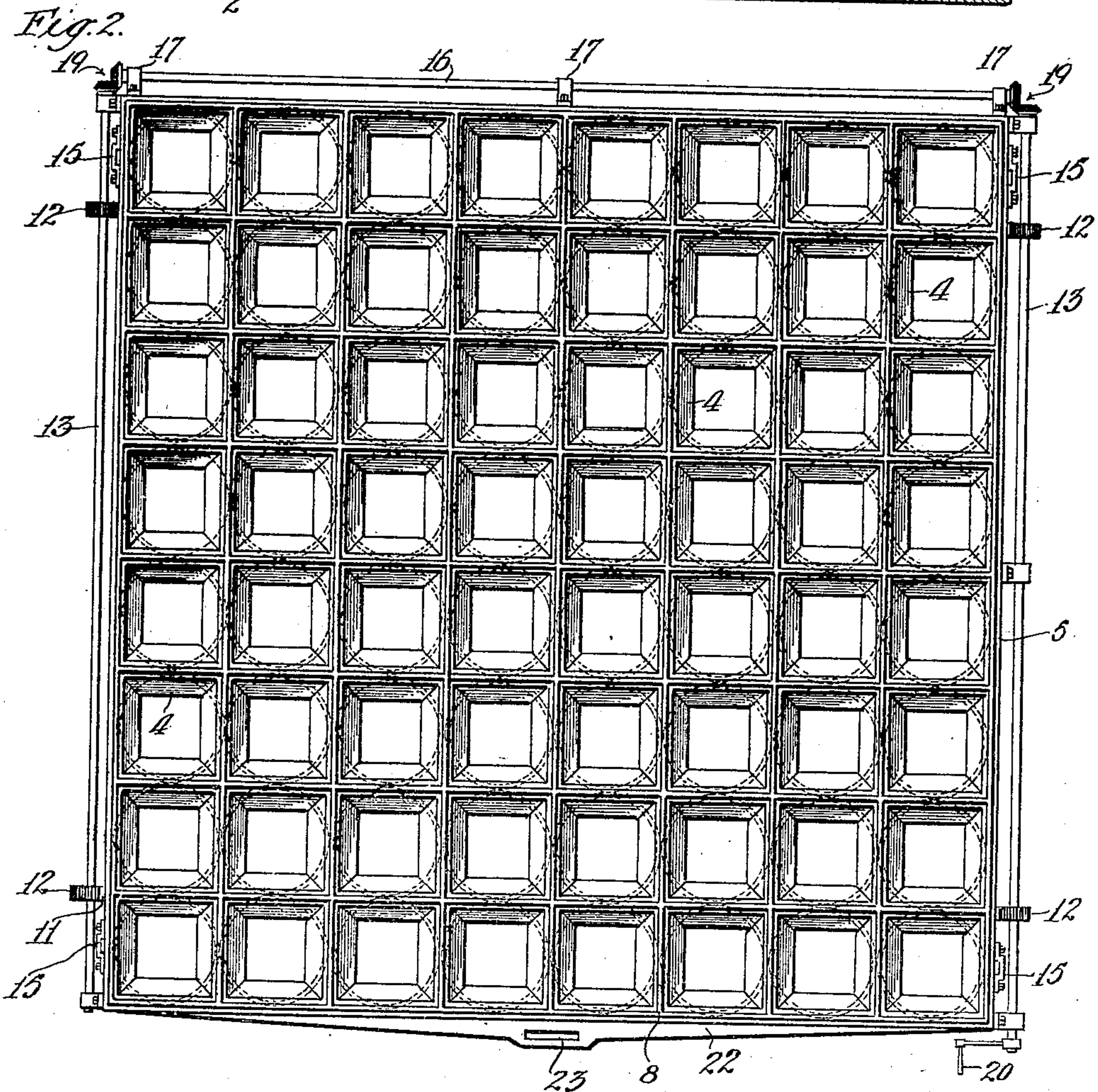
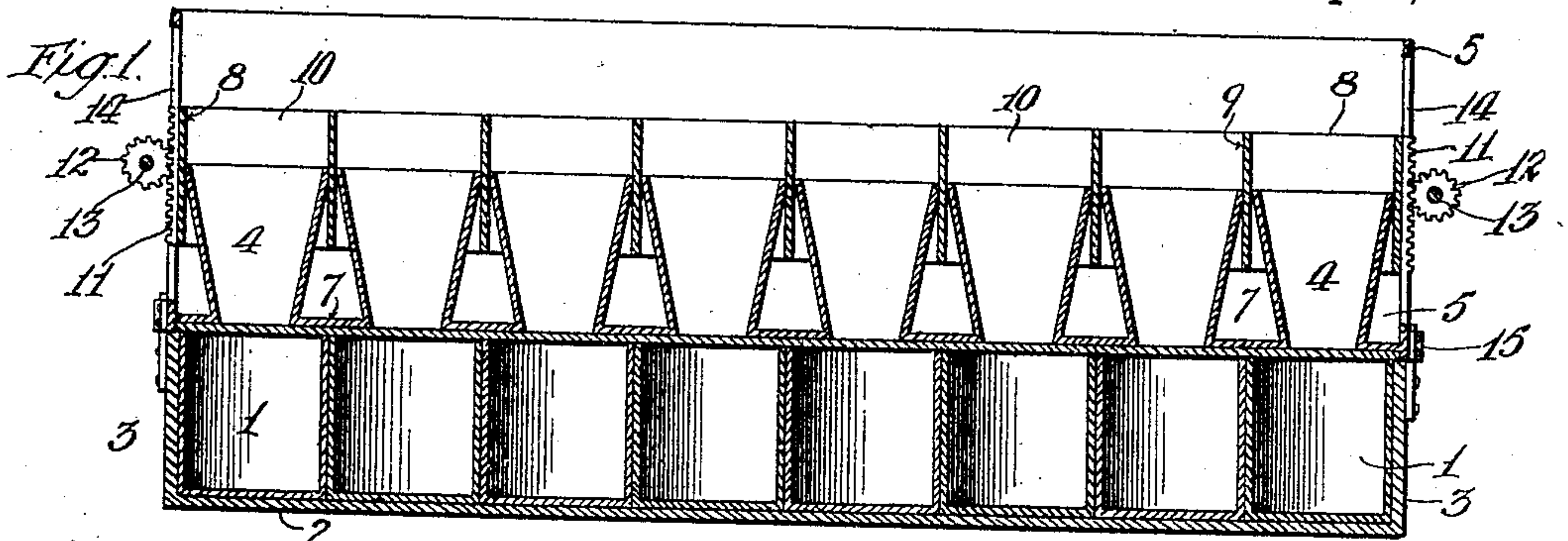


F. KIELY.
PACKAGE FILLER.
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969,376.

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Witnesses:
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UNITED STATES PATENT OFFICE.

FRANCIS KIELY, OF LOS ANGELES, CALIFORNIA, ASSIGNOR OF ONE-FOURTH TO EDGAR E. SELLERS, OF DENVER, COLORADO, AND ONE-FOURTH TO FRED A. SELLERS, OF LOS ANGELES, CALIFORNIA.

PACKAGE-FILLER.

969,376.

Specification of Letters Patent.

Patented Sept. 6, 1910.

Application filed April 30, 1910. Serial No. 558,720.

To all whom it may concern:

Be it known that I, FRANCIS KIELY, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Package-Filler, of which the following is a specification.

The main object of the present invention is to provide means for filling a large number of receptacles, cans, cartons, or other packages in a convenient and quick manner.

Another object of the invention is to provide means whereby a large number of such cans or packages can be filled accurately so as to avoid loss by over-weight. Where cans are filled by hand it is customary to take a sample can for the tare and after weighing out to properly fill this can, other cans are filled by duplicating the weight. If the can should happen to be heavier than the average, as is often the case, the weight required for a large number of cans will be considerably in excess of the proper amount, the loss resulting therefrom being a large proportion of the profits. In this connection the object of the invention is to eliminate such accidental errors by providing means whereby the material to be canned is weighed in bulk and then distributed equally throughout the plurality of cans.

Other objects of the invention will appear hereinafter.

The accompanying drawings illustrate the invention, and referring thereto: Figure 1 is a vertical section of the filling apparatus in place over a set of cans. Fig. 2 is a plan of the apparatus.

The cans or cartons indicated at 1, which may be of any suitable shape, for example, circular, are supported in a tray 2 which may be rectangular in cross section and is sufficiently large to accommodate a multiplicity of cans which are packed or assembled in rows within said tray, said tray having upwardly extending walls 3 between which the cans are packed so that the cans occupy definite positions within the tray and are therefore adapted to properly receive the material from the filling apparatus.

The filling apparatus comprises hoppers or funnel-shaped chambers 4 mounted in a frame 5, said chambers being arranged in rows within said frame, the spacing and arrangement of said rows being in corre-

spondence with the spacing and arrangement of the cans 1 in the tray 2. The frame 5 is carried by the side walls 3 of the tray 2, for example, by means of cross strips or bars 7.

Means are preferably provided for adjusting or varying the capacity of the measuring chambers or hoppers 4, said means consisting of a rectangular frame 8 surrounding the assemblage of hoppers and having cross walls or partitions 9 forming a recticulated structure, said walls or partitions extending between the walls of the hoppers 4 and movable with the frame 8 upwardly or downwardly with respect to said hoppers so as to form an extension chamber 10 above each hopper. The said walls or partitions 9 slide between the upper portions of the measuring chambers or hoppers 4, said measuring chambers or hoppers being rectangular in cross section and approaching sufficiently close to one another to form ways in which the said partitions 9 move with a sliding fit so that no open space will be left through which the material can escape and no flat ledges will be formed on which the material can collect, all of the material, therefore, passing from the hopper and its upward extension into the receptacle below when the temporary support therefor hereinafter described is removed. Said frame 8 is mounted to move vertically in the frame 5, being guided by means 11, on frame 8, engaging with vertical slots 14 in frame 5, which rests on the side walls 3 and is temporarily retained thereon by bars 18 secured to side walls 3 and extending within straps 15 on the frame 5. Said frame is adjustably supported, for example, by means of racks 11 thereon engaging pinions 12 on shafts 13, said shafts being at opposite ends of the apparatus and being connected to operate in unison by a cross shaft 16 mounted in bearings 17 and connected to said shafts 13 by bevel gearing 19. One of said shafts 13 is provided with an operating handle means 20.

The lower ends of the hoppers 4 terminate a sufficient distance above the tops of the cans 1 and walls 3 to form a way or passage for receiving a temporary floor or false bottom 22 adapted to slide laterally into said way and to close the bottoms of all the hoppers temporarily retaining the material

therein. Said false bottom 22 is provided with an operating handle 23.

The operation is as follows: The material is first weighed out in a batch or batches representing the total weight to be charged into a set or tray of cans. Thus, if there are 100 cans in a set or tray, each adapted to contain one-half pound, the material will be weighed out in batches of fifty pounds. This insures greater accuracy than is possible in weighing out small charges for individual cans, besides economizing greatly in the time required. The adjusting means 8, 9 having been set to the required height as determined by trial, the false bottom 22 is inserted so as to close the hoppers at the bottom and the weighed out material is then dumped onto the set of hoppers and scraped or stroked thereinto so that it is distributed uniformly or equally into the plurality of hoppers. The false bottom 22 is then withdrawn, allowing the material so distributed into the hoppers to fill into the cans and fill the same, after which the filling apparatus or frame 8, 9, 14 may be removed from the tray and the cans then lifted out and replaced by another set of cans.

What I claim is:

1. A package filler comprising means for supporting a plurality of receptacles in a definite order of arrangement, and a filling device comprising a plurality of hoppers having the same order of arrangement, said hoppers being rectangular and spaced apart to form intervening ways, means for supporting said filling device over said receptacles, a removable bottom member between

said hoppers and the receptacles to temporarily retain the material in said hoppers, and an adjusting member formed as a reticulated structure comprising a plurality of walls extending and fitting in the ways between the said hoppers and sliding vertically therein to form an adjustable upward extension for the hoppers.

2. A package filler comprising means for supporting a plurality of receptacles in a definite order of arrangement, and a filling device comprising a plurality of hoppers having the same order of arrangement, said hoppers being rectangular and spaced apart to form intervening ways, means for supporting said filling device over said receptacles, a removable bottom member between said hoppers and the receptacles to temporarily retain the material in said hoppers, an adjusting member formed as a reticulated structure comprising a plurality of walls extending and fitting in the ways between the said hoppers and sliding vertically therein to form an adjustable upward extension for the hoppers, means for adjusting the height of said adjusting member comprising racks at opposite sides of said adjusting member, gears engaging said racks, and operating shafts carrying said gears and connected to operate in unison.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 25th day of April 1910.

FRANCIS KIELY.

In presence of—

ARTHUR P. KNIGHT,
FRANK L. A. GRAHAM.