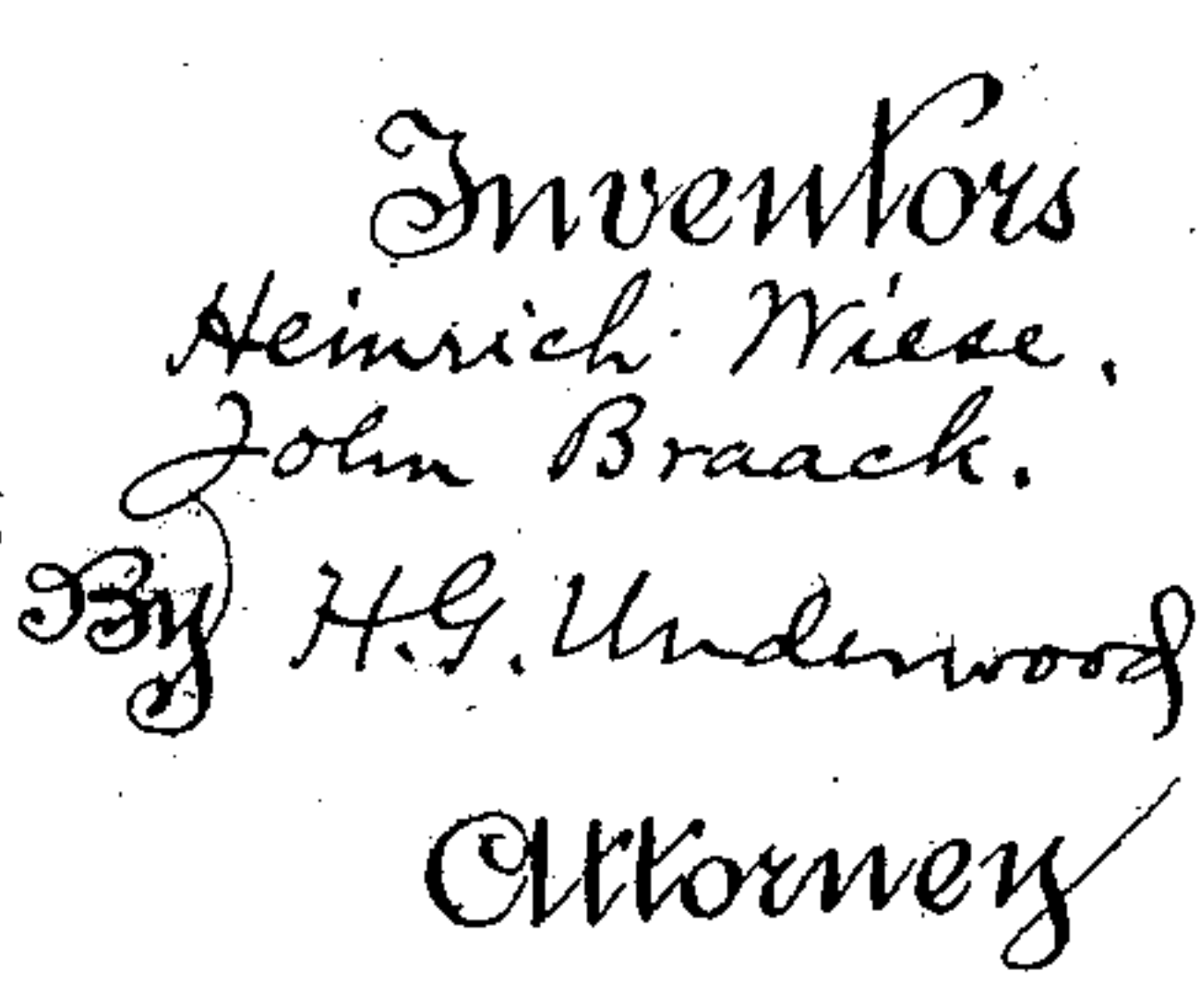


Patented Aug. 5, 1890.



UNITED STATES PATENT OFFICE.

HEINRICH WIESE AND JOHN BRAACK, OF MILWAUKEE, WISCONSIN.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 433,709, dated August 5, 1890.

Application filed April 7, 1890. Serial No. 346,858. (No model.)

To all whom it may concern:

Be it known that we, HEINRICH WIESE and JOHN BRAACK, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Refrigerators; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention relates to refrigerators; and it consists in certain peculiarities of construction and combination of parts to be hereinafter described with reference to the accompanying drawings, and subsequently claimed.

In the drawings, Figure 1 represents a longitudinal section of a refrigerator constructed according to our invention; Fig. 2, a transverse section of the same, and Fig. 3 a detail horizontal section illustrating an anti-friction bearing.

Referring by letter to the drawings, A represents the wall, B the top, and C the bottom, of a refrigerating-compartment, and arranged within this compartment is a cage D for holding ice. In the present form of our invention the ice-cage is provided with a bail E, and a central arm F of the bail extends up into a casing G on the top B of the refrigerating-compartment. Secured to the bottom of the casing G is a plate b, and supported on this plate to surround the bail-arm E is a spiral spring H of considerable power, this spring being held in place by means of a cross-head or washer c and nut d on the upper end of said bail-arm. Secured to the inner sides of the compartment-walls A are brackets H', and journaled in the latter are anti-friction rollers I, impinged against the bail E, and these rollers have flanges e adjacent to the edges of said bail to prevent the latter from swaying. The bail E is provided with a finger J, that extends through a slot in the adjacent wall of the refrigerating-compartment to register with a scale-plate K, and depending from the bottom of the ice-cage D is a pipe f, that is loosely fitted in a nipple g on the cover of a water-receptacle L, connected to said wall. The water-receptacle is provided with a sieve h, to stop dirt that may come down with the drip from the ice-cage D, and between this sieve and another one i we arrange suitable filtering material j to

purify the water, the latter being drawn off, for drinking purposes, through a faucet M, extending outside the refrigerating-compartment. A drain-pipe N leads from the bottom of the receptacle L down through the bottom of the refrigerating-compartment, and this pipe is provided with a cock k, the latter being closed when said receptacle is employed to collect the drip from the ice for drinking purposes. The ice-cage is normally supported by shoes m m, pivotally connected to a transverse rod P, the latter being passed through lever-arms Q R, pivotally arranged on bolts n, that pass through the walls A of the refrigerating-compartment. The lever-arm R is of greater length than the one Q, and is provided with a handle r, while at the same time a spiral spring s on its pivot-bolt exerts sufficient force to hold said arm R in engagement with a catch S, secured to the adjacent compartment-wall. If at any time it is desirable to ascertain the weight of the ice in the cage, the lever-arm R is disengaged from the catch and thrown to one side, as shown in dotted lines, Fig. 1. This operation brings the shoes m m away from said cage and permits the latter to descend against the force of the spring H, the finger J on the bail E being carried down along the scale-plate K to show the weight of the ice.

Arranged in the ice-cage is a vertical flue T, through which warm air in the refrigerating-compartment ascends, and above the flue is a flanged plate U, that extends on opposite sides of said flue to divide and deflect said air in two directions onto the ice to be cooled, after which it descends into said compartment, this circulation being continuous. By means of the central flue and deflector the air is distributed over a greater cooling-surface to thereby lessen the consumption of ice.

For the purpose of ventilating the refrigerating-compartment a pipe V is fitted in the top thereof, as shown in Fig. 1.

By the construction just described we cheapen the manufacture of large refrigerators, refrigerator-cars, &c., effect a saving in ice, and improve the circulation of air, while at the same time we are enabled to accurately determine the amount of ice on hand at any time.

Having thus described our invention, what

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

1. A refrigerating-compartment, a bail arranged therein and provided with a vertically-disposed arm, a spiral spring arranged to surround the bail-arm, a cross-head carried by said bail-arm in opposition to the spring, and an ice-cage connected to the bail, substantially as set forth.
2. A refrigerating-compartment having a wall thereof provided with a slot, a bail arranged in the compartment and provided with a finger extended through said slot, a vertically-disposed arm on the bail, a spiral spring arranged to surround the bail-arm, a cross-head carried by said bail-arm in opposition to the spring, and an ice-cage connected to the bail, substantially as set forth.
3. A refrigerating-compartment, a yielding ice-cage arranged therein, a transverse rod provided with pivotal supporting-shoes arranged to normally impinge against the ice-cage, and lever-arms pivoted to the walls of said compartment and connected to said rod, substantially as set forth.

4. A refrigerating-compartment, a spring-controlled ice-cage arranged therein, a transverse rod provided with pivotal supporting-shoes arranged to normally impinge against the ice-cage, lever-arms pivoted to the walls of the compartment and connected to said rod, a spring arranged to exert its force against one of the lever-arms, and a catch for this latter arm, substantially as set forth.

5. A refrigerating-compartment, a spring-controlled bail arranged therein, flanged anti-friction rollers arranged to impinge against the bail, an ice-cage connected to said bail, and a pivotal support for said cage, substantially as set forth.

In testimony that we claim the foregoing we have hereunto set our hands, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

HEINRICH WIESE.
JOHN BRAACK.

Witnesses:

N. E. OLIPHANT,
WM. KLUG.