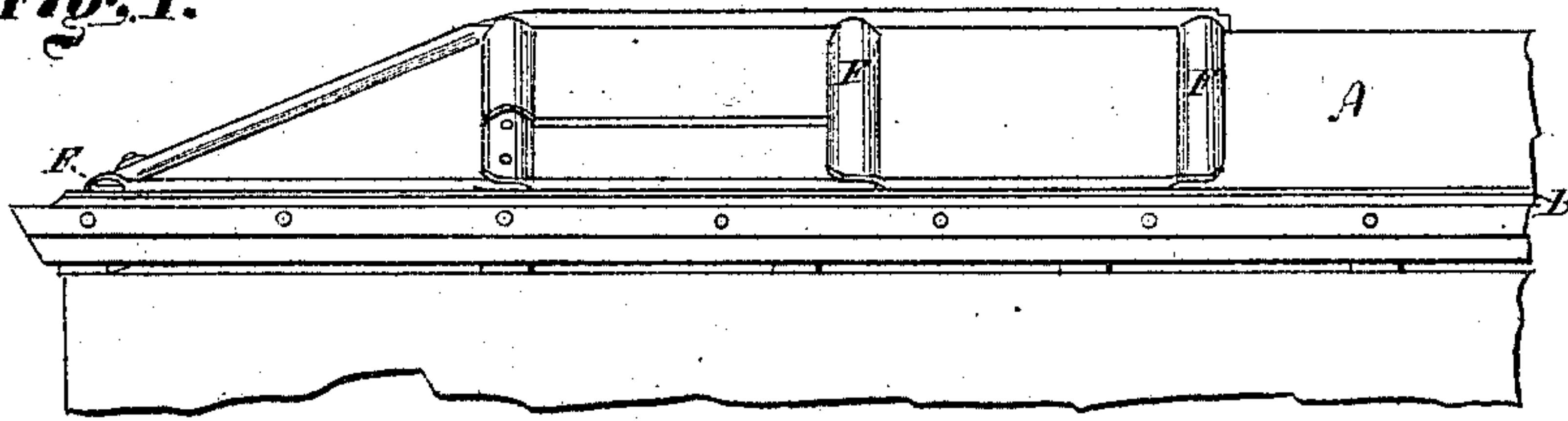


# R. SANDERSON. ROOFING.

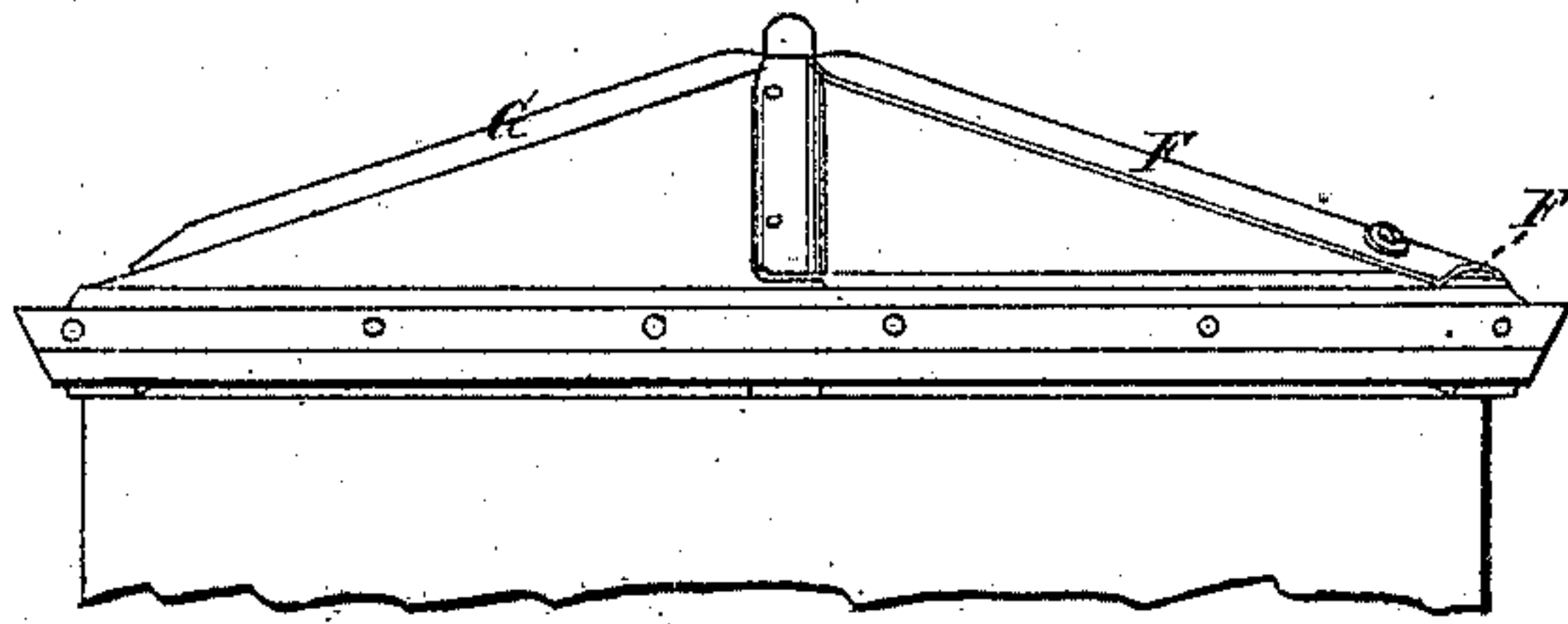
No. 120,900.

Patented Nov. 14, 1871.

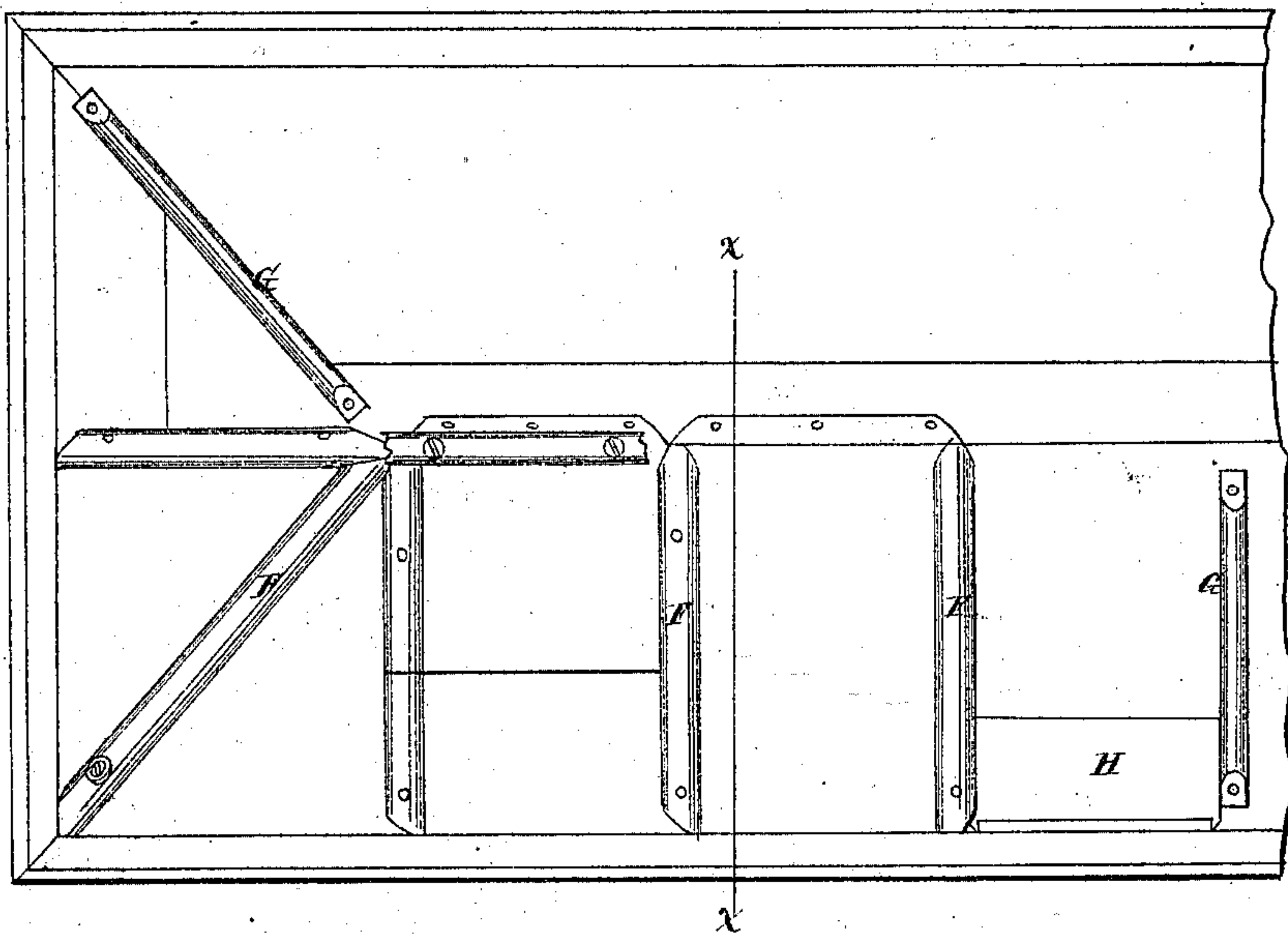
*Fig. 1.*



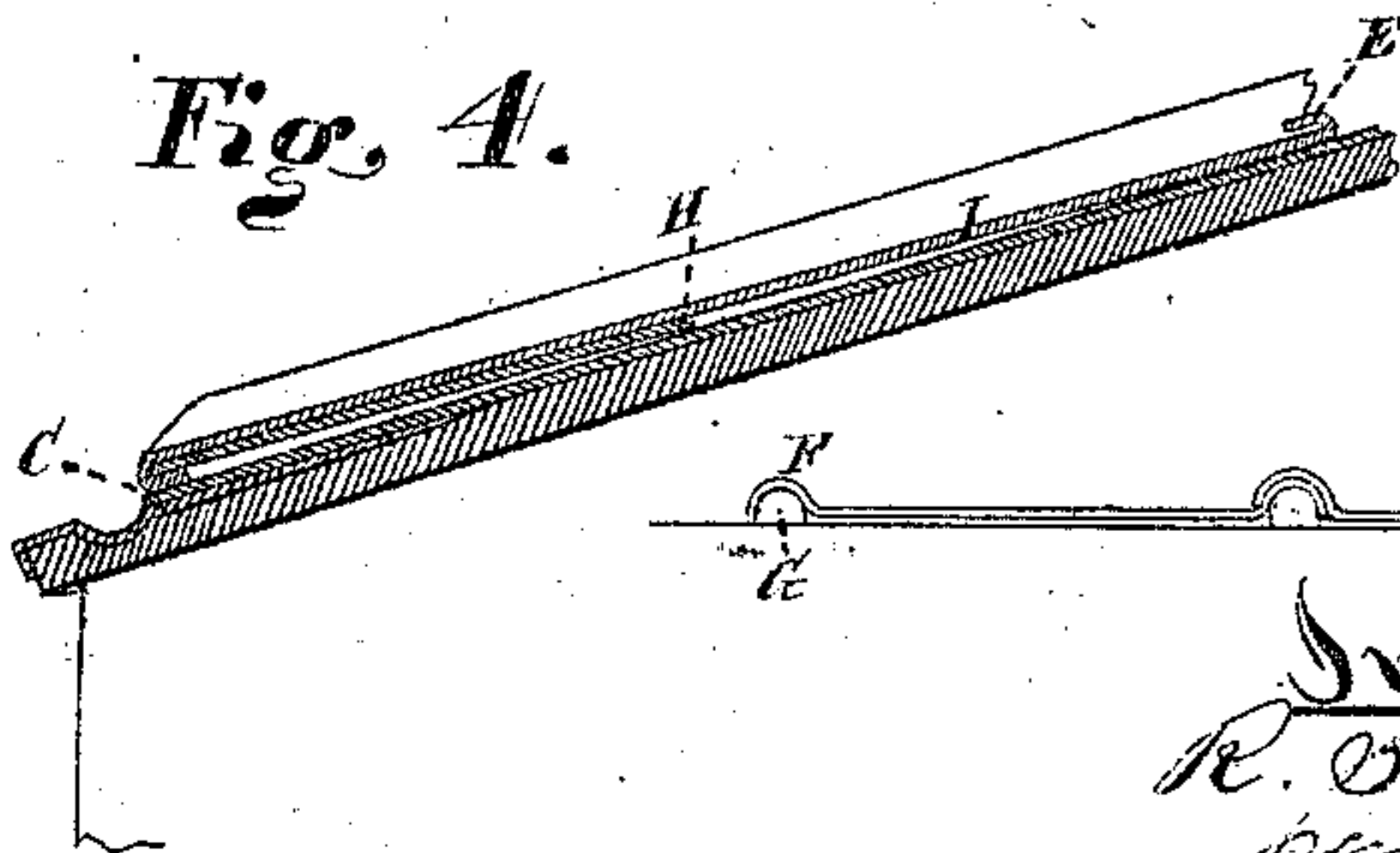
*Fig. 2.*



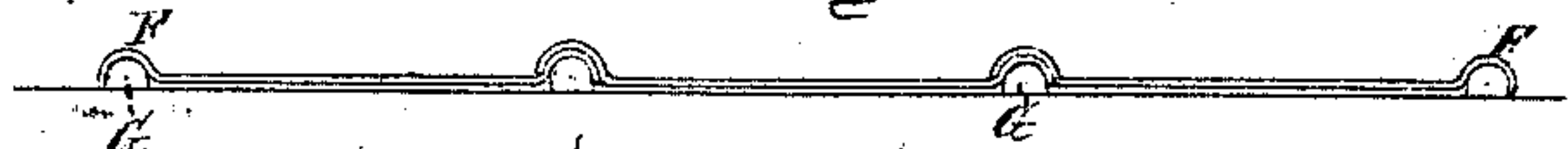
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



*Inventor.*  
R. Sanderson,  
per Burridge & Co.  
Attorneys

*Witnesses.*  
J. H. Burridge,  
D. L. Humphrey



# UNITED STATES PATENT OFFICE.

ROBERT SANDERSON, OF CLEVELAND, OHIO.

## IMPROVEMENT IN ROOFINGS.

Specification forming part of Letters Patent No. 120,900, dated November 14, 1871.

*To all whom it may concern:*

Be it known that I, ROBERT SANDERSON, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and Improved Roof; and I hereby declare that the following is a full, clear, and complete description of the same, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a side view of the roof. Fig. 2 is an end view. Fig. 3 is a plan view. Fig. 4 is a vertical transverse section in direction of the line *x x*. Fig. 5 is an end view of the eaves.

Like letters refer to like parts in the several views.

The nature of this invention relates to the manner of securing sheet metal to roofs; and the object sought for is to so lay the sheets upon the roof that the joints of the sheets shall be rain-tight, and at the same time allow the sheets to expand and contract by the vicissitudes of the weather without causing the joints to leak or the sheets to buckle and crack, of which the following is a more full and complete description.

In the drawing, Fig. 1, A represents a side view of the roof, on which the sheets are laid, and of which B is the eaves-trough or gutter. The sheets of metal covering the roof may be of any desirable width and length, the edge of the lower end of which is turned under, as shown at C, Fig. 4, of which D is a sheet, whereas the upper end is turned back over the sheet, as shown at E. The sides of each sheet are struck up, forming grooves along the under side and ribs F on the upper side thereof, as shown in Figs. 3 and 5.

The sheets thus formed are laid upon the roof as follows: Upon the boards is first laid a covering of felt or of paper along the eaves to serve as an insulator between the sheets of iron and the tin or zinc eaves-gutters. At certain distances, according to the width of the sheets, are nailed to the roof a series of ribs, two of which are shown at G, Fig. 3, extending from the eaves to the ridge. Lengthwise of the eaves and between the ribs is nailed a plate or tongue of metal, H, on which is hooked the lower end of a sheet of metal, I, as shown in Fig. 4, whereby the lower end of the first course of sheets laid is held down. The grooves in the under side of the sheet are made to fit down upon the ribs,

and to which they are nailed by broad flat-headed nails. The next sheet in order, at the right of the first laid, is now put down in like manner, the left-hand groove of the second sheet being made to cover the right-hand groove and rib of the first laid, whereas the right-hand groove of the second sheet rests upon and covers the base-rib only; and so the third sheet is secured at the lower end by a tongue of metal, and its left-hand groove resting upon and covering the right-hand groove and rib of the second, and its right-hand groove covering the base-rib as in the former case; and so on throughout the length of the roof, as shown in Fig. 5. The second tier of sheets is laid in the same way—that is to say, with the left-hand groove covering the right-hand groove and rib of the one preceding it. The lower end of the sheet, however, is not held by a tongue, but is hooked or locked into the upturned edge E of the sheet next below, and which is thereby held down to the roof, as was the sheet next below held by the tongue referred to. In this way the entire number of sheets is laid without being nailed, only along the ribs by broad-headed nails having a washer or gasket under the head.

Sheets thus laid not only make a strong, tight, and durable roof, but it also allows the metal to expand and contract by means of the grooves or channels covering the ribs; hence the sheets cannot buckle up or strain loose from the fastenings, but will remain smooth, unbroken, and close-fitting.

The ribs referred to not only offer a hold to which to nail the several sheets of metal, but they also prevent the wind from passing under the sheeting, and thereby prevent it from being torn up and blown away, which not unfrequently happens to this class of roofing when secured to the roof-boards without wind-brakes or ribs.

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

The ribs G, grooved-edged plates or sheets I having side laps and an overturned end, E, and an underturned end, C, tongue H, and paper or other equivalent material, substantially in the manner as described, and for the purpose set forth.

ROBERT SANDERSON.

Witnesses:

W. H. BURRIDGE,  
J. H. BURRIDGE.

(126)