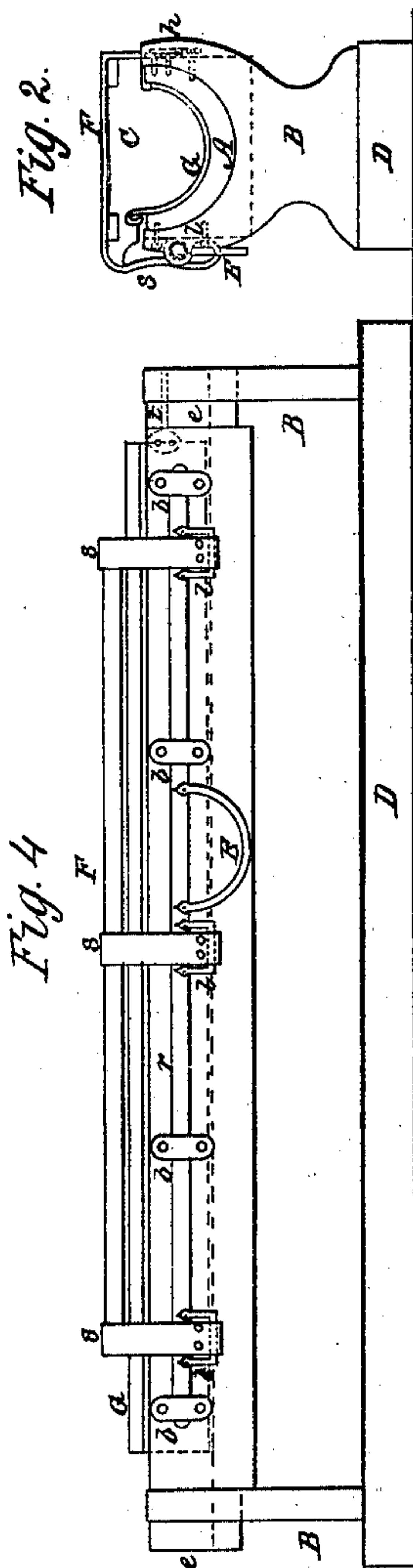
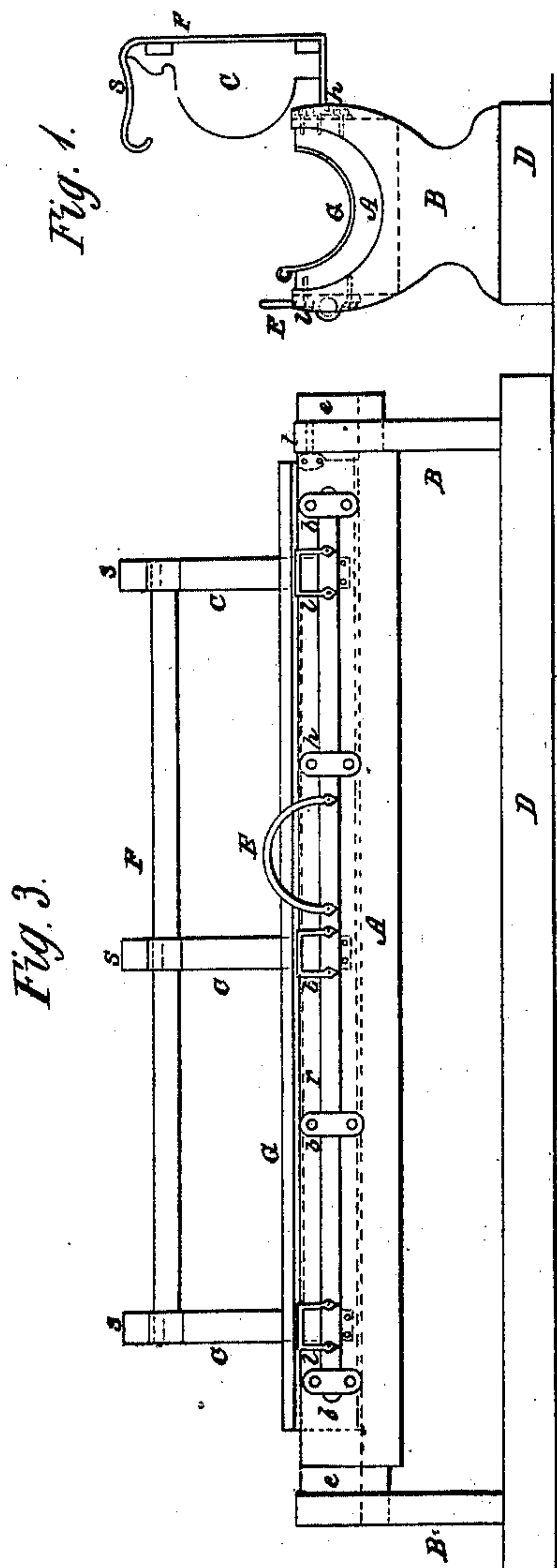


*J. N. Woolwin,*

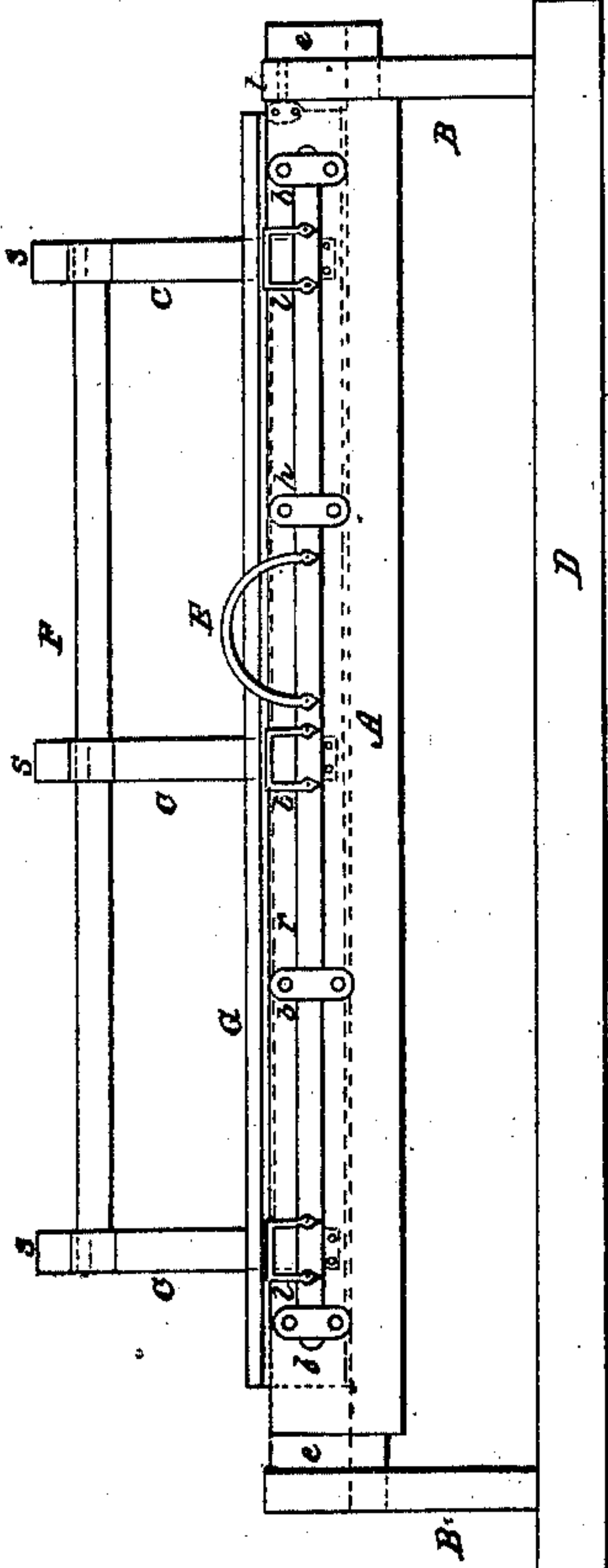
*Gutter Trough.*

*No. 92,922.*

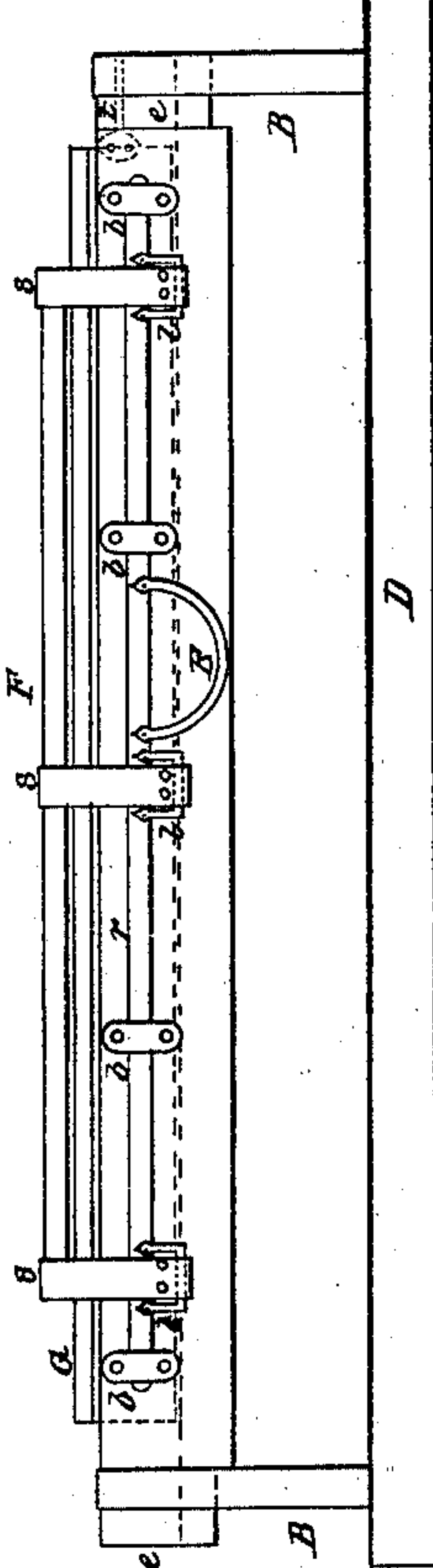
*Patented July 20, 1869.*



*Fig. 3.*



*Fig. 4.*



Witnesses  
*Thomas Morgan*  
*E. S. Morgan*

Inventor  
*John N. Woolwin*



# United States Patent Office.

JOHN N. WOOLWIN, OF MECHANICSBURG, OHIO.

Letters Patent No. 92,922, dated July 20, 1869; antedated May 20, 1869.

## IMPROVEMENT IN TINNERS' GUTTER-TROUGH.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN N. WOOLWIN, of Mechanicsburg, in the county of Champaign, and State of Ohio, have invented certain new and useful Improvements in Tinnings' Gutter-Troughs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings, and to the letters of reference marked thereon, similar letters indicating like parts.

The nature of my invention consists in a wooden trough, semicircular in shape, and mounted upon supports cut out to fit it, and in which it can be partially revolved, for the purpose of soldering the gutter-plates, laid in it, more perfectly and conveniently together.

The sections of gutter (which may be of tin, copper, or other sheet-metal) are laid into the trough overlapping each other at their ends the required distance, and are clamped in place by a hinged frame, operated with lever and springs. This frame is easily and firmly secured, and when released, after soldering the joints, can be thrown back out of the way, and other sections attached.

The ease and rapidity with which my machine may be operated will enable one man to do nearly as much as two men by the ordinary methods, and with much less labor in handling long sections of gutter.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation.

Figure 1 represents an end view of my gutter-trough, showing the semicircular trough A in the upright supports B, on the bed-piece D.

The section of trough is seen at G.

The frame F is thrown up, and shows the forms C C, of the clamp F, fitting the gutter G.

The springs S S have hooks upon their ends, into which the loops l l (represented in dotted lines) catch when the clamp is let down into the gutter, and the lever E is thrown down.

For convenience, the lever E is made of semicircular form, as shown in Figure 3.

It is attached to the rod r, which runs along the front of the gutter-trough, and is secured to the same by the boxes b b, in which it turns.

It will be seen, in this figure, that metal loops l l are also attached to the rod r, opposite to each of the semicircular blocks or forms C C, and that the strap-springs S S, passing over the top, catch into these loops.

In Figure 4 the hinged frame F is closed down upon the gutter G, and the lever E being thrown down to clamp it, the loops l l (which act upon springs S S as levers or cranks) are also thrown down in the same position, having performed a semicircular movement from the position shown in fig. 3.

The ends of the trough e e are rounded, and the

shoulders are cut back far enough from the supports B B to slide the trough endwise, to secure it in position by pushing the dowel-pin t, on the right end of trough A (in both figures) into a hole in the upright B, or, to release it, by pushing the trough to the left, so that it can be rotated sufficiently to solder the inside.

The strap-springs S S are hinged to the back part of the trough at h, the spring and hinge-part being made in one piece.

Figs. 1 and 3 show the several parts, and the position of the lever E and loops or cranks l l, when the clamp F is thrown up, and the machine is ready to receive the guttering, which is placed in with the plates, overlapping the required distance, and for as long a section as desired.

The semicircular lever E and loops l l are shown in an upward position. The clamp-frame F is then closed down.

On throwing the lever E forward and downward, half revolving the rod r, the loops, levers, or cranks l l receive the curved ends of the springs S S, and bring them down to the position shown in Figures 2 and 4, securing the clamp firmly upon the gutter-plate G.

The gutter-trough being pushed endwise to the left, as shown in fig. 4, will free the pin t from the support B upon the right, the trough can then be rotated on its semi-cylindrical ends e e sufficiently to solder the several plates in the clamp together on the inside, after which the lever E is thrown up, releasing the clamp-frame F, and this section of the gutter is slid along in the trough and a second attached, and so on, to the required length.

Having thus described my invention,

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

1. The arrangement of rod r, lever E, and loops, cranks, or levers l l, for operating the clamp, as shown and described.

2. The arrangement of the dowel-pin t, entering support B, in combination with the semi-cylindrical sliding ends e e of trough A, for holding the same in position while clamping the gutter-plates, as shown and described.

3. The segments or forms C C, and springs S S, in the clamp-frame F, with rod r, semicircular lever E, boxes b b, and loops or levers l l, when the same are used in combination, as shown and described, as and for the purpose specified.

In testimony of which invention, I have hereunto set my hand.

JOHN N. WOOLWIN.

Witnesses:

THOMAS MORGAN,  
E. D. MORGAN.