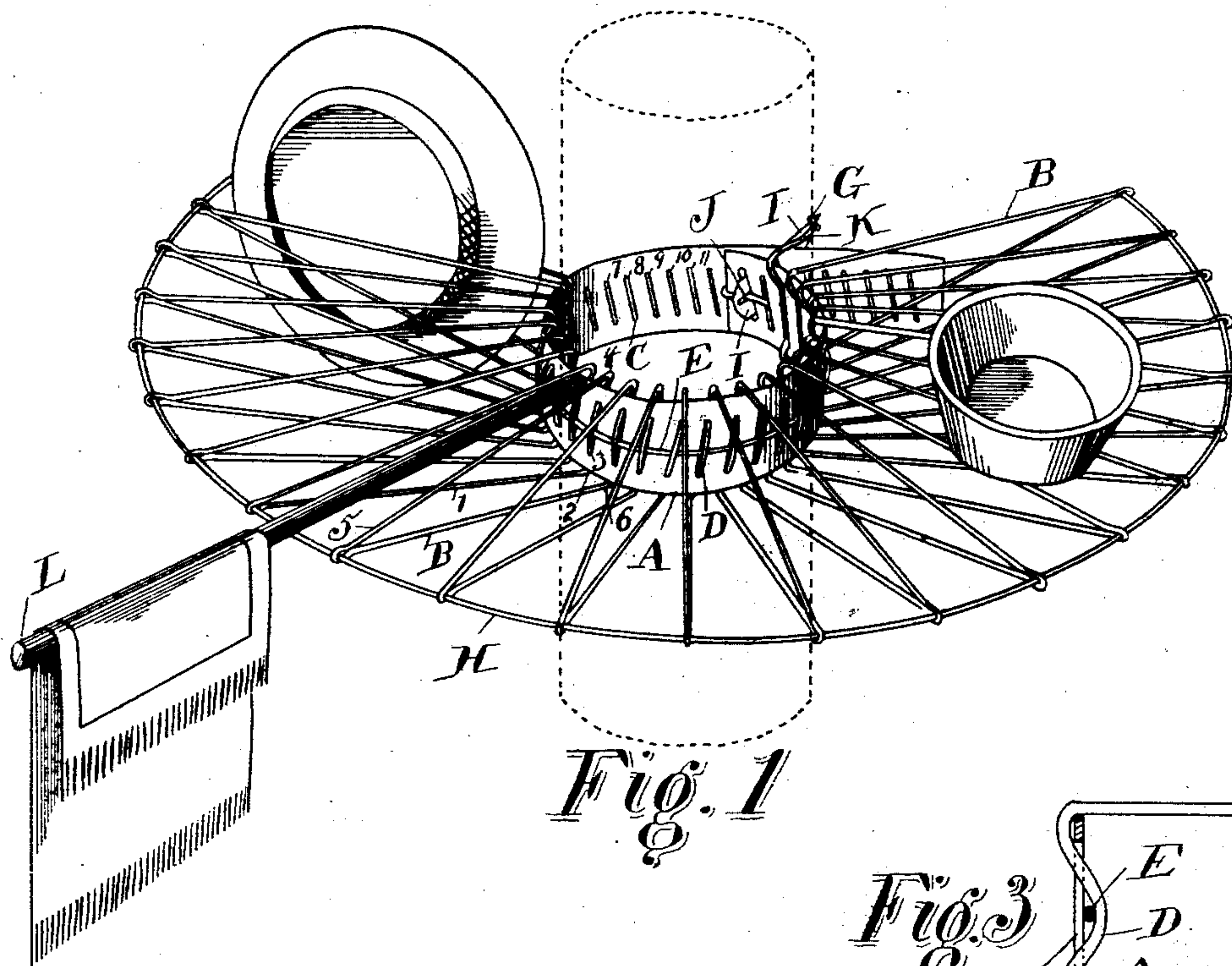


(No Model.)

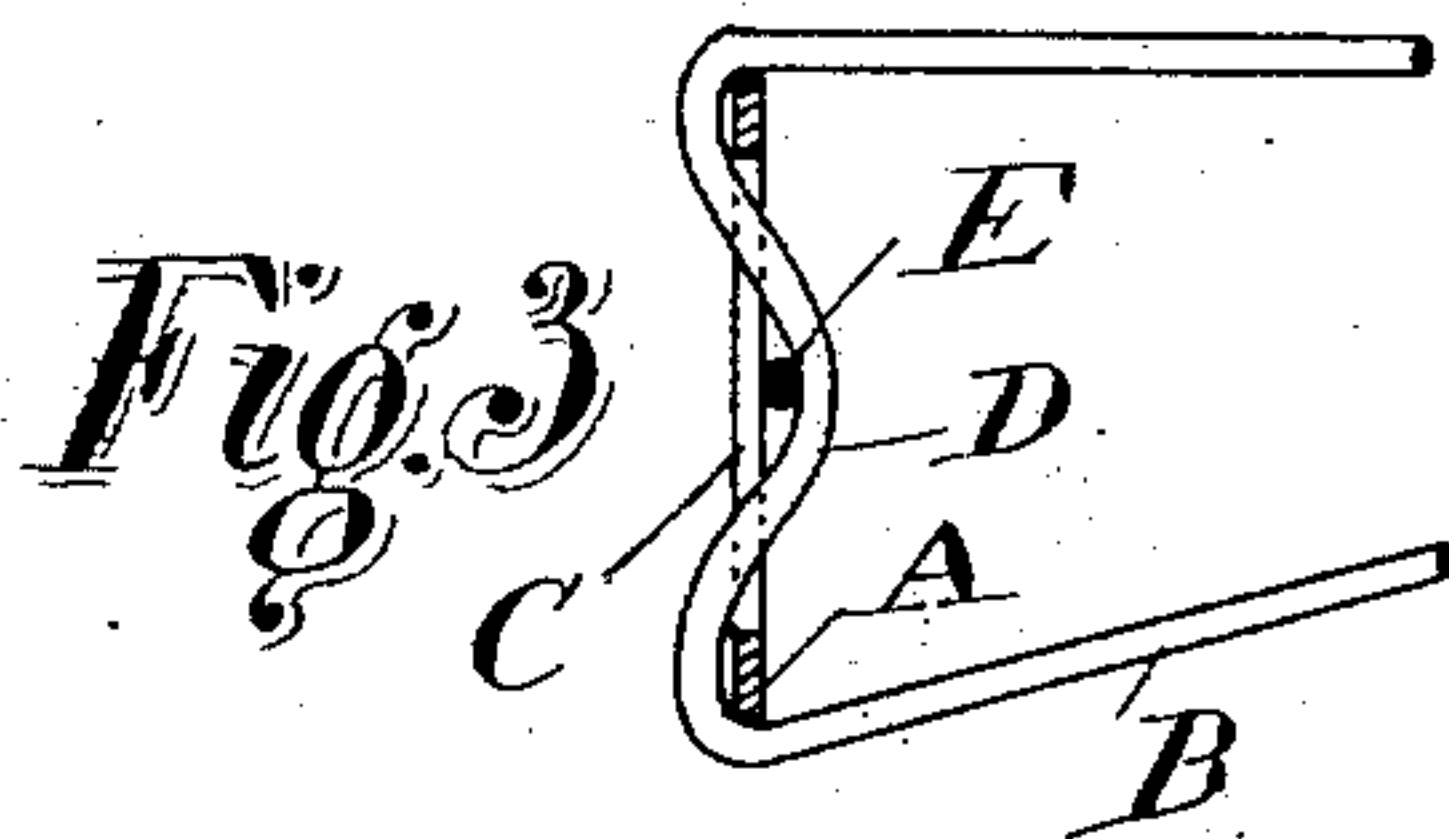
C. N. JOHNSON.  
STOVEPIPE SHELF.

No. 525,461.

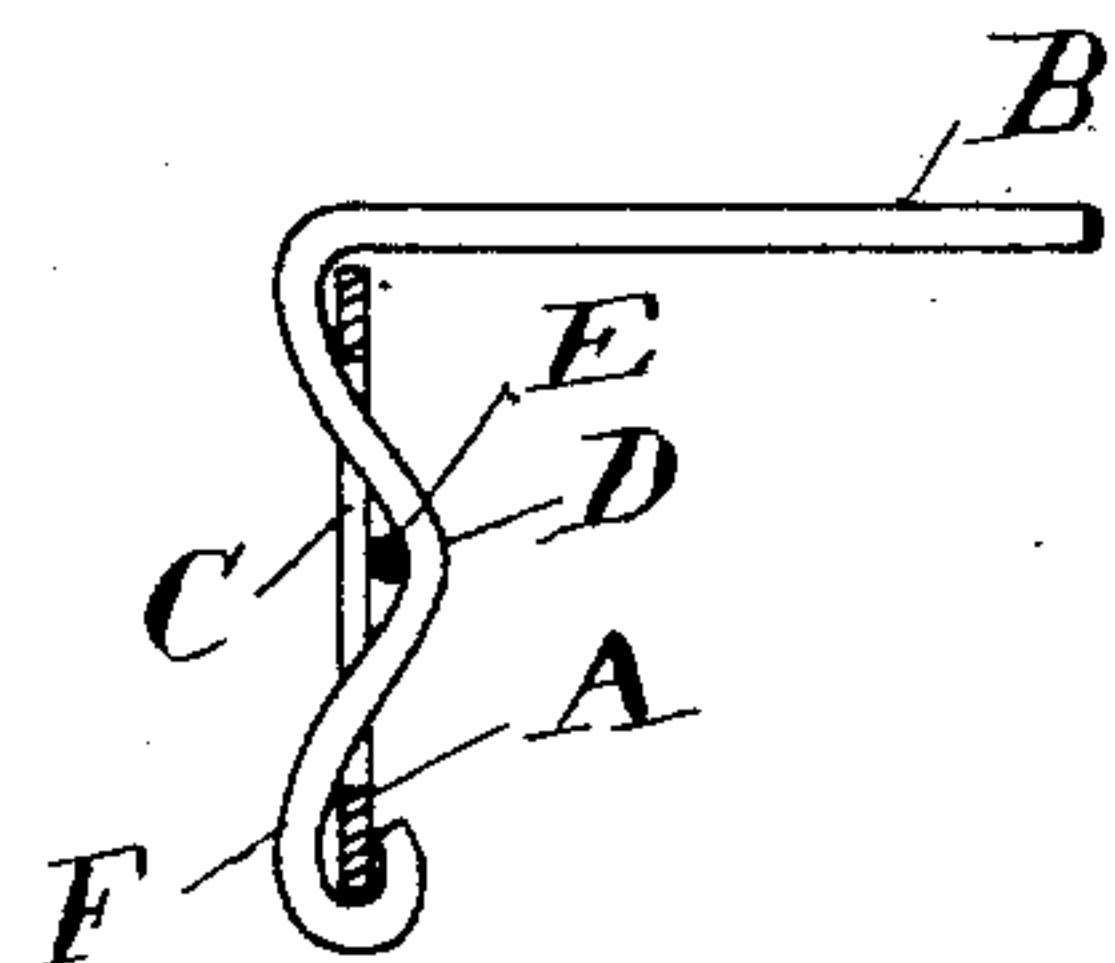
Patented Sept. 4, 1894.



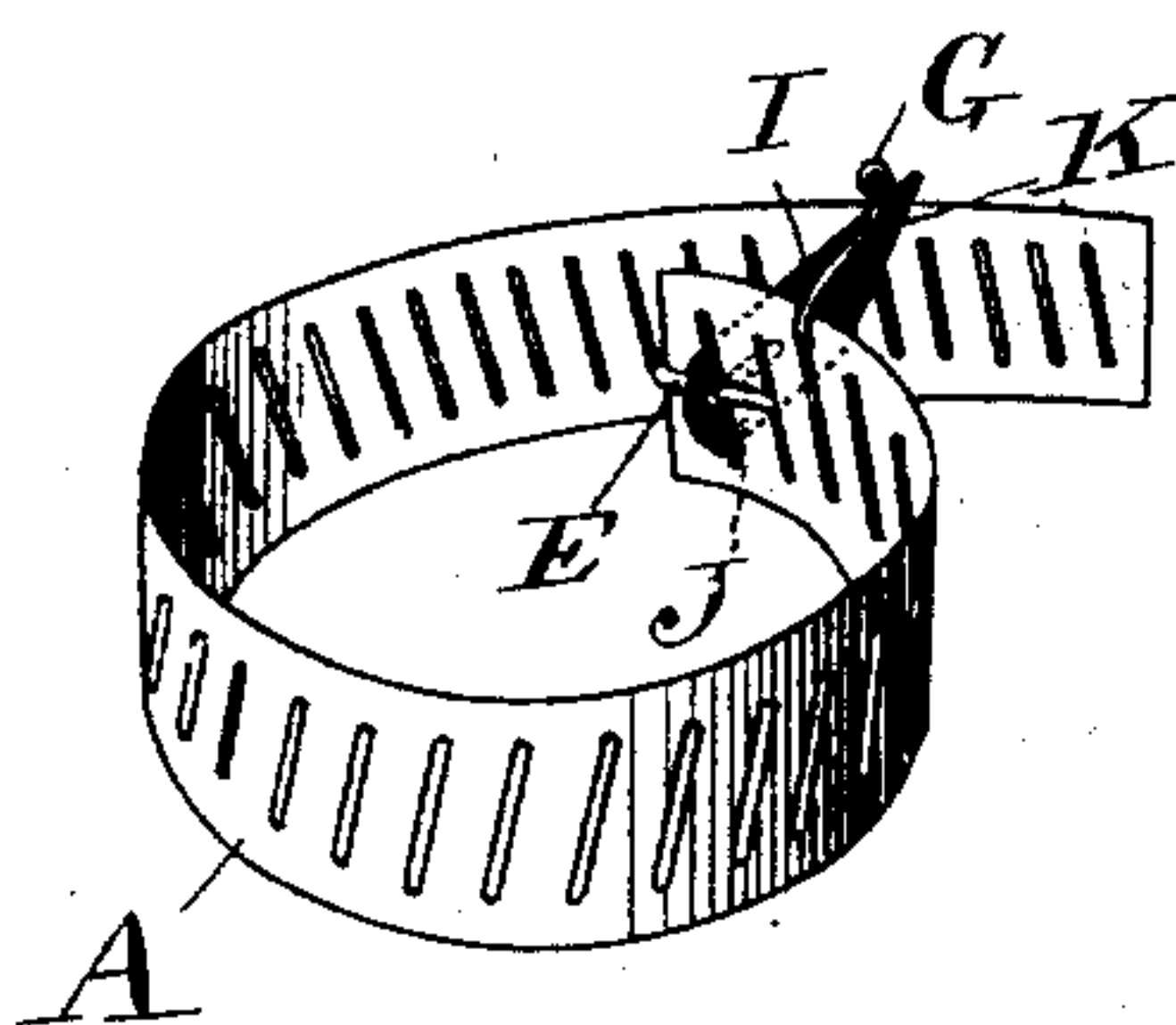
*Fig. 1*



*Fig. 3*



*Fig. 4*



*Fig. 2*

*Witnesses.*  
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*Inventor.*  
Charles N. Johnson.  
by his Attys. Kincaid & Co.



# UNITED STATES PATENT OFFICE.

CHARLES N. JOHNSON, OF SAN FRANCISCO, CALIFORNIA.

## STOVEPIPE-SHELF.

SPECIFICATION forming part of Letters Patent No. 525,461, dated September 4, 1894.

Application filed March 8, 1894. Serial No. 502,928. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES N. JOHNSON, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Stovepipe-Shelves; and I hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improvement on the stove-pipe shelf shown and described in my patent, No. 497,125, of May 9, 1893, and the object of the same is to so construct the shelf as to greatly lessen the cost of manufacture and at the same time add to the rigidity, general appearance and efficiency of the shelf.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon form a part of this specification, and in which—

Figure 1 is a perspective view of my improved form of shelf. Fig. 2 is a perspective view of the inner sheet metal rim showing the ends in an unlocked position, and Fig. 3 is a transverse section of the sheet metal rim showing the manner of securing the radiating wires thereto. Fig. 4 is a section of inner rim showing the manner of securing the extremity of the wire composing the shelf.

My present form of shelf consists essentially of an inner flexible sheet metal rim, (A) which is adapted to encircle any form of stove-pipe, and a single wire (B) so bent and secured to the rim (A) as to take the form of a series of radiating arms and braces therefor, the arms being adapted to afford a suitable and convenient support for dishes or other articles. From one end to the other of this flexible metal rim (A) is punched a series of parallel, equidistant openings or slots (C) which incline slightly to the direction of the perpendicular from the upper or lower edge of the rim.

The single continuous wire (B) forming the horizontal upper surface of the shelf as well as the inclined under braces is bent to form a series of adjoining triangles, the number of triangles thus formed being equal to the number of radiating arms composing the shelf.

The manner of securing the continuous wire (B) to the flexible rim (A) is clearly shown in Figs. 1 and 3. The concave base (D) of each of the series of wire triangles which encircle the inner rim (A) in a transverse direction is caused to protrude through one of the parallel grooves (C) where it is held by means of the wire (E) which encircle the rim (A) and passes between the rim and the protruding portion of the convex base.

In Fig. 4 I have shown the manner of securing one extremity (F) (that on the left side of Fig. 1), of the wire (B) to the rim (A) which consists of pressing the wire (B) after passing under the lower edge of the rim (A), up against the outer surface of the rim. The other extremity of the wire (B) (that on the right side of Fig. 1), after passing over the upper edge of the inner rim (A) is bent radially outward for a short distance and terminates in a hook (G) the use of which I will explain hereinafter.

In order to keep the outer extremities or vertices of the series of triangular shaped radii at the desired distances apart I have provided the outer rim wire (H) which passes within the triangles and near their outer vertices, the latter being pressed together to form a close and binding contact with the rim wire (H).

The course of the wire (B) relative to the inner and outer rims (A) and (H) respectively, is readily seen from Fig. 1. The left hand extremity of the wire (B) being secured to the rim (A) as explained above and shown in Fig. 4 thence passes inward through the slot (C) thence over the securing wire (E) and returns through the slot (C) after which it passes over the upper edge of the rim (A) from which it extends radially and horizontally outward until it reaches the outer rim (H) which it encircles and then runs in an inclined direction downward toward the lower edge of the inner rim (A) and then through the adjoining slot (C) over a similar route to that just described, so continuing until the entire shelf is formed. The exact course of the wire (B) can be more readily traced by taking a portion of the wire (B) near the center of Fig. 1 and following the numbers from (1) to (6).

Situated at one extremity of the inner rim



(A) and passing through the extreme one of the series of parallel slots (C) is a triangular shaped metal locking clamp (I) which is loosely secured to and is prevented from being detached from the rim (A) by means of the wire (E) which passes through a slot (J) in the clamp, the extremity of the wire passing around the end of the rim (A). While the radiating wires (B) approach to within a short distance of the extremity of the rim bearing the clamp (I), the other extremity of the rim (A) extends a considerable distance past the wire frame work and is adapted to afford a considerable length of adjusting surface, thereby adapting the shelf to various sizes of stove-pipes. In Fig. 1 I have shown in dotted lines the relative positions of the pipe and shelf.

It will be readily seen from Figs. 1 and 2 that the plate or clamp (I) can be made to enter any one of the slots (7), 8, 9, 10, &c., and further that by springing the outwardly extending extremity (K) of the wire (B) downward and causing the lock (G) to engage with the vertex of the clamp (I) the latter is prevented from being accidentally detached from the groove (C). It is further manifest that as the triangular plate (I) is inserted in one of the parallel slots (C) and the end drawn toward the lock (G) it affords the additional function of acting as a lever to tighten the rim (A) about the stove-pipe.

The radiating wires (B) while affording a horizontal surface for the reception of the dishes and cooking utensils of various sizes, also furnish a convenient drying and heating rack, as plates of various sizes can be placed edgewise between the wires as shown on the left side of Fig. 1. When however the diameter of the plate is less than the distance between the rims (A) and (H) it can be placed diagonally between the converging sides of one of the triangles.

I will now explain the successive steps in the manufacture in my improved form of shelf: The rim (A) being formed of a straight strip of galvanized iron or other suitable metal is perforated with the series of parallel slots. The wire (B) is then bent by suitable mechanism into a series of compact adjoining triangles, the concave bases of which are inserted in the grooves (C) when the wire (E) is threaded between the protruding portions of the bases and the rim (A). The rim (A) is then bent to conform with the outer curve of an ordinary stove-pipe, after which the outer rim (H) is positioned as described above.

Taking advantage of the fact that the radiating wires composing the upper surface of the shelf diverge toward the outer rim (H), I have caused the wooden rod or arm (L) whose diameter is slightly greater than the distance between the inner ends of successive radiat-

ing arms, to be placed in the position shown in Fig. 1, which affords a readily detachable and efficient rack for the drying of dish cloths, towels or other similar articles.

I am aware that changes in the number and proportion of parts of the devices herein shown and described as an embodiment of my invention, can be made without departing from the spirit or sacrificing the advantages thereof and I therefore reserve the right to make such changes and alterations as fairly fall within the scope of my invention.

By the improved construction herein shown and described, I am enabled to manufacture and place on the market a far superior stove pipe-shelf at a very moderate cost and thus to meet the demands of the trade.

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

1. A clamp for a stove pipe shelf consisting of a pivoted member having a triangular outline, an opposite member having a series of oblong perforations or grooves to receive the first, and a hook or catch secured to the opposite extremity of said opposite member from that bearing said perforations, and adapted to engage with the vortex of said pivoted member and thereby retain the latter in one of said grooves, substantially as set forth.

2. In a stove pipe shelf the combination of the wire (B) forming the top and bottom of the shelf proper, the inner flat metal rim (A), said metal rim being perforated with a series of parallel grooves (C), a portion of said wire (B) being adapted to protrude through said grooves and retained therein by means of the wire E, and means for retaining the shelf in position on a stove pipe, substantially as shown and described.

3. In a stove pipe shelf the combination of a flat metal rim, with a series of adjoining triangular arms radiating from said rim, a series of parallel oblong perforations or slots in said rim, said slots being adapted to allow a concave side of said triangular arms to protrude through the rim where they are retained by means of a wire encircling said rim and passing between the protruding portions of said triangles and the rim, said triangular arms being formed of one continuous wire, and a rim wire secured to the outer vertices of said triangular arms and adapted to retain the vertices at the required distances apart and means for clamping the shelf to the pipe, substantially as set forth.

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

CHARLES N. JOHNSON.

Witnesses:

A. L. WHITNEY,  
J. M. MENDELL.