

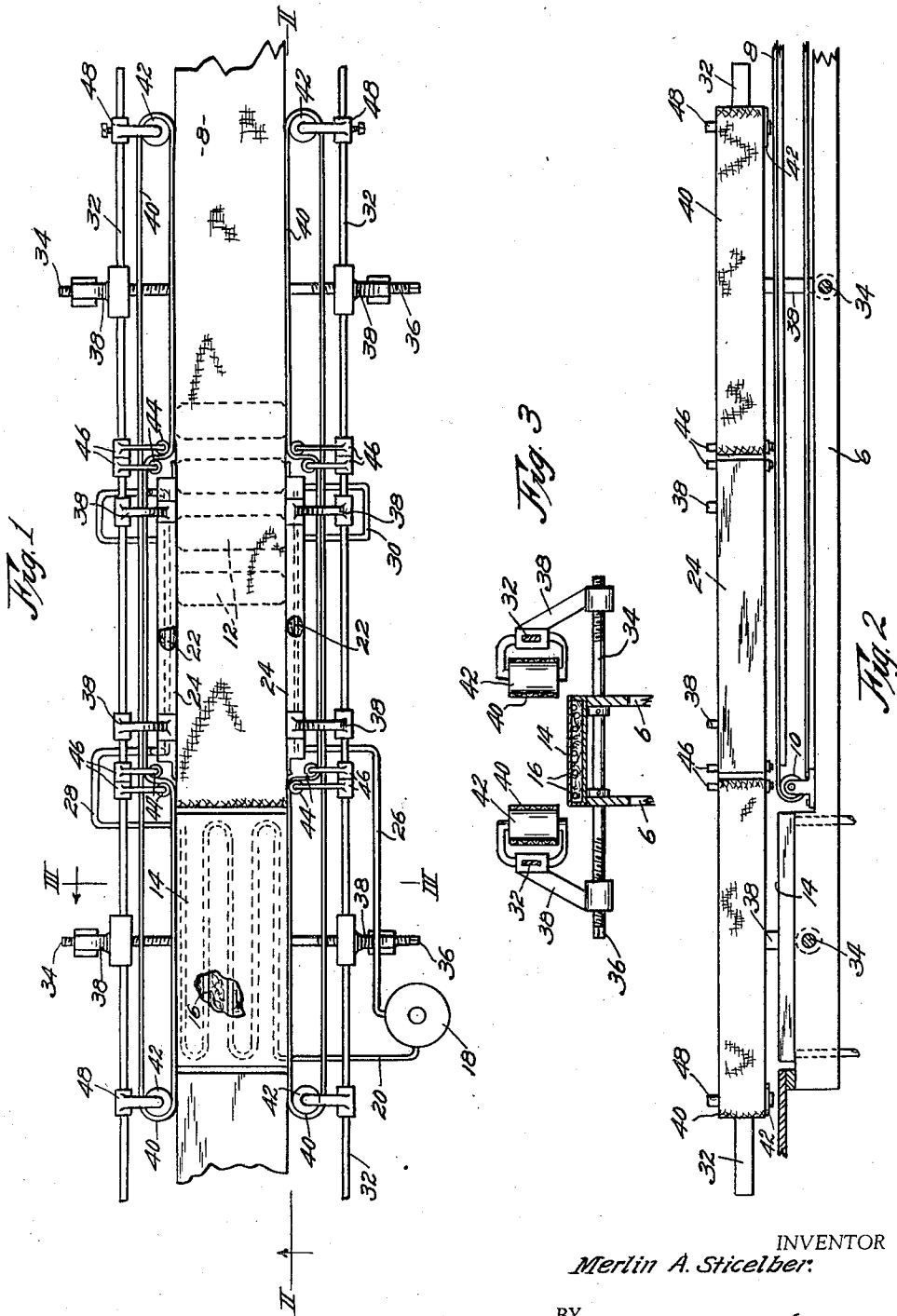
Aug. 4, 1936.

M. A. STICELBER

2,049,876

SEALING EQUIPMENT FOR WRAPPING MACHINES

Filed Dec. 16, 1935



INVENTOR
Merlin A. Sticelber.

BY

Morey & Hamilton
ATTORNEYS.

UNITED STATES PATENT OFFICE

2,049,876

SEALING EQUIPMENT FOR WRAPPING
MACHINES

Merlin A. Sticelber, Kansas City, Mo.

Application December 16, 1935, Serial No. 54,589

10 Claims. (Cl. 93—2)

This invention relates to wrapping machines generally and specifically to the sealing equipment for such machines, and the primary object is to provide unique, novel and efficient seal con-

5 gealing equipment for wrapping machines that includes staggered side and bottom cooling plates in combination with specially disposed and novel-ly arranged belts.

One of the primary aims of this invention is the provision of sealing equipment for wrap-
10 ping machines having offset conveyor belts that combine with side plates so that a portion of the faces thereof are on a common plane with the plates for the purpose hereinafter more fully set
15 down.

Another object of this invention is the provision of a series of package sealing plates and a series of package conveying belts that are arranged so as to permit the passage of the packages being sealed through the said sealing equipment without the use of force exerted from one package to the other and in such fashion as to permit the packages to remain in spaced apart relation during their trip through the sealing equipment.

Heretofore when loaves of wrapped bread or other packages have been passed through package sealing equipment, a certain amount of force has been exerted upon a group of packages with detrimental effect. It is desirable to pass loaves of wrapped bread or similar units through the sealing equipment individually and without the exertion of force in any way whatsoever.

35 Disposing belts and cooling plates in the manner contemplated by this invention permits the passing of packages through the equipment as a unit, and while the invention may be embodied in such machines as shown in the accompanying drawing, it is obvious that the ideas forming
40 a part of the invention may be built into conventional types of wrapping machines without difficulty. In the drawing:

Figure 1 is a top plan view of sealing equipment for wrapping machines made in accordance with this invention.

Fig. 2 is a longitudinal, sectional view through the same, taken on line II—II of Fig. 1, and,

Fig. 3 is a vertical cross section through the machine, taken on line III—III of Fig. 1.

50 All of the parts of the equipment are mounted upon a suitable frame 6 and a horizontal belt 8 carried by any number of suitable rollers 10 mounted upon frame 6 forms a portion of the bottom of the passageway for the loaves of bread 12 indicated by dotted lines in Fig. 1. The re-

maining portion of the bottom of this passageway comprises the lower cooling plate 14, having associated therewith cooling coils 16 that are included in the refrigerating system diagrammatically illustrated in Fig. 1. These coils 16
5 are joined to compressor 18 by a conduit 20 and coils 22 disposed in operative relation with cooling plates 24 are likewise in the refrigerating system and are in communication with compressor 18 and coils 16 by means of tubes 26 and 28. 10
The circuit for the refrigerant is completed by joining together coils 22 through the medium of a conduit 30.

Side plates 24 are in opposed relation and offset with respect to bottom plate 14. Side plates
15 24 are mounted upon bars 32 and these bars are movable toward and from each other for the purpose of varying the width of the passageway. The means for moving bars 32 is in the form of a threaded shaft 34, journaled in frame 6 and
20 movable by the application of a wrench or suitable crank to squared head 36 formed on each of the several shafts 34. Obviously, right and left hand threads should be used to engage brackets 38 and lateral adjustment through the medium
25 of shafts 34 will be effective in moving all of the side wall forming parts of the equipment as a unit.

Belt 8 extends from the wrapping machine to a point just beyond the ends of opposed side
30 plates 24 and this belt serves to move the wrapped packages 12 along between vertical plates 24. The seals at the ends of packages 12 are solidified as they come in contact with plates 24 and there-
35 after the seal at the bottom of each package 12 is solidified by contacting bottom plate 14. If plates 14 and side plates 24 were not in offset relation, it would be impossible to conveniently
40 move the several packages 12 therealong without exerting a crushing or compressing force.

The diverted side belts 40 are mounted upon end rollers 42 and offset intermediate rollers 44. These intermediate rollers divert an intermediate
45 portion of one stretch of belt 40 so that it passes behind the proximal plate 24 for a part of its path of travel. The portions of the inner stretch of belt 40 which extends longitudinally from the ends of each plate 24 are in a plane with plate
50 24 and serve to move packages 12 toward and from plate 24 and toward and from that portion of lower belt 8 lying between side plates 24. Brackets 46 support rollers 44 and brackets 48 carry main rollers 42. These brackets are mounted upon bars 32 and one of brackets 48 is ad-
55 justably mounted thereon so that when belts 40

are not to be diverted with respect to plate 24, the distance between end rollers 42 might be increased without difficulty.

A number of advantages other than those mentioned herein are present when using sealing equipment of the character embodying this invention, and while one exemplification has been shown and described, it is desired to be limited only by the scope of the appended claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. Sealing equipment for package wrapping machines comprising a pair of opposed plates having cooling means associated therewith; a package conveying belt between said plates; and a continuous package conveying belt having a stretch thereof extending longitudinally from each end of each of said plates respectively to move packages onto and off of the portion of said first mentioned belt between the plates said belts each having means for diverting the portion intermediate the longitudinally extending stretches to the rear of its respective plate.

2. Sealing equipment for package wrapping machines comprising a pair of opposed plates having cooling means associated therewith; a package conveying belt between said plates; and opposed package conveying belts extending longitudinally from the ends of said plates to move packages to and from the said first mentioned belt between the plates said first mentioned package conveying belt terminating between the ends of said opposed package conveying belts.

3. Sealing equipment for package wrapping machines comprising a pair of opposed plates having cooling means associated therewith; a package conveying belt between said plates; opposed package conveying belts extending longitudinally from the ends of said plates to move packages to and from the said first mentioned belt between the plates; and a second plate, having cooling means associated therewith, between the belts which move the packages from the said opposed plates.

4. Sealing equipment for package wrapping machines comprising a pair of opposed plates having cooling means associated therewith; a package conveying belt between said plates; opposed package conveying belts extending longitudinally from the ends of said plates to move packages to and from the said first mentioned belt between the plates; and a second plate, having cooling means associated therewith, between the belts which move the packages from the said opposed plates, said second plate and first mentioned belt being in end-to-end relation, in a common plane, and forming the bottom of a package passageway.

5. Sealing equipment for package wrapping machines comprising a pair of opposed plates having cooling means associated therewith; a package conveying belt between said plates; opposed package conveying belts extending longitudinally from the ends of said plates to move packages to and from that portion of the said first mentioned belt between the plates; and a second plate, having cooling means associated therewith, between the belts which move the packages from the said opposed plates, each of said first mentioned plates and certain stretches of the package conveying belts that extend longitudinally therefrom being in a common plane and forming a side of a package passageway.

6. Sealing equipment for package wrapping machines comprising a pair of opposed plates having cooling means associated therewith; a package conveying belt between said plates; opposed package conveying belts extending longitudinally from the ends of said plates to move packages to and from the said first mentioned belt between the plates; and a second plate, having cooling means associated therewith, between the belts which move the packages from the said opposed plates, said second plate and first mentioned belt being in a common horizontal plane and forming the bottom of a package passageway, each of said first mentioned plates and the package conveying belts that extend longitudinally therefrom being in a common vertical plane along one side and above said bottom of the passageway to form one side of the said passageway.

7. Sealing equipment for package wrapping machines comprising a pair of opposed plates having cooling means associated therewith; a package conveying belt between said plates and co-operating therewith to form a package passageway; and an endless belt having a portion thereof extending longitudinally from each end respectively of each of said plates respectively, each of said belts having a portion of its face always in the same plane as the face of the proximal plate on each side of the said plate to move packages toward and from the plate and onto and off of the first mentioned belt.

8. Sealing equipment for package wrapping machines comprising a pair of opposed plates having cooling means associated therewith; a package conveying belt between said plates and co-operating therewith to form a package passageway; and an endless belt having a portion thereof extending longitudinally from each end respectively of each of said plates respectively, each of said belts having a portion of its face always in the same plane as the face of the proximal plate on each side of the said plate to move packages toward and from the plate and onto and off of the first mentioned belt, said endless belts each being provided with a series of supporting rollers serving to divert one stretch of the endless belt to one side of the adjacent plate.

9. Sealing equipment for package wrapping machines comprising a pair of opposed plates having cooling means associated therewith; a package conveying belt between said plates and co-operating therewith to form a package passageway; and an endless belt extending longitudinally from each end respectively of each of said plates, each of said belts having a portion of its face always in the same plane as the face of the proximal plate on each side of the said plate to move packages toward and from the plate and onto and off of the first mentioned belt, said endless belts each being provided with a series of supporting rollers serving to divert a length of one stretch thereof intermediate the ends toward the other stretch of the belt whereby to provide space for the associated plate.

10. In sealing equipment of the character described, a pair of opposed seal cooling plates; an endless belt associated with each of said plates respectively; and a series of rollers supporting each belt disposed to divert an intermediate length of one stretch of that belt toward the other stretch thereof to provide space for the associated plate.

MERLIN A. STICELBER.