A. TOWNSEND.

Thrashing Machine.

No. 7,691. Patented Oct. 1, 1850.

Fig: 1.

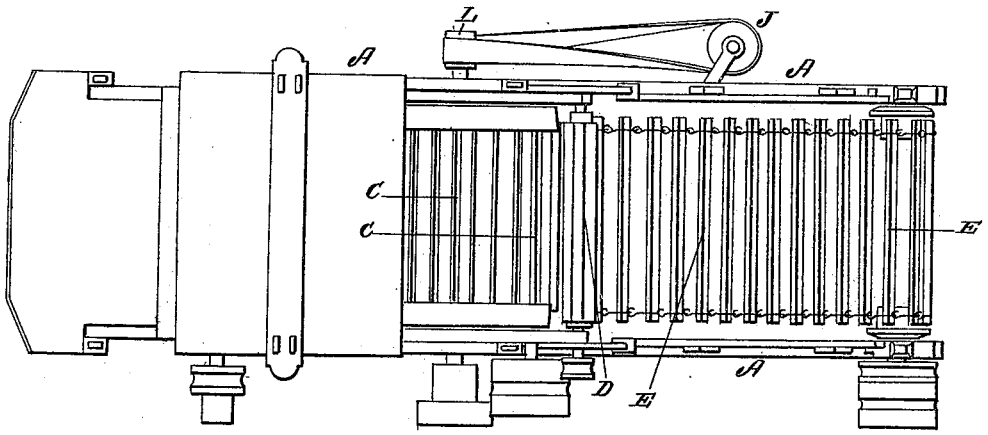
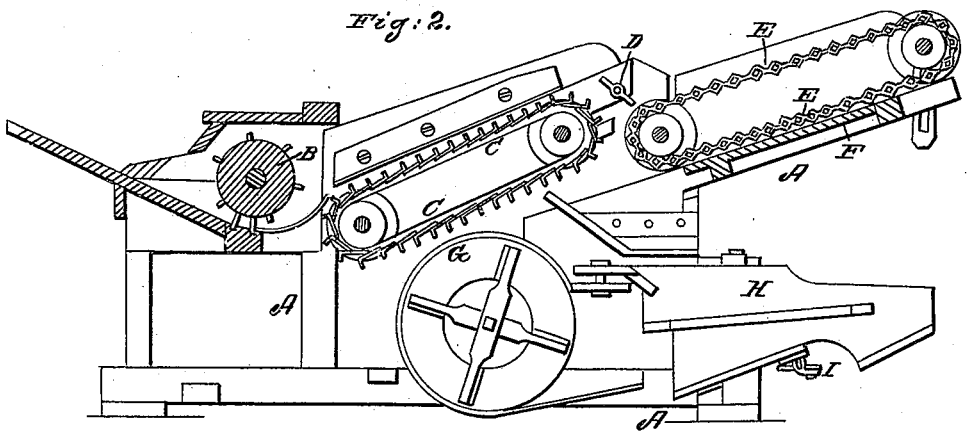


Fig: 2.



UNITED STATES PATENT OFFICE.

ASHLEY TOWNSEND, OF PAVILION, NEW YORK.

CONSTRUCTION OF ENDLESS APRONS IN THRESHING-MACHINES AND GRAIN-CLEANERS.

Specification of Letters Patent No. 7,691, dated October 1, 1850.

To all whom it may concern:

Be it known that I, ASHLEY TOWNSEND, of the town of Pavilion, county of Genesee, and State of New York, have invented a new and useful Improvement in Machines for Threshing and Cleaning Grain; and I do hereby declare that the following is a full and exact description thereof.

The threshing cylinder B is made of heads of cast iron set on a shaft of wrought iron and runs on boxes of cast iron or other metal boxes and is covered with staves of wood or iron and eight or ten rows of teeth set lengthwise about two inches long and set five or six in a row. The concave under the cylinder is made of wood or cast iron with three or four rows of teeth and set so as not to clash with those in the cylinder.

The first or closed apron C is made of sheet iron on a new and improved plan and not subject to wear out as the grain beats against it as it plies from the cylinder. The iron is cut into strips about two and $\frac{3}{4}$ inches wide and crimped into squares and the length of the squares is the width of the apron and each square forms a joint in the apron and at the ends of the square is a block of wood nailed in to keep the grain from falling off from the ends. Or the iron may be bent across the ends which will answer the same purpose. The iron squares are nailed or riveted onto five or six straps of leather or connected by an iron chain so as that each square forms a tight box into which the grain falls as it flies from the cylinder and the straw rests on the upper edge of the boxes and is conducted to the fanning mill where the straw is thrown off from the iron apron by a fly wheel or rotating beater D onto an open revolving apron E.

The fly wheel or rotating beater is made with two wings of iron or wood about five inches wide.

The open apron E is made of slats of wood about five-eighths of an inch square set cornerwise in a strong wire chain one to two inches apart. The iron apron C runs on four wheels six inches diameter. The open apron runs on four wheels seven inches diameter. The use of the open apron E is to finish separating the grain from the straw and conduct the straw out of the machine.

Under the back end of the open apron is a slide or inclined plane F onto which the grain falls through the open apron and is conducted back into the mill by the action of the apron on the inclined plane. The drum G to the mill is two feet four inches diameter. The shaft on which the wings of the fan hang has a small pulley L on the opposite side to the one that drives the mill, two and a half inches diameter and at the back end of the mill near the end of the shoe, is an iron wheel I with an upright shaft which shakes the shoe H and on the same shaft is a pulley J about five inches diameter which is turned by a strap running from the pulley on the wing or fan shaft. The shoe H to the mill is three feet six inches long and takes in a screen two feet six inches wide. The sills to the machine are twelve feet long and framed together with three girts making the frame two feet ten inches wide inside. The first post to the thresher is two feet from the front end of the sill. The 2d post is two feet eight inches from that and three feet two inches high. From the 2d post to the thresher to the first post in the mill is two feet ten inches. To the 2d post in the mill one foot three inches; to the 3d post in the mill two feet four inches; to the end of the sill six inches. Frame to the mill one foot four inches high. The first post on top of the mill that supports the back end of the iron apron is two feet three inches high. The back post on top of the mill that supports the frame that the open revolving apron runs in is one foot eight inches high and set ten inches from the back end of the mill frame. The frame in which the open apron runs is eight feet long framed into the first post mentioned on the mill and rests on the back posts above named. Letters referring to the drawings— A, A, frame work; B, threshing cylinder; C, iron apron; D, fly, or rotating beater; E, open apron; F, inclined plane; G, drum to the mill; H, shoe to the mill; I, iron wheel, and pulley; J, that shakes the mill shoe.

Mode of operation described. The cylinder is turned by a pulley of five inches with a strap or rope connected with the horse-power. And on the same or the other end of the cylinder is a pulley three and a half inches diameter which runs a strap onto a pulley on the wing shaft or fan to the mill of one foot diameter. The wing shaft or fan has on another pulley connected with

the twelve inch one of five and a half inches which drives the iron apron with a cross band running to a pulley of twelve inches at the upper end of the iron apron. The iron apron pulley is made thick enough to run another strap onto the pulley on one of the open apron shafts of one foot which pulley has another connected with it of the same size which drives the fly or rotating beater by a pulley of two and a half inches. The shoe is shaken with a strap running from the small pulley on the left hand side of the wing shaft. The machine may be built with a thresher connected with the same frame or be fitted to any common thresher in use. The machine may be made larger or smaller according to the wishes of the operator.

What I claim as my invention and desire to secure by Letters Patent is—

The method of constructing the closed metallic apron C for separating grain in the manner described.

ASHLEY TOWNSEND.

Witnesses:
F. S. BIGELOW,
GILMAN BENNETT,
M. PARSONS.