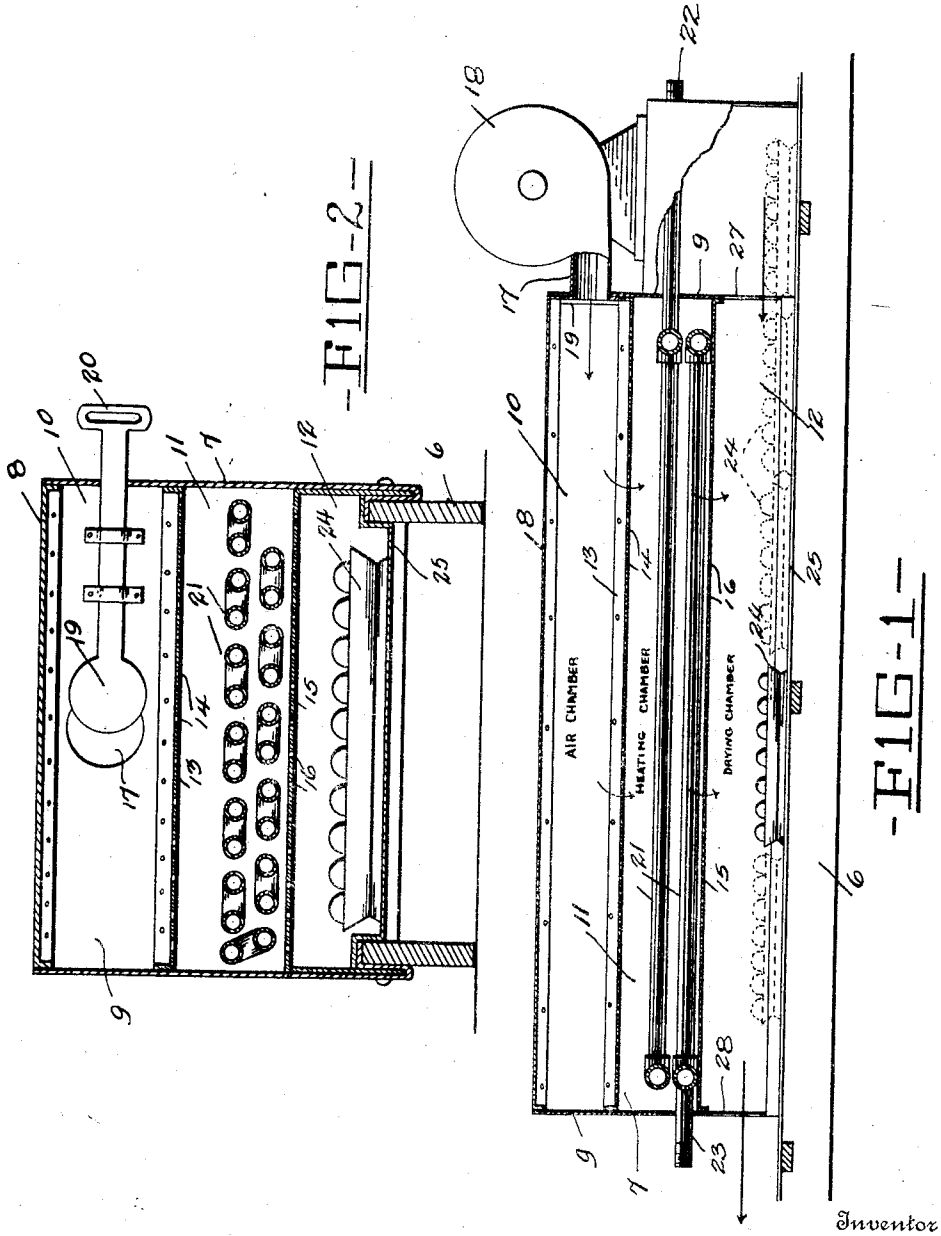
Jan. 5, 1926. 1,568,436

E. E. ANDERSON

DRIER

Filed April 10, 1925



-FIG-2-

-FIG-1-

Inventor

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Patented Jan. 5, 1926. 1,568,436

UNITED STATES PATENT OFFICE.

ELMER E. ANDERSON, OF LA GRANDE, OREGON.

DRIER.

Application filed April 10, 1925. Serial No. 22,098.

To all whom it may concern:

Be it known that I, ELMER E. ANDERSON, a citizen of the United States, residing at La Grande, in the county of Union and State of Oregon, have invented certain new and useful Improvements in Driers, of which the following is a specification.

This invention relates to driers of that type in which a blast of air is forced thru the heating chamber in which the air is heated and is then distributed over the articles to be dried in an adjacent chamber thru which the articles move or are carried on trays.

Altho it is capable of many other uses, the device is particularly adapted and intended as a drier for eggs which have been "processed". This is usually performed by submerging the eggs in hot oil to form a coating, and after they are so treated, the eggs are placed in a tray and sent thru the drier, wherein the oil is dried and the surplus oil removed.

The construction of the drier will be more fully evident from the following description and the accompanying drawings, in which Fig. 1 is a vertical longitudinal section of the same. Fig. 2 is a vertical cross-section.

The base of the machine consists of a pair of longitudinal side boards 6 forming a runway or track, and on which is erected a casing, conveniently made of galvanized iron or other sheet metal, the casing having two sides 7, a cover or top 8 and ends 9, one of which will be designated the inlet end and the other the outlet end.

The casing is divided longitudinally by sheet metal horizontal partitions into three chambers, a top air chamber 10, a middle heating chamber 11, and a lower conveying or drying chamber 12. The partition between the air chamber 10 and the heating chamber 11 consists of a sheet metal plate 13 provided with many perforations over practically its entire surface. These perporations may conveniently be holes about $\frac{1}{16}''$ in diameter and numbering say 100 to the square foot. A similar perforated partition 15, with holes 16, extends between the heating chamber and the drying chamber.

At its inlet end, the air chamber 10 receives the blast thru a connection 17 from an air fan 18 which may be driven by any suitable motor, and a damper 19 is located in the connection, operated by handle 20 to vary the supply of air.

In the heating chamber 11 is located a set of steam pipes 21 extending lengthwise thereof from end to end with an inlet at 22 and an outlet at 23. Any other kind of heating means may be substituted.

The trays on which the eggs or other articles are conveyed, are indicated at 24, and they slide on a bottom pan or plate 25, the flanged edges of which are hooked over the top of the side boards 6. The trays slide into the casing thru an opening at 27 at the inlet end, and out thru an opening at 28 at the outlet end, the bottom plate 25 being continued beyond the ends of the casing as far as may be necessary to permit insertion and removal of the trays. The drier may be set on an inclination downwardly from the inlet end to assist the sliding movement of the trays on the floor of the drying chamber, the trays being pushed in at the inlet end in a line and pushed out at the outlet end as the operation proceeds. The inlet end may be connected to the egg dipping machine, not shown, when the drier is used for the purpose referred to.

In the use of the drier, the air blast creates a pressure in the air chamber 10 and the air flows downwardly thru the perforations 14, being distributed over the heating pipes in the heating chamber, from which it is forced downwardly thru the perforations 16 in the partition 15 and distributed over the eggs or other articles in the drying chamber below. This dries the surface coating on the eggs or article and accomplishes the purpose of the apparatus. The operation may be continuous, the trays being fed in at one end and delivered at the other end as the operation proceeds. The construction provides a very even distribution of the heated air in the drying chamber, and the degree of heat is uniform, and may be regulated to suit the work being done. The apparatus is capable of comparatively cheap construction and has a large capacity because of the large number of articles which are treated at the same time and the possibility for continuous operation.

I claim:

1. A drier comprising a casing closed at the top and having upper and lower horizontal perforated partitions forming in the casing an upper air chamber, an intermedi-

ate heating chamber, and a lower drying chamber, the air chamber having means to supply air thereto under pressure, the heating chamber having a heat radiator therein, and the drying chamber having an inlet at one end and an outlet at the other end, and means permitting the travel of article carriers thru the same.

2. A drier comprising a pair of side boards, a floor supported thereon and adapted to permit the travel of article carriers along the same, a casing mounted on the side boards, upper and lower perforated partitions in the casing forming an upper air chamber, an intermediate heating chamber, and a lower drying chamber between the lower partition and the floor, means to supply an air blast into the air chamber, and means in the heating chamber to heat the air therein.

In testimony whereof, I affix my signature.

ELMER E. ANDERSON.