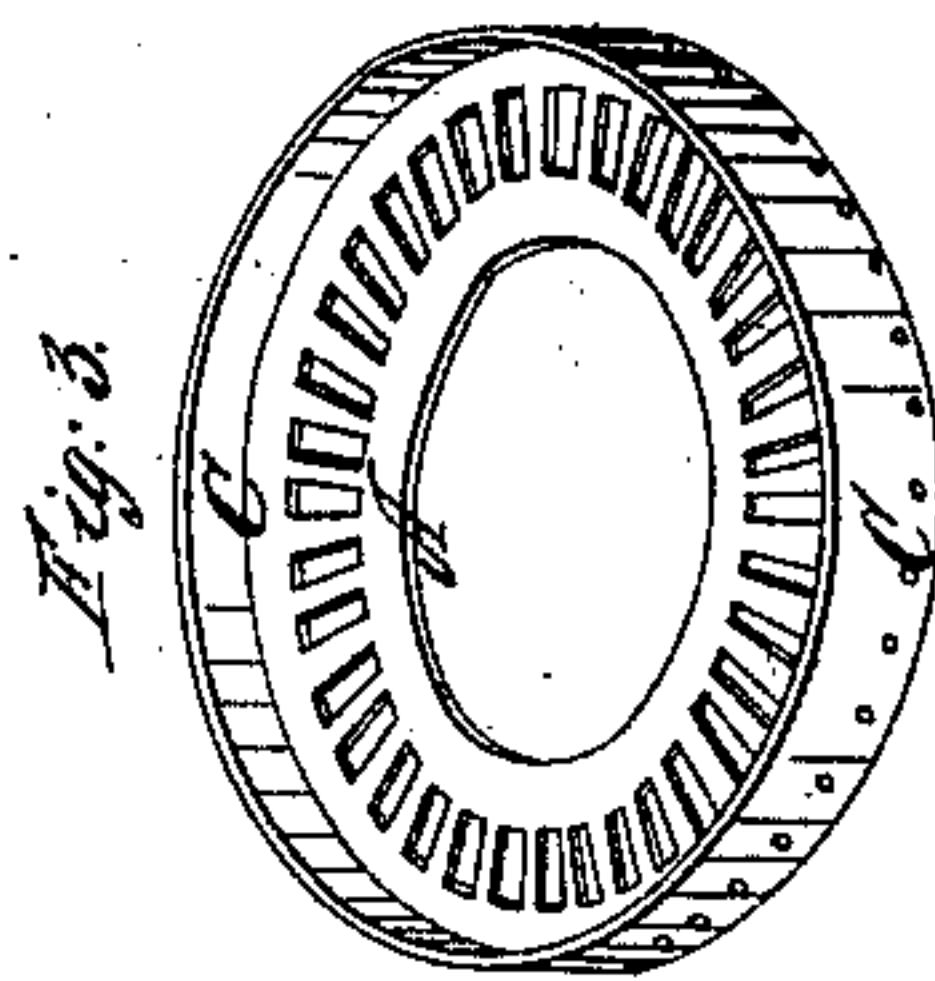
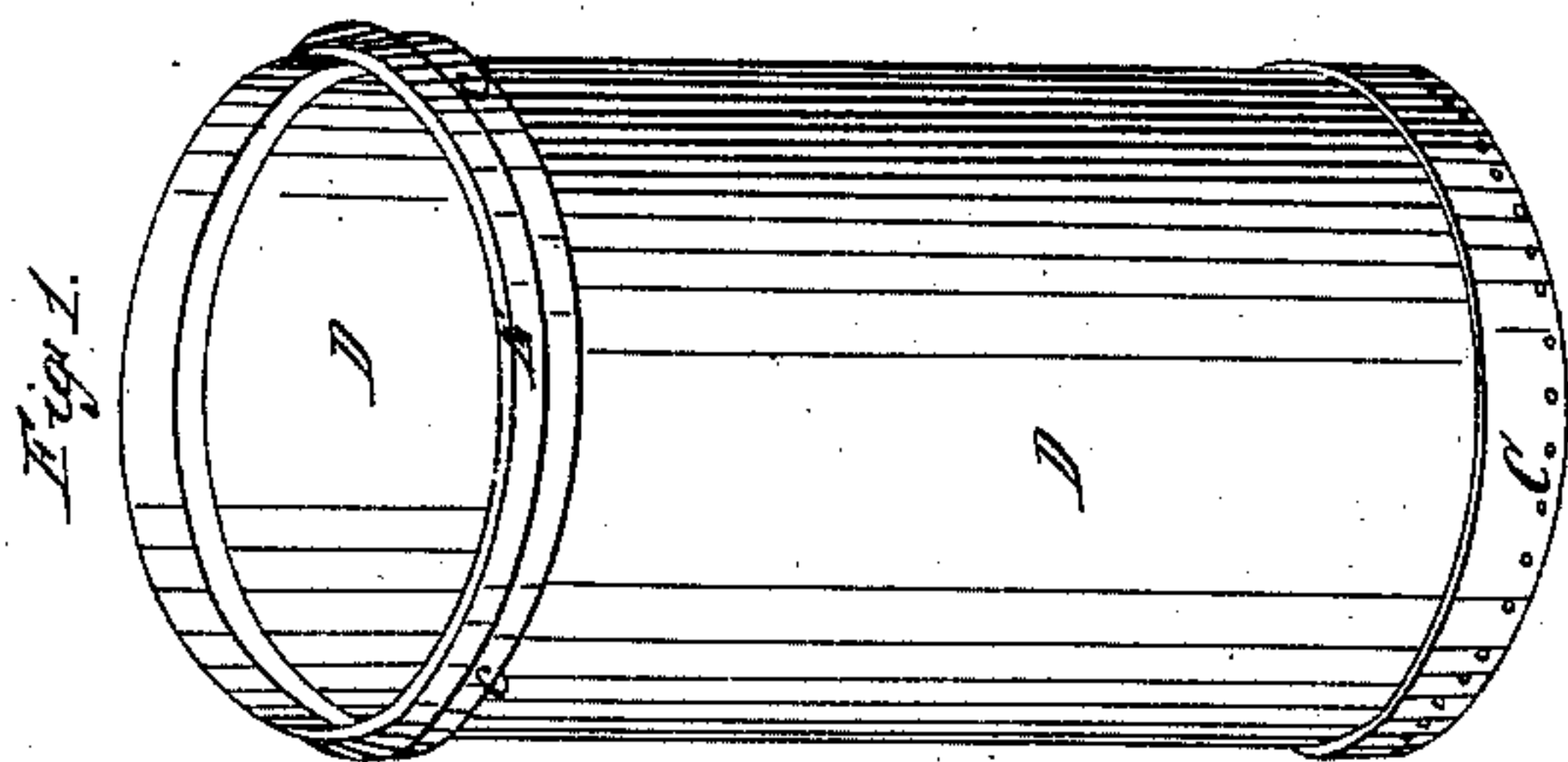
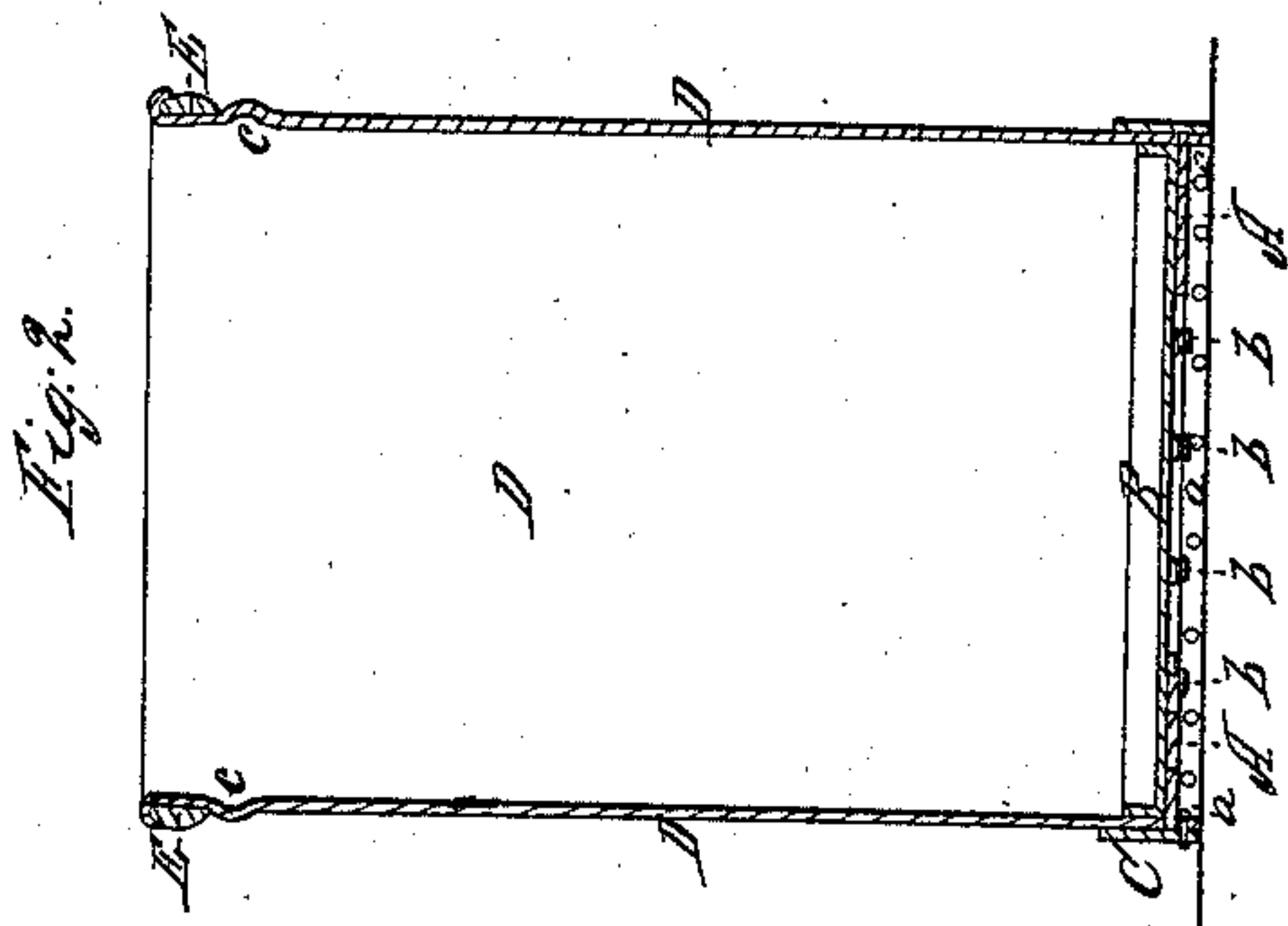


*H. A. Crain,*

*Metal Can.*

*N<sup>o</sup> 43,479.*

*Patented July 12, 1864.*



*Witnesses:*

*J. King  
C. D. Peterson*

*Inventor:*

*Hiram A. Crain,  
by Robbins & Burr  
Attorneys.*

# UNITED STATES PATENT OFFICE.

HIRAM A. CRAIN, OF WHITESTOWN, NEW YORK.

## IMPROVED SHEET-METAL CANS.

Specification forming part of Letters Patent No. 43,479, dated July 12, 1864.

*To all whom it may concern:*

Be it known that I, HIRAM A. CRAIN, of Whitestown, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Sheet-Metal Cans; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective view of a can embodying my improvements; Fig. 2, a vertical central section of the same; Fig. 3, a view in perspective of my improved bottom support and protector combined with a suitable binding-hoop.

Similar letters of reference indicate like parts in all the figures.

Although my improvements are applicable to cans of all sizes, and which are intended to be used for various purposes, still I find them peculiarly advantageous and useful when applied to cans of large capacity, such as are generally used for containing milk for transportation from the rural districts to the city or the cheese-factory. It consists, first, in a novel manner of strengthening and protecting the bottoms of such cans, and, secondly, in a novel construction of the upper rims thereof.

The necessity of this improvement has long been felt and has been made apparent by the constant wearing away of the bottoms of the cans as usually constructed and the great waste of the contents consequent upon the defective construction of the mouths of the cans.

Heretofore in the construction of a sheet-metal can for the purpose particularly referred to it has been customary for the most part to have the bottom rest directly upon the floor of the car, wagon, or other vehicle in which it is transported, and it is well known that but little use of such a can is sufficient to cause the bottom to bulge outwardly, and when so effected the whole weight of the can and contents is brought to bear upon but a portion of the area of the bottom. The frequent change of the center of gravity of the mass contained in the can, consequent upon the jars of the vehicle in which it is placed, produces a constant variation of the base or point of support of the can, resulting in great friction and sudden strains upon

the bottom of the can, and eventually causing breakage, and consequent leakage and loss. In order to cure this defect, cans have been made with a downwardly-projecting annular flange around their bottoms, for the double purpose of strengthening the joints between the bottoms and sides of such cans and of preventing the injurious contact of the bottoms with the floor of the vehicles in which the cans are placed. This improvement, although it prevents the friction alluded to, does not prevent the constant "springing" of the bottoms with every jar of the vehicle, which has been found to result in a short time in fracture of the metal.

I remedy the defects above enumerated by the use of such a supporting disk or ring as is illustrated in the accompanying drawings, being most fully shown in Figs. 2 and 3, wherein A represents a disk or ring of metal, which may be either perforated or plain. This disk is of a size somewhat larger than the bottom of the can, and the margin is bent into an annular flange, *a*, the outer circumference of which is coincident with that of the can. A binding-hoop, C, is secured to the lower portion of the can and projects downwardly beyond the bottom a distance equal to the depth of the annular flange *a* upon the supporting-disk A. Within this binding-hoop C the supporting-disk A is secured by means of its projecting flange *a*, which is riveted or otherwise attached to the hoop.

By reference to Fig. 2 it will be seen that the disk A is in immediate contact with the bottom of the can B, affording it a sure and reliable support. In Fig. 3 the binding-hoop C is represented as being combined with the supporting-disk A before being applied to the can D, which may be found convenient in the manufacture of these my improved cans.

The disk or ring A may be made either of cast metal or cut from sheet metal, as is deemed most desirable. When made of sheet metal, I find the perforated form (shown in the drawings) more desirable than a continuous plain disk, for the reasons that it is less liable to spring and warp, and it requires less metal in its construction. Additional efficiency may be given to this improvement by securing the per-



forated disks to the bottoms of the cans by means of clamps or other suitable devices, as shown at *b*, Fig. 2.

Cans constructed with this my improvement may be more safely transported than those which rest directly upon their bottoms, as blocks similar in size and shape to the cavities in the bottoms of the cans may be secured to the floor of the vehicle, upon which the can being placed it is sufficiently steadied to prevent its being affected by any ordinary jar of the vehicle.

Having thus fully described an improved sheet-metal can, what I claim therein as new, and desire to secure by Letters Patent, is—

The combination of a flat metallic disk or ring, A, provided with an annular flange, *a*, with the bottom of a sheet-metal can, when the said disk or ring is so combined by means of the binding-hoop C, in the manner and for the purpose herein represented and described.

The foregoing specification of my improvement in sheet-metal cans signed by me this 26th day of January, 1864.

HIRAM A. CRAIN.

In presence of—

JAMES WOODWARD,  
D. O. MACOMBER.