

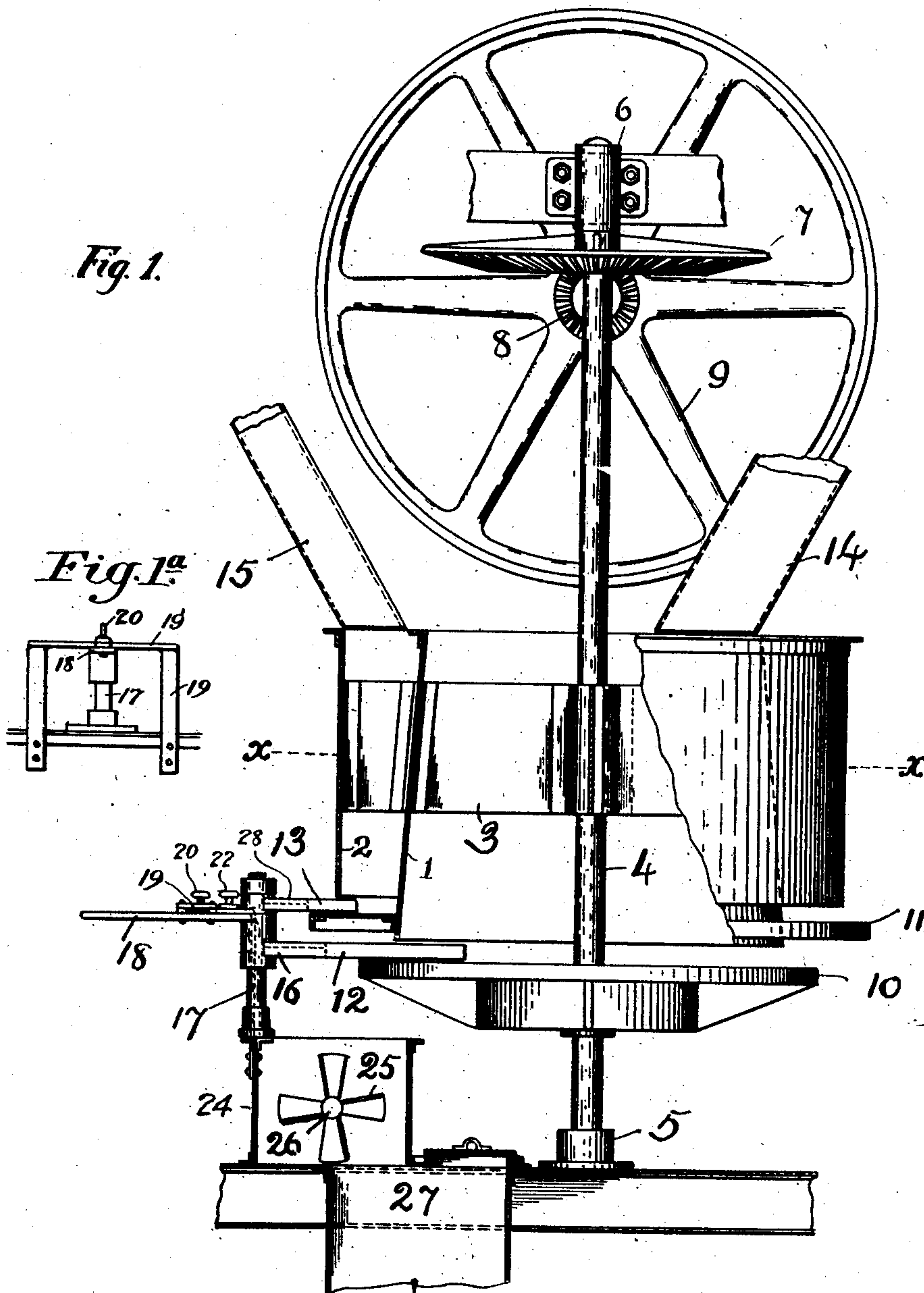
No. 830,542.

PATENTED SEPT. 11, 1906.

E. N. TRUMP.
FEEDING DEVICE.

APPLICATION FILED MAR. 17, 1903.

2 SHEETS—SHEET 1.



WITNESSES:
Mae Hoffmann
Alice J. Burrough

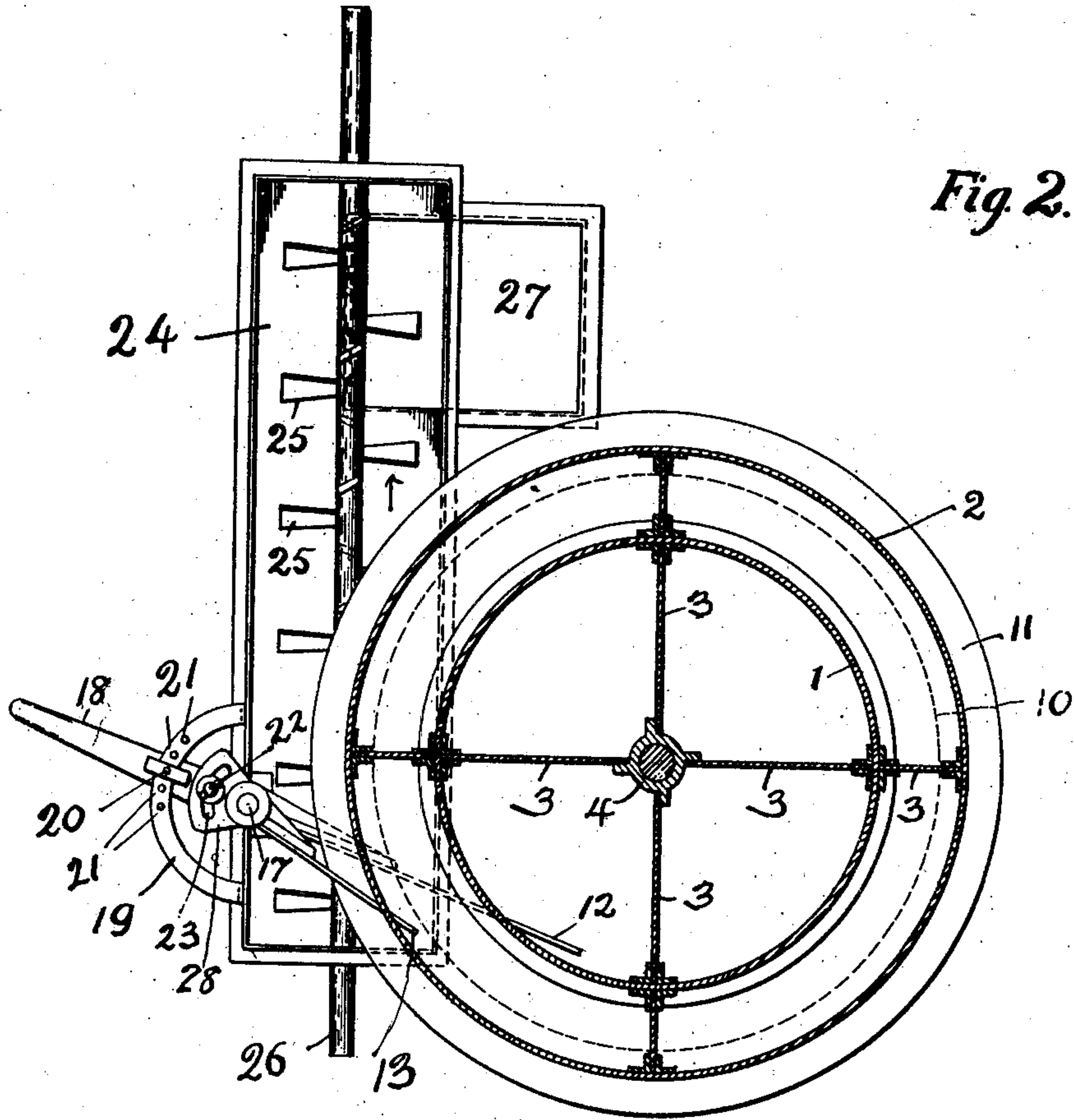
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EDWARD N. TRUMP, OF SYRACUSE, NEW YORK.

FEEDING DEVICE.

No. 830,542.

Specification of Letters Patent.

Patented Sept. 11, 1906.

Application filed March 17, 1903. Serial No. 148,165.

To all whom it may concern:

Be it known that I, EDWARD N. TRUMP, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented a new and useful Feeding Device, of which the following is a specification.

My invention relates to improvements in means for the feeding and mixing of two or more materials in certain required relative rates or proportions.

My object is to provide improved means for feeding two or more materials to a common point or into a common receiver in such relative proportions as may be desired.

My invention may also include, in combination with the above-mentioned means, means for thoroughly mixing the material so fed and also for conveying it to a desired point.

My invention comprises a plurality of rotatable receptacles, each receptacle having a vertically-extending cylinder or envelop and a platform or table spaced below the lower extension of said envelop, said platform or table having a diameter exceeding that of the cylinder or envelop sufficient to support the material at natural slope. Into the space between the envelop and platform of each receptacle projects an adjustable deflector, which is adapted to encounter the material rotated thereby. By the proper proportioning and adjusting of these respective deflectors and also by the proper regulation of the speed of rotation of the receptacles the desired feed from each receptacle, respectively, to any desired point may be secured. In combination with these means I may provide a receiver for the material thus fed and a series of inclined knives or agitators rotating therein to stir, commingle, and push forward in one direction the material fed until the same reaches a desired point—for instance, the aperture of a container.

I accomplish my object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of my device with parts broken away to show the interior construction. Fig. 1^a is a partial elevation of the means for adjusting the deflectors. Fig. 2 is a horizontal cross-section on the line *x x* of Fig. 1.

Similar numerals refer to similar parts throughout the several views.

In the device illustrated in the drawings I provide means for feeding two materials.

The two receptacles and the means for supporting and rotating the same are clearly shown in Fig. 1 of the drawings. One receptacle is formed by cylinder or envelop 1 and the table or platform 10, spaced below the lower edge thereof, while the other receptacle is formed of cylinder or envelop 2, surrounding the cylinder 1, and of the table or platform 11, spaced below the lower edge thereof. These cylinders or envelops may be provided with vertical walls, as indicated in cylinder 2, or with inclined walls, as indicated in cylinder 1, depending upon the character of the material to be contained therein and fed therefrom. The envelop 1 is secured to the shaft 4 by the radial arms 3, and the envelop 2 is supported by extensions of said arms 3 from the envelop 1.

The table or platform 10 is secured rigidly and directly to the shaft 4, while the table or platform 11 surrounds and is secured to the lower extension of envelop 1. It will thus be obvious that the two concentric envelops and two tables or platforms will all rotate about a common axis with the shaft 4. This shaft 4 is suitably stepped at 5 and supported at its upper extension in the sleeve 6 and is rotated by the beveled gears 7 and 8, driven by the wheel 9 from any suitable source of power. The chute 14 is stationary and delivers into the top of envelop 1, while chute 15 similarly delivers into envelop 2. As the chutes deliver material to the receptacles while the same are rotating, it follows that the supply to said receptacles is evenly distributed in the same.

Over the tables 10 and 11 in the space beneath the lower extensions of the envelops 1 and 2 project the knives or deflectors 12 and 13. These deflectors are suitably mounted upon the post 17 and are rotatable thereon for purposes of adjustment with respect to the angle between said deflector and the radius of the receptacle or the distance between the end of said deflector and the axis of said receptacle. Upon these conditions will depend the amount of material encountered and deflected or diverted by said deflectors with each rotation of the receptacles. The means for maintaining the deflectors in the required positions of adjustment are as follows:

Deflector 12 is secured to sleeve 16, which

has a rotatable movement on the post 17. The arm 18 is also secured to the sleeve 16 and is adapted to sweep the arc member 19 and to be secured thereto in any desired position by means of the engagement of pin 20 through the aperture of arm 18 and any of the apertures 21 of member 19. The post 17 and the member 19 are secured to any suitable stationary support. The desired adjustment of deflector 13, which is carried by member 28, connected with a sleeve on said post 17, is secured by the engagement of the clamp-screw 22, projecting from arm 18 and operating in slot 23 of member 28. It will thus be seen that the arm 18 of deflector 12 is adjustably secured to the stationary arc 19, while member 28 of deflector 13 is adjustably secured to said arm 18 by the clamp-screw 22, projecting from said arm 18 into slot 23.

The receiver 24 I have shown in the form of a trough or a long narrow box, one end of which is open beneath the receptacles at approximately the point where the materials are deflected therefrom. This receiver 24 is provided with a shaft 26, having a series of blades 25, which are all inclined in the same direction, so that when the shaft is rotated the blades serve not only to agitate the material and keep it stirred as the same falls in the receiver 24, but also to cause the material to move along in the direction of the arrow shown in Fig. 2 toward the aperture of a container or chute 27.

The operation of my device is as follows: The receptacles which are formed by envelop 1 and table 10 and envelop 2, which surrounds the envelop 1, and by table 11 are started to rotate at any desired speed. The different materials are then sent from suitable sources of supply through the stationary chutes 14 and 15 into the tops of envelopes 1 and 2. The deflectors 12 and 13 are suitably adjusted to encounter and sweep or divert from the tables 10 and 11 the under portion of the mass of material contained and rotated by each receptacle. By the respective adjustment of each deflector the exact amount required of each material, respectively, will thus be delivered to the receiver 24, resulting in the mixing of said materials in the exact proportions required. It is obvious that any num-

ber of receptacles can thus be operated together, and consequently any number of materials mixed in the exact desired relative proportions by what may be termed a "continuing process." The capacity of the receptacles are such with respect to the proportions and positions of the deflectors, respectively, as to enable said receptacles to contain such preponderating masses of material over the amount deflected at each rotation thereof as to permit of considerable variation in the supply of material to the receptacles without affecting the accuracy of the feed.

It is obvious from the arrangement shown in the drawings that material may be delivered through the chutes 14 and 15 from time to time as the supply becomes low in either of said receptacles.

What I claim is—

1. In a feeding device for a plurality of materials, the combination of a plurality of receptacles having a common axis of rotation, each receptacle comprising a cylinder and a table spaced below the lower edge of the cylinder, said table having a diameter exceeding that of the cylinder sufficient to support the material at natural slope, and means for deflecting material from beneath each cylinder.

2. In a feeding device, the combination of a plurality of rotatable receptacles for material, each receptacle comprising a cylinder and a table spaced beneath its lower edge, said cylinders being arranged concentrically and each table having a diameter exceeding that of its respective cylinder sufficient to support the material at natural slope, and means for deflecting material from beneath the lower extension of each cylinder.

3. In a feeding device for a plurality of materials, the combination of a rotatable shaft, a plurality of rotatable receptacles, supported by said shaft, each receptacle comprising a cylinder and a table spaced below the lower edge of the cylinder, said table having a diameter exceeding that of the cylinder sufficient to support the material at natural slope, and means for deflecting material from beneath each cylinder.

EDWARD N. TRUMP.

Witnesses:

H. C. EHLE,
ED. F. HUGHES.