No. 613,082. Patented Oct. 25, 1898.

G. B. SELLERS.

THRESHING AND SEPARATING MACHINE.

(Application filed Nov. 8, 1897.)

(No Model.) 3 Sheets—Sheet 1.

Fig. 1.

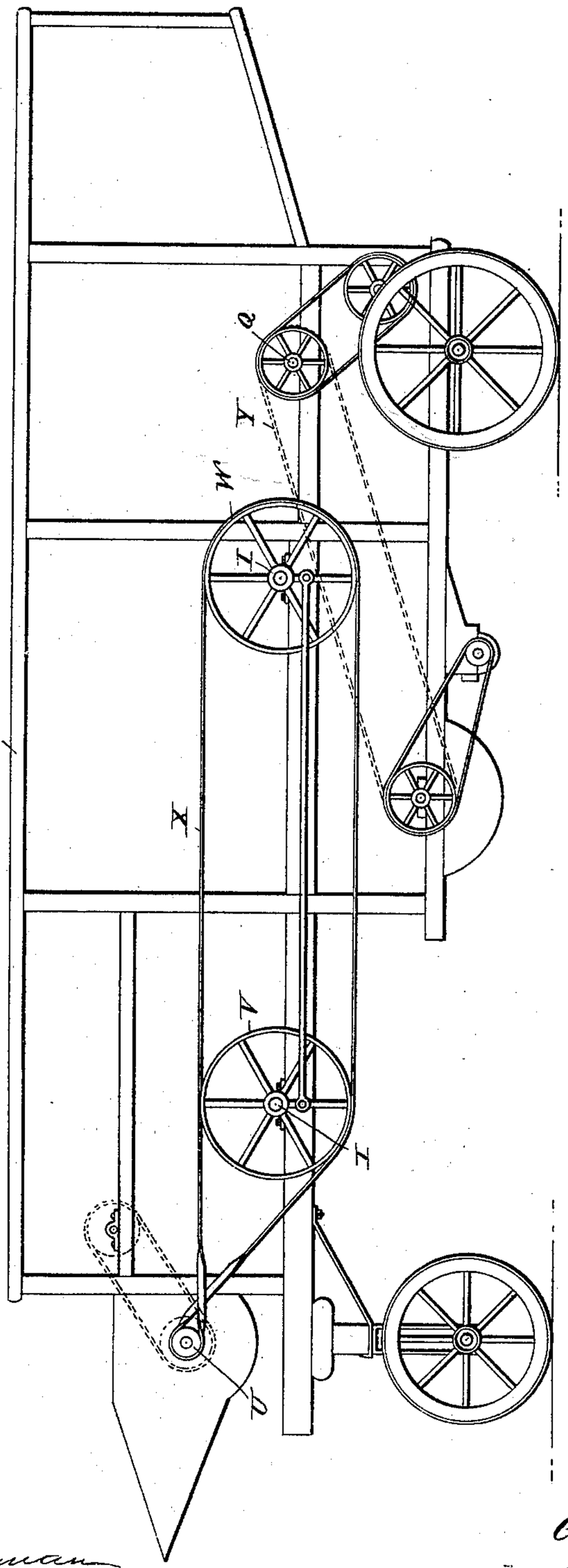

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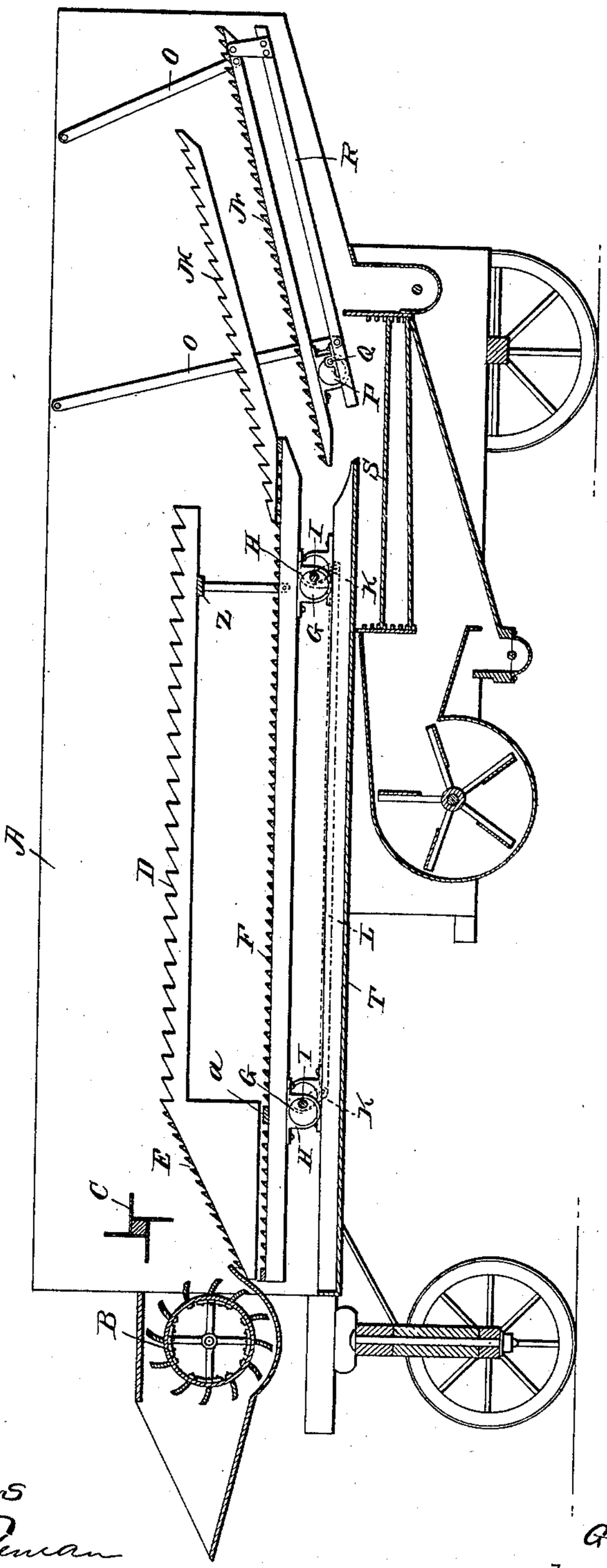
Fig. 2.



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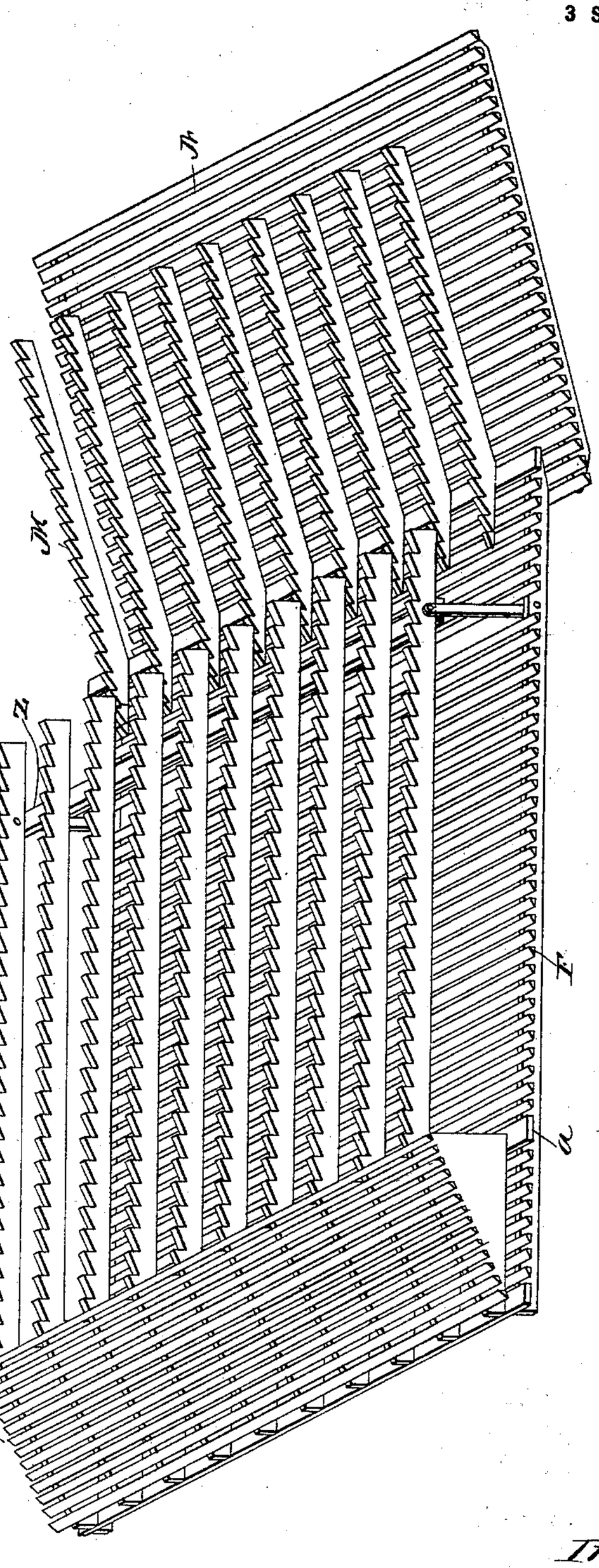

Fig. 3.

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UNITED STATES PATENT OFFICE.

GEORGE B. SELLERS, OF MARSHALLTOWN, IOWA.

THRESHING AND SEPARATING MACHINE.

SPECIFICATION forming part of Letters Patent No. 613,082, dated October 25, 1898.

Application filed November 8, 1897. Serial No. 657,826. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. SELLERS, a citizen of the United States, residing at Marshalltown, in the county of Marshall and State of Iowa, have invented a certain new and useful Improvement in Threshing and Separating Machines, of which the following is a specification.

My invention relates to a new and useful improvement in grain threshers and separators, and has primarily for its object to improve upon the construction and method of operating the separating-rack and the grain-pan of machines of this description.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of a machine embodying my improvements; Fig. 2, a central longitudinal section thereof, and Fig. 3 a detail perspective of the separating-rack.

In carrying out my invention as here embodied, A represents the frame of the machine, which may be of any suitable design and of ordinary construction, having arranged therein a cylinder B, which is properly housed, said housing adapted for the reception of the straw, as is well understood. In the immediate rear of this cylinder is journaled the usual beater C, and back of this is located the upper straw-rack D, which is composed of what I term "fish-back" ribs, which are located at a suitable distance apart, and this rack has connected therewith an inclined platform E, which is composed of slatwork, having spaces between each slat for the usual purpose. Beneath the rack D is arranged the straw-rack F, composed of a series of slats which are set at a slight distance apart, and the upper rack is supported upon this lower rack, while the latter is supported upon and operated by the eccentrics G by means of the brackets H, which surround said eccentrics and are secured to the under side of the rack F. The obvious result of this is that the two racks, as well as the inclined surface E, is given a regular rotary motion by means of the eccentrics, and this motion will more perfectly feed the straw forward, while at the same time not unduly jarring the machine or requiring an undue amount of power to bring about the movements thereof. One of the reasons for this result is the fact that the eccentrics give to the rack and up-and-down slats a longitudinal movement, thus giving to the fish-backs and slats a foreway movement relative to the straw supported thereby.

The eccentrics G are arranged upon the shafts I, which are suitably journaled in the frame, and upon these shafts are secured short arms or cranks K, which are connected by means of the rods L, and as the cranks are set at forty-five degrees apart it follows that these two eccentrics will be carried past the dead-centers without difficulty, thus producing an even movement which invariably remains in time.

In the rear of the fish-back rack D is located a secondary rack M, constructed in the same general manner and set at an incline in order that the straw leaving the first named will be precipitated upon the rack M and from thence fed to the rack N, which is located therebeneath and is hung upon the link-rods O and receives its motion from the eccentrics P, secured upon the shaft Q, and beneath the rack N is located a return-bottom R, by means of which the grain is guided to the chaffer S.

Beneath the rack F is located the grain-bottom T for the usual purpose.

Motion is imparted to the cylinder by a belt from any suitable source of power and in turn from the small pulley U, secured upon the same shaft, to the pulleys V and W by a belt X, by means of which motion is imparted to the eccentrics, and power is imparted to the shaft Q, and consequently to the eccentrics therein, by means of the belt Y, running over the pulley upon the fan-shaft, as clearly shown.

By this construction it will be seen that the straw fed upon the fish-backs D will while being fed forward be separated from the short straw and grain, which latter will be precipitated upon the rack F and again separated,

so that the grain will fall upon the grain-bottom L, and that portion of the straw which reaches the inclined rack M will again be separated, so that a portion thereof will reach the rack N and from thence leave the machine.

In practice it has been found that less power is required to operate a machine thus constructed to bring about a given amount of work without undue jar to the machine and the operating parts thereof.

A strengthening-rail Z is arranged for the support of the series of fish-back ribs D, and a similar rail *a* may be provided for the strengthening of the rack F.

Having thus fully described my invention, what I claim as new and useful is—

1. In a separating-machine of the character described, a separating-rack consisting of a series of fish-back ribs, an inclined slatted surface leading thereto, a slatted rack arranged therebeneath, a series of eccentrics upon which the rack is mounted, cranks and connecting-rods for causing the eccentrics to move in unison, a series of inclined fish-back ribs projecting upward from the rear end of the slatted rack and an inclined rack arranged beneath the last-named ribs, eccentrics for imparting a regular rotary motion to the last-named rack and means for imparting motion to the several parts, as and for the purpose described.

2. In combination with a machine of the character described, a separating-rack consisting of a series of fish-back ribs, an inclined slatted surface leading thereto, a slatted rack arranged therebeneath, a series of inclined fish-back ribs projecting from the rear end of the slotted rack, and an inclined slatted rack arranged beneath the last-named ribs, substantially as and for the purpose set forth.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

GEORGE B. SELLERS.

Witnesses:
S. S. WILLIAMSON,
F. MATTNER.