E. A. KEESLING.

STACKER.

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910,131. Patented Jan. 19, 1909.

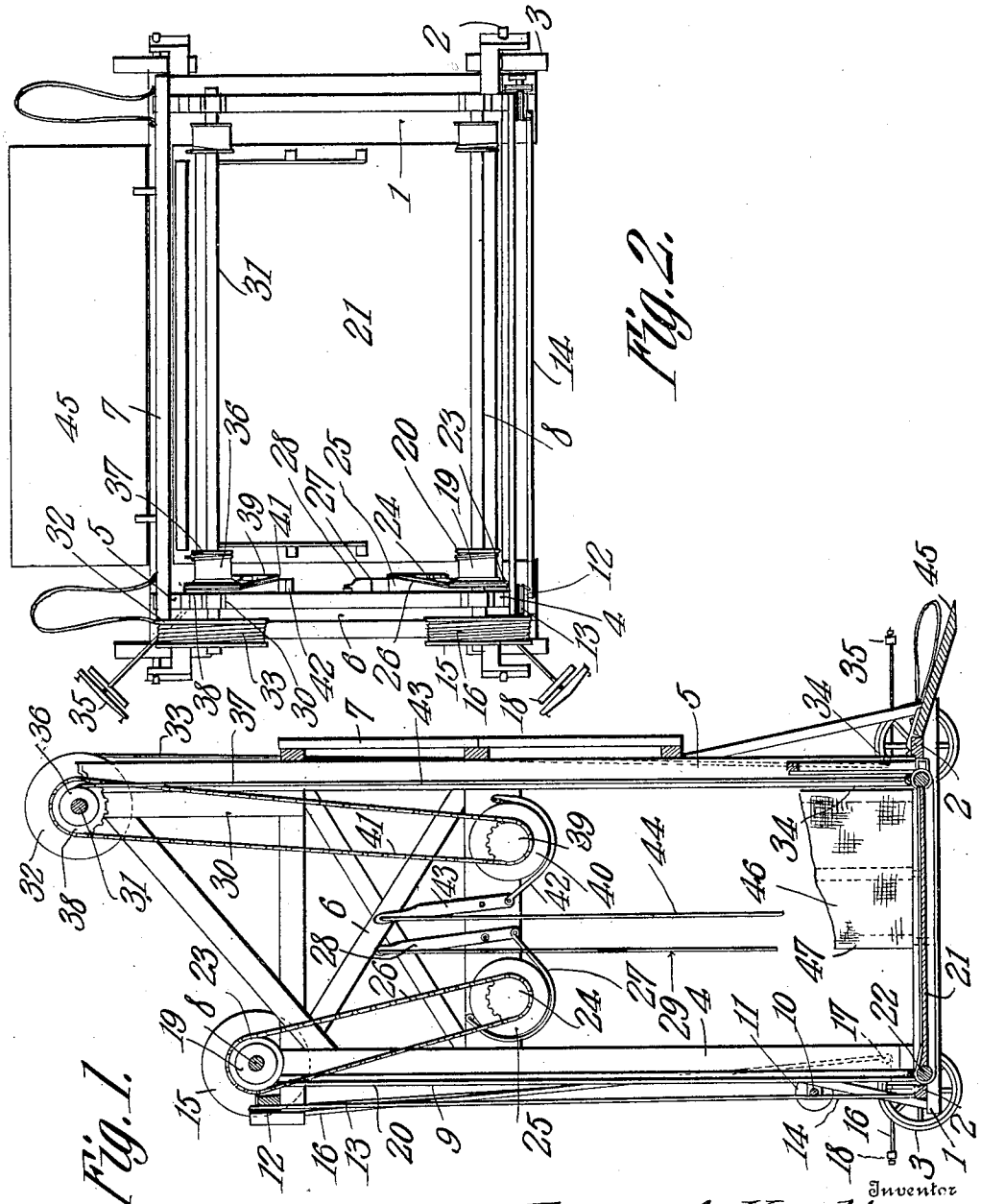


Fig. 2.

Fig. 1.

Witnesses

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STACKER.

No. 910,131. Specification of Letters Patent. Patented Jan. 19, 1909.

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To all whom it may concern:

Be it known that I, EDGAR A. KEESLING, a citizen of the United States, residing at Sylvia, in the county of Reno, and State of Kansas, have invented a new and useful Stacker, of which the following is a specification.

This invention has relation to stackers and it consists in the novel construction and arrangement of its parts as hereinafter shown and described.

The object of the invention is to provide a portable stacker which consists primarily of sills mounted upon wheels and having a frame located thereon.

Shafts are journaled for rotation at the upper end of said frame and are located at different elevations. An elevator is arranged to move vertically within the said frame and cables are connected with the said elevator at their lower ends and at their upper ends are attached to drums mounted upon the said shafts. Each shaft is provided with a drum upon which is wound a cable and the said cables pass down and through blocks located at the lower portion of the frame and a draft team or animal is adapted to be connected with each of the last said cables for the purpose of rotating the said drums and shafts. A friction brake device is connected with each of the said shafts and is adapted to be independently operated for checking the movement of the respective shaft to which it is connected. A vertically movable shield is also connected with the said frame of the stacker and means is provided for moving the shield in an upward direction as the progress of building the stacks advances. A skid is also hingedly connected with the stacker and is adapted to be swung down upon the ground for the purpose of enabling push rakes or similar devices to be moved within the frame of the stacker and located over the elevator prior to dumping.

The elevator may be of any desired construction and may be provided at its ends with wind guards or partitions which may be removed for the purpose of loading the elevator with hay. The opposite sides of the frame are open and the hay may be drawn in in shocks and deposited upon the elevator and by causing the said cables to be wound upon the said shafts or the drums located thereon the said elevator is raised within the frame and when at a suitable height one of the shafts is checked in its rotation by stopping the draft team connected with the cable attached to the said shaft or by applying the friction brake connected therewith and at the same time permitting the other shaft to continue in its rotation whereby the rear edge of the elevator will be raised while the forward edge of the said elevator will be checked. This will bring the elevator into an inclined position which will enable the hay deposited thereon to slip from the elevator and fall from the stacker upon the stack during the course of its erection.

With these and other objects in view the device consists of the novel arrangement as will hereinafter be pointed out.

In the accompanying drawings:—Figure 1 is a vertical sectional view of the stacker. Fig. 2 is a top plan view of the same.

The stacker consists of the sills 1 which are mounted upon the axles 2. The said axles are supported upon the ground wheels 3. The frame or superstructure of the stacker is mounted upon the sills 1 and the said frame consists of the uprights 4 and 5 which are connected together at their upper end portions by the bracing timbers 6 and 7. The shaft 8 is journaled for rotation at the upper ends of the uprights 4 and the guides 9 are vertically disposed along the forward edges of the said uprights 4. The shaft 10 is journaled for rotation at the lower portions of the uprights 4 and the said shaft is provided with the winding drums 11. The pulleys 12 are journaled for rotation at the upper portion of the frame and the cables 13 are attached at their lower ends to the peripheries of the drums 11 and pass over the pulleys 12 and then descend and are attached at their other ends to the shield 14 which is adapted to move vertically along the forward edges of the uprights 4.

From the above description it is obvious that when shaft 10 is rotated the drums 11 will rotate correspondingly and the cables 13 will be wound thereon whereby the shield 14 will be moved vertically along the uprights 4. The object in providing a vertically movable shield is to prevent the hay from being deposited between the forward edge of the stacker and the side of the stack as the stack is being erected. Also the said shield 14 will prevent the material from falling from the upper portion of the stack into the lower portion of the frame and in-

terfering with the manipulation or movement of the movable parts located within the frame as will be hereinafter described.

The winding drum 15 is fixed to the shaft 8 and one end of the cable 16 is attached to the periphery of the drum 15 and the lower portion of the said cable passes under a pulley 17 journaled near the lower portion of one of the uprights 4. A swingle or double tree 18 is adapted to be connected with the lower end of the cable 16 and to the said tree the draft animal or animals are attached for the purpose of drawing the said cable and winding or turning the drum 15 whereby the shaft 8 is rotated. The drums 19 are fixed upon the shaft 8 and the upper ends of the cables 20 are attached to the peripheries of the said drums 19. The lower ends of the said cables 20 are attached to the forward end portion of the elevator 21. Said elevator 21 is provided at its forward edge with a transversely disposed beam 22 the ends of which are located in the guides 9 provided at the forward edges of the uprights 4.

A sprocket wheel 23 is mounted upon the shaft 8 and a sprocket wheel 24 is arranged concentrically with relation to the friction disk 25 which is journaled for rotation at the upper portion of the frame work of the stacker. The sprocket chain 26 passes around the sprocket wheels 23 and 24. One end of the friction band 27 is attached to the frame of the stacker and the said band passes around the under portion of the periphery of the friction disk 25. The opposite end of the said band 27 is attached to the lever 28 which in turn is fulcrumed to the frame of the stacker. A draw rope 29 is attached to the upper free end of the lever 28. Thus it will be seen that when the lever 28 is swung through the instrumentality of the draw rope 29 the friction band 27 may be brought into frictional contact with the periphery of the friction disk 25 whereby the said disk will be checked in its rotation and through the sprocket wheels 24 and 23 and the sprocket chain 26 the rotation of the shaft 8 may be checked.

The studs 30 are attached to the inner or forward edges of the uprights 5 and at the upper ends thereof. The shaft 31 is journaled for rotation at the upper ends of the said studs 30. The drum 32 is fixed to the shaft 31 and the upper end of the cable 33 is fixed to the periphery of the said drum 32. The lower portion of the cable 33 passes around the pulley 34 journaled for rotation at the lower portion of one of the uprights 5 and the swingle or double tree 35 is attached to the lower end of the said cable 33. The drums 36 are also mounted upon the shaft 31 and the cables 37 are fixed at their upper ends to the peripheries of the drums 36 and at their lower ends to the rear edge portion of the elevator 21. A sprocket wheel 38 is mounted upon the shaft 31 and a sprocket wheel 39 is concentrically arranged with relation to the friction disk 40 which is journaled for rotation at the upper portion of the frame work constituting the stacker. The sprocket chain 41 passes around the sprocket wheels 38 and 39. The friction band 42 is attached at one end to a fixed point of the frame of the stacker and passes around the under portion of the periphery of the friction disk 40. The other end of the said band 42 is connected with the lever 43 which is provided at its free end with a draw rope 44. Thus it will be seen that when the said lever 43 is swung through the instrumentality of stress applied to the draw rope 44 the friction band 42 will be brought into frictional contact with the periphery of the friction disk 40 which frictional contact will check the rotation of the said disk 40 and through the sprocket wheels 39 and 38 and the sprocket chain 41 the rotation of the shaft 31 may be checked.

The skid 45 is hingedly connected with the rear axle 2 of the stacker and may be swung down into contact with the ground, as indicated in Fig. 1 of the drawing. Or if it is not desired to use the said skid it may be swung into an upright position over the rear axle 2.

The elevator 21 may be provided with the wind guards 46 which consist of strips of canvas mounted upon the posts 47 which are adapted to be inserted at their lower ends in suitable perforations in the floor of the elevator 21. Should it be desirable to use the said guards for the purpose of preventing the wind from blowing the material from the elevator 21 they may be set up in position as shown in Fig. 1 of the drawing, or if conditions are such that the said guards are not necessary they may be easily and readily removed, as is obvious.

After the hay is deposited upon the elevator 21 the draft means connected with the trees 18 and 19 are started up and the shafts 8 and 31 are caused to rotate, whereby the cables 20 and 37 will be wound upon the drums 35 and 36, respectively. As the said cables are wound upon the said drums the elevator 21 is moved up within the frame of the stacker and when at the proper height one of the shafts, usually the shaft 8, is checked in its rotary movement either by stopping the team of animals connected with the said shaft or by applying the friction device connected with the said shaft while at the same time the shaft 31 is permitted to continue in its rotary movement. As the said shaft 31 continues to rotate the cables 37 are wound thereon so that the elevator 21 is moved from a horizontal position into an inclined position and the hay carried upon the elevator slides from the same upon the stack which is being erected.

Having described my invention what I claim as new and desire to secure by Letters-Patent is:—

1. A stacker comprising a frame, an elevator mounted for movement vertically therein, shafts journaled for rotation at the upper portion of the frame, winding drums mounted upon the said shafts, cables attached at their upper ends to the peripheries of said drums and being connected at their lower ends with the said elevator, friction disks journaled for rotation upon the frame, sprocket wheels concentrically arranged with relation to the said disks, sprocket wheels mounted upon the said shafts, sprocket chains passing around the sprocket wheels mounted upon the shafts and those concentrically arranged with relation to the friction disks, friction bands attached at their ends to the frame of the stacker, and passing around the lower peripheral portions of the friction disks, levers fulcrumed to the frame and being connected with the other ends of the said friction bands, and pull ropes connected with the free ends of said levers.

2. A stacker comprising a frame, an elevator mounted for movement vertically therein, shafts journaled for rotation at the upper portion of the frame, winding drums mounted upon the said shafts, cables attached at their upper ends to the peripheries of the said winding drums and being connected at their lower ends with the said elevator, friction means operatively connected with the said shafts, a driving winding drum mounted upon each of the said shafts, a cable attached to the periphery of each of the last said winding drums, said cables passing down along the frame, pulleys engaging the lower portions of the last said cables, and a means carried by each of the last said cables for connection with draft means.

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

EDGAR A. KEESLING.

Witnesses:
GEO. R. KEESLING,
J. W. LINDSAY.