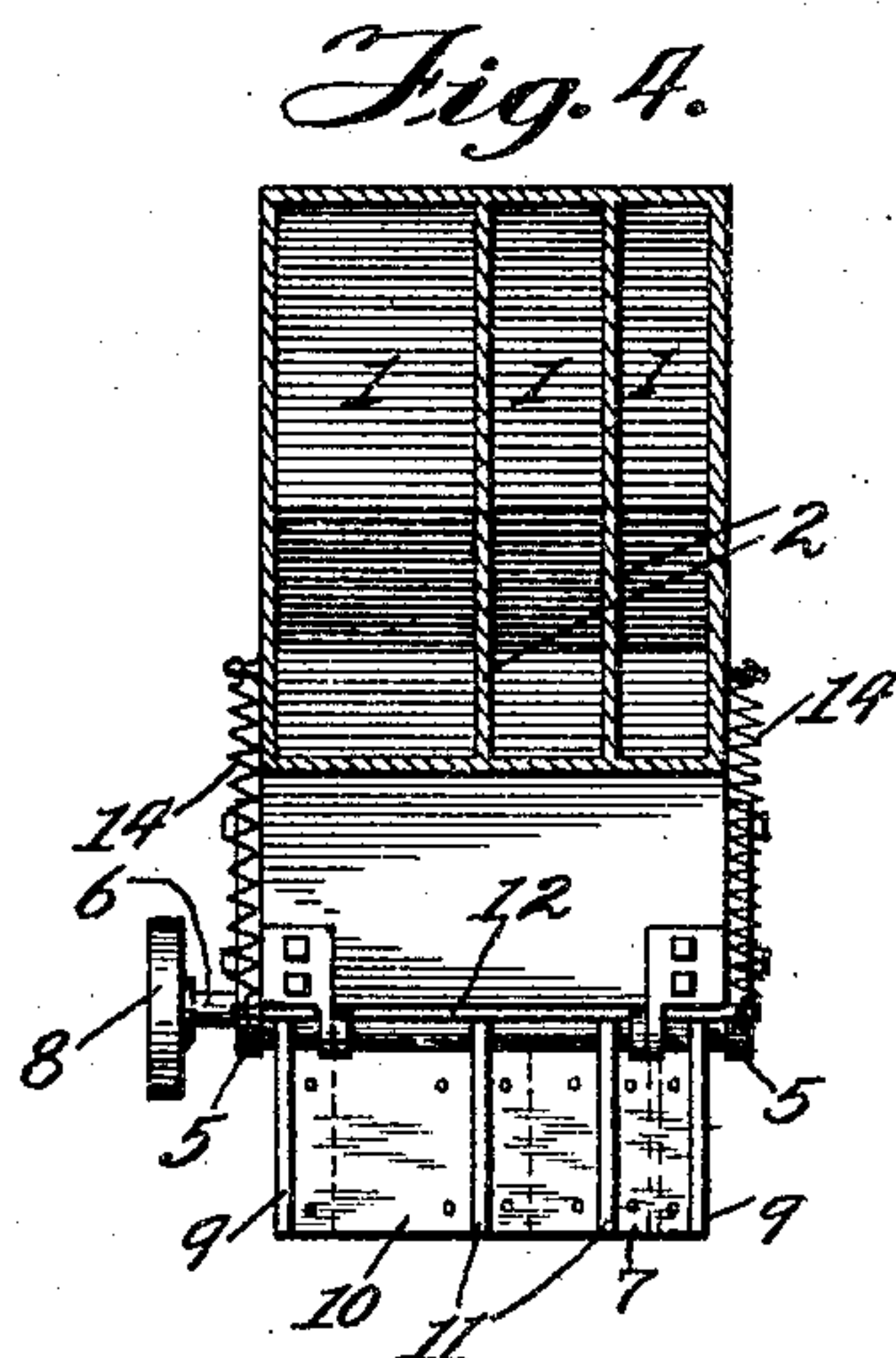
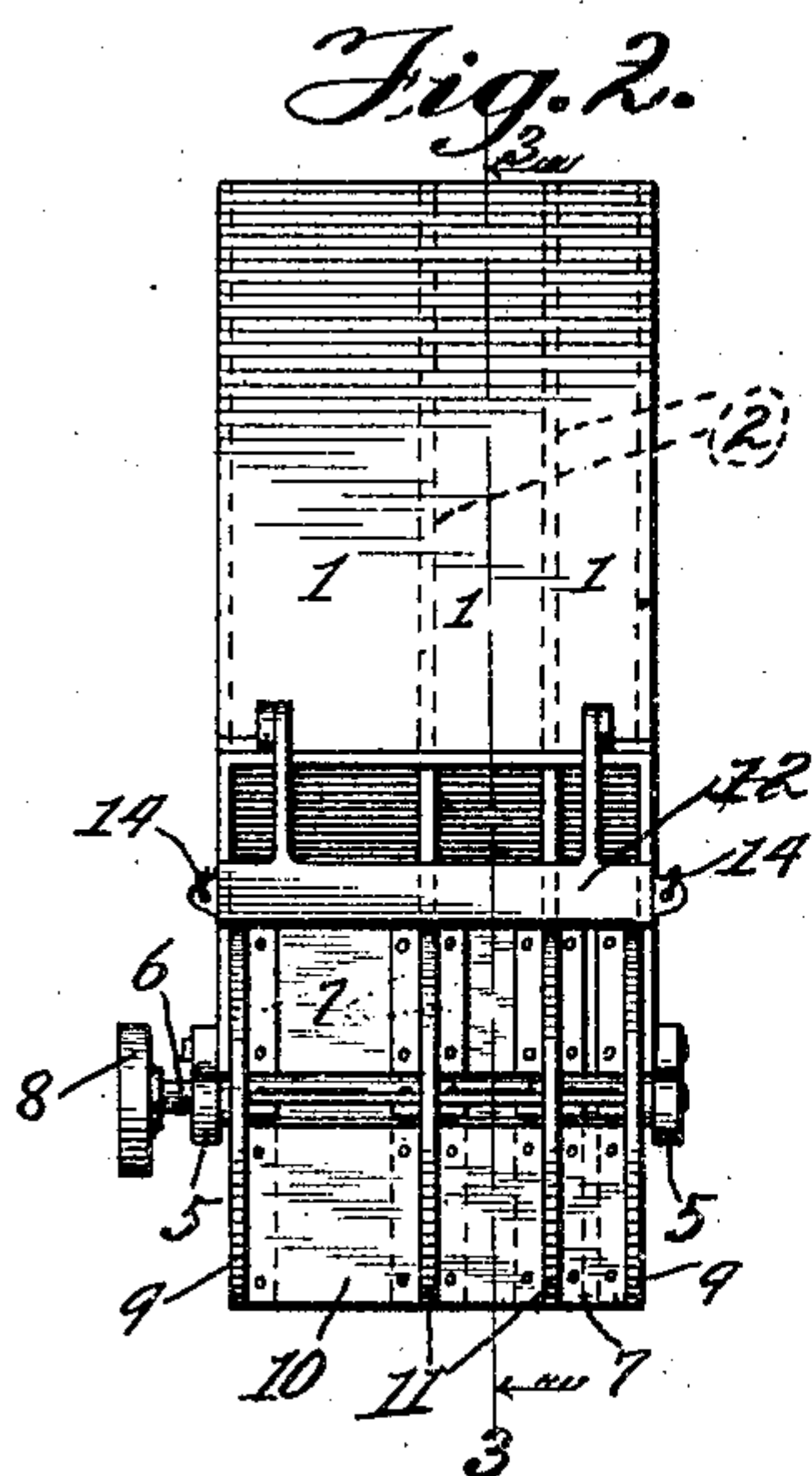
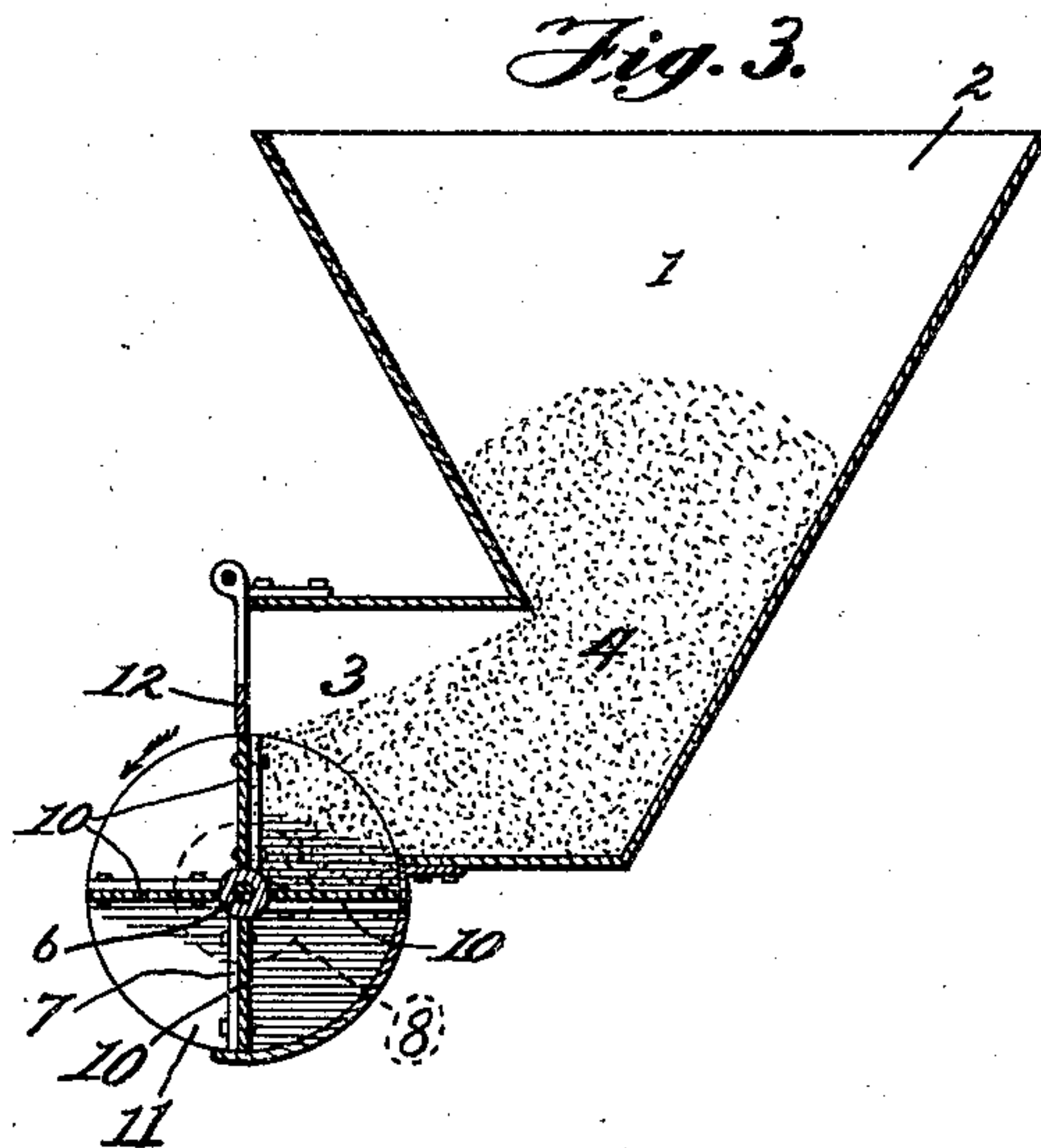
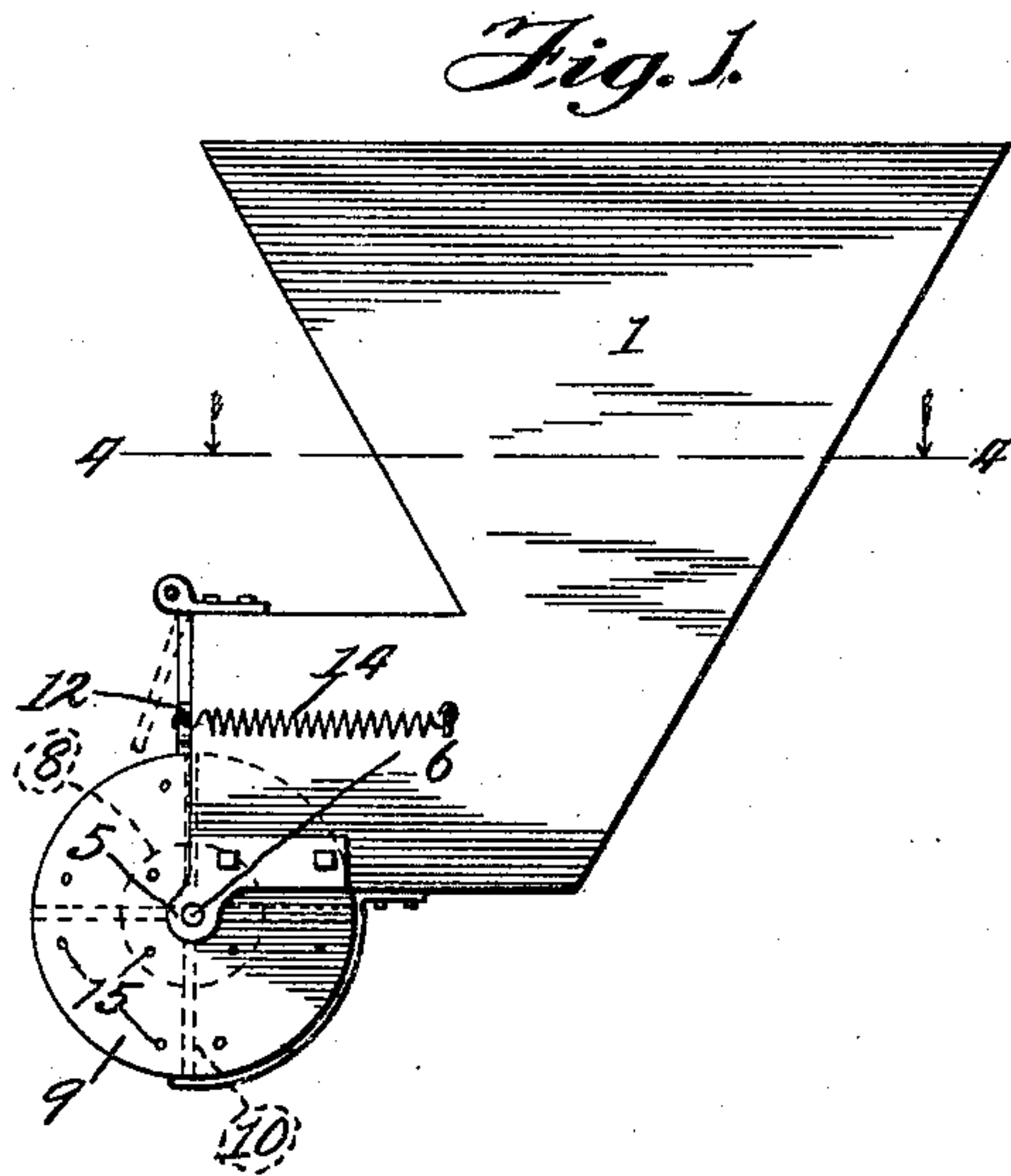


No. 783,186.

PATENTED FEB. 21, 1905.

H. ERICSSON.
AUTOMATIC PROPORTIONING MACHINE.
APPLICATION FILED AUG. 20, 1904.



Witnesses:

Wm. D. Perry
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UNITED STATES PATENT OFFICE.

HENRY ERICSSON, OF CHICAGO, ILLINOIS.

AUTOMATIC PROPORTIONING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 783,186, dated February 21, 1905.

Application filed August 20, 1904. Serial No. 221,479.

To all whom it may concern:

Be it known that I, HENRY ERICSSON, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Automatic Proportioning-Machines, of which the following is a description.

My invention relates to means for simultaneously discharging the contents of a plurality of hoppers or receptacles in certain fixed proportions to each other, and is especially applicable to the measuring of the ingredients entering into a mixture or compound—as, for example, in the making of concrete my device will simultaneously discharge from their respective receptacles the sand, broken stone, and cement in the predetermined proportions and at any desired rate of discharge.

The object of my invention is to produce a device of the kind described which is simple and convenient in construction and operation and requiring a minimum of attendance; and to this end it consists in the novel construction, arrangement, and combination of parts herein shown and described, and more particularly pointed out in the claims.

In the accompanying drawings, wherein like or similar reference characters indicate like or corresponding parts, Figure 1 is a side elevation of my device. Fig. 2 is a front elevation of the same. Fig. 3 is a section taken substantially on line 3 3 of Fig. 2, and Fig. 4 is a section taken substantially on line 4 4 of Fig. 1.

In the preferred form of my device a plurality of independent receptacles 1 1 are provided to receive the materials to form the mixture. These receptacles may be formed by extending partitions 2 2 across a single large receptacle, as shown in the drawings, or they may be entirely separate and independent receptacles spaced from each other, as preferred. Preferably the bottom of each receptacle is hopped, as shown in Figs. 1 and 3, and an extension 3 or an equivalent device is provided to receive the material issuing from the opening 4, which is arranged in any preferred manner near the bottom of the receptacle. Substantially at the lower front corner of the extension 3 I provide suitable bearings 5 for

supporting a rotatable shaft 6, upon which is fixedly mounted the pocket-wheel 7 and a driver 8 of any preferred kind. In the preferred form the pocket-wheel 7 is formed of two disks 9 9, mounted upon the shaft 6 at opposite sides of the extension, and four plates 10 of sufficient width to extend radially from the shaft 6 to the periphery of the disks 9, as shown, and forming, with the disks and shaft, four pockets of substantially equal size.

Obviously, if desired, any number of pockets may be formed in the wheel 7 by increasing the number of plates 10; nor is it necessary that the pockets be all of the same size, although it is understood that for any apparatus where several pocket-wheels are employed to proportion a single mixture the wheels should all be similar, and if the disks are irregularly divided the wheels should be so arranged that corresponding parts of each wheel will operate at the same time; but the size and arrangement shown are preferred.

Obviously where the several receptacles are formed by extending partitions across a larger one, as shown in the drawings, it is desirable to introduce other disks or equivalent means between the two end disks to divide the face of the pocket-wheel into sections corresponding with the receptacles 1 1, formed by the partitions 2 2 in the main receptacle and extension 3.

The extension 3 is preferably so proportioned that the material entering through the opening 4 will flow into and fill each pocket when the wheel is rotated in the direction indicated on the drawings, any excess of this amount being held back by the hinged scraper 12, normally held in the position shown in the drawings by the springs 14. This arrangement of the scraper 12 is provided to prevent wrecking of the machine in case any large piece of material be engaged in the pockets and so carried against the scraper.

The operation is obvious. The materials to be proportioned are each placed in its respective receptacle and the pocket-wheels 7 rotated by any preferred means in the direction indicated, when the material will be discharged from the several receptacles in proportion to the capacity of the pockets at each receptacle.

In case it is desired to alter the capacity of any set of pockets blocks may be fastened in each pocket either longitudinally or transversely, as preferred, and secured in position in any desired manner—as, for example, where it is desired to place blocks at the ends of a set of pockets any number of bolt or screw holes 15 may be formed in the disks 9 and bolts or screws employed to secure the blocks in place.

Having thus described my invention, it is obvious that various immaterial modifications may be made without departing from the spirit or scope of my invention. Hence I do not wish to be understood as limiting myself to the exact form and construction shown.

What I claim as new, and desire to secure by Letters Patent, is—

1. A device of the kind described, comprising a plurality of receptacles each provided with a lateral extension near its bottom, said extension being arranged so as to partially fill with material in combination with a plurality of series of movable pockets each series adapted to remove material, from one of said extensions, the capacity of the several series being proportional to each other and means for simultaneously moving the several series of pockets.

2. A device of the kind described, comprising a plurality of receptacles each provided with a lateral extension near its bottom, in combination with a series of pockets for each receptacle, the several pockets of each series being adapted to periodically remove a part of the contents of the extension, a scraper arranged to prevent the overloading of the pockets, and means for simultaneously moving the several series of pockets.

3. A device of the kind described, comprising a plurality of receptacles each provided with a lateral extension near its bottom, said extension being arranged so as to partially fill with material, in combination with a series of movable pockets for each receptacle, the several pockets of each series being adapted to periodically remove a part of the contents of the extension, and means for simultaneously moving the several series of pockets.

4. A device of the kind described, comprising a plurality of receptacles each provided with a lateral extension near its bottom, said extension being arranged so as to partially fill with material, in combination with a plurality of movable pockets for each receptacle periodically communicating with said extension

for removing a portion of the contents therefrom, and means for simultaneously moving said pockets.

5. A device of the kind described, comprising a plurality of receptacles each provided with a lateral extension near its bottom, said extension being arranged so as to partially fill with material, in combination with a pocket-wheel for each extension adapted to regulate the discharge of material therefrom, and means for rotating said pocket-wheels.

6. A device of the kind described, comprising a plurality of receptacles each provided with a lateral extension near its bottom, in combination with a pocket-wheel for each extension adapted to regulate the discharge of material therefrom, a hinged scraper arranged to prevent the overloading of the pockets of said pocket-wheel, and means for simultaneously rotating said wheels.

7. A device of the kind described, comprising a plurality of receptacles each provided with a lateral extension near its bottom, said extension being arranged so as to partially fill with material, in combination with a series of connected pocket-wheels, each extension being provided with a pocket-wheel, to control the discharge of material therefrom, the capacity of the several wheels being proportioned to produce the desired relations between the amounts of material discharged from the several receptacles, and means for rotating said pocket-wheels.

8. A device of the kind described, comprising a plurality of receptacles each provided with a lateral extension positioned near the bottom of the said receptacle, in combination with a series of connected pocket-wheels, each extension being provided with a pocket-wheel, to control the discharge of material therefrom, the capacity of the several wheels being proportioned to produce the desired relations between the amounts of material discharged from the several receptacles, a hinged scraper provided with resilient means for normally holding the same in position, arranged to prevent overloading of the pocket-wheels, and means for rotating said pocket-wheels.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HENRY ERICSSON.

Witnesses:

JOHN W. HILL,
CHARLES I. COBB.