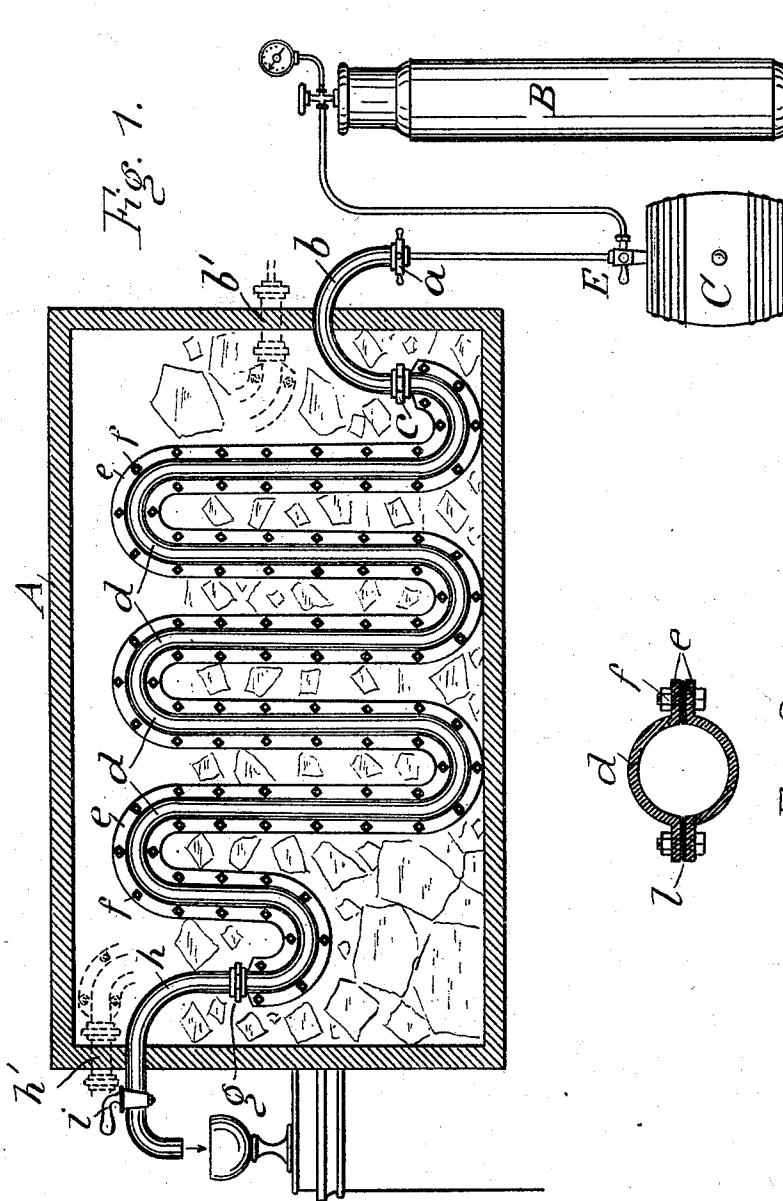


(No Model.)

G. KRUSE.
BEER TEMPERING DEVICE.

No. 505,424.

Patented Sept. 19, 1893.



Witnesses
Walter Wagner
Fred. Jackson

Inventor
Justav Kruse.
By ^{his} Attorney *Wm. Zimmerman.*

UNITED STATES PATENT OFFICE.

GUSTAV KRUSE, OF HAMBURG, GERMANY, ASSIGNOR TO GEORGE T. MAMEROW, OF CHICAGO, ILLINOIS.

BEER-TEMPERING DEVICE.

SPECIFICATION forming part of Letters Patent No. 505,424, dated September 19, 1893.

Application filed April 1, 1893. Serial No. 468,688. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV KRUSE, a citizen of Germany, residing at Hamburg, have invented certain new and useful Improvements in Beer-Tempering Devices, which are fully set forth in the following specification, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 shows my apparatus in side view with a part of it in vertical longitudinal section. Fig. 2 shows a transverse section of one of the pipes.

Like letters refer to like parts.

The object of my invention is to provide a beer tempering device in which the difficulty of cleaning the pipes, or worm, thereof shall be reduced to a minimum and in which, at the same time, it may be done to perfection. As heretofore constructed these devices were uncleanly and, consequently, unhealthful because there was no known means of cleaning them thoroughly, and; hence, where the government looks after the sanitary properties of such devices, their use has been prohibited, generally, because; even after a thorough cleansing with known methods, their cleanliness was either doubtful, or; ultimately, could be proved to be unsatisfactory. To overcome said difficulties I have devised a new mechanism which, when used according to my direction will overcome all objections and be perfectly clean. My device consists of a refrigerating chamber A, pressure device B attached to a beer cask C by means of a pipe, or pipes E. Within the chamber A is a serpentine pipe or worm *d*, which has its ends connected to short sections of pipe *b* and *h*, which pass through the walls of said chamber A and are attached thereto fixedly. The section *b* has a coupling *a*, on the outside and another one, *c*, on the inside of the box A and the pipe *h* has a coupling *g* on the inside and a cock *i* outside of said box. Said short sections of pipe *b* and *h* are shown in a modified form connected to the pipe *d* at *b'* and *h'*, as there shown in broken lines. The pipe *d* is split longitudinally and provided with flanges *e*, which are drawn together by means of bolts *f*. When necessary a packing *l* is placed between said flanges. The pipe *d*

is here shown packed in ice but any other suitable tempering substance as water of proper temperature may be used in the season when less cooling is desirable. The above mentioned difficulty consists in the deposit, within said serpentine pipe, of slime from the beer in its passage through such apparatus from the cask C into the glass near *g* at the other end of the pipe *h* and is due, principally, to the yeast or ferment and other organic substances which thus lay the foundation for microbic and other disease generating substances which will not yield fully to any known cleansing agent, except, perhaps; with great reluctance, expense and uncertainty. By means of my removable and longitudinally separable pipe the said incrustations and deposits may be removed effectually and cheaply and when replaced its condition, when thus cleansed is known with certainty because the entire inside of the pipe is open to inspection by the eye. Said pipe *d* may be made of any suitable material and it may now, also: be enameled, glazed, &c., by any of the well known methods all of which without this were impracticable. The number of screw bolts *f*, may be more or less numerous according to the material used for the pipes but they may in fact be dispensed with entirely by the substitution of suitable clamps, or equivalent devices.

What I claim is—

1. In a beer tempering device, the combination with a tempering chamber provided with fixed inlet and outlet pipes, of a longitudinally separable pipe removably connected to the inner ends of said fixed pipes, substantially as specified.

2. In a beer tempering device, the combination with a tempering chamber provided with fixed inlet and outlet pipes, of a longitudinally separable pipe removably connected to the inner ends of said fixed pipes, a pipe coupling at one end and a cock at the other of the outer ends of said fixed pipes, substantially as specified.

GUSTAV KRUSE.

Witnesses:

WM. ZIMMERMAN,
AUGUST ROTHE.