No. 707,701. Patented Aug. 26, 1902.

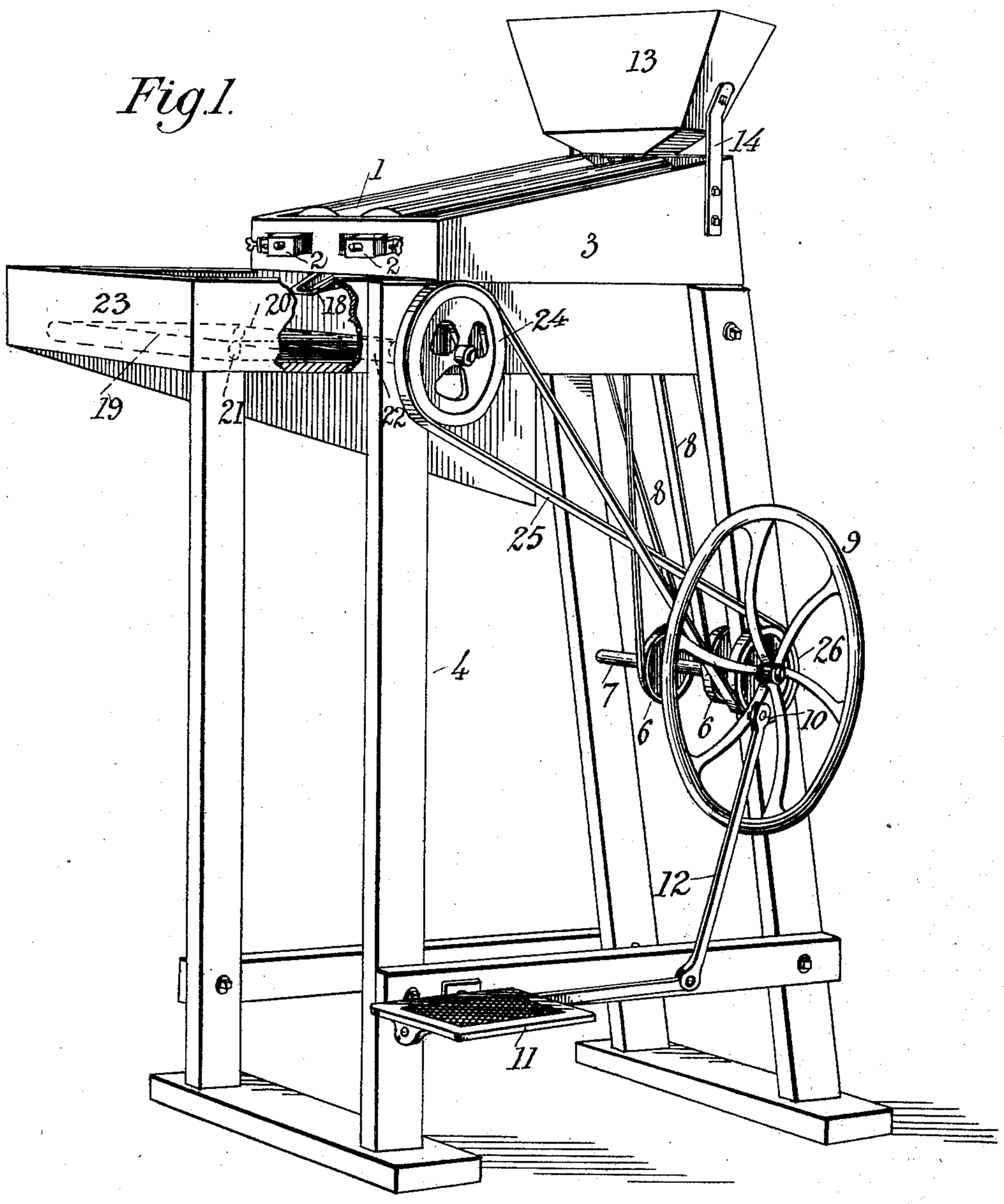
G. M. JACKSON.

SEPARATOR.

(Application filed Apr. 25, 1901.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.



Witnesses:
J. S. Bowen,
J. W. Garner

George M. Jackson Inventor
by Church & Co.
Attorneys

No. 707,701. Patented Aug. 26, 1902.

G. M. JACKSON.

SEPARATOR.

(Application filed Apr. 25, 1901.)

(No Model.) 2 Sheets—Sheet 2.

Fig.2.

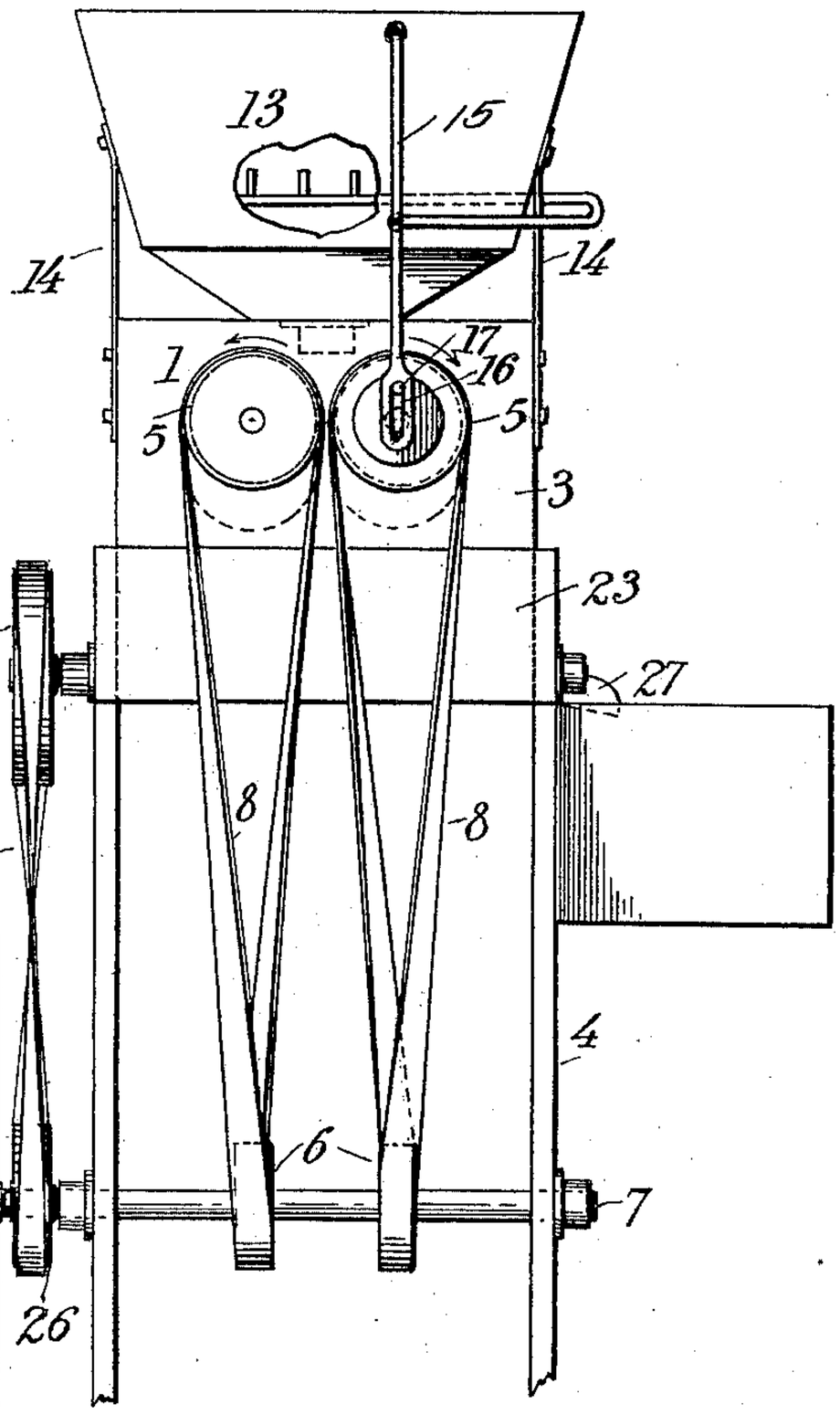
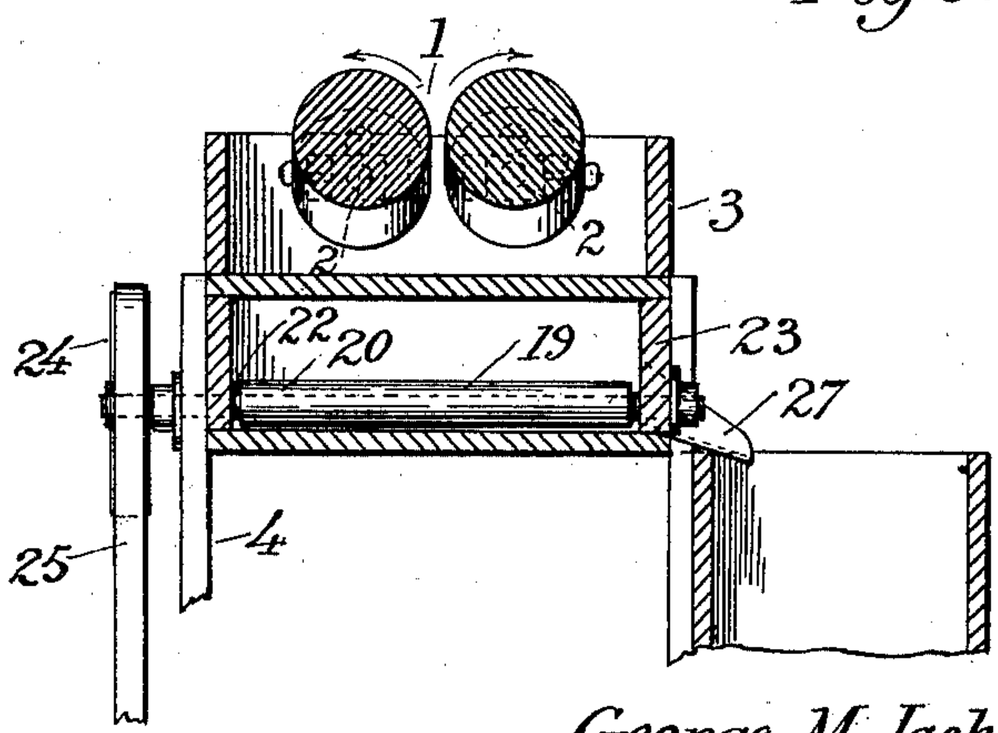


Fig.3.



Witnesses:
J. S. Bowen.
J. W. Garner

George M. Jackson Inventor
by C. A. Snow & Co.
Attorneys

UNITED STATES PATENT OFFICE.

GEORGE M. JACKSON, OF CATHARINE, NEW YORK.

SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 707,701, dated August 26, 1902.

Application filed April 25, 1901. Serial No. 57,453. (No model.)

To all whom it may concern:

Be it known that I, GEORGE M. JACKSON, a citizen of the United States, residing at Catharine, in the county of Schuyler and State of New York, have invented a new and useful Separator, of which the following is a specification.

My invention is an improved machine for separating beans, grains, seeds, and the like; and it consists in the peculiar construction and combination of devices hereinafter fully set forth and claimed.

Figure 1 is a perspective view of a separating-machine constructed in accordance with my invention. Fig. 2 is a rear elevation of the same. Fig. 3 is a detail transverse sectional view taken through the separating-rollers.

In the embodiment of my invention I employ a pair of separating-rollers 1, which are disposed side by side, inclined longitudinally, and are journaled in suitable bearings 2, which bearings are laterally adjustable in the front and rear sides of a suitable casing 3, which latter is here shown as supported on a frame 4. In operation my improved separating-rollers rotate in opposite directions, the inner contiguous sides thereof moving upwardly, as indicated by the arrows in Fig. 3. Any suitable means may, within the scope of my invention, be employed for thus rotating the separating-rollers. As here shown, the said separating-rollers are provided at the rear ends of their shafts with pulleys 5, which are connected to pulleys 6 on a driving-shaft 7 by suitable endless belts 8. The said driving-shaft 7 is journaled in bearings in the frame 4 and is provided with a fly-wheel 9, having a crank-pin 10. A suitable treadle 11, which is mounted on one side of the frame, is connected to the crank-pin by a pitman 12. Thereby the machine is operated, as will be understood.

A suitable feed-hopper 13 is disposed above the upper ends of the separating-rollers. As here shown, said hopper is supported at its ends by standards 14, which rise from the sides of the casing 3. A shaker-bar 15 is secured to and depends from the rear side of the feed-hopper and is provided at its lower end with a vertical slot 16, in which operates a stud or pin 17, that is carried by one of the pulleys 5. Said shaker-bar 15 operates a suitable agitator in the hopper, which is thus caused to discharge its contents evenly and continuously on the upper portions of the separating-rollers. I do not desire to limit myself to the means hereinbefore described in this connection, as any other suitable means may within the scope of my invention be employed for this purpose.

Below the lower ends of the separating-rollers is a spout 18, which discharges onto an endless traveling conveyer 19, which comprises a belt or apron 20 and rollers 21 22, which support and operate said apron. The said endless traveling conveyer is disposed in a suitable frame or casing 23 at the front side of the frame 4 and open on its upper side, so that the upper lead of the conveyer can be readily seen by the operator. The roller 22 has a pulley 24 at one end of its shaft, which is connected by an endless belt 25 to a pulley 26 on the driving-shaft 7. The upper lead of the endless conveyer travels outward from the separating-rollers and discharges into a suitable spout 27, which leads to any suitable receptacle.

In the operation of my improved separating-machine the materials to be separated are discharged from the feed-hopper onto the upper portions of the separating-rollers. The latter are suitably spaced apart by the adjustable bearings 2, and as the rollers rotate in the manner hereinbefore described their upwardly-moving opposing sides prevent the larger particles from passing between them, the smaller particles by gravity dropping between the said rollers. The inclination of the latter causes the larger particles which are retained thereby to slide downward between them and to be finally discharged from the lower ends of said rollers into the spout 18 and by the latter onto the conveyer. By observing the latter the operator can note the operation of the machine and make such adjustment of the rollers as may be required from time to time to secure the best results. Any suitable receiver may be placed under the separating-rollers to catch the smaller particles which fall through the space between them.

My improved separating-machine is exceedingly efficient in sorting or sizing beans,

peas, and the like and for separating grains and seeds of various kinds.

Having thus described my invention, I claim—

1. In a separating-machine, the combination of a pair of inclined separating-rollers disposed apart but in proximity to each other, to permit small particles to drop through the space between them, means to rotate said rollers in opposite directions so that their opposing sides move upwardly to prevent larger particles from becoming crushed between them, laterally-adjustable bearings for the rollers, to vary the width of the space between them, a hopper to discharge onto the upper ends of said rollers, and a horizontally-disposed endless traveling conveyer having its inner side disposed under the lower ends of said rollers, substantially as described.

2. The combination in a separating-machine, of a pair of inclined separating-rollers, pulleys carried by said rollers, a hopper to discharge onto the elevated portions of said rollers, an agitator in said hopper, connections between said agitator and one of said pulleys, whereby said agitator is operated, an endless traveling horizontally-disposed conveyer, onto which said rollers discharge, said conveyer extending outwardly from said rollers, a power-shaft and connections between the same and said conveyer and roller-pulleys, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE M. JACKSON.

Witnesses:
LESTER BURCH,
A. B. MCMILLAN.