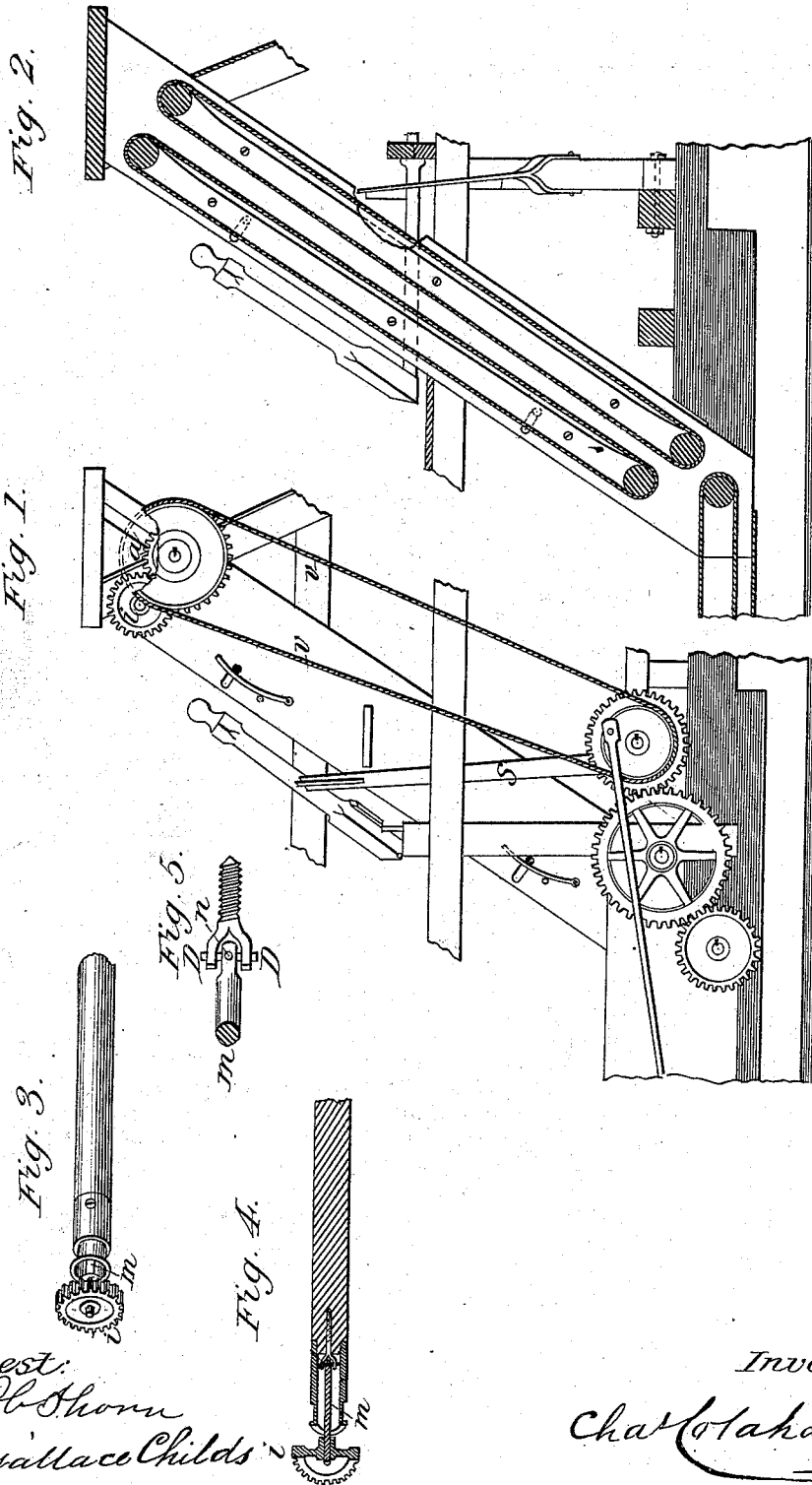


C. COLAHAN.
Harvester.

No. 215,322.

Patented May 13, 1879.



Attest:
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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **215,322**, dated May 13, 1879; application filed June 3, 1878.

To all whom it may concern:

Be it known that I, CHARLES COLAHAN, of Cleveland, county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Harvesters, of which the following is a specification.

My invention relates more especially to the elevating aprons or carriers for elevating or carrying the straw from the platform, on which it falls as it is cut by the harvester, and elevating the same to the receptacle for binding.

Figure 1 represents a rear view in elevation. Fig. 2 represents a vertical transverse sectional view. Figs. 3, 4, and 5 represent different views of the motive or driving rollers, over which the conveying aprons or belts pass. Said rollers are parallel and usually located at the top of the elevator-frame, power being transmitted from the main drive-wheel of the machine by the usual devices, while the rollers are immediately actuated from chain or belt *v*, fixed to the shaft of the lower roller, revolving in boxes, while on same shaft is attached a spur-gear, *a*, which actuates a corresponding gear on the shaft of the corresponding roller.

In my invention, the one roller being set in stationary boxes, the shaft thereto is rigidly secured, while the other roller, *i*, being yielding or elastic, the shaft *m* thereto is attached by a universal flexible joint, D D, in Fig. 5, inside of said roller, at a point distant from the gear, said roller being hollow, to admit of the vertical rising and falling of said carrier. This roller, it will be observed, passes through the inside guides or strip over which the apron runs at the sides, to admit of the vertical play of said guide with roller and apron, and the support at the outer end of shaft *m* admits of

its free oscillation, and its wheel or gear will rock and roll while actuated in its revolving movements by the corresponding gear. Thus I secure an elastic or floating upper elevating-apron in a compact close form.

Said elevator or compressing apron is supported so as to secure a free open space parallel with its corresponding lower apron or elevator, and may be held thereto by any ordinary appliance such as springs on each side thereof, while it is free to rise in its revolving movement when an unusual quantity of straw or grain is being elevated, and is not liable to choke or clog up, and thereby stop the machine, and large or small quantities of straw pass up through the elevators with equal certainty, while its elasticity prevents the crushing of the heads in tangled ripe grain or thrashing it in elevating.

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

1. The combination of the floating apron, the side pieces of its frame, the yielding actuating-roller journaled in said side pieces at the head thereof, the oscillating gear-wheel and its shaft, and the universal-joint connection between the roller and the shaft, located within the journals and protected by the cylindrical recess of the roller.

2. The oscillating gear-wheel, in combination with the fixed gear-wheel, the vertically-playing pulley, and the floating apron, substantially as shown, and for the purposes described.

CHAS. COLAHAN.

Witnesses:

WALTER C. LARNED,
EDWIN C. LARNED.