

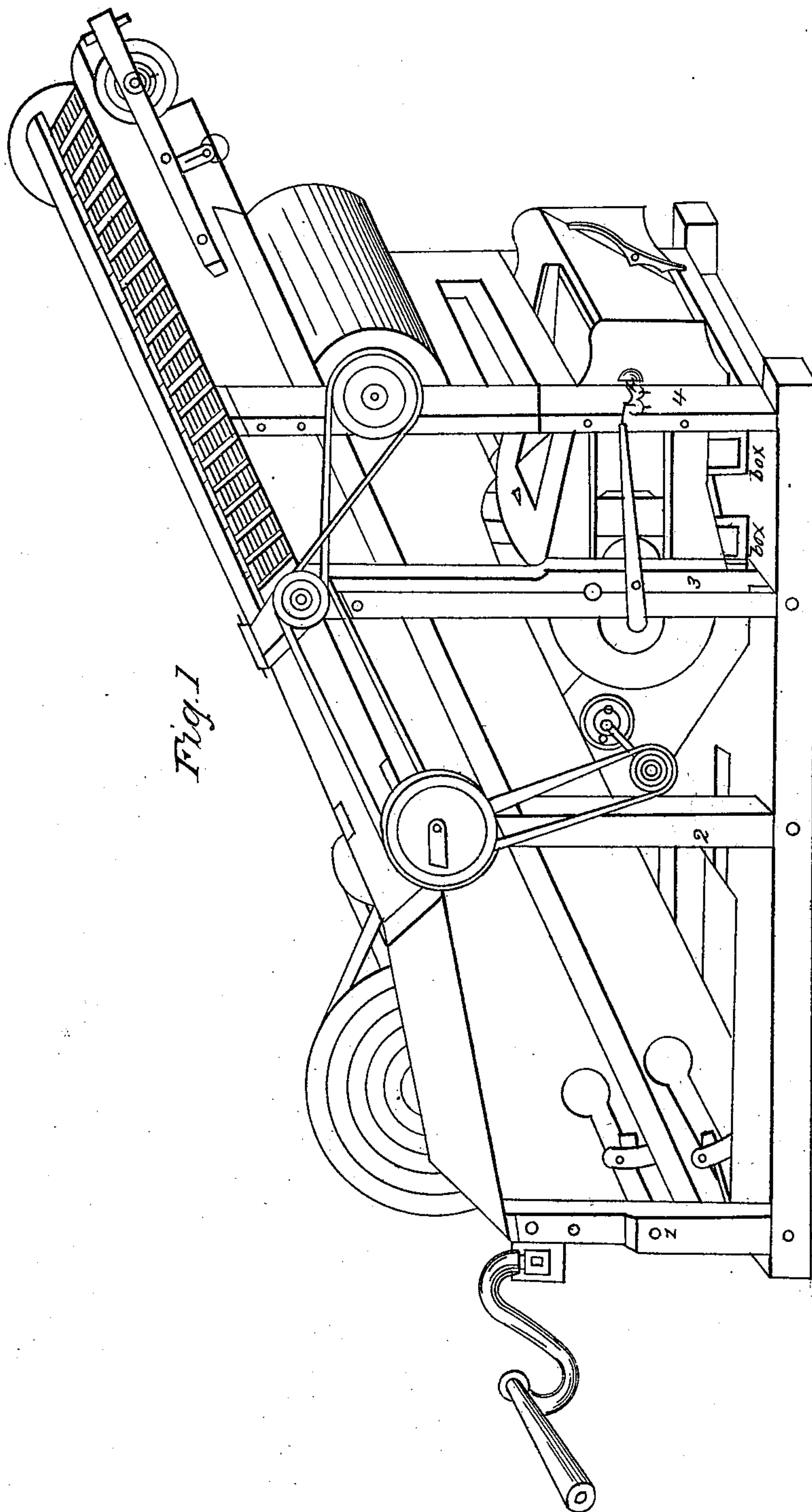
LINHART & McCLAIN.

2 Sheets—Sheet 1.

Thrashing and Cleaning Grain.

No. 6,749.

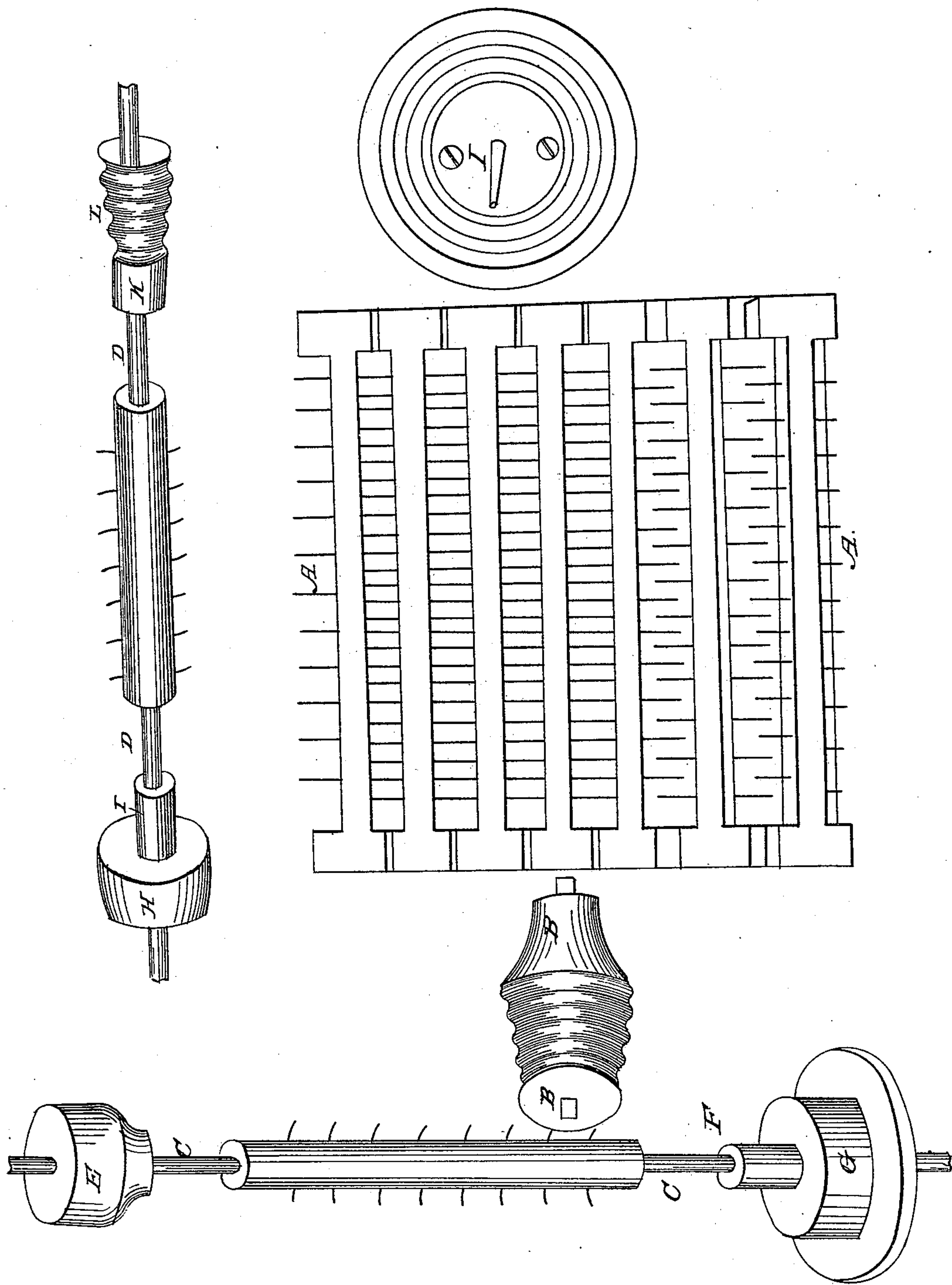
Patented Sept. 25, 1849.



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UNITED STATES PATENT OFFICE.

A. LINHART AND S. McCLAIN, OF FULTON, OHIO.

CONSTRUCTION OF GRAIN-CARRIERS.

Specification of Letters Patent No. 6,749, dated September 25, 1849.

To all whom it may concern:

Be it known that we, ADAM LINHART and SAMUEL McCLAIN, of Fulton, in the county of Stark and State of Ohio, have invented
5 a new and useful improvement on J. A. and H. A. Pitts' machine for cleaning grain and clover-seed; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation
10 of said machine, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective drawing of the original invention of the Messrs. Pitts, with
15 the improvements which your petitioners claim attached to the machine. Your petitioners therefore, hereby disclaim the invention of those parts of the original machine represented in said drawing, and only claim
20 that they have invented a new and useful improvement on said machine, and they do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same; reference being
25 had to the annexed drawings marked figure three, making a part of this specification, and which said drawings represent by sections, the improvements made by your petitioners on said machine. In which A, A,
30 is a longitudinal view of the upper or wire belt, and is constructed in the following manner. It is composed of two hundred cross sloats, thirty inches long, one inch in width, and five-eighths of an inch thick: through
35 which the wires are put, equidistant from each other, two inches, extending from sloat to sloat, and forming an open space of one inch, when working in a straight line. The belt is thirty-four feet long. To each end
40 of each of the sloats, there is a block attached, two inches in length, one and a fourth inches in width, and three-fourths of an inch in thickness. The ends of the belt are fastened together by two small screw
45 bolts. The sloats are connected together by a leather strap on each side of the machine, tacked to the blocks, on the under side; the blocks being curved so as to accommodate them to the pulley over which they pass.
50 The use and application of this belt is to cause a separation of the grain from the straw immediately on leaving the cylinder; by which operation the straw is carried by the belt to the summit of the machine, and
55 there discharged, so as not to interfere with the action of the fan. The original machine

having but one belt, the advantages possessed over it by the addition of the upper or wire belt, consists in a perfect separation of the grain from the straw; thereby preventing the straw from following the grain
60 to the fanning mill. Whereas the original machine having but one belt, could not cause so perfect a separation, but must necessarily discharge a portion of the straw with the
65 grain into the cleaner, thereby obstructing the performance of the fan. B, B, is a taper pulley through which the shaft of the fan extends, having a taper of one inch: being
70 eight and a half inches in diameter at the large end, and seven and a half inches in diameter at the small end thereof; its length being six inches with four grooves cut in it, equidistant from each other so as to admit
75 a twisted strap, by which means the motion of the fan is increased or diminished, and its performance regulated, which is an improvement on the original machine.

C, C, and D, D, are two shaker shafts, with cylinders thirty inches long, and five
80 inches in diameter, with two rows of wire teeth winding longitudinally around the cylinders, and inclining backward, C, C, having sixteen teeth in the two rows placed
85 opposite and equidistant from each other and D, D, having fourteen teeth in the two rows, placed in the same manner, and breaking in the open space of the teeth of C, C. Through each of the cylinders, passes an
90 iron shaft seven eighths of an inch square, of sufficient length to admit of pulleys on each end of the shafts. Pulley E, on shaker shaft C, C, is fourteen inches in diameter and three inches thick. It being the pulley
95 by which the thresher is connected with the cleaner, by a strap thrown over pulley E, and a three inch pulley attached to the shaft of the cylinder of the thresher. Pulleys F and G, on shaker shaft, C, C, are connected
100 together, but vary in size. Pulley F, being four inches in diameter, and two inches and a half on the surface, and is designed for driving the elevators. Pulley G, is ten
105 inches in diameter and two and a half inches on the surface, and connects with shaker shaft D, D, by a strap at pulley H. Pulley H being of the same dimensions of pulley G. To the outside face of pulley G, fly wheel J, is attached, which is made of cast iron with
110 a rim of an inch and a quarter surface, and is twenty inches in diameter. Pulley J on shaker shaft D, D, is designed for driving

the under belt, and is five inches in diameter, and two and a half inches on the surface. Pulley K on shaker shaft D, D, is the same in size with pulley J, and is used and designed to drive the upper belt. The pulleys on both of the belts, being one foot in diameter, and two and a half inches on the surface. Pulley L on the shaker shaft D, D, and connected with pulley K, is six inches in length, and having a taper of one inch, being six inches at the large, and five inches at the small end thereof in diameter, with four grooves cut in it, equidistant from each other, and is used and designed for driving the fan, and is connected with the pulley B, B, by a twisted strap.

The peculiar advantage to be derived from the additional shaker shaft, (the original machine having but one, and that one constructed of boards, and the substitution of the wire teeth for the boards) are as follows: The board shaker shaft in the original machine shoved the straw in a body along the belt, whereas the cylinder shaker, with the addition of another shaker, and the sub-

stitution of the wire teeth, cause a more perfect separation of the straw from the grain, and thus save a large amount of grain, that would otherwise be lost.

Your petitioners also claim as an improvement to the original machine, the following: At the summit of the machine, and underneath it, there are placed two rings, through which, (in case the wind is blowing,) there is placed a pole, twelve feet in length, to which is attached a piece of canvas, extending diagonally to the floor, so as to protect the fan from the effects of the wind, and enable it to perform its duty.

What we claim as our invention, and desire to secure by Letter Patent, is—

The mode of constructing the wire belt or straw carrier, as herein described and represented.

ADAM LINHART.
SAML. McCLAIN.

Witnesses:

S. MOBLY,
THOS. W. CUNNINGHAM.