

(No Model.)

G. J. JOHNSON.
GRAIN MEASURER AND BAGGER.

No. 460,580.

Patented Oct. 6, 1891.

Fig 1

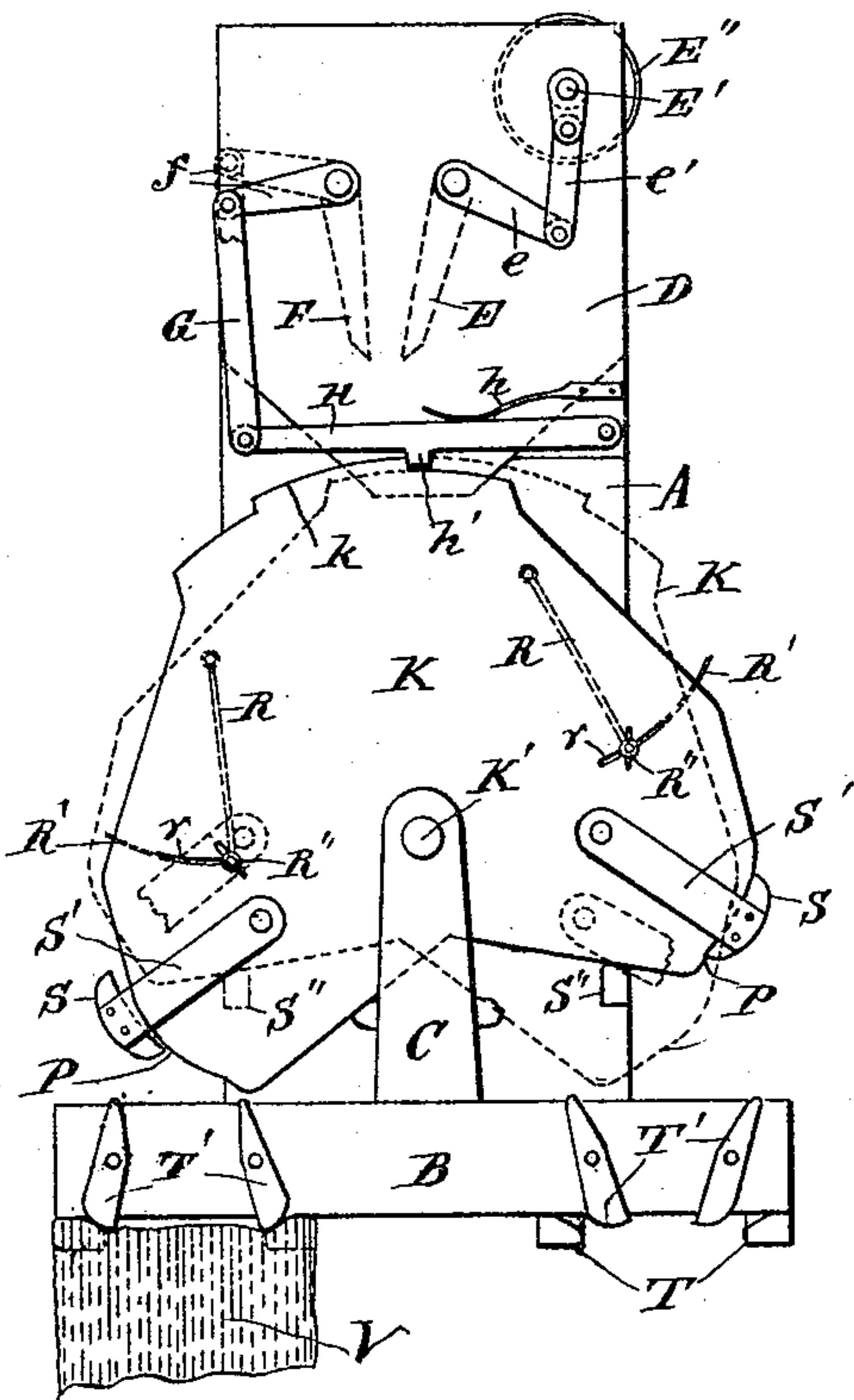
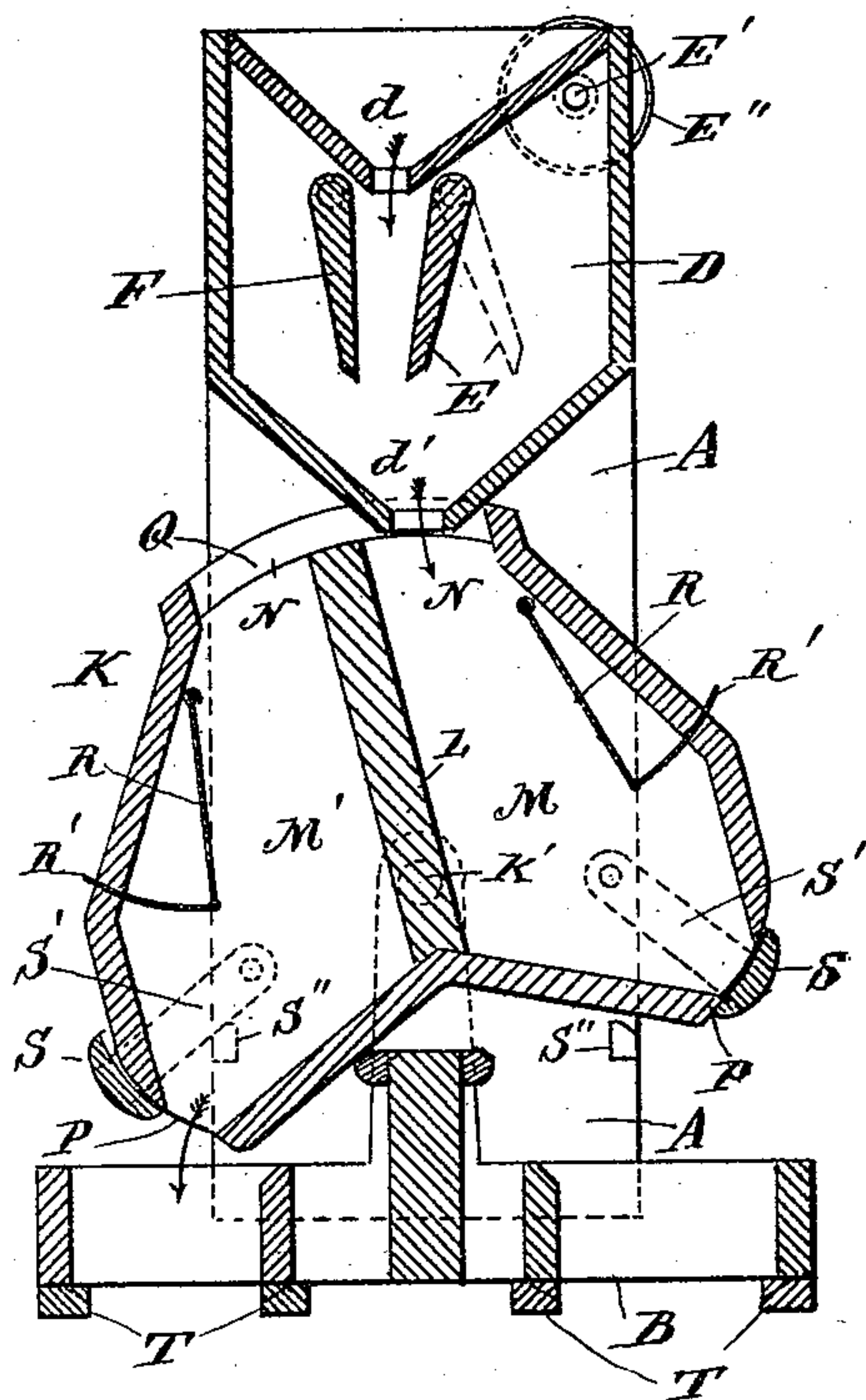


Fig 2



Witnesses.

A. W. Opsahl.
Emma F. Elmsley

Inventor.

George J. Johnson
By his Attorney.
Jas. F. Williamson

UNITED STATES PATENT OFFICE.

GEORGE J. JOHNSON, OF BLOOMING PRAIRIE, MINNESOTA.

GRAIN MEASURER AND BAGGER.

SPECIFICATION forming part of Letters Patent No. 460,580, dated October 6, 1891.

Application filed March 17, 1891. Serial No. 385,350. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. JOHNSON, a citizen of the United States, residing at Blooming Prairie, in the county of Steele and State of Minnesota, have invented certain new and useful Improvements in Grain Measurers and Baggers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide an efficient device for measuring and bagging grain. To this end under a hopper having a forced feed I place a pivoted receptacle divided into two compartments, each having open mouths at their tops for the reception of the grain and openings at their outer lower corners for the discharge of the same. Valves suspended by hangers pivoted to the sides of the case control these openings, closing by gravity and being opened by stops projecting into the paths of the valves. The compartments are so arranged with reference to the receptacle's pivot that the weight of the grain will swing the same alternately into emptying and filling positions. A retaining device locks the receptacle, so as to hold one of the compartments in its filling position, and is released from the forced feed by the accumulation of grain in the hopper. The arrangement of devices for this purpose consists in providing the head of the hopper with an inclined hopper-like mouth and arranging on the opposite sides of the same a pair of transverse pendent blades pivotally secured to the sides of the hopper, one of which is connected up to a crank-shaft and kept in constant motion to effect the forced feed and the other of which is provided with a connection to the retaining device, so that whenever the compartment is filled and the grain accumulates in the hopper, backing up between the two blades, the feeding-blade will move the releasing-blade, allowing the receptacle to swing into its discharging position and bringing the empty compartment into line with the discharge from the hopper. It is desirable for some purposes to have the measuring-compartments so constructed that their capacity may be varied. To this end I construct the compartments

with inclined walls flaring outward from the mouth, and to the said walls at their contracted portion I suspend a transverse plate having at its lower edge an angularly-extended flange, which works through slots in walls. This pivoted plate amounts to a take-up device, which may be swung inward so as to take up quite a considerable amount of the interior space of the compartment, or may be swung outward to its limit, so as to lie flush with the inside of the wall of the compartment. The bagger is placed directly under the receptacle and is provided with devices for holding bags in line with the discharge positions of the compartments.

The invention is illustrated in the accompanying drawings, wherein like letters refer to like parts throughout.

Figure 1 is a side elevation of the invention, and Fig. 2 is a vertical section from front to rear through the entire apparatus.

A B C is the frame-work.

D is the feed-hopper, provided with the inclined wall or hopper-like mouth, as shown at *d*, and the discharge-opening, as shown at *d'*.

E is the pivoted packing or feed blade, provided with the crank-arm *e*, connected by a link *e'* with a crank-shaft *E'*, driven from a pulley *E''*, which is kept in constant motion.

F is the releasing-blade, provided with a crank-arm *f*, connected by the link *G* with the outer or free end of the pivoted retaining device *H*. *h* is a spring for keeping the retaining device in its normal position.

K is the receptacle, pivoted as shown at *K'*, and divided by the partition *L* into the two compartments *M* and *M'*.

N are the openings in the tops of the compartments, and P are the discharge-openings in the same. The receptacle is provided with flanges *Q*, extended above the mouths of the compartments, engaging with the ends of the discharge-spout of the hopper.

R R' is the take-up device, of which R is the pivoted plate, and R' the flange, working through transverse slots *r* in the walls of the receptacle. R'' is a set-screw for holding the take-up device.

S S' are the valves, of which S is the valve proper, and S' the arms by which it is pivoted to the case.

T are transverse slats on the open frame B, extended at their ends and spaced apart to provide supports for the bag. At their rear ends these transverse strips are preferably
 5 beveled, inclining inward from the top, so as to form a sharp projecting edge with rectangular corners, over which to attach the bag at one side. At the front ends these strips are inclined on their opposing faces, and
 10 above the same are secured pivoted clamps T'. The bag is placed in position by catching one side over the rear end of the strips and drawing the same tightly around the front ends of the strips, securing the same
 15 under the clamps, as shown at V. One set of these devices is placed in line with the discharging position of one of the compartments and another set in line with the discharging position of the other compartment.
 20 S'' are stops projecting from the back-board A of the frame in position to intercept the hangers S' of the valves as the receptacle swings into its discharging position.

The retaining device H is provided with a
 25 lug h' on its lower face, which engages with a projection k on the top of the receptacle.

The operation is evident. The parts being in the position shown in Fig. 2, grain will be forced into the compartment M until it is
 30 filled and the grain accumulates between the packing-blade E and the releasing-blade F. When this occurs, the motion from the blade E will be communicated by the interposed grain to the releasing-blade F, which, acting
 35 through the link connection G, will lift the outer end of the retaining device H and cause the receptacle to swing into the dotted-line position shown in Fig. 1, bringing the other
 40 compartment with its open mouth into line with the discharge from the hopper and lifting the valve of the compartment M, so that the grain will pass therefrom into the open bag. The valve of the other compartment M' is closed by gravity on the initial movement of
 45 the receptacle. When the compartment M' is filled, the retaining device will be again released, and the receptacle will swing in the opposite direction, and so on alternately, one being always in the filling and the other in
 50 the discharging position.

It will be understood that the receptacle

and bagger should be at such height as to leave a necessary clearance for the bags.

In case it is desired to keep count of the number of bushels of grain, any suitable registering device may be used in connection with
 55 the pivoted receptacle.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. The combination, with the feed-hopper
 60 and the pivoted measuring-receptacle, of the pivoted packing-blade and the pivoted releasing-blade on the opposite sides of the mouth of the hopper, the retaining device for the receptacle, and a connection from the releasing
 65 blade to the retaining device, whereby upon the accumulation of grain between the two blades the packer-blade will operate the releasing-blade, substantially as described.

2. The combination, with the pivoted measuring-receptacle divided into compartments,
 70 of the retaining device H for securing the receptacle in the proper position for filling one or the others of the compartments, the pivoted packing-blade E, the constantly-running
 75 shaft E', connections for rocking said packer-blade from said shaft, the pivoted tripping-blade F, arranged parallel with and spaced apart from the packer-blade E, and the connections f and G to the tripping device H,
 80 substantially as and for the purpose set forth.

3. The combination, with the pivoted measuring-receptacle divided into compartments truncated at their lower outer corners to form
 85 openings for the discharge of the grain, of the valves pivoted to the receptacle for controlling said openings, and stops in the path of the receptacle for opening said valves, substantially as described.

4. The combination, with the pivoted measuring-receptacle divided into compartments
 90 having valved discharge-openings at their outer lower corners, of the bag-holder provided with means for holding bags in line with the discharge position of said receptacle.
 95

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE J. JOHNSON.

Witnesses:

S. JOHNSON,
 S. EMBRICKSON.