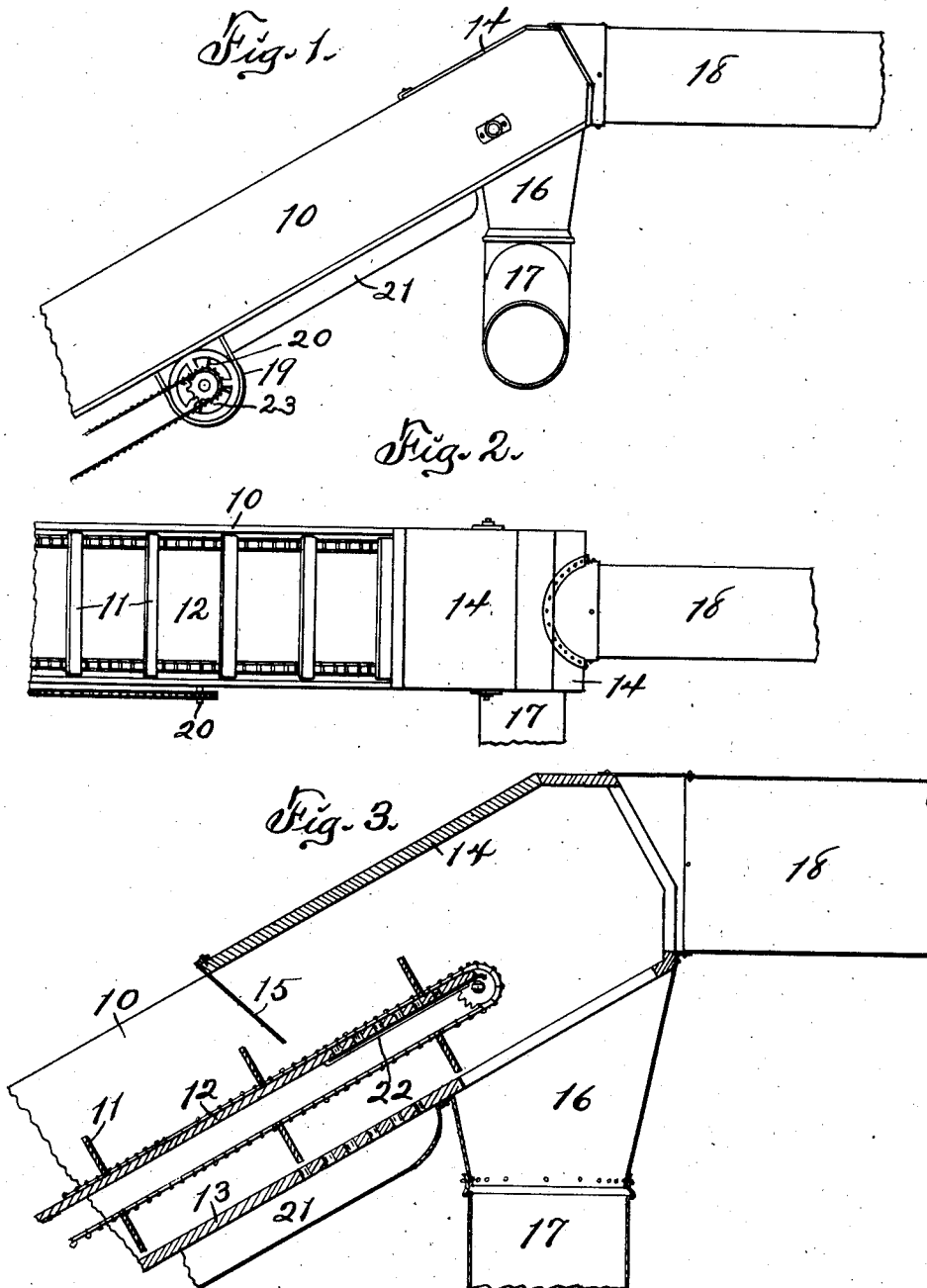


J. A. NELSON.  
 CLEANER ATTACHMENT FOR GRAIN ELEVATORS.  
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1,048,091.

Patented Dec. 24, 1912.



Attest:  
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# UNITED STATES PATENT OFFICE.

JESSE A. NELSON, OF ELLSWORTH, IOWA.

CLEANER ATTACHMENT FOR GRAIN-ELEVATORS.

1,048,091.

Specification of Letters Patent.

Patented Dec. 24, 1912.

Application filed March 2, 1912. Serial No. 681,180.

*To all whom it may concern:*

Be it known that I, JESSE A. NELSON, citizen of the United States of America, and resident of Ellsworth, Hamilton county, Iowa, have invented a new and useful Cleaner Attachment for Grain-Elevators, of which the following is a specification.

The object of this invention is to provide means for blowing the chaff, silk, husks and other light waste matter from ear corn and other grain during the operation of elevating said grain for storage.

My further object is to provide means for adjusting the course and application of air currents to passing grain.

My further object is to avoid accumulations of waste matter in stored grain, which waste matter interferes with drying and curing of grain and tends to promote decomposition therein.

My invention consists in the construction, arrangement and combination of elements hereinafter set forth, pointed out in my claims and illustrated by the accompanying drawing, in which—

Figure 1 is a side elevation illustrating the application of my improvement to a grain elevator. Fig. 2 is a plan of the same. Fig. 3 is a detail elevation, partly in section, showing the device adjusted for treatment of oats.

In the construction and application of the devices as shown, the numeral 10 designates an elevator frame having a drag elevator 11 therein. The frame 10 preferably is formed with spaced bottoms 12, 13, the upper bottom 12 being employed to carry the grain and lifting portion of the elevator and the lower bottom 13 being employed to carry the return portion of the elevator. A hood 14 is mounted over the upper end portion of the frame 10 and an apron 15, preferably of oiled cloth, is fixed to the lower margin of said hood and depends on the elevator or on the grain being carried thereby. A hopper 16 is suspended from the upper end portion of the frame 10 and is adapted to receive grain from the elevator. A delivery spout 17 is swiveled to the hopper 16 and is adapted to receive grain therefrom and convey it to any desired point of deposit. An opening is formed in the head of the hood 14, preferably at right angles to the mouth of the hopper 16, and a spout 18 is connected, by any suitable swivel joint, with said hood and communicates with the interior thereof

through said opening. A fan chamber 19 is suspended from the frame 10 and a blast fan 20, journaled in said chamber, is driven by any suitable gearing to a prime mover, such as the mechanism used to drive the elevator. The upper end portions of the bottoms 12, 13 preferably are perforated and a chute or passage 21 leads from the fan chamber to a point beneath the perforated portion of the lower bottom. A valve 22 may be mounted for manual adjustment over the perforated portion of the upper bottom 12 to prevent oats and similar small grain from falling through said bottom, and to direct the same to the hopper.

In practical use the fan and elevator are operated simultaneously and as ear corn is dumped from the upper end of the bottom 12 and is carried across the perforated portion of said bottom, a current of air from the fan through the chute 21 passes upward through the perforated portions of the bottoms and blows the chaff, husks, silk and shelled corn, smut and the like waste matter from the ear corn and carries such waste substances and shelled corn across the hood and out through the spout 18 to a place of deposit separate from the ear corn. When oats are elevated, the valve 22 is placed as shown in Fig. 3 to guide the oats to the hopper, and the current of air enters the frame through the perforations in the lower bottom 13 and passes upward along the bottom 12 and crosses the hood through the falling oats. During this operation the current of air fans the falling oats and carries light oats, chaff and sticks away through the spout 18. The force of the air blast may be regulated by valves 23 on the entrance of the fan chamber.

I claim as my invention—

1. The combination of a grain elevator having a hood and perforated bottoms beneath said hood, an elevator traveling on said upper bottom and extending within said hood, spouts leading from said hood at angles to each other, and a blast fan acting through said perforated bottoms into said hood.

2. A grain elevator formed with spaced bottoms and also formed with a hood, an elevator traveling on one of said bottoms and extending within said hood, a grain spout leading from said hood, a waste spout leading from said hood at an angle to the grain spout, and a fan communicating with

said hood and adapted to direct a blast of air through one of said bottoms and across said hood to the waste spout.

3. A grain elevator formed with a bottom, an elevator traveling on said bottom, a hood over said bottom and elevator, said bottom being perforated beneath said hood, a valve adapted to close said perforated bottom at times, a grain spout and a waste  
10 spout leading from said hood, and a fan

communicating with and adapted to direct a blast of air across said hood to the waste spout.

Signed by me at Des Moines, Iowa, this third day of February, 1912.

JESSE A. NELSON.

Witnesses:

S. C. SWEET,  
W. W. FINK.