W. R. SCOFIELD.

Milk-Cooler.

No. 169,196. Patented Oct. 26, 1875.

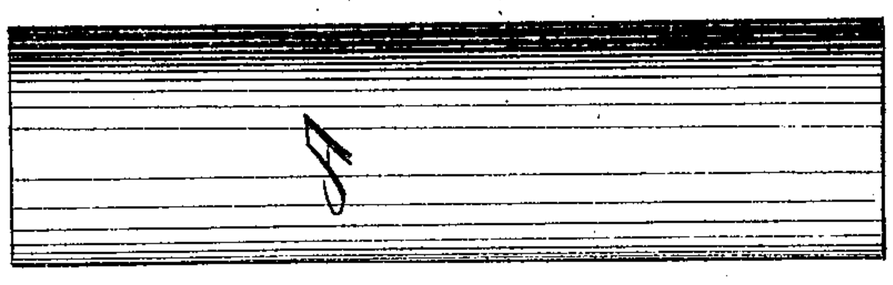

Fig 4.

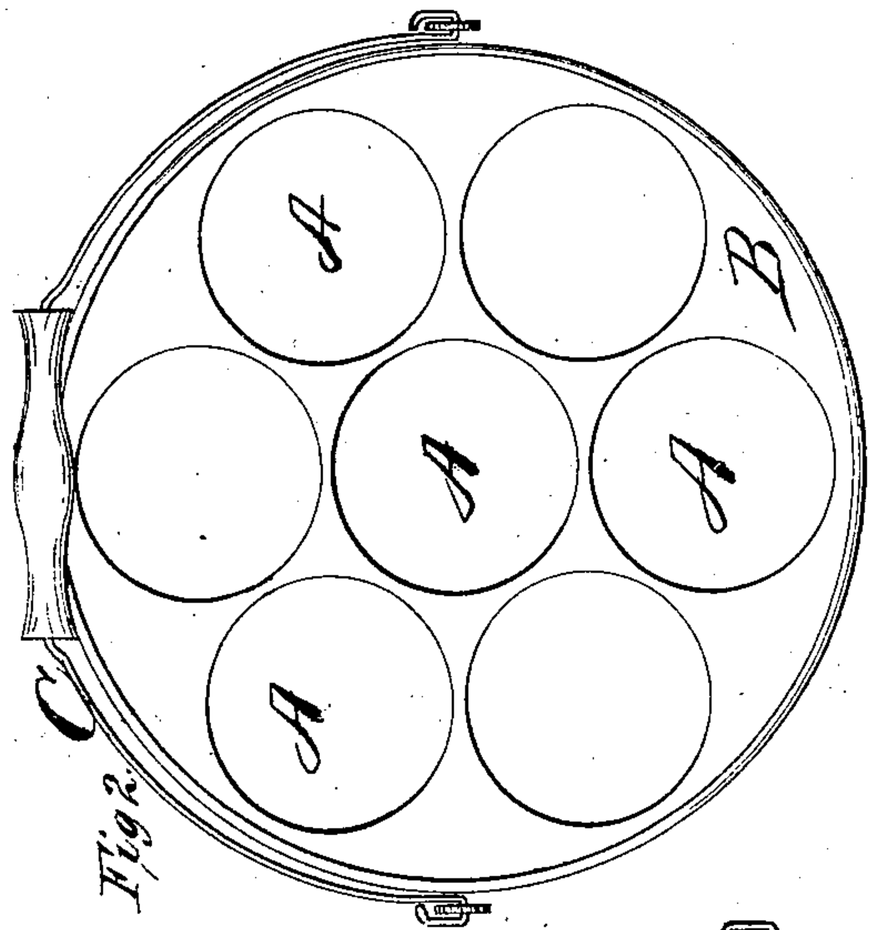

Fig 2.

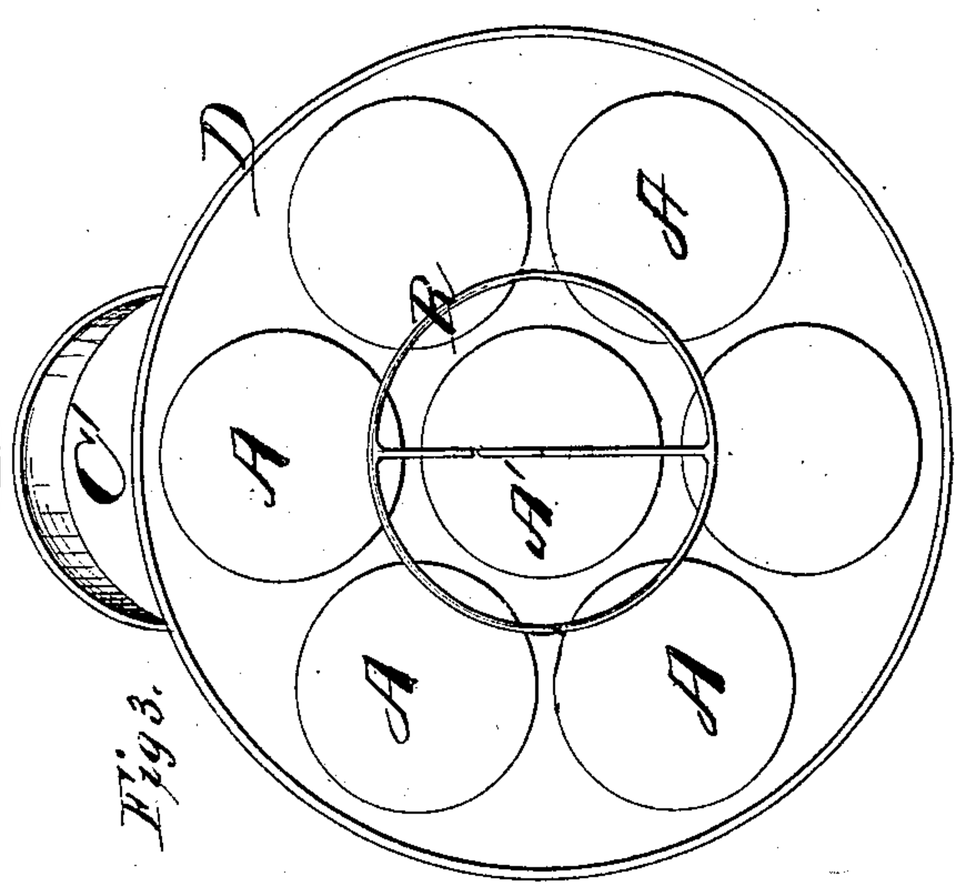

Fig 3.

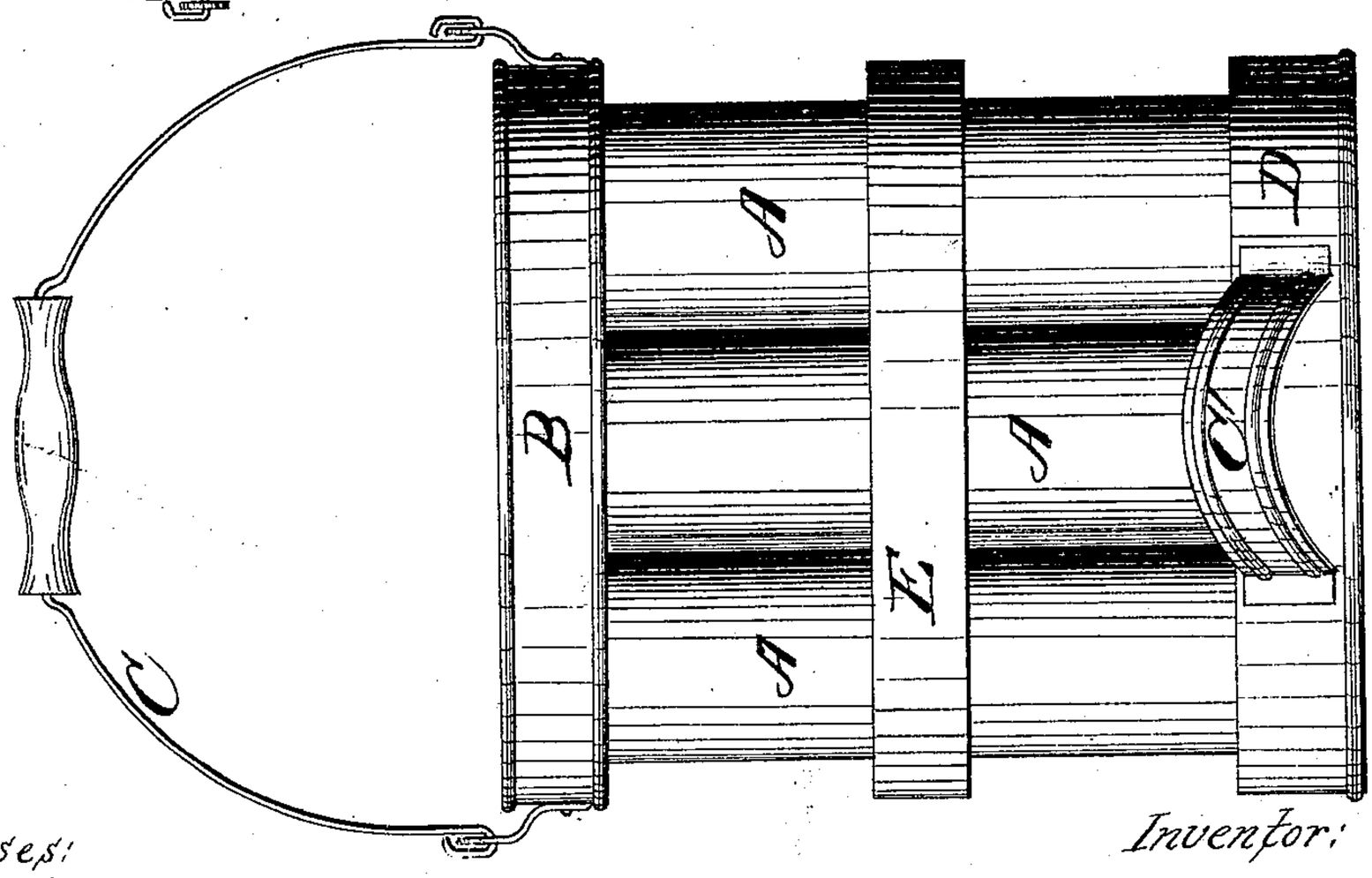

Fig 1.

Witnesses:
Austin Heath
J Lambert Ingersoll

Inventor:
Wm R. Scofield

UNITED STATES PATENT OFFICE.

WILLIAM RAY SCOFIELD, OF ELLERY, NEW YORK.

IMPROVEMENT IN MILK-COOLERS.

Specification forming part of Letters Patent No. **169,196**, dated October 26, 1875; application filed February 8, 1875.

To all whom it may concern:

Be it known that I, WILLIAM RAY SCOFIELD, of the town of Ellery, in the county of Chautauqua and State of New York, have invented a new and useful Apparatus for Cooling Milk, of which the following is a specification:

This invention has relation to improvements in milk-coolers, wherein are employed a number of spaced cylindrical vessels opening into a pan, by which they are simultaneously filled, and which are connected together at their lower ends; and it consists in strengthening-rings, which embrace the outer tier or row of vessels, and to which the said vessels are rigidly secured, whereby the union of the tubes composing the cooler is made very strong and reliable, and all danger of racking the joint of the pan and tubes is effectually obviated, as will be hereinafter more fully set forth.

In the annexed drawings, A designates a number of cylindrical tubes, the lower ends of which are closed, and which open, as to their upper ends, into a pan or vessel, B. Each of these vessels A is independent of the others, and being spaced the free circulation of water will in nowise be interfered with, and as they open into a common pan, B, they will be simultaneously filled when milk is poured into the said pan.

In practice pan B will be provided with a bail, C, by which it may be conveniently handled, the handling being still further facilitated by means of an ear, C′, applied to a strong annulus or ring, D, to which the vessels A are rigidly soldered at their lower ends. This ring extends below the lower horizontal end of vessels A, and by this means it is made to serve as a support for them as well as to prevent them from being unduly worn away by their frictional contact with the stones or brick bottom of a spring-house.

In practice the lower edge of ring D will be wired in the usual well-known manner, thus adding greatly to its strength, and effectually preventing its being battered out of shape.

In practice, also, I shall use a second strengthening-ring, E, intermediate to pan B and ring D, and rigidly secured like the latter to vessels A, thus imparting a degree of rigidity to the same equal to successfully resisting all strains and shocks to which they would ever be exposed, and yet but slightly interrupting the flow of water through the spaces between the said tubes.

The central or interior tube A′ will be connected with the exterior ones by the following means: A strong metallic ring, R, will be soldered to the bottoms of vessels A, thus additionally bracing them. A strong rod, *r*, is then passed diametrically across ring R, is rigidly secured to the said ring and to the bottom of the central tube, thereby bracing the latter against all displacement, and imparting to it a degree of rigidity equal to that possessed by the outer vessels.

The effect of rings D, E, and R is to so strongly connect the vessels A together that they are to all intents and purpose as strong as though incased in a solid vessel, and that a strain or shock received by one will be distributed over all, thus preventing the joint of that vessel receiving the shock with the pan B from being broken or rendered leaky.

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

1. The combination, with the tubular vessels A, of the strengthening-rings D E, substantially as specified.

2. The combination, with the vessels A and strengthening-rings D E, of the ring R and brace *r*, substantially as specified.

WM. R. SCOFIELD.

Witnesses:

AUSTIN HEATH,

J. LAMBERT INGERSOLL.