No. 662,438. Patented Nov. 27, 1900.

W. C. HUCKINS.

APPARATUS FOR COOLING LIQUIDS.

(Application filed Sept. 14, 1900.)

(No Model.) 2 Sheets—Sheet 1.

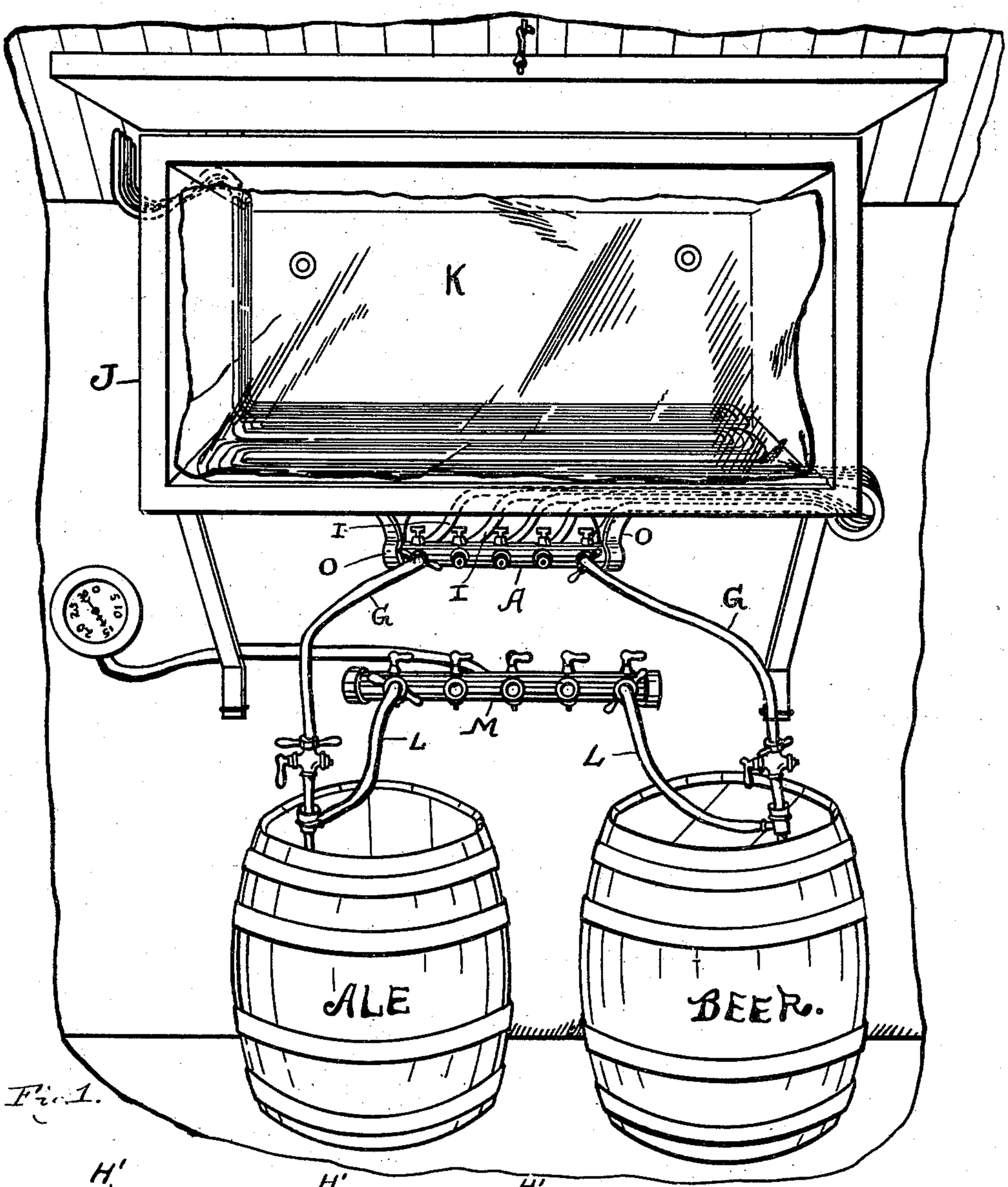

Fig. 1.

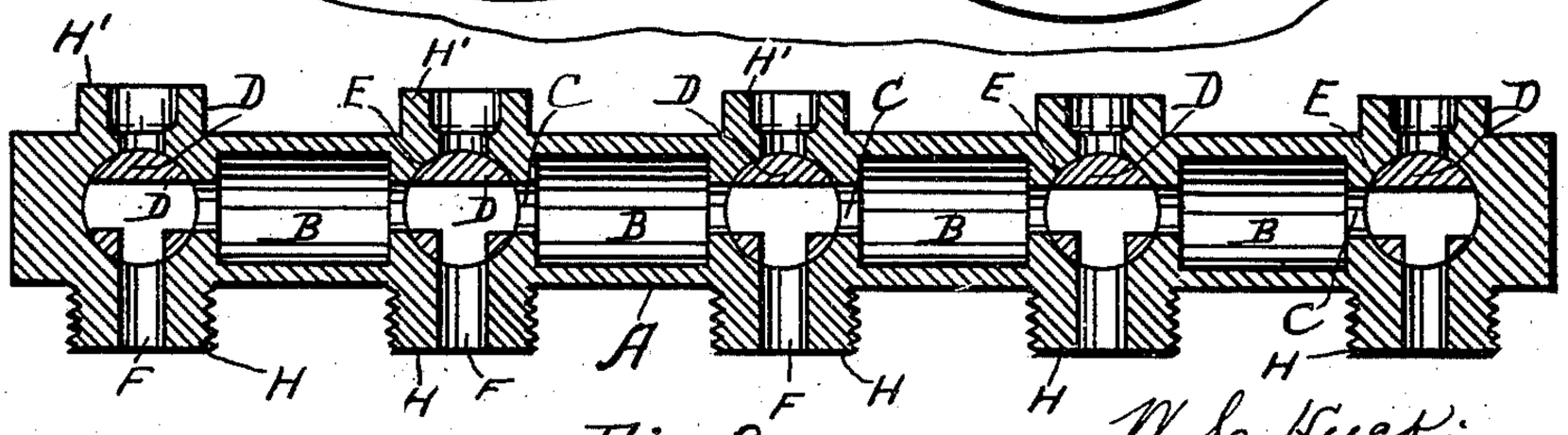

Fig. 2.

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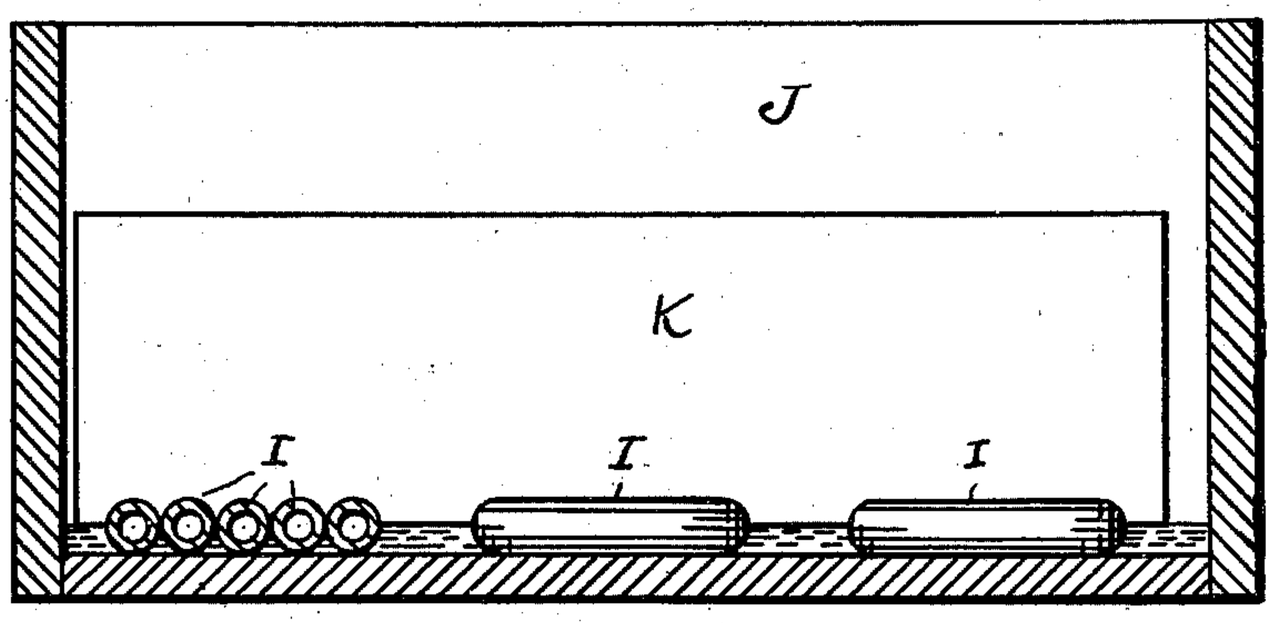

Fig. 3.

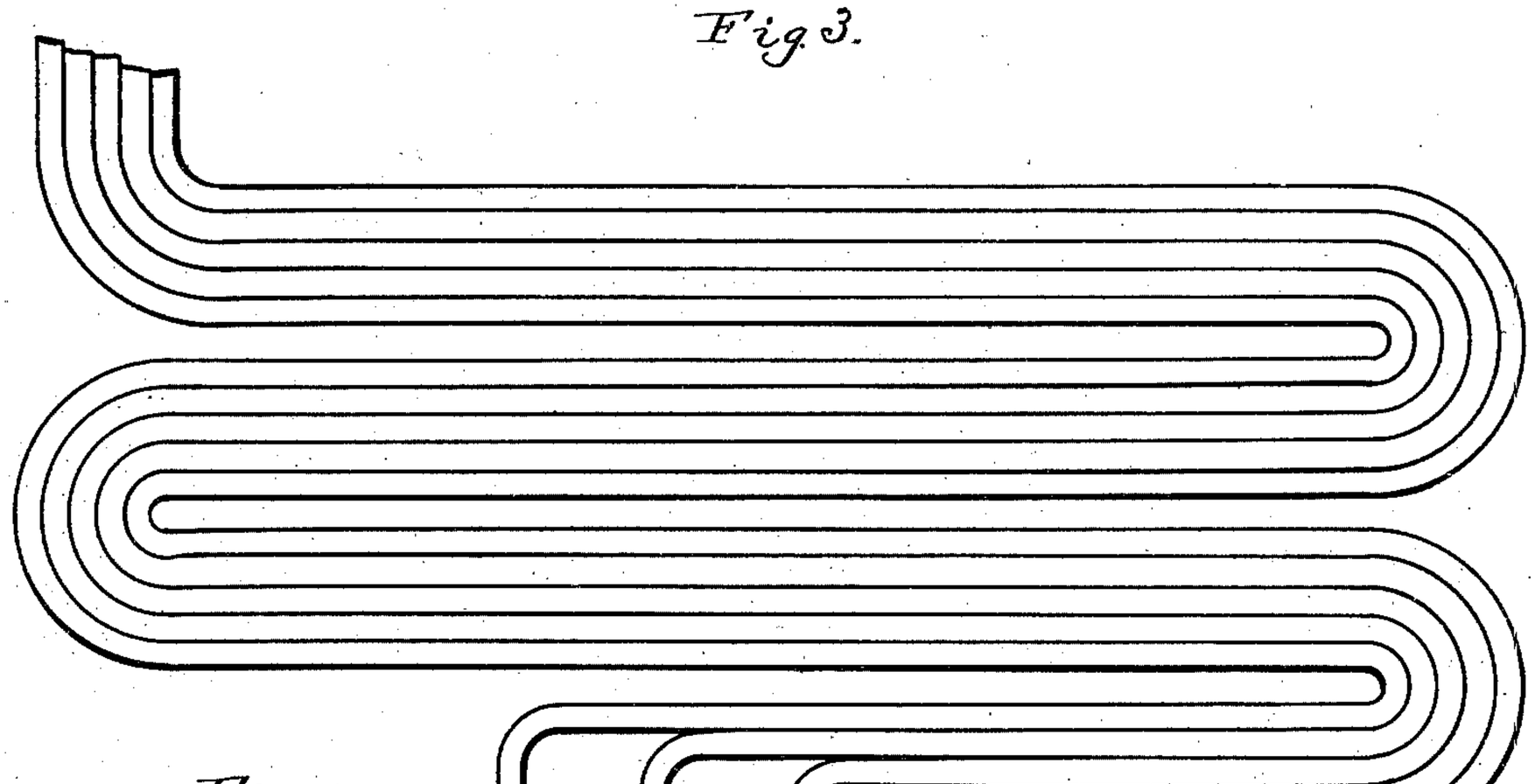

Fig. 4.

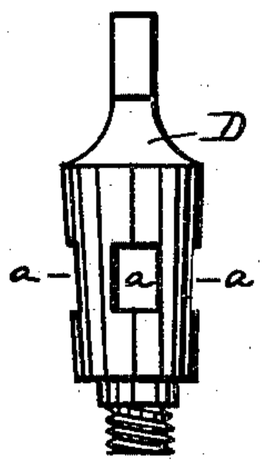

Fig. 5.

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UNITED STATES PATENT OFFICE.

WALTER C. HUCKINS, OF DAYTON, OHIO.

APPARATUS FOR COOLING LIQUIDS.

SPECIFICATION forming part of Letters Patent No. 662,438, dated November 27, 1900.

Application filed September 14, 1900. Serial No. 30,034. (No model.)

To all whom it may concern:

Be it known that I, WALTER C. HUCKINS, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Apparatus for Cooling Liquids; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in an apparatus for cooling beer, ale, &c.

One object of the invention is to provide means for drawing beer, ale, &c., from two or more kegs or barrels through two or more separate sets of cooling-coils arranged within a common ice box or chest and subjected to the cooling effect of a single cake or body of ice.

A further object of said invention is to provide means for connecting said separate coils with each respective keg and for controlling the passage from said kegs to said coils—that is to say, means whereby one or more of the cooling-coils may be fed with ale or beer from separate kegs.

In the arrangement of the coils, as will be hereinafter specified, the oblong cake or body of ice is so affected by the coils that in the melting of said ice its length and breadth are reduced to a much less extent than the depth of said cake or body of ice, and the consequence is the length and breadth of said cake will cover the coils until practically the entire cake or body of ice is melted.

In carrying out the objects of my invention, whereby I am enabled to connect two or more kegs of beer with two or more separate cooling-coils, I provide a manifold cock with intervening large chambers communicating through reduced openings to a series of three-way cocks, all as will be hereinafter more fully described, reference being had to the accompanying drawings, of which—

Figure 1 is a front elevation of my apparatus complete, showing the connection of two kegs with their cooling-coils. Fig. 2 is an enlarged longitudinal sectional view of the manifold cock. Fig. 3 is a sectional view through the end of the ice-box through which the coils enter. Fig. 4 is a plan view of the coils, showing their connection with the manifold cock. Fig. 5 is an elevation of one of the keys of the manifold cock.

In a detail description of my invention similar reference characters indicate corresponding parts in the several views of the drawings.

A represents a manifold cock having a series of enlarged chambers B, which communicate through reduced ports C with a series of valve plugs or keys D, which are seated in openings E at right angles to the chambers B. It is essential to have the chambers B considerably larger than the ports C, in order that the force of the liquid in its passage through the keys will be materially reduced. The said chambers B act as storage-chambers, in which an accumulation of the liquid may take place in its passage through the keys and the force thereof be broken. Each of said keys D has three openings *a*, which may be turned to communicate with the openings C, openings F communicating with the pipes G, which are connected with two or more kegs of ale or beer. Each keg of ale or beer is connected by a separate pipe G with a coupling-lug H on said manifold and each respective cooling-coil I is connected with a respective coupling-lug H′ on the opposite side of the manifold. These coils, it will be seen, are arranged adjacent to each other in oblong coils, each coil entering the ice-box J at one end and leaving it independently of the others. The cake or body of ice K rests upon the coils so arranged, and the weight thereof, together with the warmer temperature of the pipes, causes said pipes to become embedded in the body of ice, substantially as shown in the drawings. The melted ice deposits in the bottom of the box and is permitted to discharge therefrom in suitable quantities through the box around the coils where they enter the end of the box. The oblong manner in which these coils are arranged and the provision of suitable space in the bottom of the ice-box in which to maintain a suitable portion of the melted ice have the combined effect of causing the cake of ice to melt through its depth at a greater degree than through its length or width. The result is the coils are not materially de-

prived of contact with the ice until the ice has all melted and the box is in a condition to be replenished. The beer or ale is forced through the pipes G by well-known means, consisting of air-pressure, which enters said kegs through pipes L, which are fed from a well-known form of manifold cock M. This of course forms no part of the present invention. The present invention consists in the separate connection of two or more kegs of ale or beer with separate sets of cooling-coils so arranged that they may be subjected to the cooling effect of a single body of ice, the said cooling-coils being arranged to support the body of ice and have the effect of retarding a uniform melting away of said body of ice.

It will be understood from reference to the drawings and the above description that a number of kegs of ale or beer may be connected through individual cooling-coils and the passage of the beverage controlled at will. For example, if it is desired to pass ale alone the cock controlling the passage thereof is manipulated to permit of the said beverage passing through each respective coil. If it is desirable to pass a certain quantity of ale and beer to be mixed—say "half-in-half"—the respective cocks of the ale and beer supply are turned on sufficiently to admit of one-half the quantity passing through their respective coils, which are received into a single glass at the counter.

One of the principal advantages of my cooling apparatus consists in the ability of one or more bartenders to draw ale or beer from one barrel through one or more faucets. For example, referring to Fig. 1, by attaching the connecting-pipe G to the first coupling-lug H on the manifolding cock and turning the blank side of the key D toward said coupling-lug the liquid will be allowed to pass directly through the chambers D and will leave by any faucet that may be opened at the bar, or if the proprietor handles different varieties of beer they can be kept separate and run independently and at the same time subjected to the cooling effects of the ice-box.

Having described my invention, I claim—

In an apparatus for cooling a number of different beverages and maintaining them on draft, the combination with an ice-box, of a series of cooling-coils arranged within said ice-box in an oblong manner, the said coils so arranged providing an uneven or corrugated surface upon which the ice is supported, the said uneven or corrugated surface being approximately the length and breadth of the body of ice, a manifold cock with which each of said coils so arranged has an independent connection, means on said manifold cock for independent connections, of a series of pipes leading from a like number of kegs, a series of enlarged chambers B within said manifold cock and forming enlarged feed-passages, a series of three-way keys in said manifold cock, the openings or ports from the chambers B to said keys being essentially smaller than the chambers B so that the force of the liquid in passing from said chambers B will be materially reduced, all arranged and operating substantially in the manner and for the purposes specified.

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

WALTER C. HUCKINS.

Witnesses:

HARRY G. CARSON,

R. J. MCCARTY.