My present invention relates to alimentary paste driers, and more particularly to an improved drier of the rotary type in which the alimentary paste products such as noodles may be continuously agitated during the drying process.

Formerly driers for these products have been of a more or less stationary type in which the alimentary paste is spread out on screens. In this type of driers much time is consumed in placing the material to be dried upon the screens as well as in removing same after it is dried. Driers of this type are more adaptable to the handling of macaroni, spaghetti or the like than such products as the various kinds of fancy cut noodles which are of short lengths and must be spread out evenly in order to dry properly.

With the above objections in mind, I have developed a new drier in which the noodles or other similar products may be fed into the drier at the top and gradually lowered to an outlet at the bottom of the drier by means of gravity, and in which the product is continually turned over and over during its passage through the drier. The principal object of my invention therefore is an improved drier of the rotary type;

Another object is an improved drier in which the drying material will be continuously agitated during its progress through the drier.

In the accompanying drawing which is of a more or less diagrammatic form,

Fig. 1 is a central vertical section showing the several rotatable chambers in elevation;

Fig. 2 is a cross section taken on the line 2, 2 of Fig. 1.

Referring to the drawing, 10 designates a frame in which are journalled several drive shafts 11, 12 and 13, and adapted to support and rotate several hexagonal drying chambers 14, 15 and 16 respectively, by means of chain driven sprockets 17 connected together by chains 18 and 19.

Power to rotate these chambers is transmitted to the drier through the medium of the belt 20, which may be driven from any suitable means such as electric motor or the like.

At 21 is located an air passage totally enclosing the chambers 14, 15 and 16 on all sides except at top and bottom. Air is forced through this passage to speed up the drying of the material within the chambers during its passage through the drier.

Chambers 14, 15 and 16 are built with hexagonal sides comprising a frame work supported internally by members 23 located at each end and at the center. On the inside of these chambers is provided a screen having a relatively coarse mesh but close enough to prevent the noodles or other products from falling through. One end of each chamber is smaller than the other so that the sides will have a downward pitch sufficient to cause the drying material inside the chamber to rotate in a downward direction as the chambers are rotated. At the large end of each chamber, I have provided openings 26 to allow the drying material within the chambers to pass from the chamber through passages 28 in the frame 10, to the next succeeding chamber, the small end of each chamber is open for this purpose.

In operation, the material to be dried is fed into the hopper 30 from which it passes through the end chamber 14 adjacent said hopper and is slowly rolled along through this chamber until it reaches the opening 26 in the opposite end from which it drops through the recess 28 in side frame 10 and so on until it finally emerges at the outlet 32.

During the time the drying material is passing through the chambers, a continuous draft of air is passing through the drier and by the time the product in the chambers has reached the outlet 32, it is thoroughly dried.

Having thus described my invention, what I claim as new, is:

In a rotary drier for alimentary paste products and the like comprising in combination, two journalled side frames, a series of oppositely opposed and vertically disposed rotary drums having hexagonally shaped sides wider at one end than at the other end and attached to horizontally disposed drive shafts, said drive shafts journalled in said side frames and progressively driven by means of chain and sprocket mechanism, the said side frames being recessed at points adjacent the large end of said drums, said recesses extending down to a point adjacent and above the shaft extending through the small end of one of the said drums located below the said first drum, the large end of the
said first drum extending in a longitudinal direction beyond the small end of the said second drum, the large end of the said first drum being provided with openings in its hexagonal sides adjacent said side frame and enclosed within side frame at all points except at the point connecting with the lower recess extension communicating with the said lower drum, an inlet chamber located in the top of one of the said side frames communicating with the small end of the topmost drum, an outlet in the other side frame directly below and communicating with the openings in the hexagonal sides of the large end of the lowermost drum located within a recess provided in the said side frame, a normally air tight casing separating and supporting said side frame surrounding all of said drums except at such portions as are covered by said side frames and further provided with inlet and outlet openings located on the bottom and top respectively of said air tight casing, substantially as shown and described.

In witness whereof, I hereby subscribe my name this 10th day of January, 1928.

Michele Cantella.