Aug. 3, 1926. 1,594,653

T. J. ANSTEY

REFRIGERATING COUNTER

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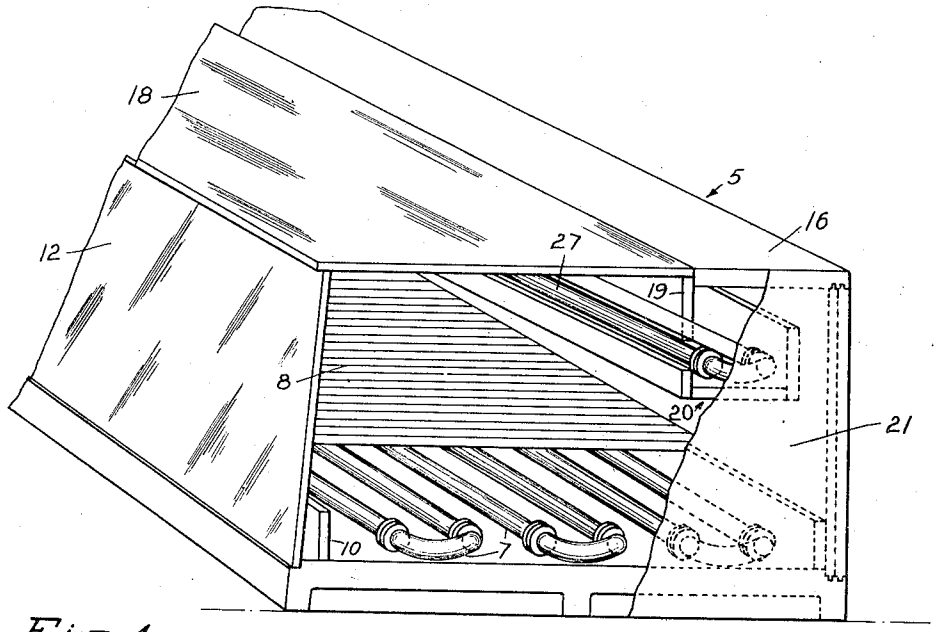


Fig. 1

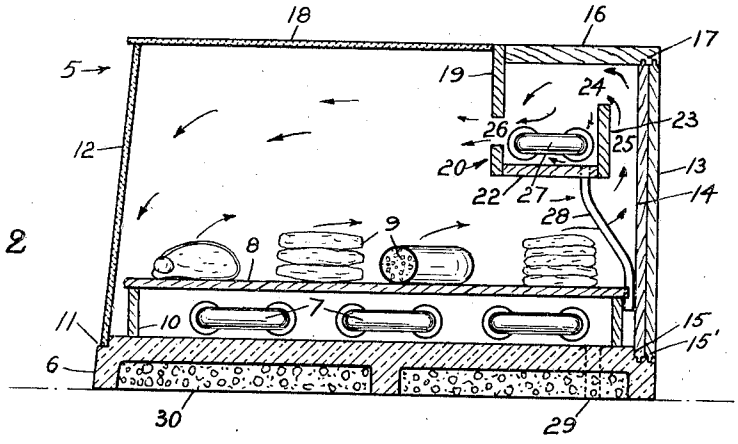


Fig. 2

INVENTOR
Tracy J. Anstey
BY M. C. Frank
ATTORNEY

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TRACY J. ANSTEY, OF OAKLAND, CALIFORNIA.

REFRIGERATING COUNTER.

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My invention relates to refrigerating counters of the closed type, and more particularly to such a counter wherein the cooled air is kept in circulation by a secondary cooling coil therein and spaced remotely above the main coils.

Ordinary refrigerating counters provided with refrigerating pipes only below the tray on which food articles are displayed and temporarily stored, are defective in the respect that the circulation of cold air is insufficient for keeping the food at the most efficient preserving temperature. The reason for the lack of proper circulation in such counters is that the cold air will stay at the bottom, while the warm air arising from the food will seek the highest level, so that the tendency is to form two distinctly separate strata of air and that therefore, if the counter were not opened occasionally, a stagnant condition would prevail and thus the food, instead of being preserved, would be spoiled within a short time.

As a remedy for this condition in refrigerating counters my invention comprises in combination with the system of refrigerating pipes below the food tray, refrigerating pipes above the tray and at one side of the counter, and means for leading the warmed air to and over the last-named pipes so that it may pass as a continuous stream of cold air over and around the food and thus preserve the food for a reasonable length of time.

In the drawings, which illustrate the invention, Figure 1 is a perspective view showing a part of a refrigerating counter with one end partially broken away and constructed according to the principle of my invention; and

Fig. 2 is a transverse sectional view of the counter directly in front of the end wall.

In a counter 5, which may be of a conventional construction and adapted to rest with its base 6 upon a suitable structure, not shown, I provide at its bottom the usual system of refrigerating pipes 7 and a removable tray, comprising spaced transverse slats 8 for display and storage of food articles 9 thereon; the tray and the pipes extending practically through the whole length of the counter and the tray being supported upon longitudinal supporting members 10 of a height adapted to hold the tray above the refrigerating pipes.

At the front of the base is a longitudinal recess 11 into which is set the wall 12, which preferably is made of glass or other transparent material, the other side or rear of the counter may consist of sliding doors 13, 14, retained in the base by a longitudinal recess 15 and by a tongue-and-groove connection, as shown at 15', and being retained in a rear section 16 of the top of the counter by other tongue-and-groove connections, as at 17. Beside the rear section 16 the top also comprises a front section 18, which, like the front wall 12, preferably is made of glass or other transparent material and is supported at its front edge upon the front wall 12 and at its rear edge upon the front wall 19 of a casing 20, so that the upper surface of the section 18 is in the same plane as the upper surface of the rear section 16.

The casing 20, which extends longitudinally from one end wall 21 to the other end wall of the counter 5 and is secured to the end walls in any suitable manner, comprises, beside the front wall 19, a closed bottom 22 and a rear wall 23, while the top section 16 of the counter also serves as a top for the casing. The rear wall 23 is joined to the bottom 22 and is spaced apart from the side of the casing, which side comprises the sliding doors 14, 13, and is also spaced from the top of the counter, so that an opening 24 is formed at the top of the rear wall 23 and extends the whole length thereof, thus, a passage 25 is provided between the rear wall of the casing and the rear side of the counter. An opening 26 is also formed in the front wall 19 of the casing and extends the whole length of the said wall and is narrower and lower than the opening 24 at the top of the rear wall 23, the front wall 19 being suitably joined to the top 16 and to the bottom 22 and to the end walls of the counter.

Within, and at the bottom of, the casing 20 thus formed in and secured to the counter 5, are refrigerating pipes 27 fastened in any appropriate manner, the pipes being of any suitable number and preferably extending the length of the casing and being joined to the other system of refrigerating pipes 7 or independently connected with a refrigerating source. However, since such connections are not essential to the understanding of this invention, they are not shown in the drawings.

A drain pipe 28 may be extended from the casing for carrying the pipe drippings

away therefrom, and also another drain 29 under the pipes 7 is provided for the draining of the counter. Pads 30 of cork or other moisture-resisting material may be provided under the base 6 of the counter for insulation purposes.

In practice, the heat radiating from the food 9 will cause the air warmed thereby to rise to the top of the counter. However, since the opening 26 in the front wall 19 of the casing is narrower than, and also below the level of, the opening 24 at the top of the rear wall 23, the expanded warm air will travel through the passage 25 and pass through the opening 24 and then, as its progress is checked at the top of the front wall 19, it will be forced to travel to and over the pipes 27, where it will be chilled and contracted and pass therefrom as cold air through the restricted front wall opening, from which it will be directed as a continuous stream of cold air over and around said food, and thus an effective circulation results, the arrows in Fig. 2 indicating the path of travel of the circulated air.

Having thus described my invention, I claim as new and desire to secure by Letters Patent of the United States the following:

1. In combination with a refrigerating counter of the class described having therein a tray for display and storage of food thereon and a system of refrigerating pipes below said tray, (1) refrigerating pipes above the tray and at one side of the counter; and (2) a casing surrounding the last-named pipes, the casing comprising a closed top. a closed bottom, a rear wall joined to the said bottom and spaced apart from the said side of the counter and from the said top so that an opening is formed at the top of the rear wall and a passage is provided between the rear wall of the casing and the side wall of the counter, and a front wall joined to the said top and to the said bottom and having an opening therein below the opening in the rear wall, the arrangement of the casing being such that the warmed air will travel through said passage and through the opening at the top of the rear wall and then will be forced to pass downward to and over the last-named pipes and through the opening in the front wall and will be directed as a continuous stream of cold air over and around said food.

2. In combination with a refrigerating counter of the class described having therein a tray for display and storage of food thereon and a system of refrigerating pipes below said tray, (1) refrigerating pipes above the tray and at one side wall of the counter; and (2) a casing surrounding the last-named pipes, the casing comprising a closed top, a closed bottom, a rear wall joined to the said bottom and spaced apart from the said side wall of the counter and from the said top so that an opening is formed at the top of the rear wall and extends the whole length thereof and a passage is provided between the said rear wall of the casing and the said side wall of the counter, and a front wall joined to the said top and to the said bottom and having an opening therein below the opening in the said rear wall, said front-wall opening extending the whole length of the wall and being narrower and lower than the opening at the said rear wall, the last-named pipes being supported on the bottom of the casing, and the arrangement of the casing being such that the expanded warmed air will travel through the said passage and pass through the opening at the top of the said rear wall and then will be forced downward to and over the last-named pipes, where it will be chilled and contracted and pass therefrom as cold air through the said front wall opening and from which it will be directed as a continuous stream of cold air over and around said food.

In testimony whereof, I affix my signature.

TRACY J. ANSTEY.