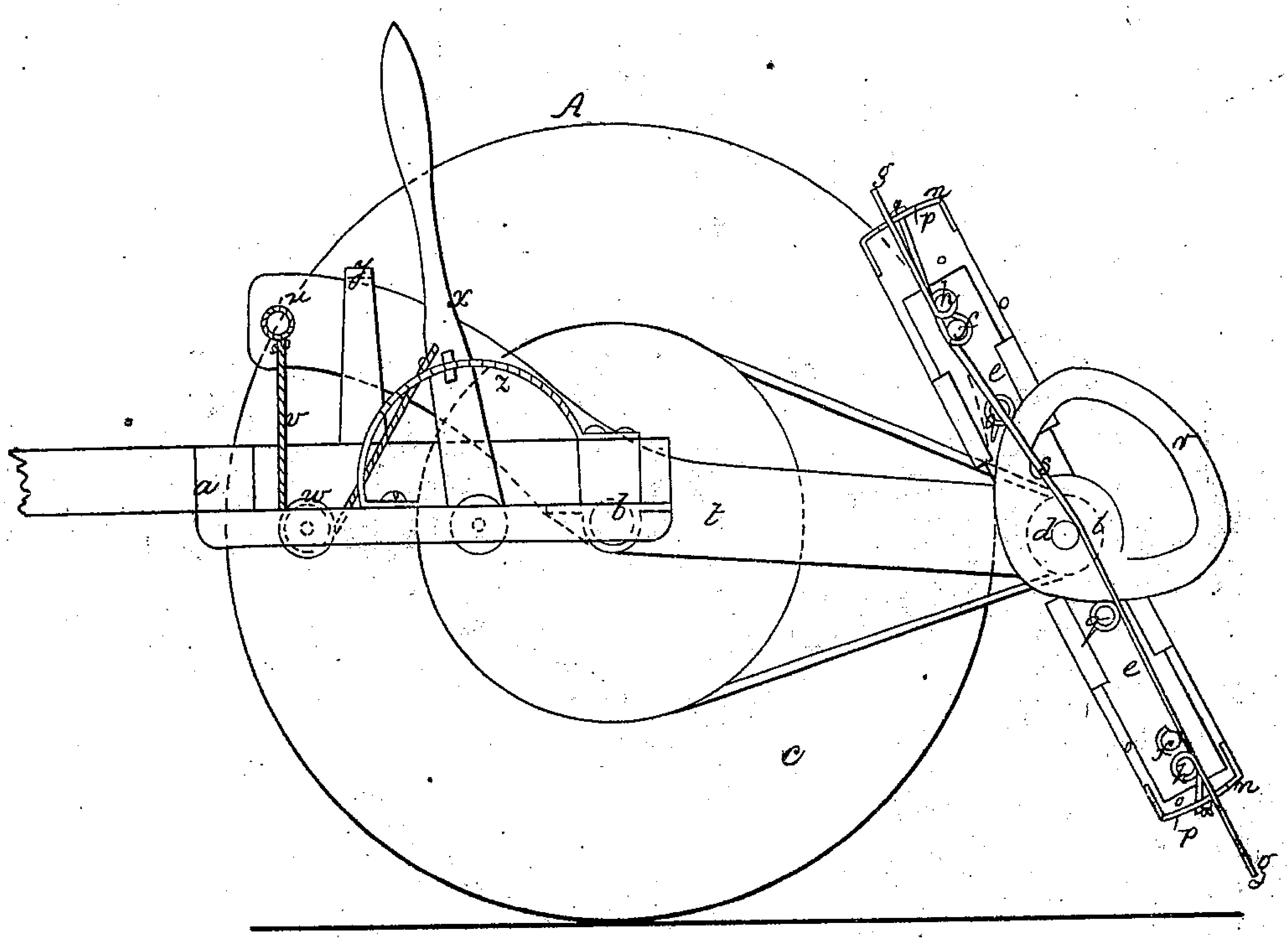
E. D. & O. B. Reynolds.

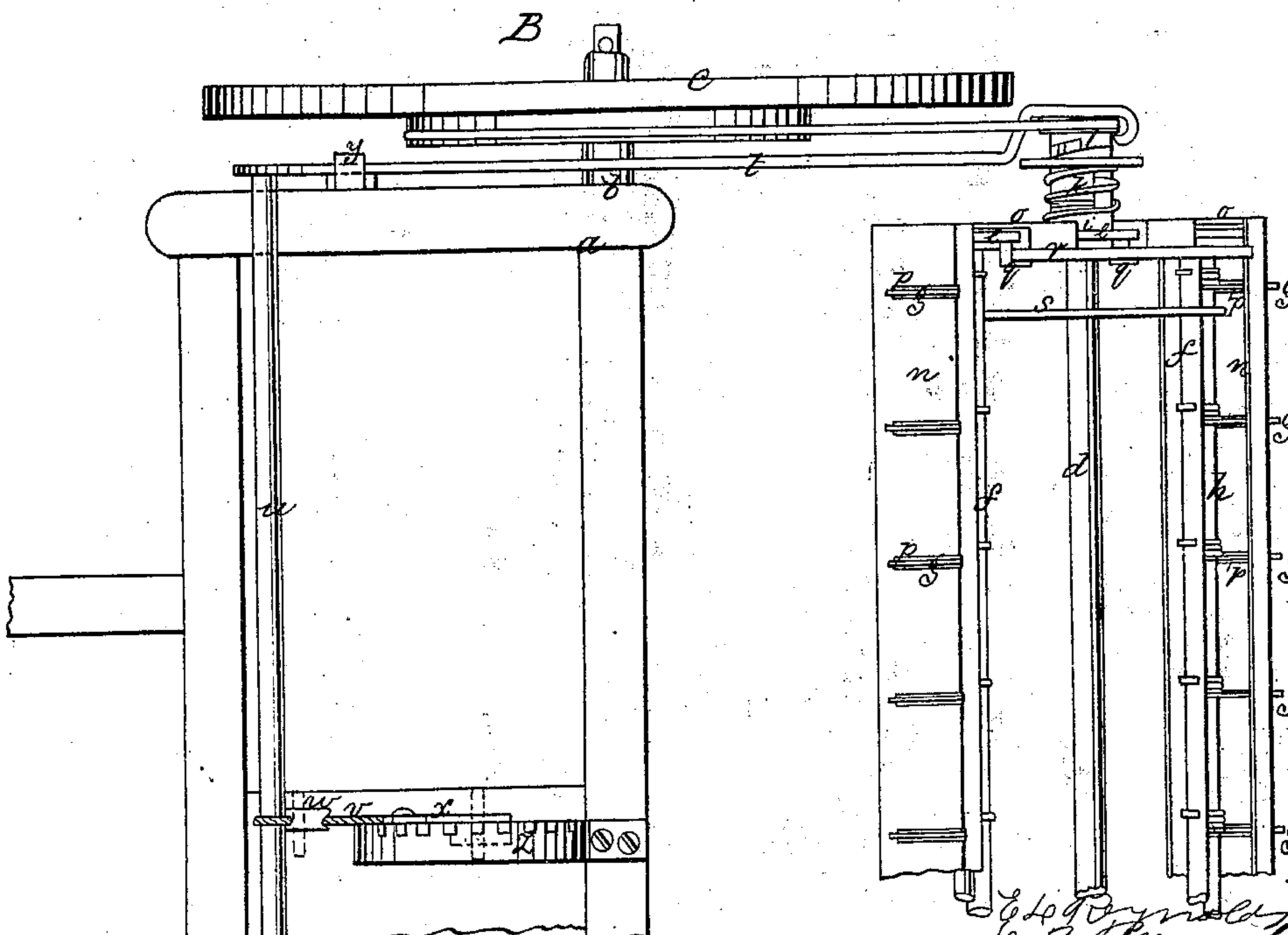
Tedder.

No. 87066. Patented Feb. 16, 1869.

A



B



Witnesses
J. N. Kidder.
M. W. Frothingham.

Inventor
E. D. Reynolds
O. B. Reynolds,
by their Attys
Crosby Halsted & Gould

United States Patent Office.

EDMUND D. REYNOLDS AND O. BRADFORD REYNOLDS, OF NORTH BRIDGEWATER, MASSACHUSETTS.

Letters Patent No. 87,066, *dated February* 16, 1869.

IMPROVEMENT IN HAY-SPREADERS.

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

To all whom it may concern:

Be it known that we, EDMUND D. REYNOLDS and O. BRADFORD REYNOLDS, of North Bridgewater, in the county of Plymouth, and State of Massachusetts, have invented an Improved Hay-Tedder; and we do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of our invention sufficient to enable those skilled in the art to practise it.

Our invention has reference to the construction of that class of hay-tedders in which several series of revolving sets of teeth are employed, each set of teeth springing from a rod, and the several rods being supported upon the ends of radial arms, and revolving around a common or central shaft.

In our machine, we make the tedder-teeth stationary, with respect to the rods upon which they are supported, excepting so far as they spring, by virtue of their flexibility and elasticity, but we employ, in connection with each set of teeth, a reciprocating clearer or stripper, by which, after the hay has been lifted and thrown forward, by either set of the teeth, the clearer moves outward, to the points of the teeth, stripping therefrom all hay which may twist about or adhere to the teeth.

It is in this construction that our invention primarily consists.

The drawings represent a hay-tedder embodying our improvement.

A shows a vertical section of the machine.

B is a plan of one side of the same.

a denotes the carriage-frame, the axle, *b*, of which is mounted on wheels, *c*, which are geared or belted to and drive the tedder-mechanism.

d denotes the tedder-shaft, having at or near its opposite ends, radial arms *e*, which turn loosely upon the shaft, each two arms in line supporting a cross-rod, *f*, which carries a series of tedder-teeth or forks, *g*, the teeth being preferably coiled around another rod, *h*, as seen in the drawings.

The arms *e*, at each end of the shaft *d*, radiate from a hub, *i*, which turns loosely on the shaft, which hub has on one face, teeth projecting into sockets in a clutch-pulley, *k*, which clutches with a pulley, *l*, belted to a pulley on the adjacent wheel *c*, the pulley-teeth slipping by the clutch-teeth, when the wheels are backing, but rotating the clutches, and with them the arms *e*, the tedder-rods and tedder-teeth, when the carriage is driven forward, as will be readily understood.

Both wheels *c* may be geared or belted to the tedder-mechanism, or only one, as circumstances may require.

For each set of tedder-teeth, we use a clearer or stripper, *n*, constructed and arranged to operate as follows:

Each stripper is made of a thin plate, placed outside of the ends of the arms *e*, and having, at its opposite ends, projections *o*, which are flanged over, and slide loosely upon the arms *e*.

In line with each tedder-tooth, the stripper-plate has a cross-slot, *p*, through which the tooth projects, and in which it springs, as the teeth press against the hay.

A pin, *q*, projects inwardly from each slide *o*, and as the arms *e* revolve, the opposite pins for each set of tedder-teeth, pass over a stationary peripheral cam, *r*, or through a cam-groove of similar curvature, the diametrically-opposite clearer-plate being connected by springs *s*, to keep the pins against the cams, when peripheral cams are used.

The cams are so formed, that as or before each set of tedder-teeth, in revolving, approaches the ground, the clearer-plate of said teeth is drawn back, leaving the teeth projecting therefrom nearly their full length, as seen near the ground-line at A, the teeth remaining thus projected until they pass under the shaft, and rise above the hay on the ground, carrying with them the hay against which they strike.

As the teeth rise behind the shaft, the cams throw out the clearer to or nearly to the ends of the teeth, and strip therefrom all hay which has become attached to or interlocked with the tedder-teeth.

The apparatus, both as to construction and operation, is very simple, and not liable to become disarranged, and is inexpensive, while its efficiency in turning hay is beyond that of any machine now in use, so far as we are aware. We have used the machine, and find it every way practical.

The tedder-shaft *d*, we prefer to mount on a rocker-frame, rocking on the axle *b*, the cross-bar *u*, which connects the two rocker-arms *t* of the frame, having a chain, *v*, which passes under a sheave, *w*, to a hand-lever, *x*, which lever is pivoted to the carriage-frame, and carries a tooth which engages with the teeth of a rack, *z*.

The weight of the tedder-mechanism carries it toward the ground, and it is raised out of action, or is adjusted in height, by means of the lever and rack.

Stops *y* may be used to arrest the tedder-shaft at the proper height above the ground.

We claim, in combination with one or more sets of revolving tedder-teeth, a reciprocating clearer or clearers, arranged to operate substantially as described.

EDMUND D. REYNOLDS.
O. BRADFORD REYNOLDS.

Witnesses:

J. R. PERKINS,
HENRY SOUTHWORTH.