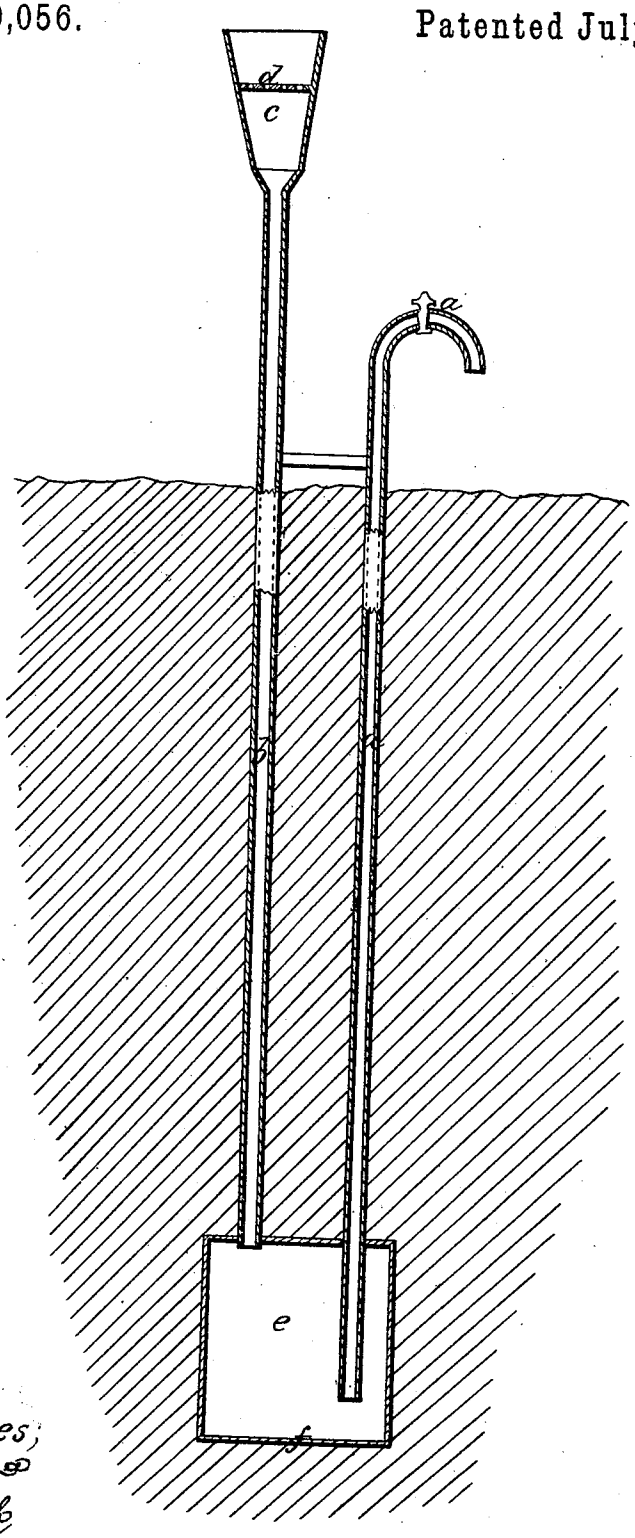
T. BYRNE.

REFRIGERATING ARTIFICIAL WELL.

No. 29,056. Patented July 10, 1860.



Witnesses;

Baldwin & Hodgson

G. F. Patterick

Inventor;

Thos. Byrne

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

THOMAS BYRNE, OF BATON ROUGE, LOUISIANA.

METHOD OF COOLING WATER.

Specification of Letters Patent No. 29,056, dated July 10, 1860.

To all whom it may concern:

Be it known that I, THOMAS BYRNE, of Baton Rouge, in the parish of East Baton Rouge and State of Louisiana, have invented a new and useful Method of Cooling Water; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification.

The drawing represents a vertical central section through the apparatus.

The nature of my invention consists in the combination of a subterranean reservoir with a feed pipe and a discharge pipe, when constructed and arranged in relation to each other as hereinafter to be described.

The object of this invention is to provide a simple and efficient means for cooling water without the use of ice or any expense beyond the original cost of the cooling apparatus.

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

A water-tight reservoir *e*, is buried in the ground a considerable depth, (say from thirty to forty feet) below the surface.

A feed pipe *b*, provided with a funnel shaped mouth *c*, at its upper end above the ground, terminates into the reservoir *e*, as also does a pipe *a*, the upper end of which is bent and provided with a cock (as seen at *a'*) so as to provide for a convenient discharge of the water.

The water to be cooled is poured into the mouth *c*, of pipe *b*, (where it passes through a suitable filter *d*,) and fills the reservoir *e*, and (after the reservoir has been filled) rises through pipe *a*, and is discharged at *a'* ready for use. As the coldest water will always sink to the bottom, the lower end of the discharge pipe *a*, reaches nearly the bottom of the reservoir *e*, in order that the coldest water in the reservoir shall rise into and be discharge through pipe *a*, *a'*. The water gathering in the reservoir *e*, will assume the surrounding temperature which at such a depth below the surface will naturally be lower than the surrounding temperature in summer and the water discharged at *a'* will be rendered cool.

It will be understood that this cooling process would be far more imperfect if a common siphon were embedded in the ground without the application of an intermediate subterranean reservoir *e*, where the water can gather in a great mass and remain for a time before it rises through pipe *a*. By this means (allowing the comparatively warm water to gather in the reservoir *e*, and to rise to be discharged only after it has become cool enough to sink to the bottom of the reservoir) I obtain a very simple, cheap and efficient water cooler.

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

The combination of a subterranean reservoir *e*, with a feed pipe *b*, and a discharge pipe *a*, *a'*, when constructed arranged and operated in the manner and for the purpose set forth.

THOS. BYRNE.

Witnesses:

GOODWIN Y. AT LEE,

GUSTAVUS DIETERICH.