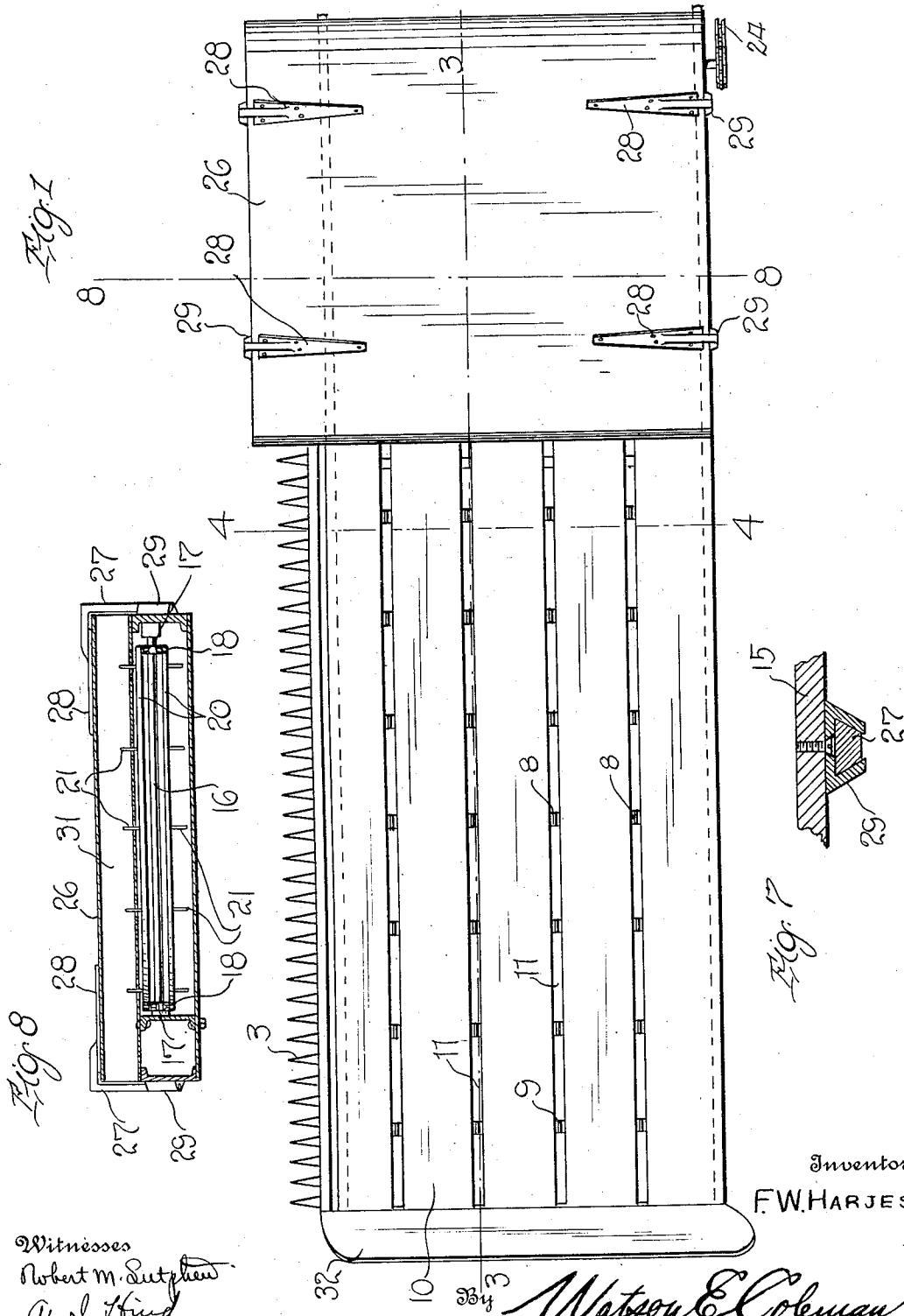


1,109,062.

F. W. HARJES.
ELEVATOR.
APPLICATION FILED JAN. 31, 1914.

Patented Sept. 1, 1914.
3 SHEETS—SHEET 1.



Witnesses
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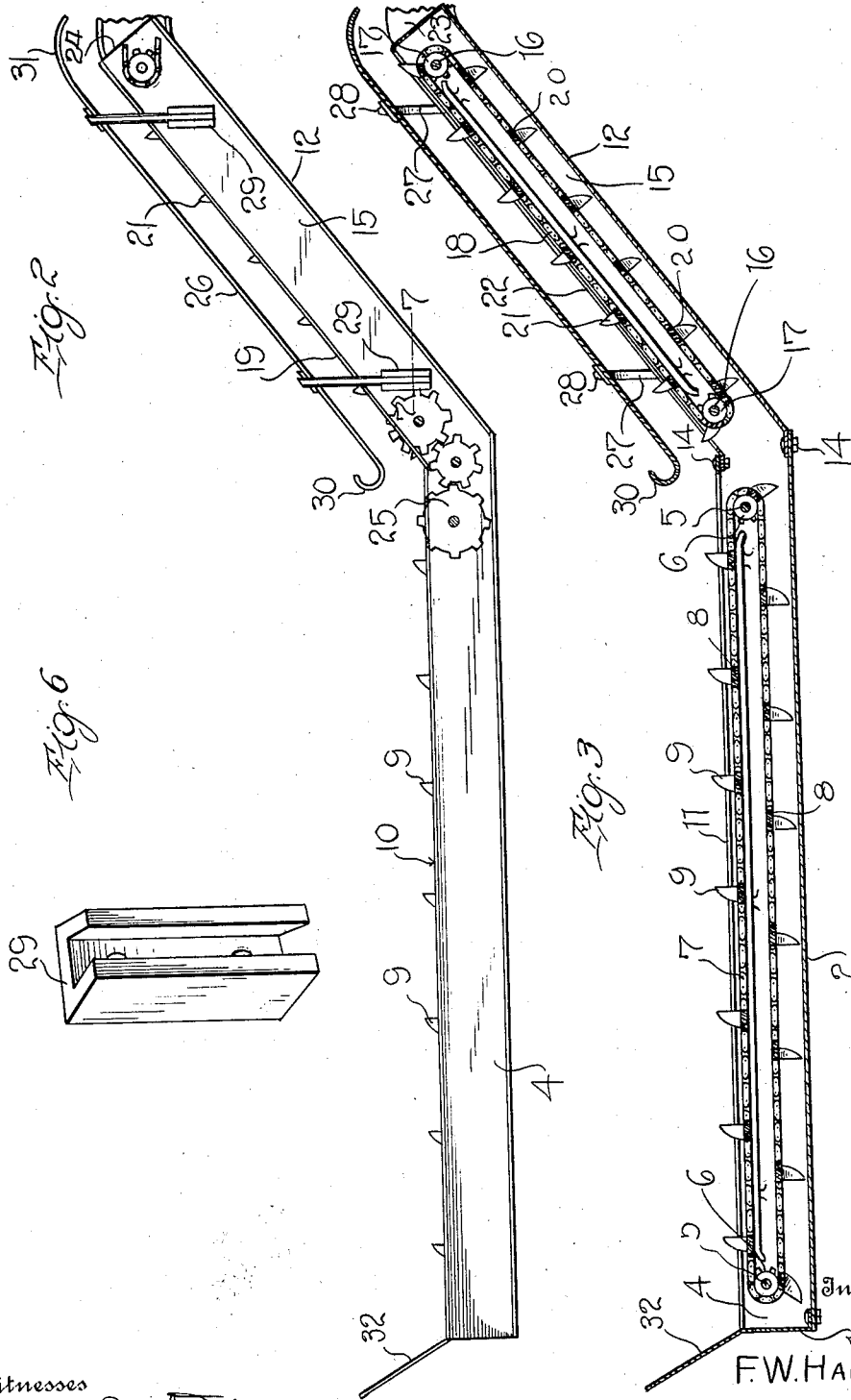
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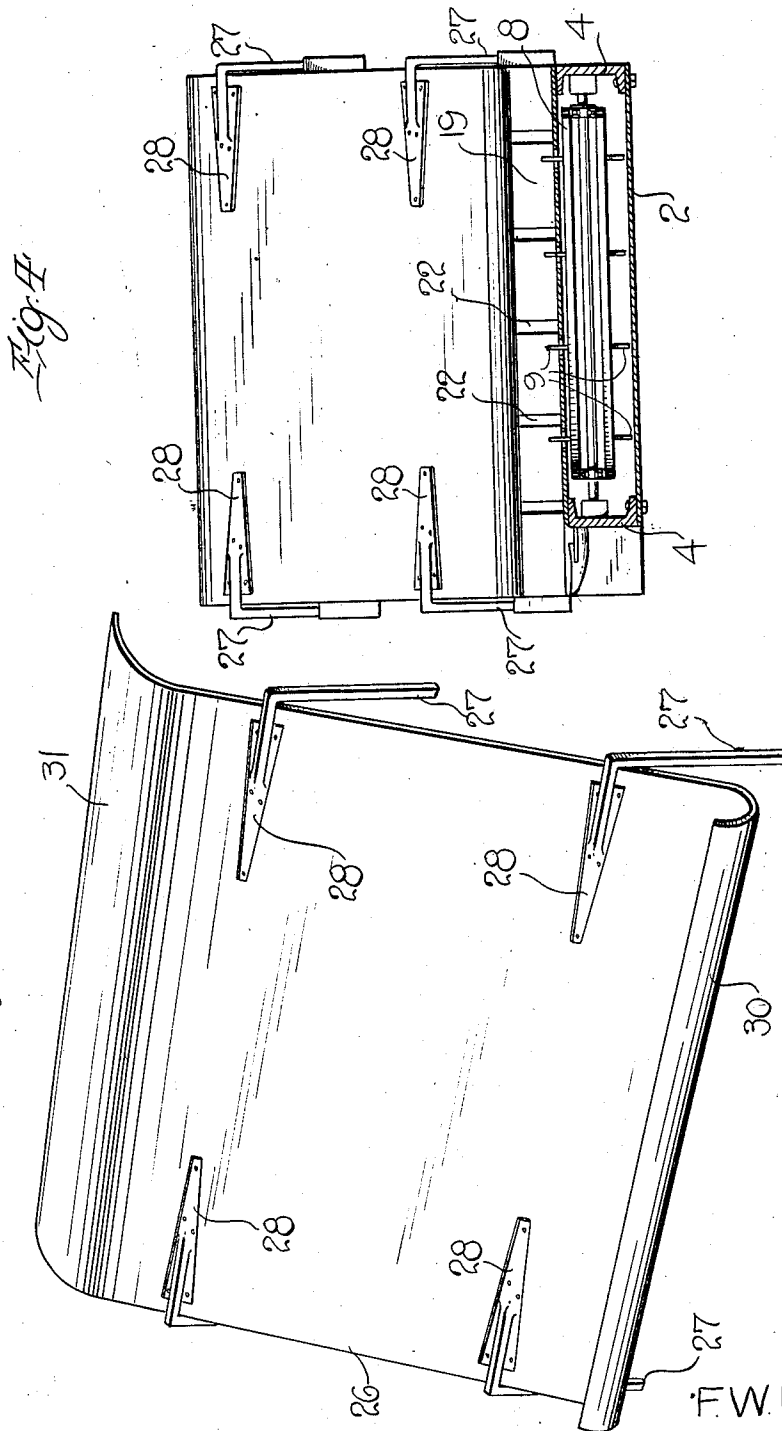
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UNITED STATES PATENT OFFICE.

FREDERIC W. HARJES, OF TICONIC, IOWA.

ELEVATOR.

1,109,062.

Specification of Letters Patent.

Patented Sept. 1, 1914.

Application filed January 31, 1914. Serial No. 815,728.

To all whom it may concern:

Be it known that I, FREDERIC W. HARJES, a citizen of the United States, residing at Ticonic, in the county of Monona and State of Iowa, have invented certain new and useful Improvements in Elevators, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to elevators and has relation more particularly to a device of this general character especially designed and adapted for use in connection with a binder; and the object of the invention is to provide a device of this general character having novel and improved means whereby the grain, after being cut, topples back upon the elevator and is properly conveyed to the binder or other desired locality.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved elevator 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 claim.

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 a view in top plan of an elevator constructed in accordance with an embodiment of my invention; Fig. 2 is a view in side elevation of the device as illustrated in Fig. 1; Fig. 3 is a sectional view taken substantially on the line 3—3 of Fig. 1; Fig. 4 is a sectional view taken substantially on the line 4—4 of Fig. 1; Fig. 5 is a perspective view, detached, of the floating plate, as included in the present embodiment of my invention; Fig. 6 is a perspective view, detached, of a guide member for the floating plate; Fig. 7 is a sectional view taken substantially on the line 7—7 of Fig. 2; and Fig. 8 is a sectional view taken substantially on the line 8—8 of Fig. 1.

As disclosed in the accompanying drawings, 1 denotes a horizontally disposed frame substantially inclosed and having its bottom 2 detachable so that access within the frame may be had with convenience and facility as the occasion may require and especially for the purposes of repairing any

of the parts of the mechanism contained therein as will hereinafter be more particularly referred to. Suitably connected with the forward longitudinal side of the frame is the sickle or cutting mechanism 3. As this mechanism 3 in its detail forms no particular part of my present invention, a specific illustration and description thereof is believed to be unnecessary as the same may be constructed and operated in any manner desired.

Operatively supported by the side walls 4 of the frame 1 and adjacent the opposite ends of such frame are the shafts 5 having affixed thereto in close proximity to the side walls 4, the sprockets 6 around which are directed the endless chains 7 connected by the cross rods 8. The rods 8 are provided with the carrying lugs 9 and the position of the upper stretches of the chains 7 relative to the top plate 10 of the frame 1 is such as to permit the lugs 9 to project through the elongated slots 11 produced in such top plate 10 and extend a predetermined distance thereabove so that grain toppling back upon the frame 1, after being severed by the cutting mechanism or sickle 3, will be carried toward the upwardly directed or inclined frame 12, to be hereinafter more particularly referred to. The frame 12 is also substantially inclosed and has its lower marginal portions in overlapping relation with the adjacent marginal portions of the frame 1, and suitably secured thereto, as indicated at 14 in Fig. 3. The frame 1, adjacent its opposite ends, has operatively supported by the side walls 15, the transverse shafts 16 having affixed thereto in close proximity to the side walls 15 the sprocket wheels 17 around which are directed the chains 18, the upper stretches of which are in close proximity to the top plate 19. The chains 18 are connected by the cross rods 20 from which project the carrying lugs 21 which extend through the slots 22 produced in such top plate 20 and being adapted to properly engage the severed grain and carry the same up to the binder. As the binder forms no part of the present invention, the same is omitted, except a fragment 23 to indicate a connection between the frame 12 and the binder. The uppermost shaft 16 is operatively connected, as at 24, with a movable part of the binder, while the adjacent shafts 16 and 5 are operatively connected, as indicated at

25, whereby it will be readily perceived that requisite movement to the chains 7 and 18 may be effected.

Coacting with the frame 12 and disposed
5 above the top 19 thereof and in substantial
parallelism therewith is the floating top 26
formed preferably of metal and freely capa-
ble of movement relatively to the top 19 as
determined by the quantity of grain being
10 carried upwardly by the lugs 21. As herein
disclosed, the side marginal portions of the
top 26 have depending therefrom the elon-
gated arms 27 provided at their upper ex-
15 tremities with the angular extensions 28,
whereby the same may be suitably anchored
to the upper surface of the floating top 26.
The arms 27 are adapted to have sliding
engagement with the vertically disposed
20 guide-ways 29, suitably affixed to the side
walls 15 of the frame 12 whereby it will
be readily perceived that the floating top 26
is operatively maintained in requisite posi-
tion. I also find it of advantage to have the
lower marginal edge of the floating top 26
25 turned back on a predetermined curve, as
indicated at 30, whereby proper passage of
the grain beneath such top 26 is assured,
while the opposite end portion of the float-
ing top 26 is disposed on a downward curve,
30 as indicated at 31, to assure proper delivery
of the grain to the binder. I also find it of
advantage to provide the free end of the
frame 1 with the upwardly and outwardly
directed transverse plate or wall 32 which
35 assures the toppling grain to fall upon the
top plate 10 of the frame.

In the accompanying drawings, I have
illustrated only the essential features of my
invention and it will be readily perceived
40 that in order to overcome various disadvan-

tages and to make the device wholly opera-
tive, other parts may need to be employed
but as such parts form no part of my pres-
ent invention, they have been omitted in
order not to obscure my present invention. 45

From the foregoing description, it is
thought to be obvious that an elevator con-
structed in accordance with an embodiment
of my invention is of an extremely simple
and comparatively inexpensive nature and 50
is particularly well adapted for use by rea-
son of the convenience and facility with
which it may be assembled and operated and
it will also be obvious that my invention is
susceptible of some change and modification 55
without material departure from the prin-
ciples and spirit thereof and for this reason
I do not wish to be understood as limiting
myself to the precise arrangement and for-
mation of the several parts herein shown 60
in carrying out my invention in practice.

I claim:

A device of the class described including
a substantially inclosed frame having a sub-
stantially horizontal portion, and an in- 65
clined portion, guide members arranged
upon the sides of the inclined portion of the
frame and arranged in spaced relation, a top
having the lower end upturned and the
other end downturned, supporting arms se- 70
cured to the longitudinal edges of the top
adapted to be removably arranged within
the guide members to hold the top in posi-
tion.

In testimony whereof I hereunto affix my 75
signature in the presence of two witnesses.

FRED. W. HARJES.

Witnesses:

W. P. FORKER,
E. A. TOWNE.