

E. J. BRACH.
CANDY COOLING APPARATUS.
APPLICATION FILED AUG. 5, 1912.

1,067,460.

Patented July 15, 1913.

2 SHEETS-SHEET 1.

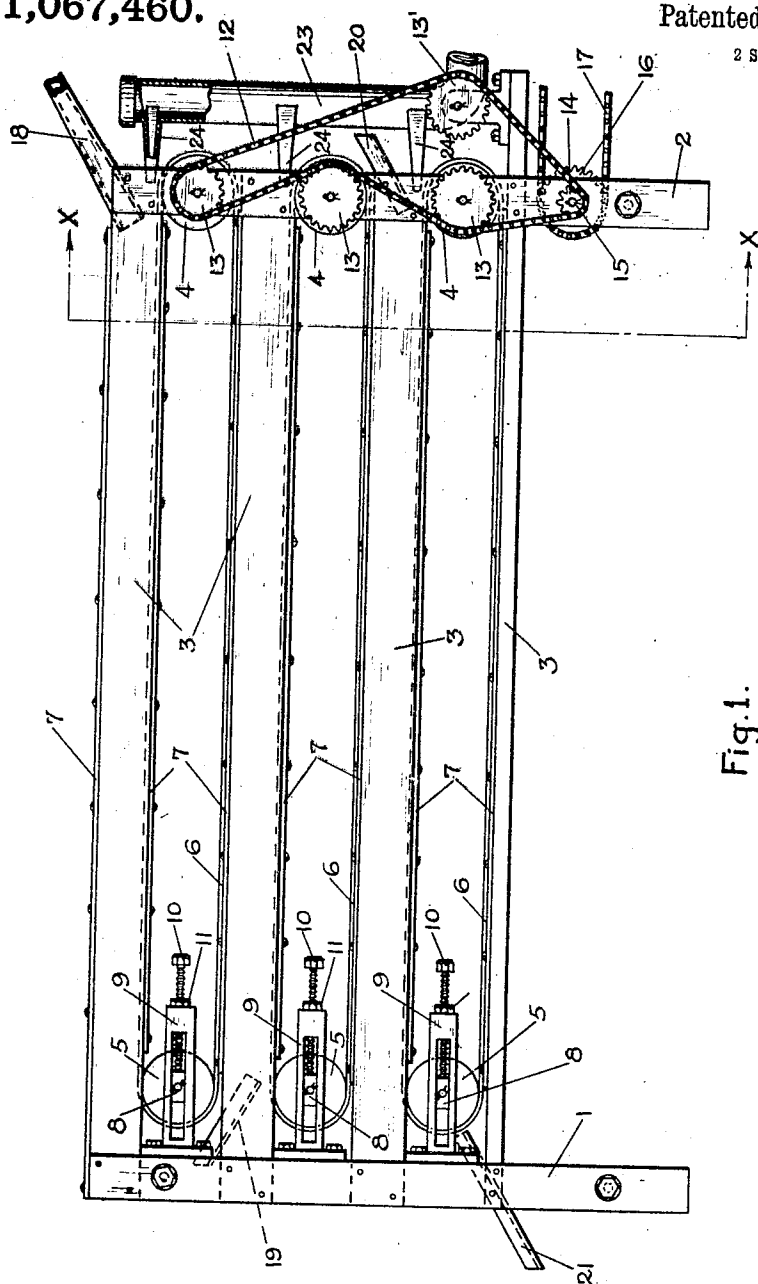


Fig. 1.

Witnesses

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2 SHEETS-SHEET 2.

Fig.2.

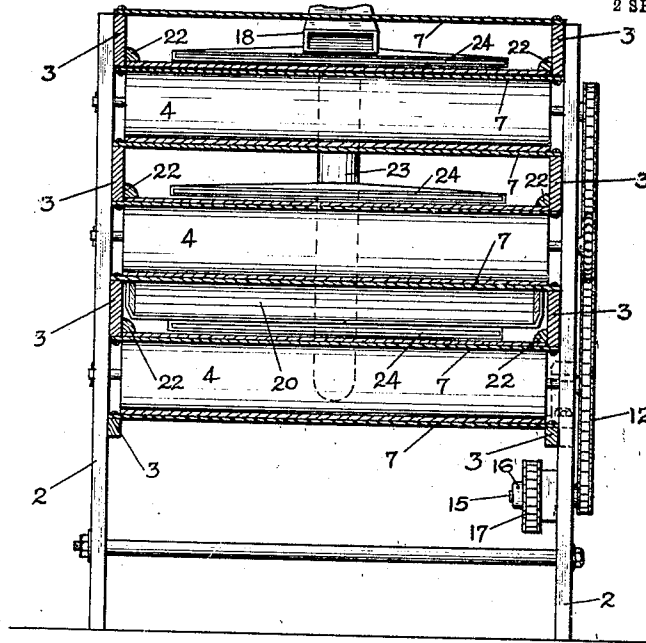
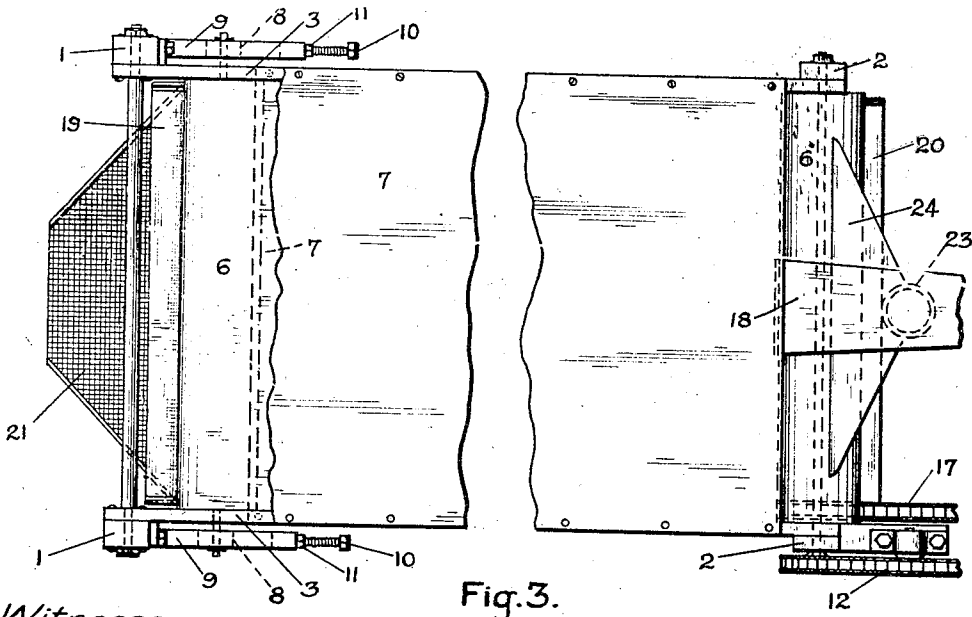


Fig.3.

Witnesses

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UNITED STATES PATENT OFFICE.

EMIL J. BRACH, OF CHICAGO, ILLINOIS.

CANDY-COOLING APPARATUS.

1,067,460.

Specification of Letters Patent.

Patented July 15, 1913.

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To all whom it may concern:

Be it known that I, EMIL J. BRACH, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Candy-Cooling Apparatus, of which the following is a specification.

My invention relates to improvements in cooling apparatus designed for use particularly in the manufacture of candy and has for its object the production of apparatus of this character through the medium of which hot candy may be effectually cooled without the employment of manual labor.

A further object of my invention is the production of a cooler as mentioned which will be compact in construction and efficient in use.

Other objects will appear hereinafter.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a partially sectional side elevation of a cooling apparatus embodying my invention, Fig. 2 is a vertical transverse section taken on substantially line *x-x* of Fig. 1, and Fig. 3 is a fragmentary top plan view of the apparatus.

The preferred form of construction as illustrated in the drawings comprises an elongated supporting frame which consists of uprights 1 and 2 which are provided respectively at the opposite ends of said frame. The uprights 1 and 2 are connected by vertically spaced longitudinal members 3 which are rigidly secured to the former as shown in the several views. Arranged at one end of said supporting frame are a plurality of vertically spaced rollers 4 which are mounted in bearings provided in uprights 2 and arranged at the opposite ends of said frame are a plurality of vertically spaced rollers 5. Traveling around the rollers 4 and 5 are endless conveyers or belts 6, metal sheets 7 secured to the longitudinal edges intermediate the rollers, preventing sagging thereof. The rollers 5 are mounted in bearing blocks 8 which are slidably mounted in slotted brackets 9 which are fastened to uprights 1. The construction is such, as will be observed, that horizontal adjustment of

the rollers 5 will be permitted in order to take up any slack in the conveyers, screws 10 cooperating with the bearing blocks 8 in this adjustment, as will be readily understood. Lock nuts 11 cooperate with screws 10 for locking the latter in position of adjustment.

Conveyers 6 are driven through the medium of a sprocket chain 12 which travels around the sprocket wheels 13 secured to corresponding extremities of rollers 4, an idler sprocket 13' driving sprocket 14, the latter being secured to driving shaft 15, which carries sprocket 16 at its inner end around which travels driving sprocket chain 17, the latter being connected with any suitable source of power. The sprocket wheels 13 engage with sprocket chain 12 in such a manner that, during operation of the device, the upper and lower conveyers 6 will be driven in one direction and the intermediate conveyer in the opposite direction, as will be readily understood.

In using the conveyer the pieces of candy to be cooled are deposited upon the upper side of the uppermost conveyer 6 at the right hand end thereof, the distributing chute of the candy cutting machine being shown at 18. The candy thus deposited upon said conveyer is carried by the latter toward the left. As said candy reaches roller 5 the same will drop from said conveyer on to the inclined deflecting plate 19 which will deflect the pieces of candy toward the second conveyer 6. The latter will then carry the candy in the opposite direction and as the candy passes the corresponding roller 4 the same will drop from the conveyer on to the inclined deflector plate 20 which will guide the same on to the lowermost conveyer 6. The latter conveyer will carry the candy again toward the left and deposit the same into the discharge chute 21. With the arrangement set forth then, it will be seen that the candy will be continuously carried back and forth, the distance traveled corresponding in length to three times the length of the apparatus, that is the three short belts employed serve the same purpose as one belt equal to the combined lengths of the former; the superposed arrangement of the belts resulting in compactness and hence in the economizing of space.

The provision of plates 7 results in the upper sides of the conveyer 6 being inclosed in flat passages or tubes which are open at

their opposite ends. Strips 22 are preferably provided at the inner sides of members 3 engaging over the longitudinal edges of the conveyers to prevent the candy pieces 5 carried thereby escaping from the same.

At one end of the apparatus is provided an air supply pipe 23 which, in use, is connected with any suitable source of cool air supply. Leading from said pipe 23 are outwardly flaring nozzles 24 adapted to direct 10 currents of air toward the upper sides of the conveyers in order to cool the candy deposited thereon. The tubular housings or passages surrounding the upper sides of the 15 belts serve to confine the cool air discharged from the nozzles 24 so that the same will be utilized to its fullest extent in cooling the candy positioned upon the conveyers.

While I have illustrated and described the 20 preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the 25 precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention what I 30 claim as new and desire to secure by Letters Patent is:

1. A device of the class described comprising a plurality of superposed endless conveyers; means for simultaneously driving 35 said conveyers; means arranged at the ends

of said conveyers for directing currents of air toward the upper sides of said conveyers; and tubular inclosures for the upper sides of said conveyers, substantially as described.

2. A device of the class described comprising a plurality of rollers; a plurality of vertically spaced horizontally disposed endless conveyers mounted for travel around 40 said rollers; supporting casings inclosing the upper sides of said conveyers intermediate said rollers for preventing sagging of 45 said conveyers; and means for simultaneously driving said conveyers and directing a current of air through the said inclosing 50 casings.

3. A device of the class described comprising a plurality of rollers; a plurality of vertically spaced horizontally disposed endless conveyers mounted for travel around 55 said rollers; tubes inclosing the upper sides of said conveyers and supporting the same to prevent sagging, said tubes being open at both ends; and means at the ends of said 60 tubes for directing currents of air thereinto toward the upper sides of said conveyers, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EMIL J. BRACH.

Witnesses:

JOSHUA R. H. POTTS,
JANET E. FARRELL.

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