(No Model.)

J. SMITH.

SLIP OR LOCK JOINT FOR CORRUGATED IRON.

No. 405,379. Patented June 18, 1889.

Fig. 1.

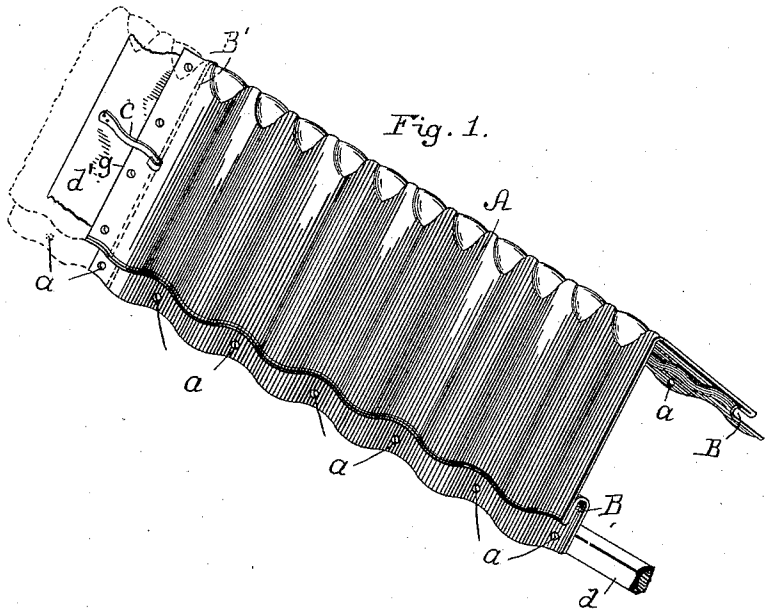


Fig. 2.

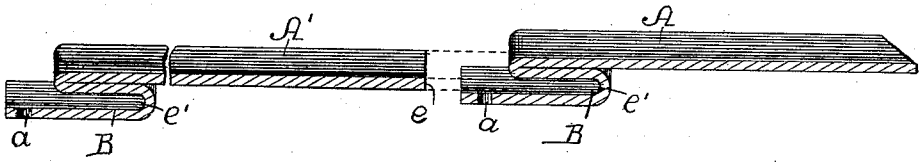


Fig. 3.

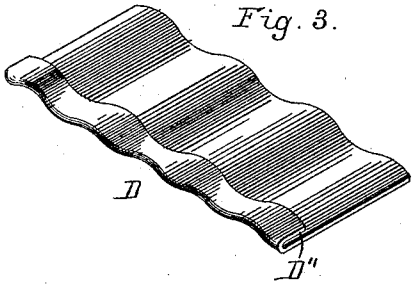
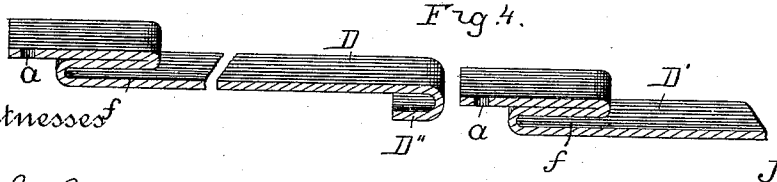


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN SMITH, OF KANSAS CITY, MISSOURI.

SLIP OR LOCK JOINT FOR CORRUGATED IRON.

SPECIFICATION forming part of Letters Patent No. 405,379, dated June 18, 1889.

Application filed February 21, 1889. Serial No. 300,640. (No model.)

To all whom it may concern:

Be it known that I, JOHN SMITH, of Kansas City, Jackson county, Missouri, have invented certain new and useful Improvements in Slip or Lock Joints for Corrugated Iron, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to certain improvements in corrugated metal plates for roofs, &c., having for its object to obviate the exposure of the fastenings for the plates to the action of the sun and weather, to prevent leakage, and also to avoid the nailing or connecting together lapping metal sheets or plates, as also to render it unnecessary to interlap or interlock the transverse edges of the plates. Neither is it necessary in my invention to use any nails or like fastenings in connecting or securing together, or to the sheathing the plates along or in lines parallel with their transverse edges; and to these ends the nature of my invention consists of combinations of parts and their construction, as will be understood from the following description and accompanying drawings, in which—

Figure 1 is a perspective view of the cap or gable sheet of a roof with parts removed, embodying my improvement. Fig. 2 is an enlarged perspective view of sections of two plates relatively disposed to show the manner of putting them together. Fig. 3 is a similar view of a plate, showing in part another form of the embodiment of my invention; and Fig. 4 is a similar view to Fig. 2, but carrying out the form of its embodiment as partly disclosed in Fig. 3.

In the organization of my invention I employ metal sheets or plates A and A′ of corrugated iron, and fold or convert the same at or along their longitudinal edges inward and under and parallel with themselves a short distance, and then recurve or bring the metal back parallel with the first curved or folded portion, but so as to leave a space or socket between them, as seen at B *e′*. The rearward portions B are extended a short distance outward or beyond the edges of the plates A A′ proper, to provide for conveniently fastening or nailing the same, as they are, through the openings *a* to the sheathing or framing *d*. The next or adjoining corrugated plates or sheets, which are the exact duplicates of the aforesaid plates or sheets, are reversed edge for edge, and have their uncurved or plain longitudinal edges *e* inserted into the sockets *e′* of the aforesaid plates, and these edges of the plates are thus connected together and require no other fastenings for that purpose. Furthermore, the nails or fastenings and openings in the first-named plates, which it will have been noticed are all that are used along these (the longitudinal) edges of the plates, are covered, and thus removed or concealed from the action of the sun and weather, preventing any possibility of leakage at these points.

At their transverse edges or in parallel lines therewith the underlapping plates are fastened or nailed through flanges *g* thereof to the framing *d* or sheathing, and to the sheathing or framing, so as to cause their hooked ends to rest upon the flanges *g*, may be applied or secured my previously-patented fastener *c*. The next plates put in position endwise to the previously-referred-to plates A A′ are caused to lap the nailed or securing flanged ends of the latter, and thus likewise conceal these fastenings and their openings, making the same wholly free from leakage or preventing the sun or weather affecting their fastenings.

In placing the ends of the lapping-plates upon the plates A A′ they are inserted and clamped down and under the hooked ends of the fasteners *c*, and thus held in position without the aid of nails or other fastenings. With the use of the fastener *c*, it is obvious that even the fastenings or nails driven through the underlapping plates may be omitted, the fastener being screwed down over and to the underlapping flanges *g* thereof and into the framing or sheathing. Before, however, the corrugated plates are put in position layers of tar-paper *d′* or cement are applied to the sheathing or framing and the plates then embedded in the cement or superposed upon the layers of tar-paper.

In the modification of Figs. 3 and 4 it will be seen that a locking or interlocking connection or joint is formed, between the plates of which D′ answers to plate A inverted, and D to A′, also inverted, but having at its other

end also a hook D″, which catches over the overhanging portion and into the socket *f* of plate D′.

I am aware that plain metal sheets have been bent along the edges to form sockets; but I am not aware of such construction as I have above described.

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

1. The corrugated metal plate the edges whereof are bent directly across the corrugations of the plate, whereby inwardly-extending sockets corresponding to a cross-section of the corrugations are formed upon the edges of the plate, substantially as and for the purpose specified.

2. The corrugated metal plates the longitudinal edges whereof are bent directly across the corrugations of the plates, whereby inwardly-extending sockets having the wave-like contour of corrugations are formed along said edges, in combination with duplicate corrugated plates having one of their longitudinal edges entering the said sockets, substantially as and for the purpose specified.

3. The combination, with the layer or layers of tar-paper or cement, of the corrugated metal plates having interconnecting edges, and the end of one overlapping or underlapping the end of the other, and the hooked fastener interposed between said ends of the plates and receiving in its hook the overlapping end of a plate, substantially as specified.

4. The combination of the duplicate corrugated metal plates the longitudinal edges of which are provided at one side with inwardly-extending corrugated sockets arranged underneath the plates and having outwardly-projecting portions formed integrally with the sockets and provided with nail-receiving apertures, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN SMITH.

Witnesses:
F. G. FISCHER,
A. A. HIGDON.