

(No Model.)

C. E. BUCKLEY.
SHEET METAL CHECK VALVE.

No. 464,812.

Patented Dec. 8, 1891.

FIG. 1.

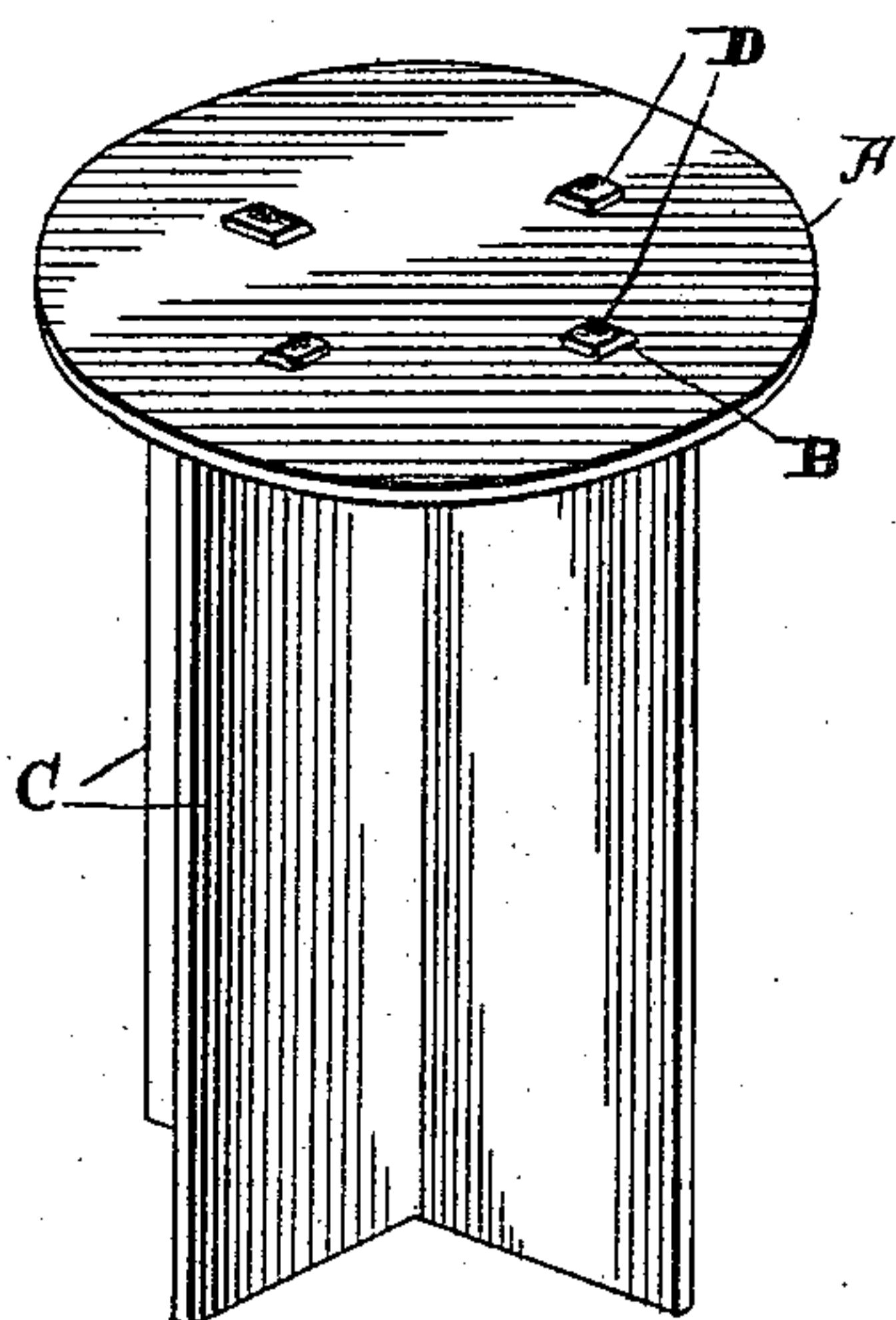


FIG. 2.

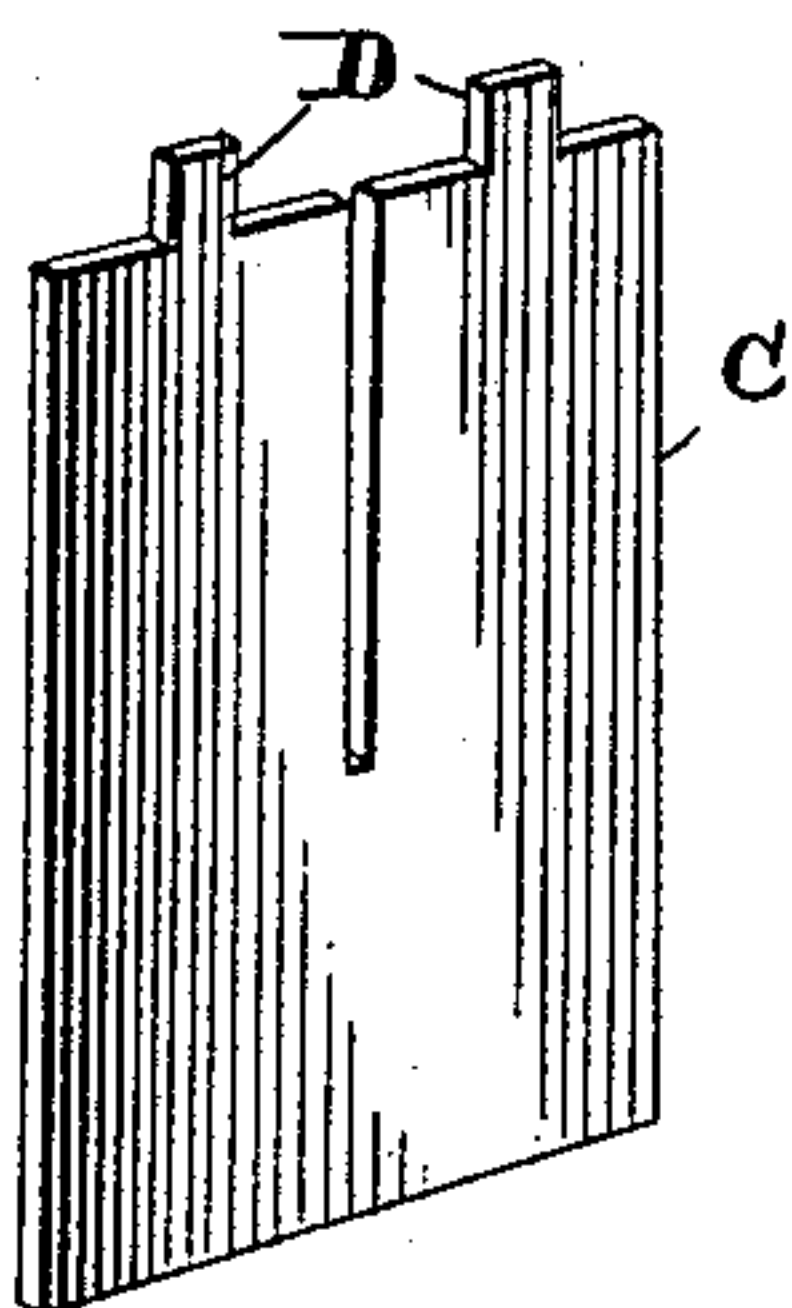


FIG. 3.

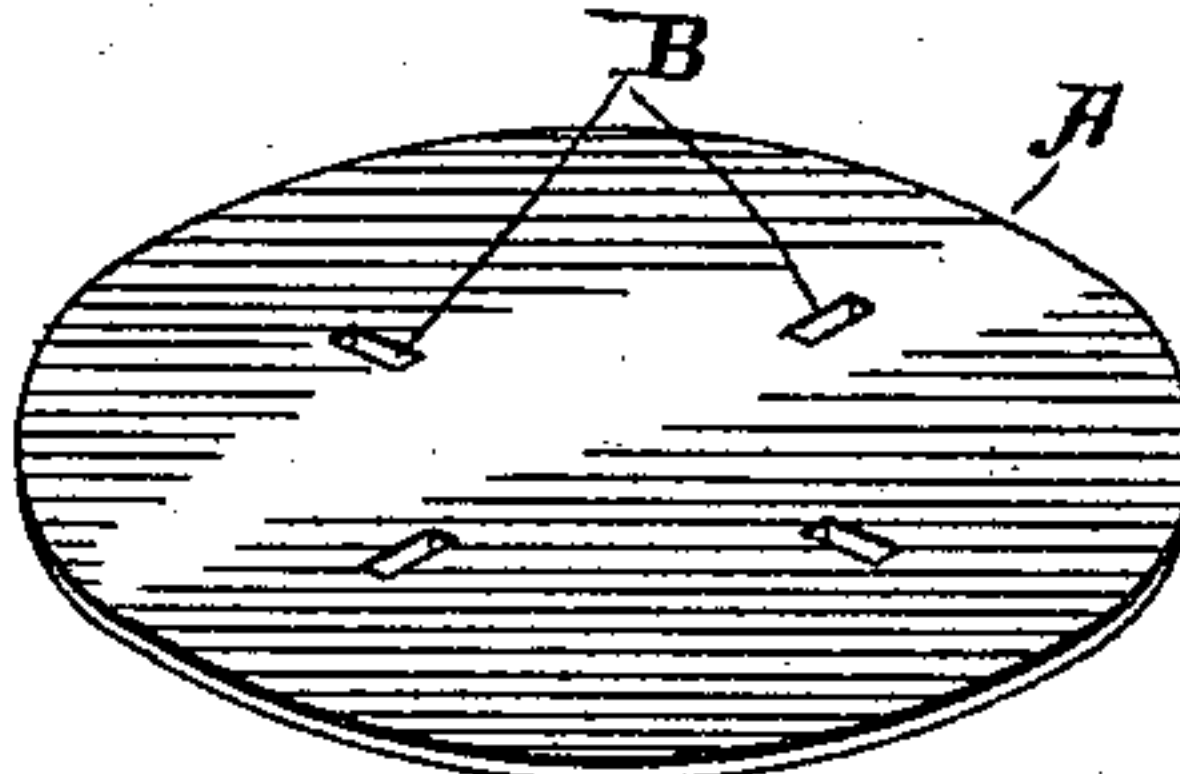
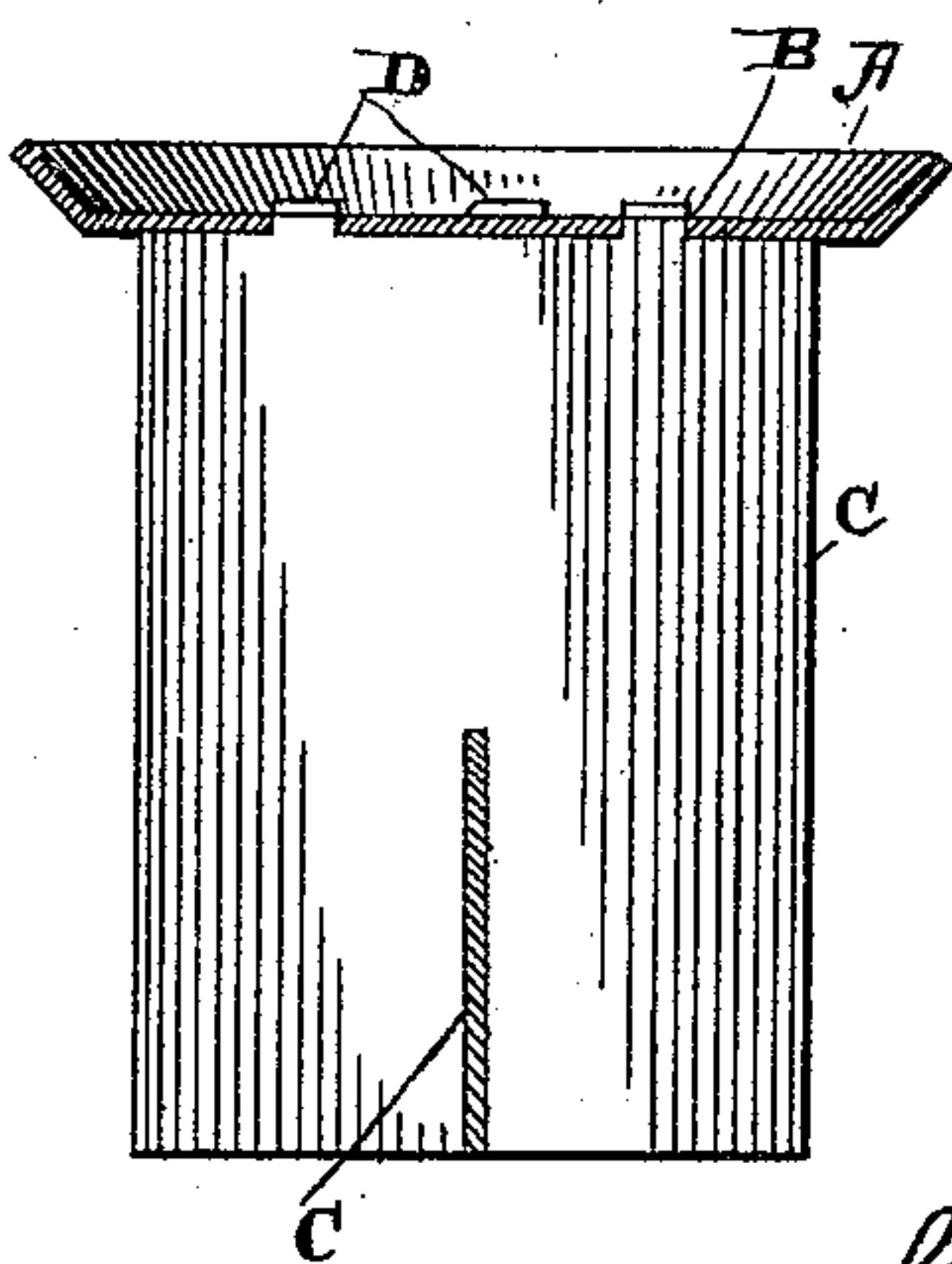


FIG. 4.



WITNESSES.

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UNITED STATES PATENT OFFICE.

CHARLES E. BUCKLEY, OF AMENIA UNION, NEW YORK.

SHEET-METAL CHECK-VALVE.

SPECIFICATION forming part of Letters Patent No. 464,812, dated December 8, 1891.

Application filed June 29, 1891. Serial No. 397,836. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. BUCKLEY, of Amenia Union, in the county of Dutchess and State of New York, have invented certain new and useful Improvements in-Sheet-Metal Check-Valves; and I do 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in sheet-metal check-valves; and it consists in the particular construction, which will be fully described hereinafter, and pointed out in the claims.

Heretofore, check-valves have been cast, which necessarily makes them heavy, and, owing to their weight, they are absolutely inapplicable in many places where only a very light pressure exists, and it has been necessary to resort in these cases to hinged or flap valves made of light material, for the reason that the pressure was not sufficient to lift the ordinary cast check-valve.

The object of my invention is to make a check-valve of sheet metal, which will be so light that it will operate under almost an imperceptible pressure, and thus enable me to use my improved check-valve in places and under conditions that the ordinary cast valve would be inoperative, owing to its necessary weight.

Figure 1 is a perspective view of a check-valve which embodies my invention. Fig. 2 is a perspective of one of the webs of the valve detached. Fig. 3 is a detached perspective of the disk or seat portion of the valve. Fig. 4 is a detached view of a modified form of the seat portion, showing it so shaped as to make a tight joint with the opening which it is intended to close.

In manufacturing my check-valve I take any suitable sheet material that may be desired, and of a thickness sufficient to stand the pressure to which it is subjected. The disk or seat portion A of the valve is made, preferably, circular in shape, though it may be in any other shape desired, and is provided with the four transverse openings B.

Formed upon the upper edges of the webs C are the projections D, which enter the openings B of the disk A. These webs C are constructed of the same material as the disk

A, and are provided with the longitudinal slits or openings E, which are cut therein any desired distance. Owing to these slits, the two webs are interlocked, as shown in Fig. 1, and the projections D passed through the openings B made in the disk A and then bent over against the outer face of the disk. These webs are then preferably soldered, though not necessarily secured to the disk by any means other than the turning down of the lips or projections D upon the face of the disk, as just described.

While I prefer to have a projection sufficiently long to be bent down on the disk, it will be understood that this is not absolutely necessary, for the reason that the webs can be soldered to the disk A without the bending down of the projections.

By means of the construction above described it will be seen that I am enabled to produce a check-valve which is extremely light, and which is adapted to be used in connection with the construction shown in my patent, No. 445,920, granted February 3, 1891. This construction also enables me to produce a very cheap check-valve, as all of the parts can be stamped from sheet metal, and be put together very rapidly.

Having thus described my invention, I claim—

1. A check-valve made of sheet material, consisting of a disk or seat portion, and webs having longitudinal slits for interlocking them, and which have their inner edges secured to the disk, substantially as described.

2. A sheet material check-valve consisting of a disk having transverse openings and webs having longitudinal interlocking slits and projections on their upper edges, which enter the openings in the disk, substantially as shown.

3. A sheet-metal check-valve consisting of a disk portion having transverse openings, and webs having longitudinal interlocking slits and projections on their upper edges, which are longer than the thickness of the disk, whereby they project through the disk and are clamped by bending them down thereon, substantially as shown and described.

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

CHARLES E. BUCKLEY.

Witnesses:

GEO. H. SWIFT,

SAML. L. BRENGLE.