P. F. DUERR.

GRAIN GATHERING DEVICE.

APPLICATION FILED MAR. 13, 1915.

1,156,985.

Patented Oct. 19, 1915.

2 SHEETS—SHEET 1.

Fig. 1

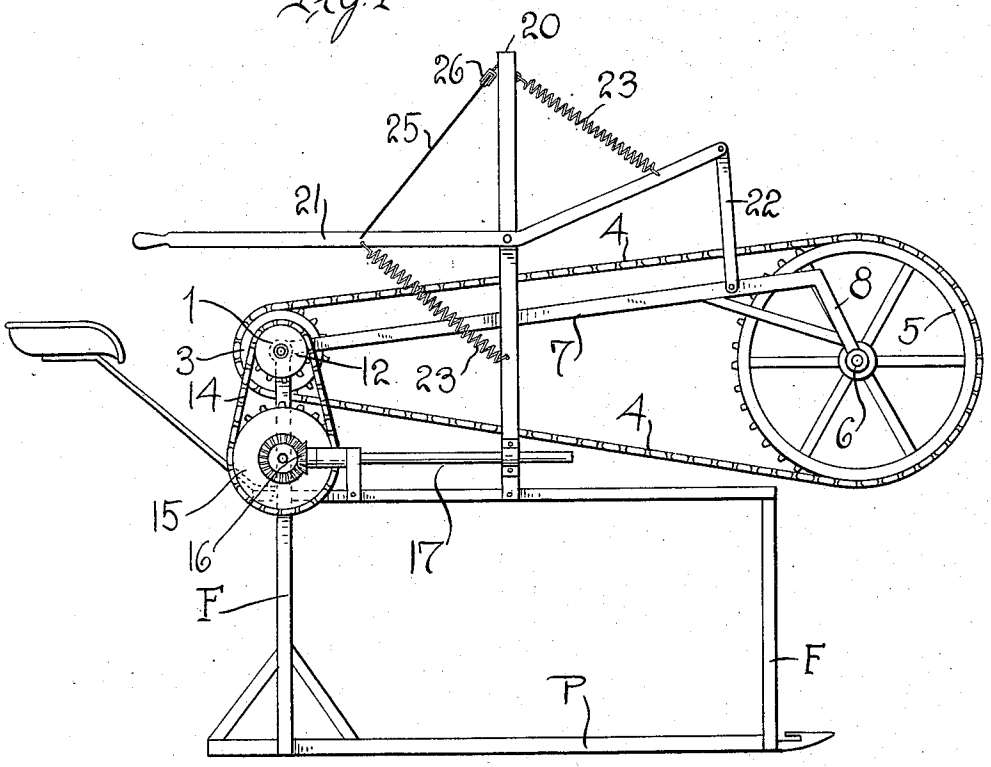


Fig. 6

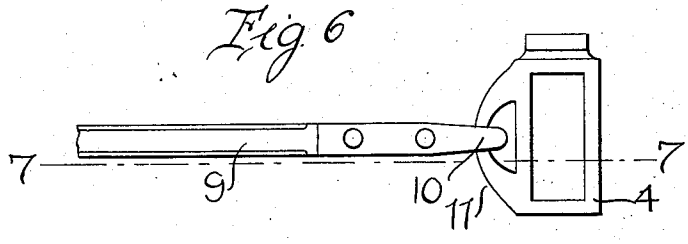
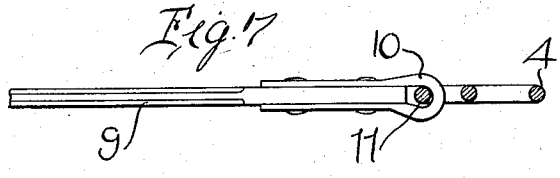


Fig. 7



Witnesses

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2 SHEETS—SHEET 2.

Fig. 2

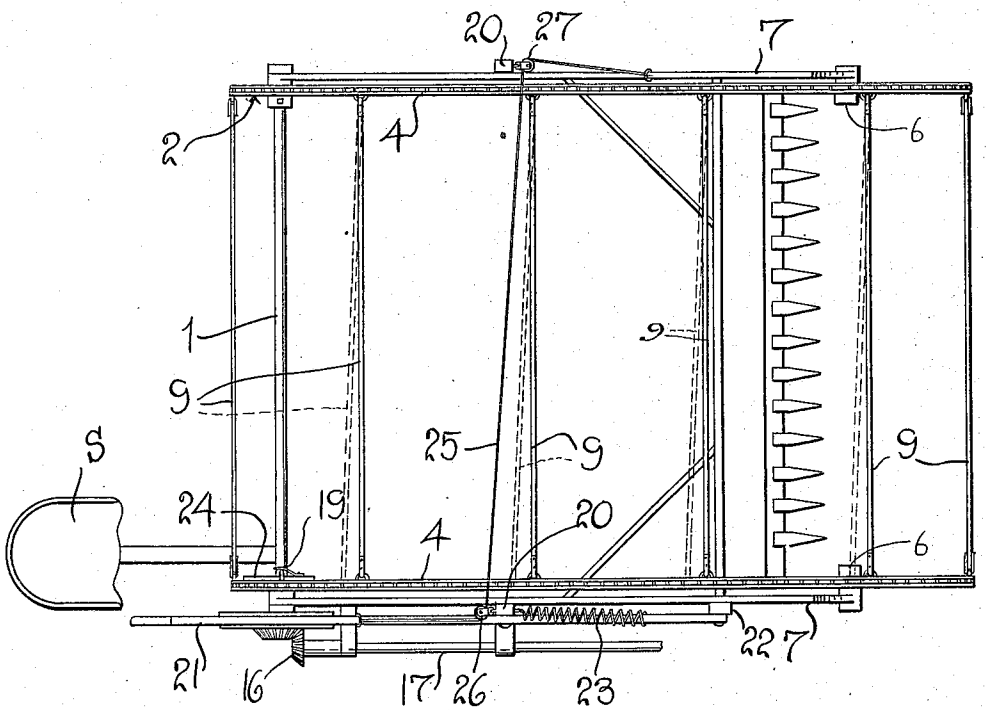


Fig. 3

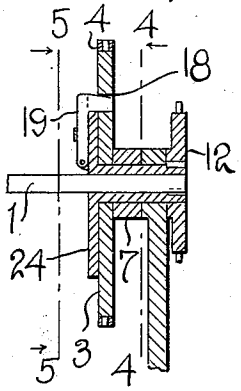


Fig. 4

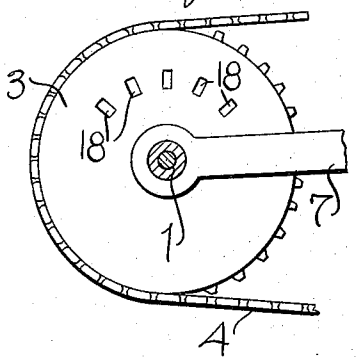
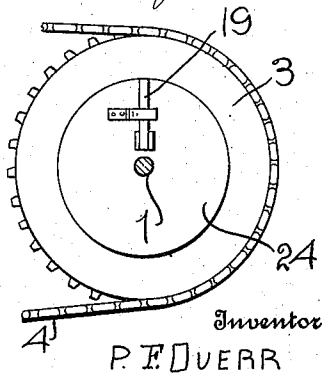


Fig. 5



Witnesses

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UNITED STATES PATENT OFFICE.

PHILIP F. DUERR, OF ALVO, NEBRASKA.

GRAIN-GATHERING DEVICE.

1,156,985. Specification of Letters Patent. Patented Oct. 19, 1915.

Application filed March 13, 1915. Serial No. 14,149.

To all whom it may concern:

Be it known that I, PHILIP F. DUERR, a citizen of the United States, residing at Alvo, in the county of Cass and State of Nebraska, have invented certain new and useful Improvements in Grain-Gathering Devices, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain improvements in grain gathering devices and has relation more particularly to a device of the general character especially designed and adapted for use in connection with a binder or other harvesting machines and it is an object of my invention to provide a novel and improved device of this general character wherein the efficiency of the device will not be affected in any way by the wind.

It is also an object of my invention to provide a novel and improved device of this general character including endless members tied or connected by gathering slats or the like, said endless members being capable of independent relative movement whereby the angle of said slats may be varied in order to assure the cut grain to be delivered to the binder or the like with the tips or heads thereof disposed in the same general direction.

Furthermore, it is an object of my invention to provide a novel and improved device of this general character which may be readily and conveniently adjusted in a vertical path in order to permit the device to be effectively employed in connection with growing grain of varying heights.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved device whereby certain important advantages are attained and the device is rendered simpler, less expensive and otherwise more convenient and advantageous for use, all as will be hereinafter more fully set forth.

The novel features of the invention will be carefully defined in the appended claims.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein—

Figure 1 is an elevational view illustrating a grain gathering device constructed in accordance with an embodiment of my invention; Fig. 2 is a top plan view of the device as illustrated in Fig. 1, a second position of the slats, herein included, being indicated by dotted lines; Fig. 3 is an enlarged detail sectional view illustrating means whereby independent adjustment of one of the endless members may be had; Fig. 4 is a sectional view taken substantially on the line 4—4 of Fig. 3; Fig. 5 is a sectional view taken substantially on the line 5—5 of Fig. 3; Fig. 6 is an enlarged fragmentary view in plan illustrating in detail a connection between a slat and endless member as herein embodied; and Fig. 7 is a sectional view taken substantially on the line 7—7 of Fig. 6.

As disclosed in the accompanying drawings, P denotes a platform generally employed in connection with conventional binders and operatively supported by said platform is the frame F of my improved device.

Operatively supported by the frame F adjacent the rear of the platform P and disposed transversely thereof is a shaft 1 having affixed adjacent one extremity thereof the sprocket 2 and loosely mounted adjacent the opposite extremity the sprocket 3 and disposed around each of said sprockets is an endless member 4 also disposed around a sprocket 5 of increased diameter and affixed to a stub shaft 6 carried by each of the depending brackets 8 positioned at the forward extremities of the swinging frame 7 pivotally engaged with the shaft 1 hereinbefore referred to and mounted for movement in a vertical plane.

The endless members 4 are tied or connected at predetermined distances by the gathering slats 9 adapted to engage the tops of the growing grain in a manner and for a purpose which is believed to be self-evident and as herein embodied the opposite extremities of each of the slats 9 is provided with an eye 10 loosely engaged with a loop 11 carried by an endless member 4 and projecting inwardly thereof as is believed to be clearly disclosed in the accompanying drawings.

Fixed to the shaft 1 adjacent the sprocket 3 is a third sprocket 12 around which is disposed the chain 14 also disposed around the sprocket 15 rotatably supported by the frame F at a point below the sprocket 12 and operatively engaged as at 16 with the

shaft 17 adapted to be driven from a movable part of a binder or other harvesting machine in a conventional manner.

The sprocket 3 is provided with a concentric series of spaced openings or recesses 18 adapted to be engaged by the latch member 19 carried by the member 24 whereby it will be readily perceived that the sprocket 3 may be caused to move in unison therewith. It will also be perceived that upon releasing the latch 19 from the sprocket 3 that said sprocket 3 may be independently rotated to set back the coacting endless member whereby the horizontal inclination of the slats 9 may be varied so that it can be assured that the grain will be delivered to the binder with their heads or tips disposed in the same general direction. It will be appreciated that the connection between the endless members 4 and the gathering slats 9, as afforded by the eye 10 and the loop 11, will permit the desired horizontal inclination of the slats.

At points intermediate the shafts 1 and 6, the frame F is provided with the upstanding transversely alined standards 20 to which is pivotally secured the locking lever 21, the forward extremity thereof to be operatively engaged through the medium of the link 22 with the swinging frame 7, the opposite extremity of said lever terminating in close proximity to the seat structure S whereby it will be perceived that the frame 7 may be readily and conveniently adjusted in a vertical path to compensate for grain of varying heights. To expedite the vertical adjustment of the frame 7 I have coacting with the lever 21 the retractable members 23 herein disclosed as conventional coiled springs positioned at opposite sides of the coacting standard 20 and suitably anchored to said lever 21 and the standard 20 at points above and below the lever in a manner which is believed to be clearly apparent from an inspection of the accompanying drawings.

To further assure the proper vertical adjustment of the frame 7, I find it of advantage to secure to the lever 21 rearwardly of the adjacent standard 20 the flexible member 25 which is disposed around the guide pulley 26 carried by the upper extremity of said adjacent standard 20 and extending transversely of the frame 7 and disposed around a second guide pulley 27 mounted in the upper extremity of the second standard 20 and operatively engaged with the opposite side of the frame 7 adjacent the forward extremity thereof. In practice I desire to have the lower stretch of the endless members 4 to travel inwardly at a speed slightly in excess of the forward travel of the binder or other harvesting machine with which my improved device coacts.

It will also be readily perceived that by the use of the endless members 4 and the coacting slats 9 that the effective operation of my device is in no way impaired by the wind and that the grain will not be thrown to the back of the platform P and become wasted as now occurs with the rotatable reels in general use.

From the foregoing description, it is thought to be obvious that a grain gathering device constructed in accordance with my invention is of an extremely simple and comparatively inexpensive nature and is particularly well adapted for use by reason of the convenience and facility with which it may be assembled, and it will also be obvious that my invention is susceptible of some change and modification without material departure from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice.

I claim:

1. A device of the character described comprising two parallel shafts, a sprocket secured adjacent each extremity of said shafts, one of said sprockets being loosely mounted, endless members disposed around corresponding sprockets of the shafts, slats connecting the endless members, and means coacting with the loosely mounted sprocket for causing the same to rotate in unison with its shaft, said loosely mounted sprocket serving as a medium to vary the angle of the slats relatively to the endless members.

2. A device of the character described comprising two parallel shafts, a sprocket secured adjacent each extremity of said shafts, one of said sprockets being loosely mounted, endless members disposed around corresponding sprockets of the shafts, slats connecting the endless members, means coacting with the loosely mounted sprocket for causing the same to rotate in unison with its shaft, said means comprising a member affixed to the shaft, and a latch carried thereby capable of detachable engagement with the loosely mounted sprocket, said loosely mounted sprocket serving as a medium to vary the angle of the slats relatively to the endless members.

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

PHILIP F. DUERR.

Witnesses:
HARRY O. PALMER,
CALVIN H. TAYLOR.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."