

D. CAMPBELL.
Thrashing Machine.

No. 95,423.

Patented Oct. 5, 1869.

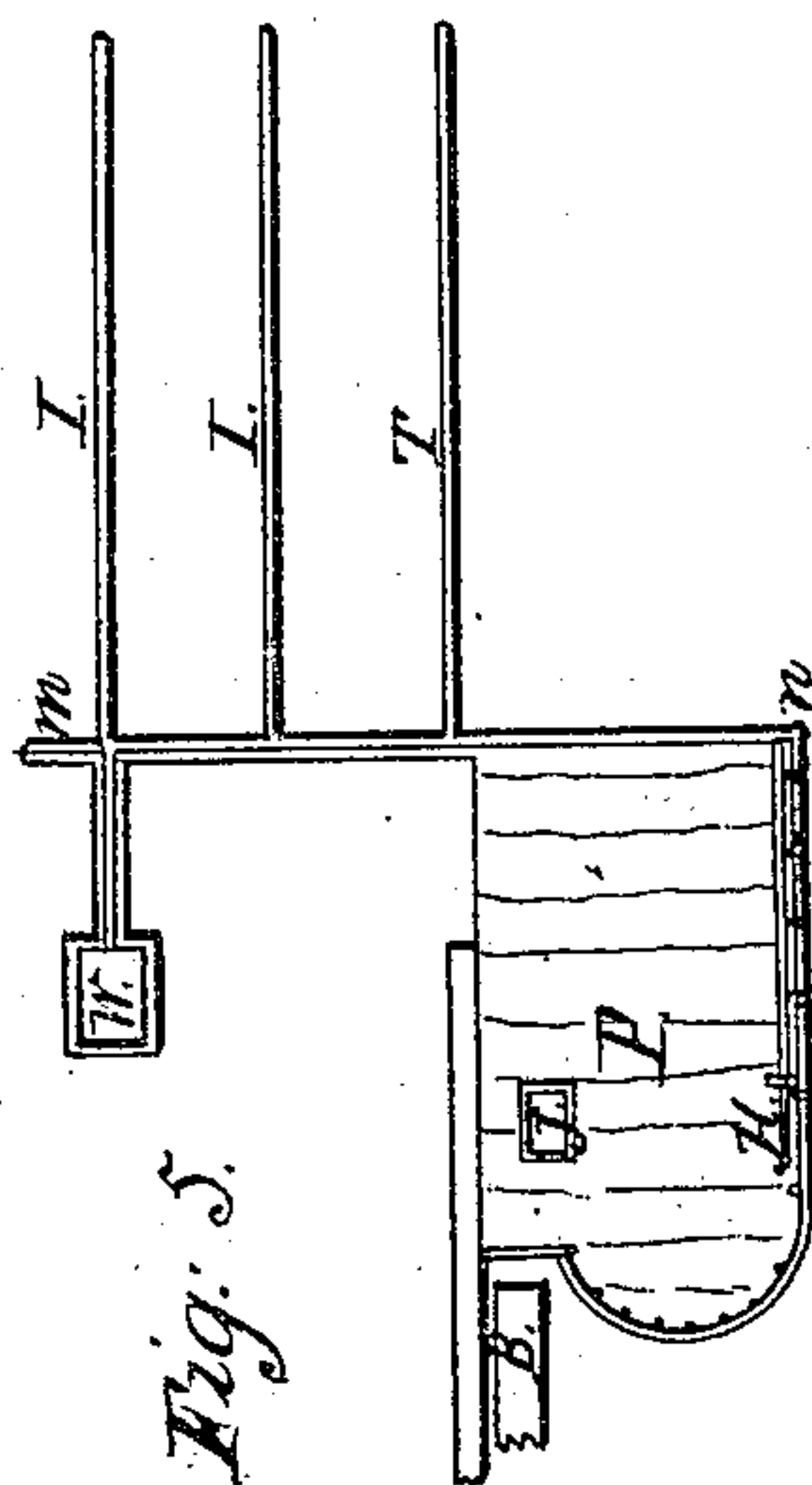


Fig. 5.

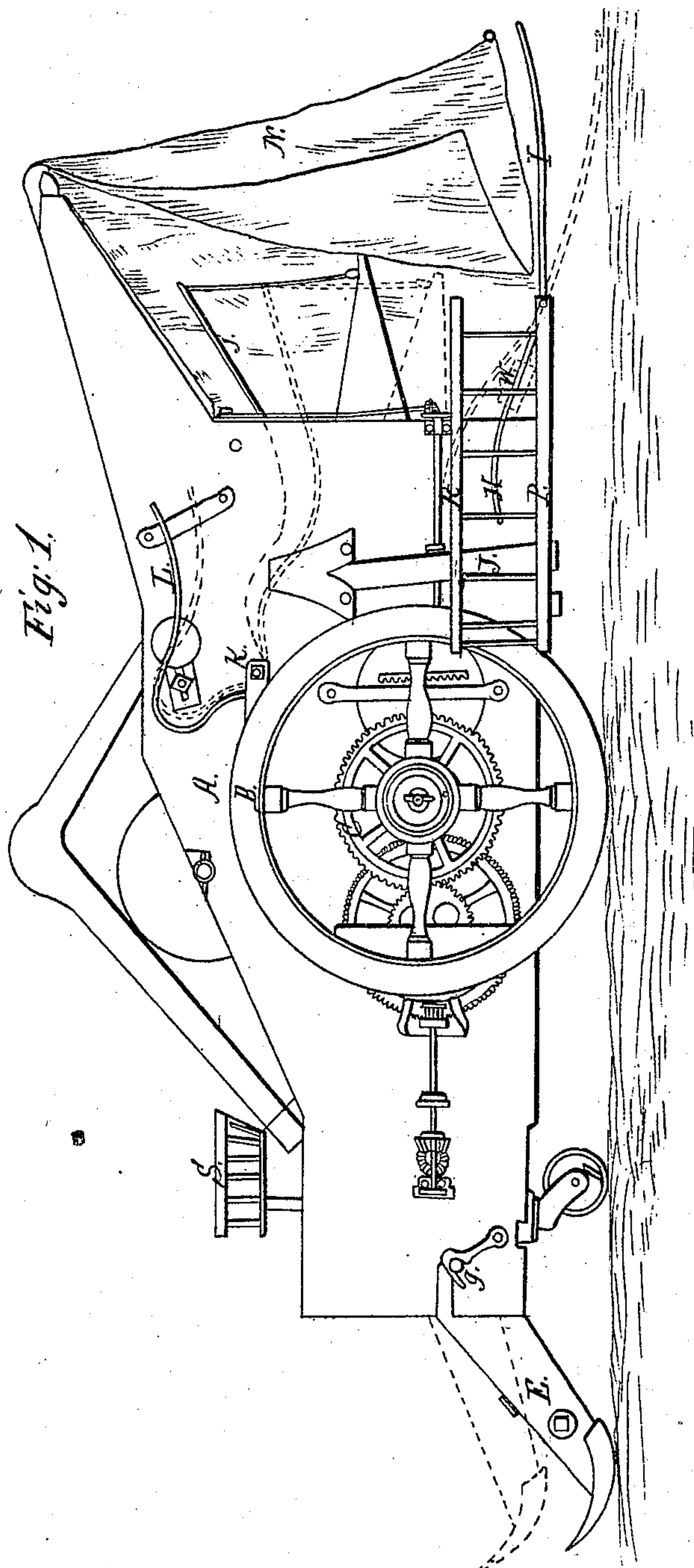


Fig. 1.

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C. A. West.
O. W. Bond

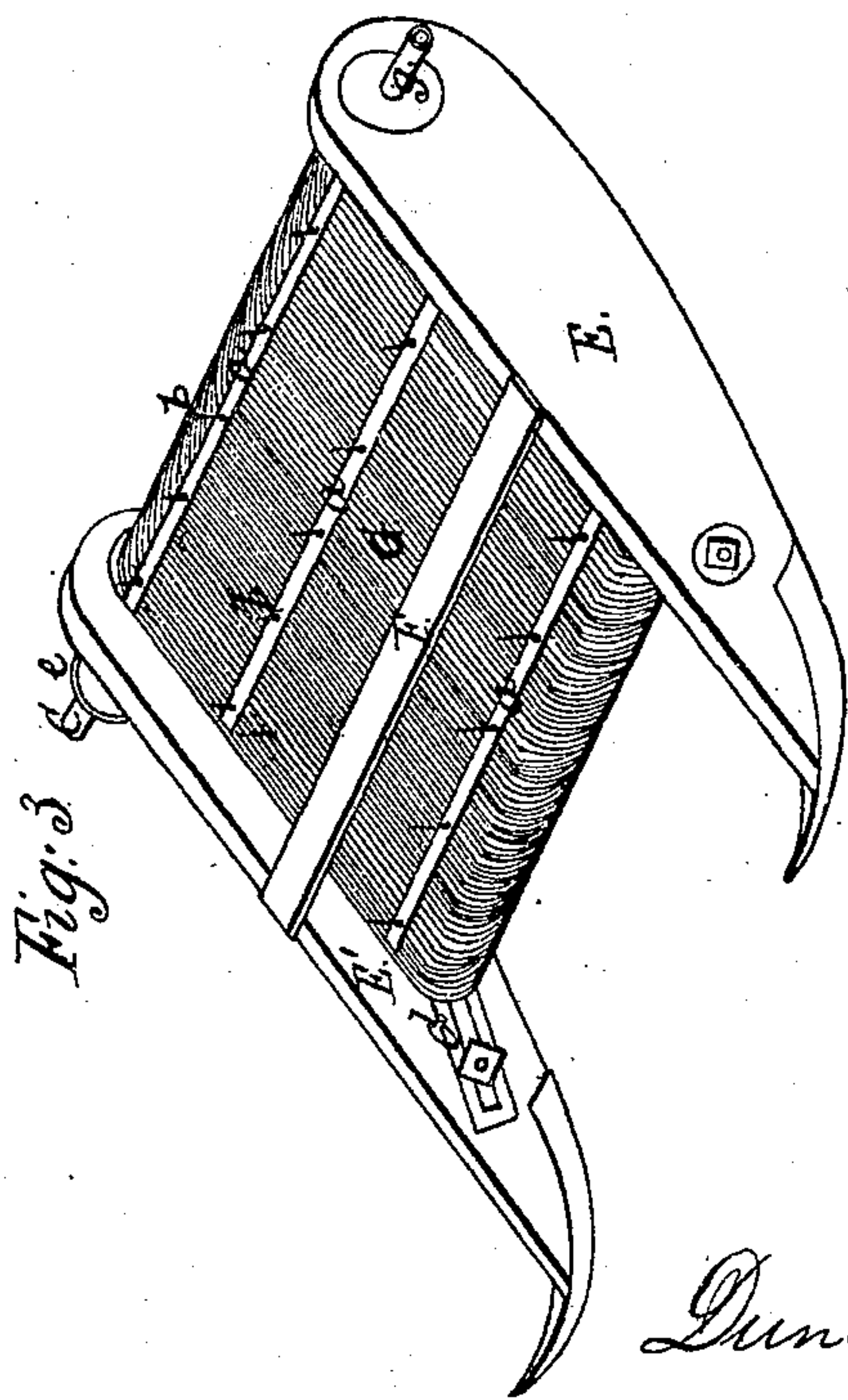
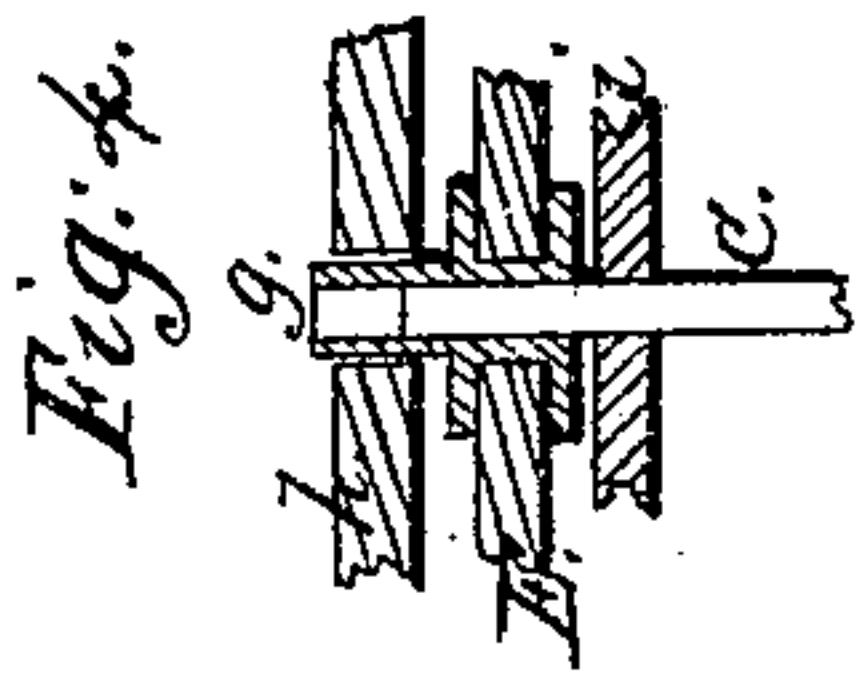
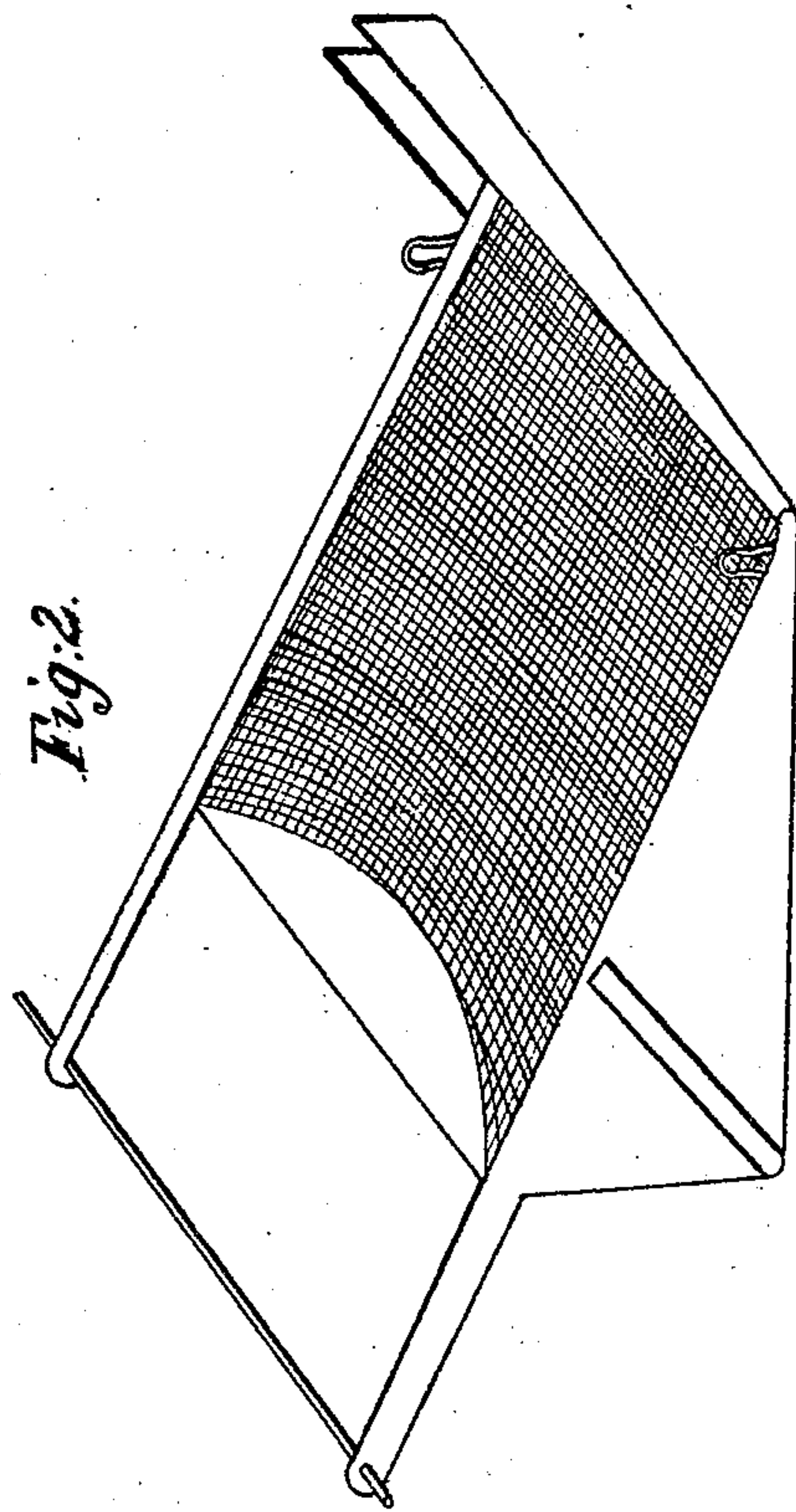
Inventor.
Duncan Campbell.

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Thrashing Machine.

2 Sheets—Sheet 2.

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Duncan Campbell

United States Patent Office.

DUNCAN CAMPBELL, OF INDIAN TOWN, ILLINOIS.

Letters Patent No. 95,423, dated October 5, 1869.

IMPROVEMENT IN THRESHING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, DUNCAN CAMPBELL, of Indian Town, in the county of Bureau, and State of Illinois, have invented certain new and useful Improvements in Threshing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, consisting of two sheets, in which—

Figure 1, sheet 1, is a side view.

Figure 2, sheet 2, a view of the sieve.

Figure 3, sheet 2, a detail view of the gatherer.

Figure 4, sheet 2, a detail in section, showing the shaft and bearings at one side of the gatherer.

Figure 5, sheet 2, a detail of the platform where the grain is sacked, and the devices for discharging the straw.

In binding, shocking, and stacking grain, and in passing the same from the stack into the threshing-machine, a vast amount of labor is required.

The object of my invention is to save this labor, which I accomplish by constructing a self-feeding field-thresher, a machine which gathers the cut grain, carries it to the cylinder, and threshes it as the machine is being drawn through the field; the power being communicated to the machine from the wheels upon which it is placed.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents the body of my machine, the frame of which is so constructed that it is supported upon a single axle, centrally located, upon which are two wheels, one of which, B, is shown.

By means of well-known devices, both wheels are so connected to the axle that they operate as driving-wheels, driving the machinery, but so acting only when having a forward movement.

C is a cog-wheel permanently attached to the axle, which, through suitable intermediate gearing, drives the cylinder, the other portions of the machinery being driven in the usual manner, except as otherwise specified.

The interior of the machine is substantially like ordinary threshing-machines. The gearing which drives the machinery I locate along the outside of the machine, in compact form, substantially as shown, so that the same may be boxed, to prevent accidents.

I so arrange the machine upon the axle that it is nearly balanced thereon, thus bringing nearly all the weight upon the wheels.

D is a caster-wheel beneath the front end of the machine, serving the ordinary purposes of such a wheel.

E, fig. 1, represents one side of the gatherer, which takes up the cut grain, and carries it to the cylinder.

Its construction will be understood from an inspection of fig. 3, sheet 2.

E E' are the sides of the gatherer, shaped somewhat like runners, pointed at their lower ends, and so turned up that they will not run into the ground. These ends should be shod with metal, to prevent wear.

F is a cross-bar. These sides and cross-bar form a frame, within which the operating-parts of the gatherer are placed.

G is an endless apron, to which a number of transverse slats, *a*, is secured, which slats are provided with a sufficient number of teeth, *b*.

This apron runs over a shaft at each end, one end of one of which is shown at *c*. The lower one runs in bearings *d*, in which are slots.

Each bearing is secured to the side by means of a bolt and nut, and by changing the position of these bearings, the lower end *g* of the apron can be adjusted in any required position.

Within the sides E E', and upon each shaft, are pulleys, over which run bands, (or chains may be used, running over suitable wheels,) to which the apron is secured, and by which it is carried; the shaft *c* being driven by a band from a pulley upon the shaft of the cylinder running over the pulley *e*, or by suitable gearing.

Near the upper end of each side-piece E E' is a bearing, one of which, *g*, is seen. They are permanently secured to their respective side-pieces passing through the same. *g* is so constructed as to furnish a bearing on the inside of E for one end of the shaft *c*. The other end of this shaft passes entirely through the other bearing.

The construction of the bearings will be seen in fig. 4—*c* being the shaft; *g*, the bearing; *i*, the pulley over which the band carrying the apron passes; and *h*, the side of the body of the machine.

By this arrangement the shaft *c* moves freely in these bearings, while the whole gatherer is movable, its position conforming to inequalities in the ground, and when desired, in passing from one field to another, it can be raised and secured away from the ground.

The grain can be carried to the cylinder without the use of the apron, the slats *a*, with their teeth, being secured to suitable bands, but I prefer to use the apron, it having, among other things, this advantage—shelled grain will be caught upon the apron, and against the slats, and be carried to the cylinder.

I adjust the angle at which the sieves are placed as follows:

The rear end of the frame, in which the sieves are placed, is supported by cords or chains attached to the outer ends of two rods or arms *j*, one being placed on each side of the machine, and within it.

These arms are secured to a shaft passing through the machine, the position of which is indicated by *k*.

This shaft is operated by the lever *L*, and by raising or lowering the lever, the angle of the sieves can be adjusted. The lever is held in any desired position by any of the well-known methods.

Near the rear of the machine, and where the grain is discharged when threshed, I place a platform, *P*, upon which the person bagging the grain can stand.

The grain is carried up the spout *J*, and discharged at *o*, or *o'*, as desired, into bags, in the usual manner; the bags standing on the platform *P*, and being thrown off at the rear when filled.

R is a railing around the platform.

The straw falls upon the fingers *I*, (see fig. 5,) which are secured to a cross-rod or bar, *m*, one end of which is pivoted to the platform at *n*, and the other end is pivoted at the opposite side of the machine.

H is an arm or lever fastened to the bar *m*, by the use of which the fingers *I* can be raised or lowered at pleasure.

If the farmer desires to save his straw, it can be deposited in piles, at suitable intervals, by lowering the fingers; if he does not wish to save it, the fingers may be down constantly, and the straw will be continuously distributed over the field, or the fingers or drop may be removed. The fingers may be counterpoised by the weight *w*.

The levers *H* and *L* are both within reach of the person bagging the grain.

If the sieves are made somewhat concave, as shown in fig. 2, the machine may be used on ground somewhat sloping without throwing the grain over the sides of the sieves.

On the front of the machine is a driver's seat, *S*.

Around the rear of the machine I place a cloth screen or curtain, *N*, the upper portion of which is attached directly to the machine, while the lower portion or edge is attached to a rod or rods secured to the machine at or near the bottom.

In fig. 1, one side of this screen is thrown back, to show the sieves.

In windy weather the screen will protect the grain, as it falls upon the sieves, from the wind, and will also

protect the straw from the wind. In still weather, the curtain will not be required.

When my machine is to be used, I think it desirable to have the grain so deposited upon the stubble, as cut, that the heads will first be taken up by the gatherer. Reaping-machines can readily be arranged so as to do this, laying the grain in a continuous line, the grain falling on the stubble at right angles, or nearly so, with the sickle-bar.

A tongue or pole is to be attached to the front of the machine.

In use, my machine is to be drawn through the field along and over the line of cut grain, which will be taken up by the gatherer, and carried to the concave and cylinder, and be threshed while the machine is in motion.

Only two men will be required to run the machine, and I think four horses will be all that will be required to effectually do the work.

By making the gatherer angular, the bands running over travellers, the grain may be first carried up and then down an incline to the concave, but I do not consider this form necessary.

Caster-wheels may be placed under the lower ends of the side-pieces of the gatherer.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is as follows:

1. The hinged or pivoted gatherer *E*, when provided with a revolving apron, *G*, and operating independently of the threshing-cylinder or straw-carrier, substantially as specified.

2. The platform *P*, in combination with a threshing-machine, substantially as and for the purposes described.

3. The arms *j* and lever *L*, when secured to a shaft, and arranged and operating substantially as specified.

4. The fingers *I* and rod *m*, in combination with the lever *H* or weight *w*, for depositing the straw in heaps, as described.

DUNCAN CAMPBELL.

Witnesses:

E. A. WEST,
O. W. BOND.