

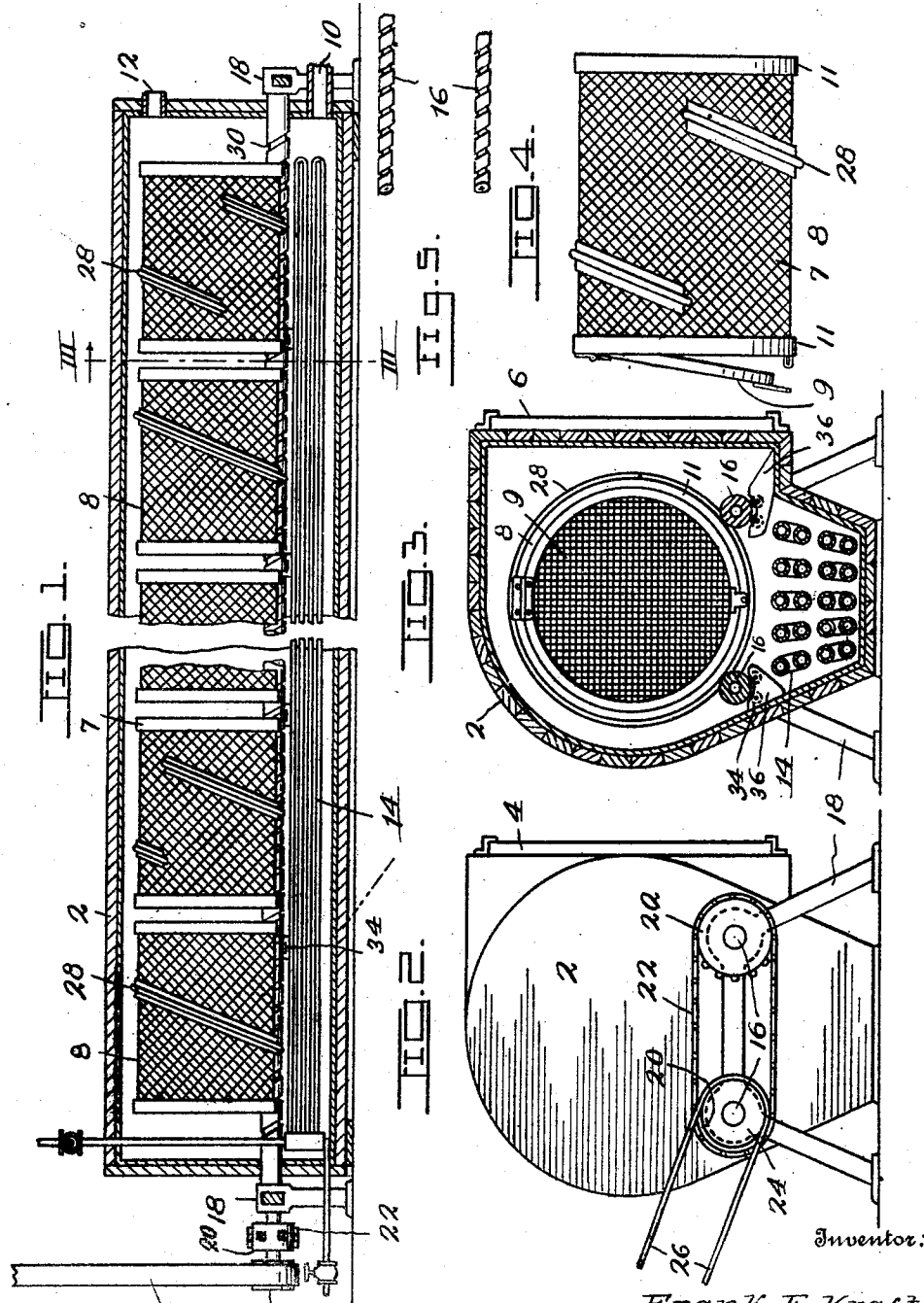
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DRY ROOM TUMBLER

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Witness:  
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## UNITED STATES PATENT OFFICE.

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## DRY-ROOM TUMBLER.

Application filed October 2, 1922. Serial No. 591,869.

My invention relates to dry room tumblers for use in laundries and the present invention is an improvement over the apparatus disclosed in my pending application filed in the United States Patent Office February 28, 1921, Serial No. 448,288.

An important feature of the present invention resides in the driving mechanism whereby the receptacles containing the articles to be dried are rotated at a relatively rapid speed and advanced through the drying chamber at a relatively low and predetermined speed. By rotating the receptacles at a relatively high speed each article is thoroughly agitated and exposed to the hot air circulating through the drying chamber and by advancing said receptacles at a relatively low and predetermined speed the articles have sufficient time to dry in their passage through the drying chamber and the time required for such passage can be readily determined.

Other features will hereinafter appear, and in order that the invention may be fully understood, reference will now be had to the accompanying drawings in which:

Fig. 1 is a longitudinal section of the apparatus.

Fig. 2 is a front elevation.

Fig. 3 is an enlarged cross section on line III—III of Fig. 1.

Fig. 4 is a detail side elevation of one of the receptacles.

Fig. 5 is a fragmentary plan view of a portion of the driving mechanism.

2 designates the drying chamber having doors 4 and 6 at its ends through which the receptacles 8 may be placed and removed. Each receptacle consists, preferably, of wire 7 so that air may circulate freely there-through, and each receptacle has a lid 9 at one end and bands 11, to which latter the wire 7 is secured. Air is admitted to the drying chamber 2 through an inlet 10 and exhausted through an outlet 12. The drying chamber 2 has a steam or other heating coil 14 for heating the air within said drying chamber 2. The foregoing parts are similar to those set forth in my application above referred to, the important feature of the present invention residing in the driving mechanism which will now be described in detail.

16 designates two worms or threaded elements extending longitudinally through the

drying chamber 2 and journaled in bearings 18. The worms 16 are driven in unison by suitable gearing. In the present instance I have shown a sprocket wheel 20 fixed to each worm and connected by a sprocket chain 22. One of the worms 16 is also provided with a fixedly-mounted pulley 24 which may be driven from any suitable source of power (not shown) through the intermediacy of a belt 26.

Each receptacle 8 is provided with a thread or spiral member 28 for engaging the threads 30 on the worms 16. Preferably, the threads 30 are countersunk as shown, so that the worms 16 may present relatively broad surfaces to the bands 11 and thereby exert sufficient traction on the receptacles 8 to rotate the same while they are advanced through the drying chamber 2 by the coengaging threads 28 and 30.

The coengaging threads 28 and 30 may be of any desired pitch but the arrangement is preferably such that the receptacles 8 will be advanced through the drying chamber at a sufficiently slow speed as to give the articles sufficient time to dry, while at the same time said receptacles 8 are rotated at a sufficiently high speed to agitate and expose the articles therein to the hot air circulating through the drying chamber 2. By driving the worms 16 at a predetermined speed the time required for the passage of the containers through the drying chamber 2 can be readily determined.

The worms 16 are prevented from spreading apart or sagging beneath the weight of the receptacles 8 by suitable supporting means. In the present instance I have shown such supporting means in the form of anti-friction rollers 34 mounted in brackets 36 secured to the interior of the drying chamber 2.

While I have shown and described one form of my invention I reserve the right to all forms falling within the spirit and scope of the appended claims.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:

1. In an apparatus of the character described, a receptacle for holding articles to be dried, a drying chamber having openings through which said receptacle may be placed and removed, rotary members extending longitudinally through the drying chamber to support and rotate the recep-

tacle, and coengaging means on the receptacle and said rotary members whereby the latter advance the former through the drying chamber.

2. In an apparatus of the character described, a receptacle for holding articles to be dried, a drying chamber having openings through which said receptacle may be placed and removed, two parallel rotary members extending longitudinally through the drying chamber to support and rotate the receptacle, and coengaging means on the receptacle and said rotary members whereby the latter advance the former through the drying chamber.

3. In an apparatus of the character described, a receptacle for holding articles to be dried, a drying chamber having openings through which said receptacle may be placed and removed, two parallel rotary members extending longitudinally through the drying chamber to support and rotate the receptacle, gearing for driving said rotary members in unison, and coengaging means on the receptacle and said rotary members whereby the latter advance the former through the drying chamber.

4. In an apparatus of the character described, a receptacle for holding articles to be dried, a drying chamber having openings through which said receptacle may be placed and removed, worms extending longitudinally through the drying chamber to support and rotate the receptacle, and means on the receptacle for engaging said worms and advancing the receptacle.

5. In an apparatus of the character described, a receptacle for holding articles to be dried, a thread on said receptacle, and a rotary worm for rotating said receptacle and engaging the thread to advance the receptacle longitudinally of said worm.

6. In an apparatus of the character described, a receptacle for holding articles to be dried, a thread on said receptacle, a pair of rotary worms for rotating said receptacle and engaging the thread to advance the receptacle, and supporting means for the intermediate portions of said worms.

7. In an apparatus of the character described, a receptacle for holding articles to be dried, rotary members to support and rotate the receptacle, and engaging means on the receptacle and said rotary members,

whereby the latter advance the former lengthwise of said rotary members.

8. In an apparatus of the character described, a receptacle having perforate walls for holding articles to be dried, and a thread provided upon said receptacle for co-operation with a rotary worm for rotating the receptacle.

9. In an apparatus of the character described, a receptacle for holding articles to be dried, rotary members to support and rotate the receptacle, engaging means on the receptacle and said rotary members, whereby the latter advance the former lengthwise of said rotary members, said parts being so constructed and arranged that said receptacle will have comparatively fast rotary movement and comparatively slow longitudinal movement, and means for subjecting the contents of said receptacle to drying action during such movement.

10. In an apparatus of the character described, a receptacle for holding articles to be dried, rotary members to support and rotate the receptacle, engaging means on the receptacle and said rotary members, whereby the latter advance the former lengthwise of said rotary members, said parts being so constructed and arranged that said receptacle will be rotated a substantial degree while being advanced a distance corresponding to the length thereof, and means for subjecting the contents of said container to drying action during such movement thereof.

11. In an apparatus of the character described, a receptacle for holding articles to be dried, said receptacle being provided with threaded and plain portions, and a rotary worm having grooved and plain portions for engagement with the threaded and plain portions of the receptacle, whereby the receptacle is rotated and advanced longitudinally of said worm.

12. In an apparatus of the character described, a receptacle for holding articles to be dried, rotary operating means, co-operating means provided upon said receptacle and operating means for rotating said receptacle and for advancing the same lengthwise along said operating means.

In testimony whereof I affix my signature.

FRANK E. KRAFT.