(No Model.) 2 Sheets—Sheet 1.

A. AUFRICHTIG.

BEER COOLER.

No. 385,986. Patented July 10, 1888.

Fig. II.

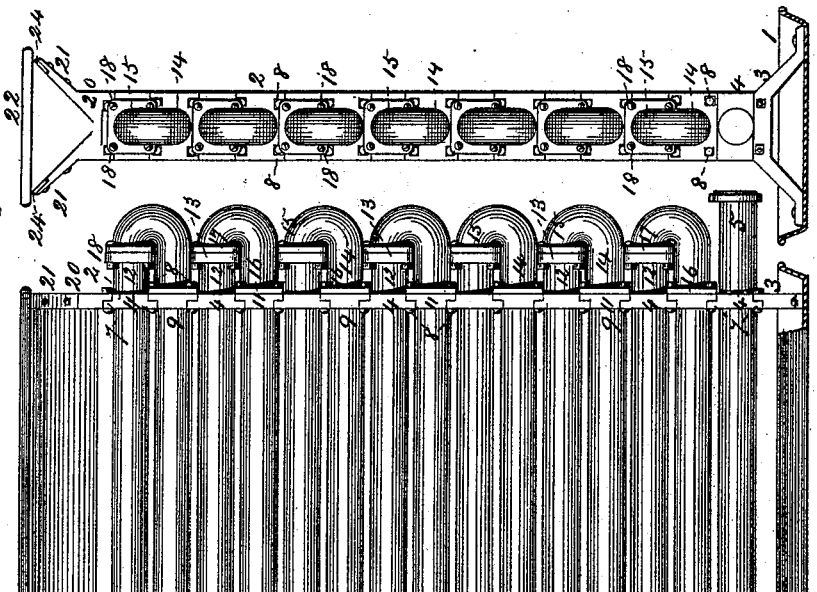
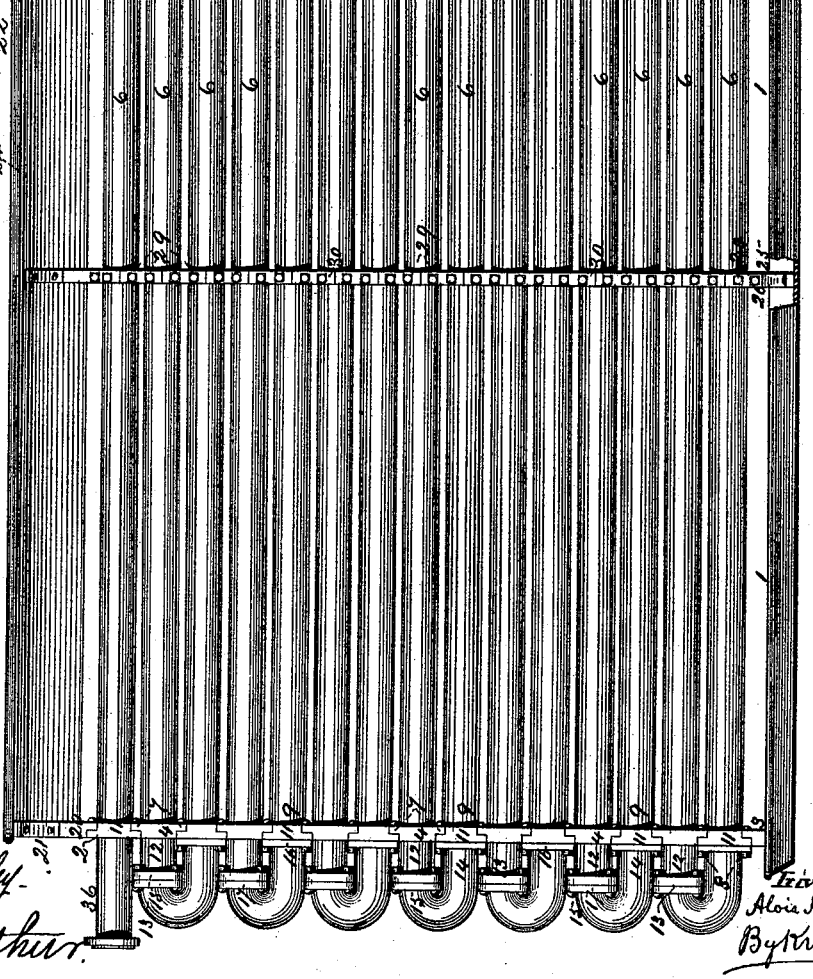


Fig. I.



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Inventor;
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By Knight Bros
Attys.

(No Model.) 2 Sheets—Sheet 2.

A. AUFRICHTIG.

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Fig. III.

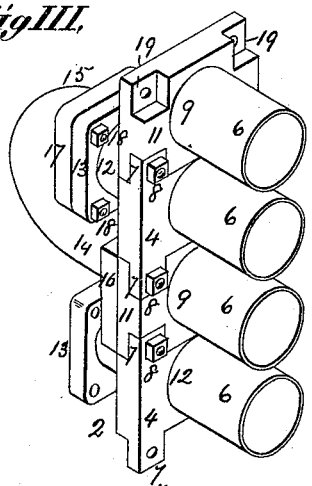


Fig. V.

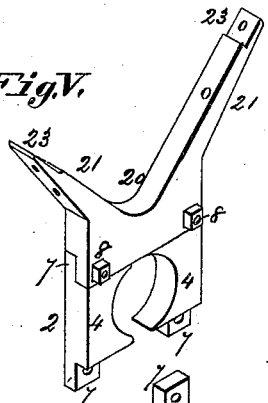


Fig. VI.

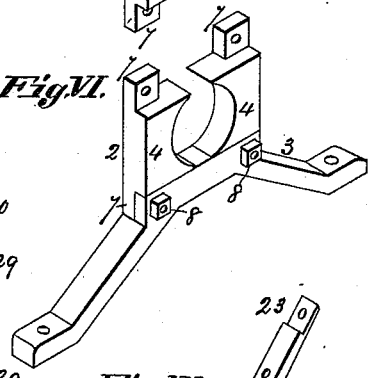


Fig. IV.

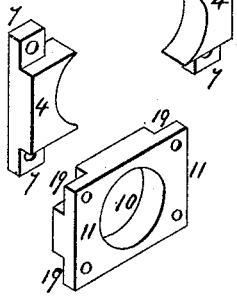


Fig. VII.

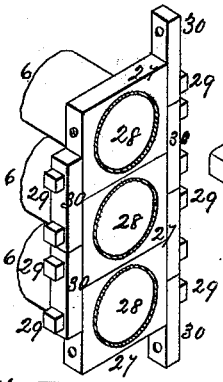


Fig. IX.

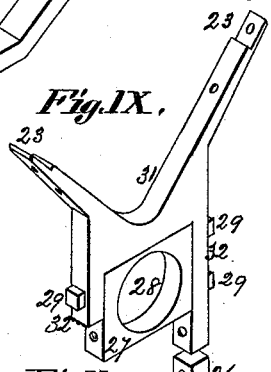


Fig. XI

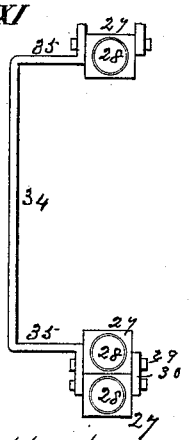


Fig. VIII.

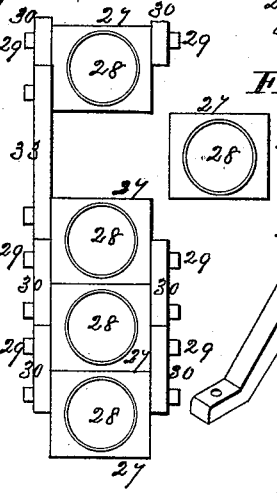
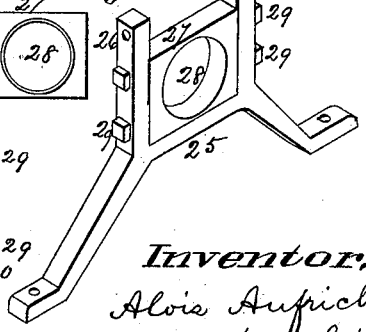


Fig. X.



Attest:

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Alois Aufrichtig.

By Knight Bros.

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UNITED STATES PATENT OFFICE.

ALOIS AUFRICHTIG, OF ST. LOUIS, MISSOURI.

BEER-COOLER.

SPECIFICATION forming part of Letters Patent No. 385,986, dated July 10, 1888.

Application filed February 20, 1888. Serial No. 264,587. (No model.)

To all whom it may concern:

Be it known that I, ALOIS AUFRICHTIG, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Beer-Coolers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

The improvement consists in such construction that either one or more of the pipes or elbows may be removed, and, in combination with such construction, a flanged elbow having parts of different lengths, so that one of the flanges may be in line with the sectional post and the other outside such line.

Figure I is a side elevation of the cooler with part of the receiving-pan broken away to show one of the feet. Fig. II is an end elevation with the receiving-pan in section. Fig. III is a detail perspective view showing parts of four of the pipes and a single elbow with two of the section-plates of the standard. Fig. IV is a perspective view of parts of one of the end standards disconnected. Fig. V is a perspective view of the top of one of the end standards. Fig. VI is a perspective view of the foot of one of the end standards. Fig. VII is a detail perspective view showing part of an inside standard. Fig. VIII is a detail elevation illustrating the manner of removing one of the pipes from the cooler. Fig. IX is a detail perspective view of the top of an interior standard, and Fig. X is a detail perspective view of the bottom of the same. Fig. XI is a detail showing means for supporting the parts when removing two or more pipes.

1 is the base-pan, which receives the liquid after it has run down the series of cooling-pipes. At 2 are shown the end standards, which are composed of removable sections and of the coupling-flanges of the shorter ends of the pipes. One of the standards 2 has a foot, 3, which is secured to the base-pan and to blocks 4, forming jaws, between which passes the extended end 5 of one of the pipes 6, said end being coupled to a supply-pipe, (not shown,) through which cold liquid passes into the pipes 6, which are preferably made of copper. The blocks 4 have at the lower and upper parts similar lugs, 7, for connection with the parts above and below by means of a bolt, 8, passing through the lug and through said part. The foot is made with recesses to receive the lugs.

The shorter ends, 9, of the pipes 6 are expanded in the central orifice, 10, of a joint-flange, 11, so as to make a tight joint between the pipe and the flange, and the longer ends, 12, of the pipes are secured in a similar manner in the joint-flanges 13, which are set at some distance from the blocks 4, so that the bottom of the flanges 13 may be at a lower level than the top of the flange 11 of the pipe beneath, and thus while flange joints are used the pipes can be set very near together—in fact, so as to be in contact with the joint-flanges of the nearest pipes above and below. This nearness of the pipes is a considerable advantage for two reasons—first, it allows a cooler of a given capacity to be put in a smaller space, and, second, it prevents the liquid from separating into round streams or drops, as there is not space between the pipes for it to do so. The elbows have a long leg, 14, and a short leg, 15, so as to adapt them for application to the shorter and longer ends of the pipes 6, and carry joint-flanges 16 and 17, which are connected to the flanges 11 and 13. The flanges 16 upon the long legs of the elbows are connected to the flanges 11 of the short ends of the pipes by the bolts 8, while bolts 18 connect the flanges 17 to the flanges 13. Any suitable gasket or packing may be used between the flanges to make the joint tight, such as sheet-lead or rubber. The flanges 11 have recesses 19 at the corners, in which the lugs 7 fit snugly, and their upper and lower edges against the lower and upper edges of the blocks above and below them, so that when the blocks 4 and flanges 11 are connected by the bolts 8 these parts form a solid standard or upright, which may be readily disconnected at any part for the removal of one or more of the pipes 6. The construction also gives means for increasing or decreasing the capacity of the cooler at will by the addition or removal of pipes 6. To the upper blocks 4 is secured a fork, 20, having arms 21, in which is set the drip-pan 22. The arms are recessed at 23 to receive a bar, 24, by which the edge of the drip-pan is strengthened and which also serves as a longitudinal stay.

The cooler, except where it is shorter than ordinarily, has one or more standards between the ends. One of these standards is shown in Fig. I of the drawings, and details of the same are shown in Figs. VII, VIII, IX, and X. This standard has a foot, 25, standing in the base-pan, and upward extensions 26, to receive a block, 27, having a central perforation, 28, fitting snugly on the pipe 6. These blocks are placed on the pipes 6 before they are put in position in the cooler. The extensions 26 embrace the lower block, 27, and preferably extend to the mid-height of the block next above.

29 are screws passing through the extensions 26 and screwing in the blocks. Each block 27 rests firmly on the block beneath it.

30 are cleats by which and the screws 29 the blocks are firmly connected together. The cleats have also end bearing upon each other, and thus strengthen the standard against transverse flexure. The top of the standard has a fork, 31, made to fit the outside of the drip-pan 22. The arms of the fork have, like the arms 21, recesses 23 to receive the bar 24. The fork is secured to the upper one or two blocks, 27, by screws 29 passing through downward extensions 32 and screwing in the block or blocks. It will be seen that by removing two of the cleats from one side and removing two of the screws 29 from the other side any of the blocks except the uppermost one and the lowermost two may be made free to slip transversely from between the blocks above and beneath, supposing the pipe to be free at its ends. The ends of the pipes are made free for removal by disconnecting them from the elbows and by removal of the blocks 4, by which they are held in place in the end standards. To prevent the derangement or strain of the remaining pipes when one is removed, I use a cleat, 33, of double the length of the ordinary cleats, (see Fig. VIII,) which will overspan the gap made by the removal of one of the blocks, and whose ends are attached by the screws 29 to the blocks above and below such gap.

To allow the removal of a number of the pipes and blocks, a longer cleat, 34, may be used, as seen in Fig. XI. This longer cleat is shown with offsets at 35, so that the cleat may be applied before the intermediate cleats, 30, are removed, (only sufficient of the cleats 30 being removed to give place for the attachment of the ends of the cleat 34 to the blocks above and below those to be removed.)

The cold liquid leaves the cooler through the end 36 of the upper pipe, 6. The current may, however, be reversed, if preferred.

The end standards, 2, are similar in construction, except that while in one the blocks 4 are attached to the foot 3, in the other a joint-flange, 11, is attached to the foot.

It will be understood that a great advantage possessed by this cooler is that it may be taken apart and packed closely in cases and shipped for low-freight rate, and may be put together at the end of its destination by any ordinary mechanic. Each of the separate parts is both light and small, so that they can easily be carried to any part of a building where it is desired to locate the cooler.

I claim as my invention—

1. In a cooler, the combination, with the pipes, of the joint-flanges 11, and divided blocks 4, embracing said pipes and alternating with and secured to said flanges, as set forth.

2. In a beer-cooler, the combination of the pipes, a joint-flange on the end of one pipe having recesses 19, blocks embracing another pipe having lugs 7 fitting said recesses, and bolts 8, passing through the lugs and the flanges, substantially as set forth.

3. The combination of the pipes connected by an elbow having legs of different lengths connecting said pipes, joint-flanges on the pipes and elbow, blocks 4, embracing the pipe which is joined to the shorter leg of the elbow and having lugs 7, the joint flanges on the other pipe having recesses 19, to receive the lugs 7, and bolts 8, passing through the lugs and both flanges of the joint between the pipe and elbow, substantially as set forth.

4. The combination, in a beer-cooler, of a vertical series of horizontal pipes extending alternately past each other at the ends in opposite directions, a standard at each end formed of the joint-flanges of the shorter ends of the pipes, and intervening blocks engaging the longer ends of the pipes, and elbows having legs of different lengths connected to the pipes with flange-joints.

5. In combination with the sectional end standards of a beer-cooler, the interior standard composed of blocks bearing upon each other, through which the pipes pass, and connecting-cleats attached to the blocks by screws, substantially as set forth.

6. The combination, in a beer-cooler, of the vertical series of horizontal pipes of equal length extending past each other alternately at the ends, connecting-elbows at the ends having legs of different lengths to adapt them to the pipes arranged as set forth, flange-joints between the pipes and elbows, and blocks embracing the extended ends of the pipes and in the plane and secured to the joint-flanges of the shorter ends of the pipes, substantially as and for the purpose set forth.

ALOIS AUFRICHTIG

In presence of—
SAML. KNIGHT,
EDWD. S. KNIGHT.