(No Model.)

F. L. HIRSCHMANN.

STOVE AND OTHER PIPES.

No. 305,188. Patented Sept. 16, 1884.

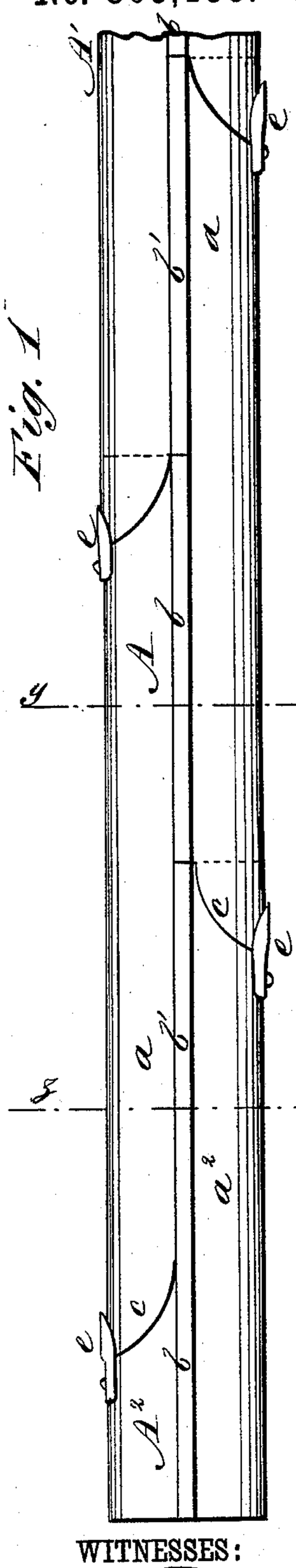


Fig. 1

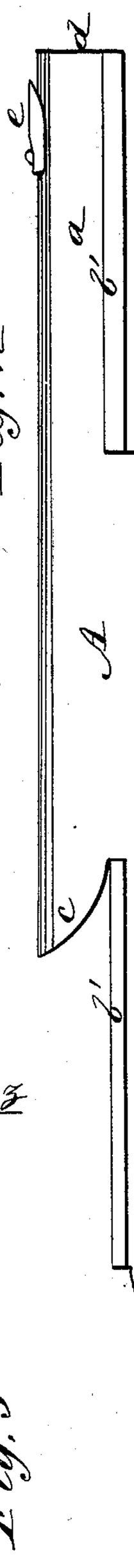


Fig. 2

Fig. 3

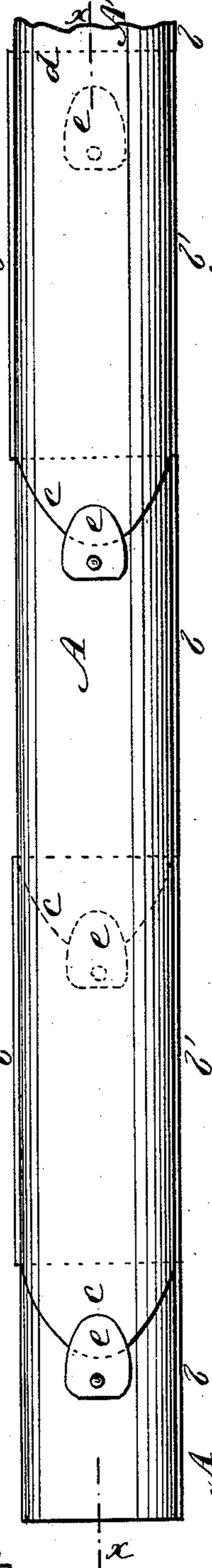
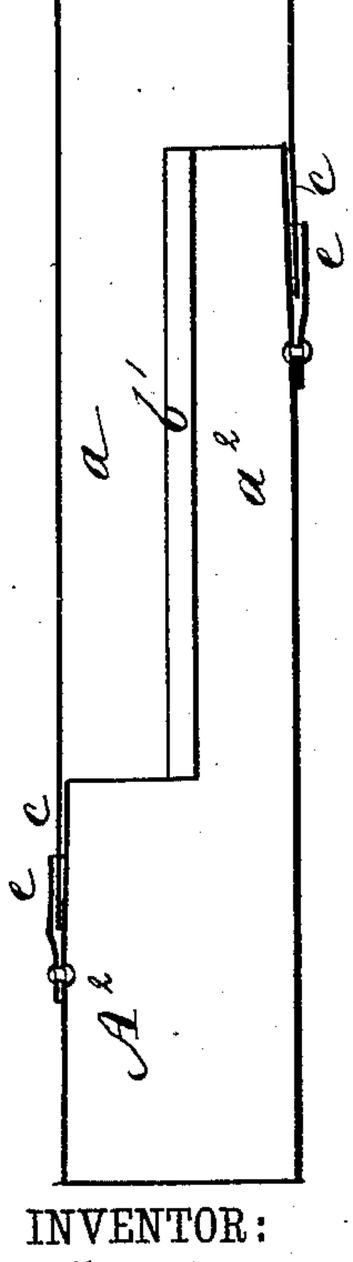


Fig. 4

Fig. 5

Fig. 6



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STOVE AND OTHER PIPES.

SPECIFICATION forming part of Letters Patent No. 305,188, dated September 16, 1884.

Application filed January 31, 1884. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK LOUIS HIRSCHMANN, of Norway, in the county of Menominee and State of Michigan, have invented certain new and useful Improvements in Stove and other Pipes, of which the following is a full, clear, and exact description.

This invention relates to sheet iron or metal pipes applicable, among other purposes or uses, to stoves; and the invention will here be described more particularly with reference to such use; but it is equally applicable to pipes put together in sections or lengths for other purposes.

The invention consists in a pipe-section or series of sections made with a close body part and half-pipe extensions fitting by longitudinally-sliding lock-joints one along the other, and provided with tongues or nose-end projections and catches, for overlapping fit of the pipe-sections in a crosswise direction one over the other intermediately of their length, substantially as hereinafter described, whereby a very strong pipe is obtained, time and labor are economized in putting it up, and space reduced when storing or transporting it.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents an exterior side view of a piece of pipe composed of several sections or lengths embodying my invention. Fig. 2 is a similar view to Fig. 1 of one of the pipe-sections detached as seen from the reverse side and as turned half round from the position it occupies in Fig. 1. Fig. 3 is an exterior longitudinal front view of the piece of pipe shown in Fig. 1, and Fig. 4 a longitudinal section upon the line *x x* in Fig. 3. Fig. 5 is a transverse section of the pipe on the line *y y* in Fig. 1; and Fig. 6, a further transverse section on the line *z z*, Fig. 1.

A indicates the body part of one length or section of pipe closed longitudinally by a folding-seam lap-joint, *b*, said joint either being made angular, oval, or round in its transverse section, but preferably angular, as shown. Projecting from either end of this body part on reverse sides, or front and back, are extension half-pipe portions or pieces *a a*, forming longitudinal continuations of the body part A, and being integral parts of it. These extension reverse half-pipe sections A′ A′ are formed each with its exposed longitudinal edges bent to make a half-lap folding or sliding joint, *b′*, the one of such joints on its one edge being in line with the closing joint *b* on the body part A, and the other of such joints on the other edge occupying an opposite relation on the other side of the pipe. The one of these pipe-extensions *a* has its outer end extended beyond its half-lap joints *b′*, which portion is of rounded or other suitably-shaped terminal configuration, forming a nose end, *c*, and the end of the body part next adjacent to said half-pipe extension is constructed to form a similar nose end, *c*, on the opposite side of the pipe-section. The other half-pipe extension, *a*, of said body A is or may be made square at its other extremity, as at *d*—that is, without any nose end. Upon the front or one side of the body part A, which lies between the line of the joints *b b′*, near the opposite end of said body part, to the nose end *c* of the one extension half-pipe *a*, is a sheet or cast metal catch, *e*, which may be made ornamental. The other lengths or sections of pipe, which are fitted to engage at either end with the length or section of pipe above described, are or may be similarly constructed. Thus to the right hand of Figs. 1, 3, and 4 is a half-pipe extension, *a′*, of another pipe-section body, A′, made with a tongue or nose end, *c*, which engages, when the pipe-sections are slid, by their lap-joints *b′*, together, with the catch *e* on or near the end of the body part A of the first-described pipe-section, while the other nose end, as here shown, of the pipe-section body A′ engages with a catch, *e*, on the square-ended half-pipe extension *a* of the body A on the opposite half of the pipe. The opposite end of the pipe-section first described is similarly joined by like lap-folded sliding side joints and catches of a further like pipe-section, (shown to the left of Figs. 1, 3, 4,) within one of the catches *e* of which the nose end *c* of the half-pipe extension *a* of the pipe-body A engages. The several nose ends *c* of the several pipe-sections engage with catches *e* on the next adjacent pipe-section successively on opposite sides of the whole pipe. Supposing this left-hand pipe-section, the body

of which is marked A^2, and a half-pipe extension from it marked a^2, to be the terminal section of the pipe, it may end square with its body part, as shown, to fit the elbow or the stove, supposing the pipe to be applied to stoves, or as other circumstances may require. Elbows for such pipe may be similarly constructed, or the pipe may be fitted with ordinary or any other suitable elbows.

A pipe thus constructed will be as strong as a riveted pipe, and may be connected for a longer distance without holding it by wire to the ceiling or elsewhere. As the cross-joints are broken in the middle of each pipe-section, the seam may be made free or loose, and the sliding longitudinal locking lap-joints of the pipe-sections readily fit or work one within the other, and the jointed connections of the sections give an unusual amount of strength.

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

1. A sheet-metal pipe-section constructed with a closed body part and half-pipe extensions, the edges of which are bent to form a lap-folded sliding joint, essentially as described.

2. A sheet-metal pipe-section constructed with a closed body part, A, half-pipe extensions *a a* at opposite ends of said body part, and on reverse sides of the longitudinal center thereof, the one end of said body part and other extremity of one of said extensions being constructed each with a tongue or nose end, *c*, both extensions with lap-folded sliding-joint portions *b'* on their longitudinal edges, and the pipe-section provided with catches *e* on opposite sides of it, substantially as and for the purposes herein set forth.

3. The combination of a series of any number of pipe-sections having closed bodies A A' A^2, with half-pipe extensions *a a'* a^2, constructed to slide by longitudinal lock-joints *b'* at their edges, one along the other, and said sections being provided with tongues or nose ends *c* and catches *e*, for engagement of the sections with each other, essentially as described.

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Witnesses:
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