often as the boiler is inspected.

The principal object of my invention is to provide means for using the covering again after it has been removed from the boiler.

The accompanying drawing illustrates the manner of carrying out my invention.

Figure 1 is a view, partly in transverse section, of a boiler and dome with my improved casing applied thereto. Fig. 2 is an end view of the same. Fig. 3 is a view of the inner surface of the casing. Fig. 4 is a section taken in the line *x x* of Fig. 3. Fig. 5 is a section taken in the line *y y* of Fig. 3.

Similar letters of reference indicate corresponding parts.

A represents a boiler, and B a dome, of any ordinary description. C represents a strip of metal having corrugations *c*, of U shape or approximate form, and of a depth equal to the thickness of the space which it is desired to preserve between the felt and the surface of the boiler or other part to be covered. D represents the felt, which may be of any suitable description, and to which the corrugated strips C are attached by rivets *d*. E represents a layer of duck, canvas, or other suitable fabric, attached to the felt by sewing it thereto, the stitches being represented at *f* in Fig. 5. G H represent, respectively, hooks and eyes on the edges of the contiguous sections of the casing, for the purpose of connecting the sections together to form the casing and to hold them in place. J represents a wire passing through eyes attached to the edges of the casing, and through loops or staples projecting from the boiler, for the purpose of gathering said edge and drawing it close to the surface of the boiler, so as to prevent the admission of cold air to the space between the boiler and the casing when the steam is on.

The felt being attached to the corrugated strips and the canvas or other fabric being stitched to the felt and the edges provided with hooks and eyes, straps and buckles, or other suitable fastenings, the section is then complete. The sections may be of any desired shape and dimensions. They may be in strips long enough to pass entirely around the boiler, or from top to bottom of an upright boiler or dome, or they may be of square or oblong shape, and arranged to break joints when in place on the boiler. Each section has the woven fabric arranged to overhang the felt on one or more of its sides after the manner of a flap.

The sections, constructed as described, are connected together by the hooks and eyes or other fastenings to form the casing. When so connected the contiguous edges of the felt fit closely against each other and the flaps cover the joints, and thereby form a practically air-tight casing. The canvas or other woven fabric protects the outside of the felt.

The edges of sections which form the terminations of a casing—as, for example, at the end of a boiler or the top of a dome—are provided with eyes H for the reception of the wire J. When the casing is in place on the boiler and the boiler has steam on, the wire is contracted so as to draw the edge of the casing close to the surface of the boiler, as before described, and as shown clearly in Fig. 1. When steam is not on, the wire may be loosened so as to admit air under the casing for the purpose of cooling off and preventing the iron from sweating.

The metallic strips C may be arranged to cross each other in the form of net-work, if desired.

When the boiler is to be inspected, or when for any reason access to the surface of the boiler is desired, either the whole or any part

of the casing may be readily removed by disengaging the hooks and eyes or other fastenings, whereupon any desired number of sections may be taken off. After the inspection or repair of the boiler, the covering may be again placed in position thereon, as before. When one boiler is replaced by another of the same form and dimensions, the casing may be readily detached from one and applied to the other.

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

1. In a boiler-covering, the combination of the corrugated strips C, felt D, and canvas E, the sections being connected by hooks and eyes, as shown and described.

2. In combination with a casing constructed as described, a wire, J, arranged as shown and described, for the purpose specified.

EDWIN A. HAYES.

Witnesses:
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