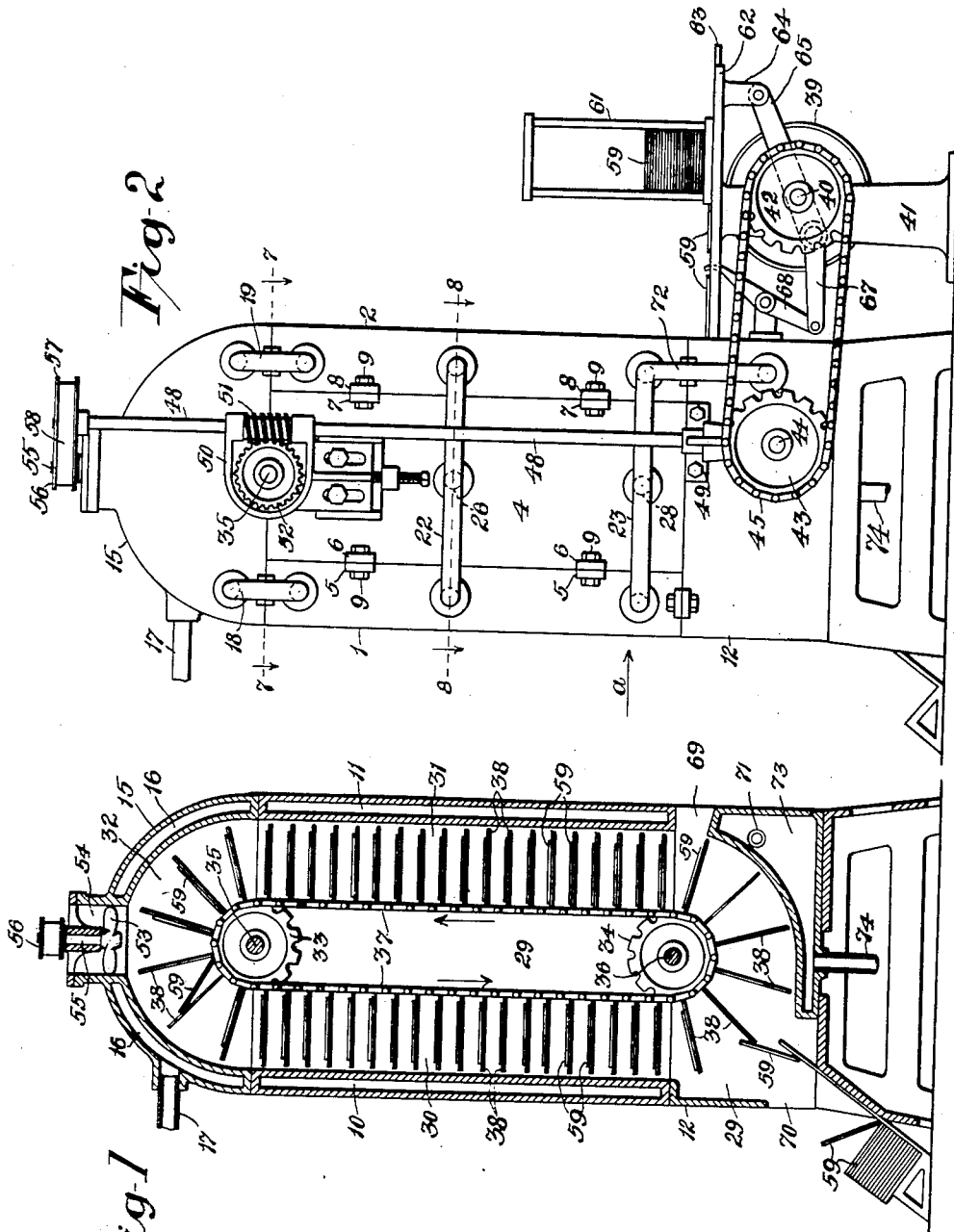


F. C. HIRSCH.
 DRIER FOR CAN COVERS.
 APPLICATION FILED OCT. 12, 1920.

1,396,431.

Patented Nov. 8, 1921.

3 SHEETS—SHEET 1.

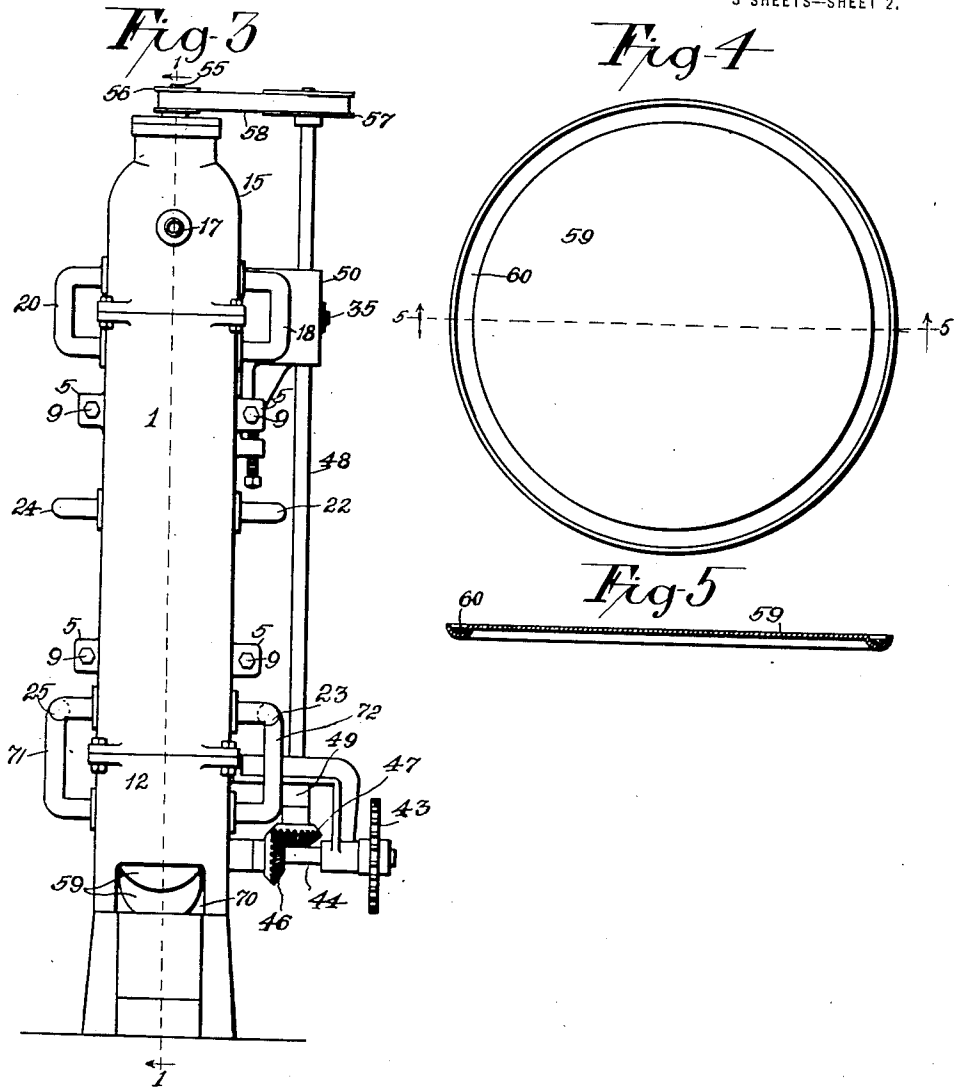


INVENTOR
Feodor C. Hirsch.
 BY *Geo D Phillips.*
 ATTORNEY

F. C. HIRSCH.
 DRIER FOR CAN COVERS.
 APPLICATION FILED OCT. 12, 1920.

1,396,431.

Patented Nov. 8, 1921.
 3 SHEETS—SHEET 2.



INVENTOR
Frederic C. Hirsch
 BY *Geo. D. Phillips*
 his ATTORNEY

F. C. HIRSCH,
 DRIER FOR CAN COVERS.
 APPLICATION FILED OCT. 12, 1920.

1,396,431.

Patented Nov. 8, 1921.
 3 SHEETS—SHEET 3.

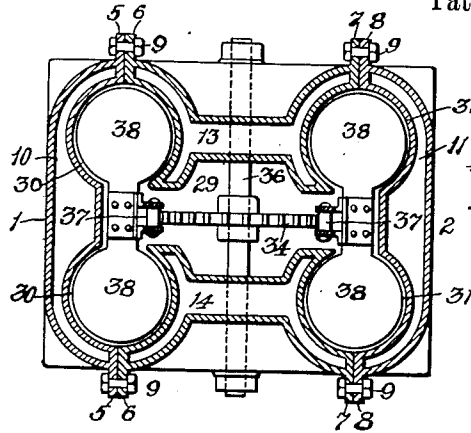


Fig 6

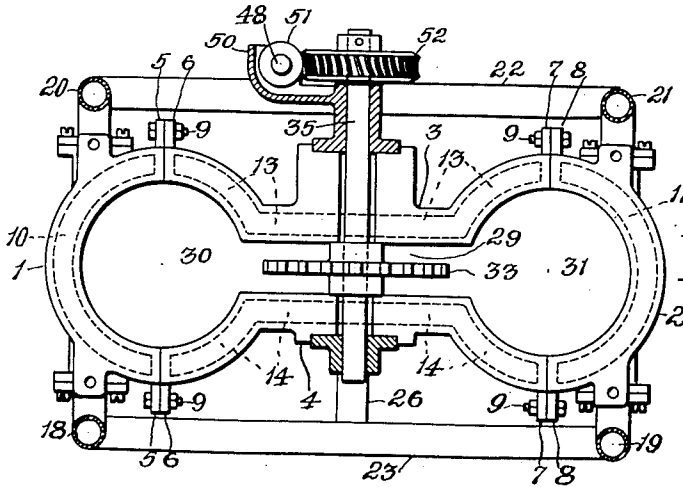


Fig 7

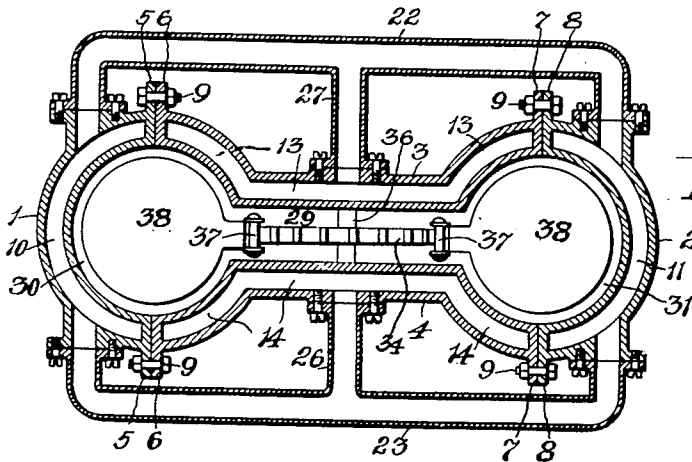


Fig 8

INVENTOR
Feodor C. Hirsch.
 BY *Geo. D. Phillips.*
 ATTORNEY.

UNITED STATES PATENT OFFICE.

FEODOR C. HIRSCH, OF BRIDGEPORT, CONNECTICUT.

DRIER FOR CAN-COVERS.

1,396,431.

Specification of Letters Patent.

Patented Nov. 8, 1921.

Application filed October 12, 1920. Serial No. 416,540.

To all whom it may concern:

Be it known that I, FEODOR C. HIRSCH, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Driers for Can-Covers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to can cover driers adapted to dry the liquid cement located in the margin of the covers preparatory to sealing the covers to cans.

Referring to the accompanying drawings—

Figure 1 represents a central sectional view of the drier on line 1—1 of Fig. 3, and broken view of the steam inlet pipe:

Fig 2 is a full view of the drier and broken view of the steam inlet pipe:

Fig. 3 is a reduced view of the drier looking in the direction of arrow *a*, Fig. 2:

Fig. 4 is a detail plan view of a can cover:

Fig. 5 is a central sectional view of the can cover on lines 5—5 of Fig. 4:

Fig. 6 is an enlarged cross sectional view of a double section drier:

Fig. 7 is an enlarged view of the drier on line 7 of Fig. 2 with the cap removed, also sectional view of the steam pipe connecting the cap with the steam compartments of the drier, and

Fig. 8 is an enlarged sectional view of the drier on line 8 of Fig. 2.

The body of the drier, Figs. 1, 2, 3, 7, and 8, is composed of the four sections 1, 2, 3, 4, having the flanges 5, 6, 7, 8, joined together by the bolts 9. The end sections 1, 2, are provided with the steam jackets or chambers 10, 11, Fig. 8, extending down to the base 12, Fig. 1.

The sections 3, 4, have the steam jackets or chambers 13, 14, of equal dimensions with the former chambers.

15 is a cap surmounting the body sections having the steam jacket 16 surrounding the same and with which the steam inlet pipe 17, Fig. 1, is adapted to communicate. The short vertical pipes 18, 19, 20, 21, Figs. 2, 3, and 7, admit steam from the cap jacket 16 to the end jackets 10; 11, and the lateral pipes 22, 23, 24, 25. Each of these lateral pipes is provided with central branches communicating with the side jackets 13, 14, three only, 26, 27, 28, of these branches being shown.

29 is a central chamber communicating with the vertical runways 30, 31, Figs. 7, 8, and also with the chamber 32, Fig. 1, of the cap 15. Sprocket wheels 33, 34, are mounted on the shafts 35, 36, and are connected by the endless sprocket chain 37 carrying the can cover carriers 38. 39, Fig. 2, is the driving pulley mounted on the shaft 40 journaled in the standard 41, and 42 is a sprocket wheel also mounted on this shaft to drive the sprocket wheel on shaft 44 through the medium of the sprocket chain 45. The bevel gear 46 on the shaft 44, Fig. 3, meshes with the bevel gear 47 at the lower end of the vertical shaft 48. This shaft is journaled in the brackets 49, 50, and imparts rotary movement to the shaft 35 through the medium of the worm 51 and worm gear 52, Figs. 2 and 7. 53, Fig. 1, is a rotary fan located in the passage 54 at the upper end of the cap 15. The fan shaft 55 carries the pulley 56 driven from the pulley 57 on the vertical shaft 48, Figs. 2 and 3, and the belt 58.

The covers 59 are provided with marginal grooves 60 and are placed in the magazine 61, Fig. 2, mounted on the platform 62. The bottom cover in the magazine is ejected therefrom by means of the pusher 63 carrying the bracket 64 actuated by the lever 65 mounted on the shaft 40. 67 is a lever pivoted to the lever 65 and also to the lever 68, which latter lever pushes a cover through the opening 69, Fig. 1, on to one of the traveling carriers 38, and is later discharged through the opening 70. After a cover leaves the magazine and before it enters the drier, a thin coating of liquid compound is applied to the marginal groove 60 of the cover by means of any suitable appliance, not shown.

The construction shown in Fig. 6 is adapted for four runways and double the number of carriers, and is simply a modified arrangement of the two runway devices shown in Figs. 7 and 8, and as all of the elements in both perform the same function, and in the same manner, the several elements in this modified arrangement will be indicated by the same figures of reference.

As previously mentioned, the steam enters through the pipe 17 and passes through all of the steam jackets in both the head and detachable sections and is carried from the lowest lateral pipes to the short vertical pipes 71, 72, Figs. 1, 3, into the chamber 73, and from thence is exhausted through the pipe 74. As the steam practically surrounds

the carriers at every stage of their travel, the covers are subjected to a uniform heat while remaining thereon. The rotation of the fan 53 will serve to create an upward
5 current and thus carry away the gases evaporating from sealing mixture carried by the covers.

Constructing the drier of detachable sections enables any section to be easily removed
10 to give ready access to the internal mechanism.

While I show a common method of feeding the covers from the magazine to the drier, it will be understood that any well
15 known mechanism that will serve the purpose could be used, or they could be manually fed into the drier.

While I make mention of steam as a heating agent it will be understood that other
20 well known means adapted to furnish the necessary heat can be used, by merely introducing heat from a suitable source into the pipe 74, in which case, the heat will enter the chamber 73 and pass from thence up
25 through the circulating pipes and escape from the pipe 17 at the top of the drier.

Having thus described my invention what I claim as new and novel is:—

1. A drier of the character described comprising detachable sections having steam
30 jackets encompassing each section, a demountable cap having a steam jacket and a steam inlet leading thereto, means whereby steam from the cap is circulated throughout the steam jackets of all the sections and
35 exhausted from said sections, and a series of traveling carriers within the drier.

2. A drier of the character described comprising end sections and side sections detachably connected together to form circular
40 runways, each section having a steam jacket, a demountable cap having a steam jacket and a steam inlet communicating therewith, a series of traveling carriers circulating through the runways, the drier
45 having an inlet and a discharge outlet for the objects to be dried, and means whereby steam from the steam jacket of the cap is circulated throughout all of the sections and
50 exhausted therefrom.

3. A drier of the character described, comprising detachable sections shaped to form
runways and a central chamber communicating therewith, said sections having steam
55 jackets embracing the runways and central chamber, carriers for the runways and means for communicating an endless movement thereto, a demountable cap having a steam jacket and a steam inlet leading thereto,
60 and means whereby steam from the cap is circulated through all of the sections.

4. A drier of the character described, comprising a plurality of detachable sections shaped to form runways the length of the
65 sections and a central chamber opening into

the runways, traveling carriers for the runways, said sections having steam compartments embracing the runways and central chamber, and a cap surmounting the sections
70 having a steam compartment communicating with the steam compartments of the sections.

5. A drier comprising a plurality of detachable longitudinal sections shaped to form internal runways the length of the
75 sections, and a central chamber opening into the runways and of equal length therewith, said sections having steam jackets embracing the runways and central chamber, a cap surmounting the sections having a central
80 chamber and a steam jacket surrounding said cap chamber and having communication with the steam jackets of the sections, said cap having a steam inlet to its steam jacket, and an outlet from its central chamber, a rotary fan in said outlet, a base for
85 the sections, having an inlet and an outlet pivotally supported carriers, and mechanism for conveying said carriers from the base through one runway into the central chamber of the cap and through the other runway
90 to the base.

6. A drier of the character described, comprising detachable sections having steam jackets, a cap surmounting the sections and having a peripheral steam jacket and a steam
95 inlet leading thereto, and means connecting the steam jacket of the cap with the steam jackets of the sections.

7. A drier of the character described, comprising detachable sections having heating
100 medium receiving chambers at their periphery and a central chamber with runways leading therefrom for the reception of objects to be heated, means for actuating said objects through the runways, and a
105 cap surmounting the sections having a peripheral heat receiving chamber communicating with the heating medium receiving chambers of the sections, said drier having inlet and outlet ports for the heating medium.
110

8. In a drier, a jacketed body, a jacketed cap surmounting the body, an endless carrier extending at its upper part into the
115 cap, said body having oppositely arranged inlet and outlet for the objects to be dried disposed adjacent the lower part of the carrier, and means to introduce heated fluid into the jacketed body and cap.

9. In a drier, a jacketed body, a jacketed
120 cap surmounting the body, an endless carrier extending at its upper part into the cap, said body having oppositely arranged inlet and outlet for the objects to be dried disposed adjacent the lower part of the carrier, a chamber below the lower part of the
125 carrier, and extending between the inlet and outlet, and means to supply heated fluid to the chamber and the jacketed body and cap.

10. In a drier, a jacketed body, a jacketed
130

cap surmounting the body, an endless carrier having its upper part operating in the cap, and means to introduce heated fluid into the jacketed body and jacketed cap.

5 11. In a drier, a body having lengthwise spaced runways and a central chamber connecting and communicating at its ends there-

with, an endless carrier having its flights movable in the respective runways, means to heat the body, and means to actuate the 10 carrier.

In testimony whereof I affix my signature.

FEODOR C. HIRSCH.