

(No Model.)

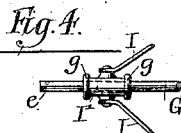
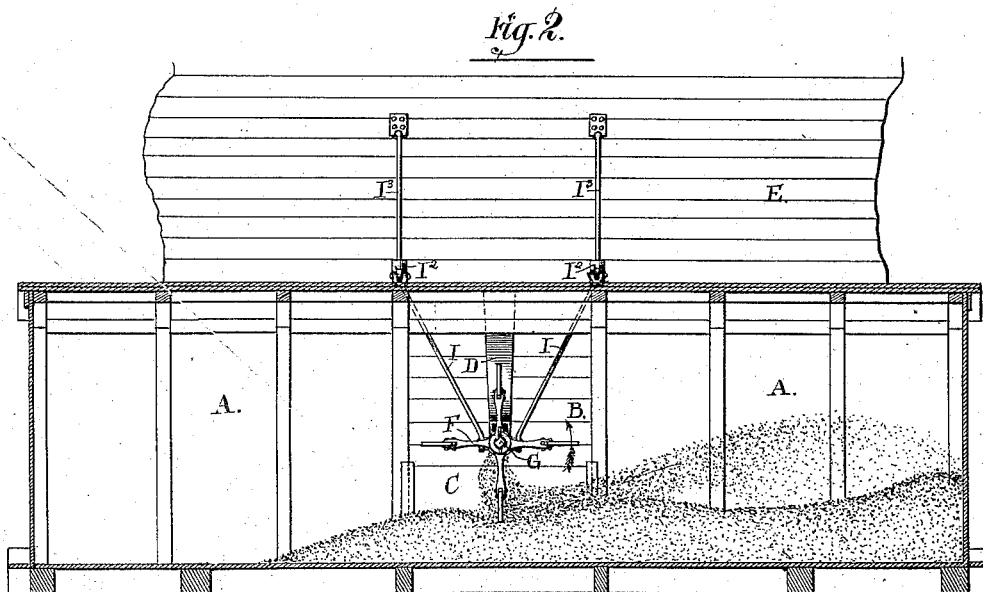
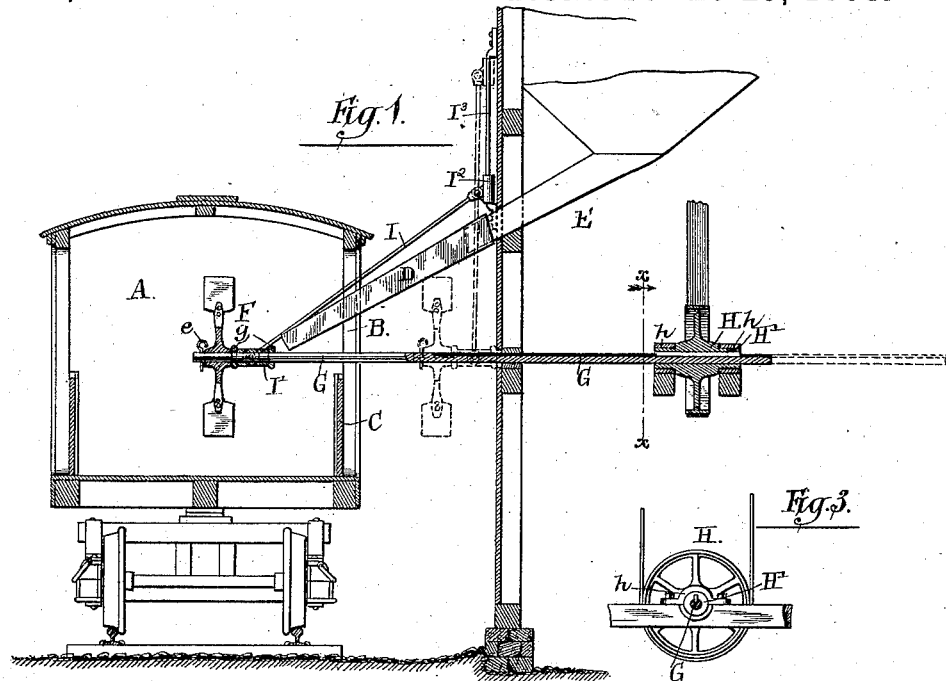
2 Sheets—Sheet 1.

M. F. SEELEY.

DEVICE FOR TRIMMING GRAIN.

No. 344,602.

Patented June 29, 1886.



*Witnesses:-*

*Louis M. Whitehead.*

*C. C. Poole*

*Inventor:-*

*Marquis F. Seeley.*

*by:-*

*W. E. Davenport*

*Attorney:-*

(No Model.)

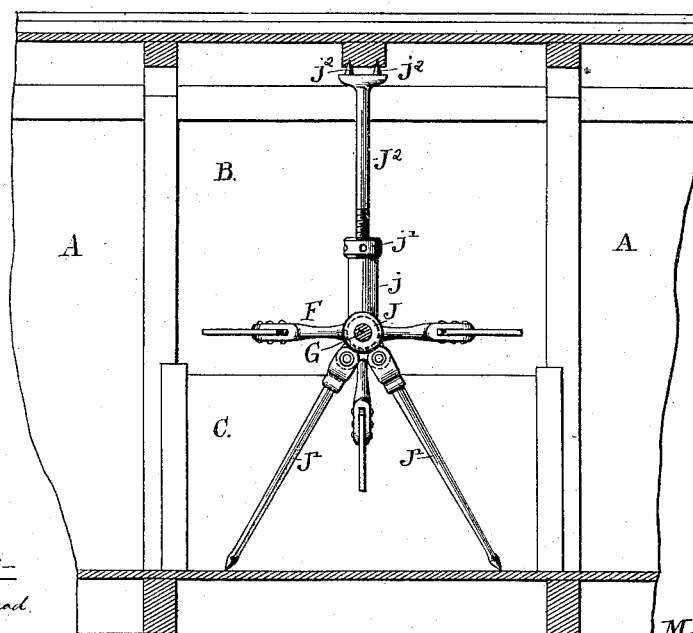
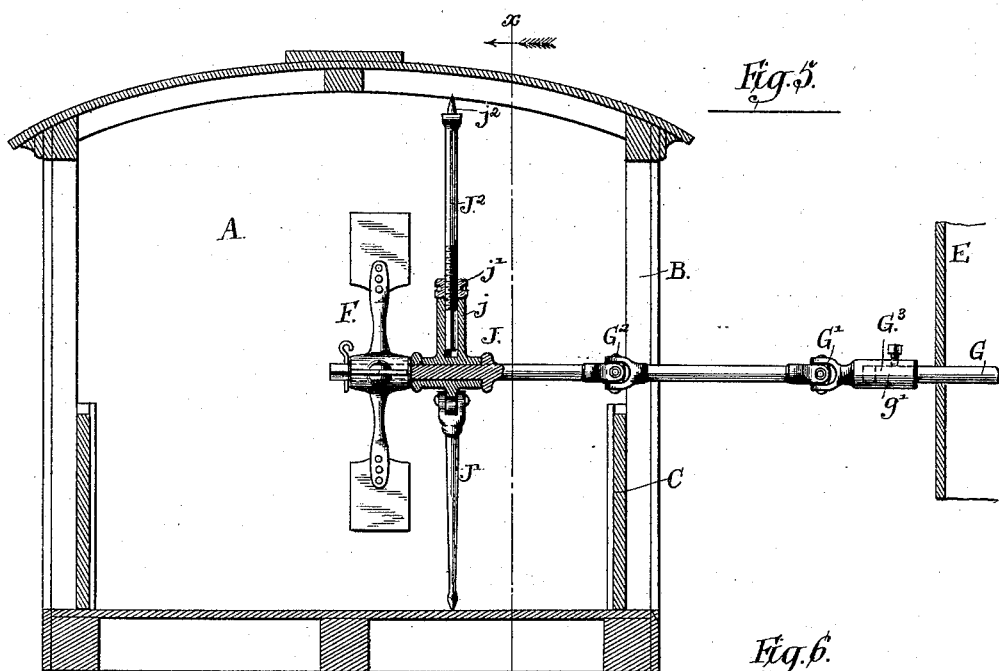
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Marquis E. Seeley.

by:-

W. E. Dayton

Attorney.—

# UNITED STATES PATENT OFFICE.

MARQUIS F. SEELEY, OF FREMONT, NEBRASKA.

## DEVICE FOR TRIMMING GRAIN.

SPECIFICATION forming part of Letters Patent No. 344,602, dated June 29, 1886.

Application filed June 13, 1885. Serial No. 168,574. (No model.)

*To all whom it may concern:*

Be it known that I, MARQUIS F. SEELEY, of Fremont, in the county of Dodge and State of Nebraska, have invented certain new and useful Improvements in Devices for Trimming Grain; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention has for its object to provide a power device for trimming grain-cars, whereby the grain spouted into the middle of a car may be rapidly and easily distributed therein.

To these ends the invention consists in the several matters hereinafter described, and pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a transverse vertical section of a grain-car in the act of being loaded, showing the distributing-wheel of my invention in place, together with one form of driving-connections for the same. Fig. 2 is a longitudinal vertical section of the car shown in Fig. 1. Fig. 3 is a detail section of a part of the driving-gear shown in Fig. 1, taken upon the line *xx* of said figure. Fig. 4 is a detail plan view of the outer end of the driving-shaft shown in Figs. 1 and 2. Fig. 5 is a transverse section of a grain-car illustrating another device for actuating the distributing-wheel. Fig. 6 is a detail section taken upon line *xx* of Fig. 5.

In the said drawings, A A represent the car, of which B is the doorway, and C the usual partial door occupying the lower part of the doorway.

D is the grain-spout, which delivers the grain from an adjacent elevator-building (represented at E) into the middle of the car through the doorway B.

The principal feature of a device embodying my invention is a revolving wheel constructed to turn about an axis which is horizontal, or nearly so, provided with peripheral blades or shovels, said wheels being actuated by any suitable driving-connections and sustained in such manner that its revolving blades may be applied to or over the pile of grain beneath the spout in such manner as to cast or throw the grain into the end portions of the car.

A revolving wheel constructed and operating in the manner above set forth may obviously be operated in any one of a number of different ways.

In the particular construction herein shown as one practical way of carrying my invention into effect, the wheel is mounted upon the end of a rotating shaft actuated by power within the elevator-building.

F is a wheel. G is a horizontal shaft upon which it is mounted, and H is a pulley for driving the shaft, located within the building E. The wheel F is, as shown, located near the middle of the car at a short distance above the floor and in position to cast the grain laterally as fast as it falls from the spout D.

Any well-known means may be provided to enable the wheel and shaft to be inserted in and removed from the car. One device for this purpose (herein shown and illustrated in Figs. 1, 2, 3, and 4) consists in making the shaft movable longitudinally in its bearings, so that it may be drawn out into position for operation or thrust back so as to clear the car when not in use. In this construction the wheel is preferably made removable, so as to enable the wheel to be introduced into and removed from the car without interference with the door C, the end of the shaft for this purpose preferably being squared and the wheel held in place thereon by a pin, *e*.

The shaft may be conveniently actuated by means of a band-pulley, H, mounted upon a hollow sleeve, H', having suitable bearings, *h*, and engaged with the shaft G, which passes through it, by means of a groove and spline, whereby the shaft may slide freely through the sleeve, but will always be in operative engagement therewith.

A suitable reversing-gear is used in the driving-connections, by which the belt-pulley is driven, whereby its direction of motion and that of the shaft and wheel may be reversed for throwing the grain into opposite ends of the car.

A means of bracing or supporting from lateral movement the outer end of the shaft G is shown in the drawings, consisting of inclined braces I, connecting a bearing or sleeve, I', held between collars *g g* upon the outer end of the shaft with the wall of the building or other

stationary support. As preferably constructed, the braces I are pivotally connected with the sleeve I' and with slides I<sup>2</sup>, mounted to slide vertically upon guide-rods I<sup>3</sup>, secured  
 5 upon the building-wall, whereby the upper ends of said brace-rods will automatically rise and fall when the shaft is thrust in and drawn out, as clearly shown in dotted lines in Fig. 1.

Another construction in the shaft G, whereby  
 10 the said shaft and the wheel F may be readily placed in and removed from the car, is shown in Figs. 5 and 6, in which the said shaft is made stationary longitudinally, and is provided outside of the building with two knuckle  
 15 or universal joints, G' G<sup>2</sup>, preferably located at some distance apart, so that the outer part or section of the shaft may be folded back upon the one adjacent to the building in removing the wheel from the car.

When the shaft is jointed or flexible, as  
 20 above set forth, the wheel may be held and manipulated by hand; but, preferably, a bearing, as J, provided with means whereby it may be rigidly supported from the car or  
 25 building, will be employed to sustain the outer section of the shaft and wheel. As a simple and convenient device for this purpose the bearing J shown is provided with two downwardly-extending pivoted legs, J' J', adapted  
 30 to engage the car-floor, and a third upwardly-projecting leg or brace, J<sup>2</sup>, constructed to engage the car-roof, and provided with means for adjusting its length, whereby it may be forced upwardly and held in contact with the  
 35 roof, and the bearing J thereby held firmly in position. For this purpose the bearing J shown is provided with an upwardly-projecting sleeve, j, made square interiorly, and the leg J<sup>2</sup> is provided with a square lower end fitted  
 40 to slide vertically in the sleeve. A nut, j', engaged with a screw-thread upon the leg J<sup>2</sup> above the sleeve j, and resting upon said sleeve, may be used for forcing upward the leg, said nut being desirably provided with  
 45 radial handspike apertures, as shown. The leg J<sup>2</sup> is preferably provided at its upper end with two or more spikes, j<sup>2</sup>, adapted to enter the car-roof, so as to aid in holding the bearing from turning.

The shaft G may be desirably provided with  
 50 a coupling, G<sup>3</sup>, as shown in Fig. 5, whereby the portion thereof outside of the building may be removed when the device is not in operation, if desired. The said coupling is preferably made with a long sleeve, g', fitted over  
 55 the end of the shaft, and held thereon by a set-screw or otherwise, so that the length of the shaft exterior to the building may be adjusted to bring the wheel accurately into position in  
 60 the car. A construction whereby the shaft G is made flexible by the use of universal joints, or otherwise, may be of advantage in some cases, inasmuch as it enables the wheel to be adjusted either laterally or vertically in the car.

In the operation of the device described  
 65 the wheel will usually be placed in the car,

and the grain allowed to run in until sufficient  
 has entered to reach the lower part of the  
 wheel, when the latter is started in one direction, and revolved until sufficient incoming  
 70 grain has been thrown to one end of the car to fill the latter. The direction of motion is then reversed, and the grain is similarly distributed in the opposite end of the car. The  
 75 grain will usually be distributed laterally in the car by the action of flat blades upon the wheel; but the blades may be made of other shape, or the wheel moved bodily during its operation, if a more accurate or even distribution is found necessary or desirable. 8c

The blades, instead of being flat, may be made convex, as indicated, for instance, in Fig. 5, or concave, as may be found upon experiment with wheels of different sizes or operating under different speeds to be most desirable for the purpose of effectively distributing the grain in the car. 85

The principal feature of novelty in my invention is the distributing-wheel constructed to revolve upon a horizontal axis; and such  
 90 device is herein broadly claimed, without restriction to the particular details of construction herein shown in the wheel itself or in the means for supporting and operating it. Specific claims are, however, also made herein to  
 95 certain of the novel features of construction illustrated, as will hereinafter appear.

I am aware that it has been proposed heretofore to employ, as a means of distributing grain in the holds of vessels, a revolving bladed  
 100 wheel turning upon a vertical axis, in connection with a spout constructed to discharge above the wheel in such manner that the grain will be cast or thrown horizontally by the contact of the moving blades with the falling grain. Wheels revolving upon vertical  
 105 axes, such as above described, require special devices for guiding the grain to the wheel and for directing the course of the grain as it leaves the wheel, and in the use of said devices the  
 110 speed of rotation of the wheel must be accurately regulated in order to obtain favorable results. By the use of a wheel revolving upon a horizontal axis and adapted to operate upon  
 115 a pile or mass of grain deposited upon a car-floor or other surface, a device is produced which is free from the objectionable complication present in devices heretofore employed, and which is at the same time capable of efficient use, for the purpose stated. 120

I claim as my invention—

1. In a device for trimming grain, the combination, with a series of blades or shovels constructed to revolve about a horizontal axis, of a horizontal grain-supporting surface located below the shovels, and sustaining the grain in position for the operation of the said shovels thereon, substantially as described. 125

2. The combination, with a grain-distributing wheel constructed to revolve about a horizontal axis, of stationary actuating devices for the wheel, a shaft for transmitting motion to 130

the wheel, and an adjustable bearing or support for the end of said shaft adjacent to the wheel, substantially as described.

3. The combination, with a grain-distributing wheel constructed to revolve about a horizontal axis, and a driving-shaft therefor, of means for sustaining the end of the shaft adjacent to the wheel, consisting of a bearing adapted for rigid connection with a car, substantially as described.

4. The combination, with a revolving grain-distributing wheel and a driving-shaft therefor, of a bearing, J, for the shaft, adjacent to the wheel, said bearing being provided with means for securing it to the floor and roof of the car, substantially as described.

5. The combination, with a revolving grain-distributing wheel and a driving-shaft therefor, of a bearing, J, for the shaft, adjacent to the wheel, said bearing being provided with the pivoted legs J' J' and an adjustable leg or brace, J<sup>2</sup>, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

MARQUIS F. SEELEY.

Witnesses:

C. CLARENCE POOLE,  
G. F. LANAGHEN.