R. M. PIERSO.

STALK CUTTER.


Fig. 1. Fig. 2. Fig. 3. Fig. 4.

WITNESSES:
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A. G. Luce.

INVENTOR:
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BY
M. T.

ATTORNEYS.
To all whom it may concern:

Be it known that I, ROBERT M. PIERSON, of
Mayesville, in the county of Sumter and State
of South Carolina, have invented a new and
useful Improvement in Stalk-Cutters, of which
the following is a full, clear, and exact descrip-
tion, reference being had to the annexed draw-
ings, forming part of this specification.

My invention relates to one-wheeled cutters
for cutting cotton and other stalks into small
pieces as they stand in the field; and the in-
vention consists of the novel construction here-
inafter described and claimed.

In the drawings, Figure 1 is a side eleva-
tion of my stalk-cutter partly broken away.
Fig. 2 is a plan view of the same, showing a
duplicate attachment. Fig. 3 is a detail view
of a revolving cutter; and Fig. 4 is a modi-
fied form of gearing. Figs. 5 and 6 are plan
views of the attachment and stalk-cutter prop-
er, respectively, showing the same detached
from each other.

A indicates any suitable beam or frame,
which is to have handles \( a \) like plow-handles,
and \( B \) is a wheel supporting the same. The
wheel \( B \) is shown as extending up through
an opening, \( C \), in the beam, and the axle of
the wheel carries a bevel-gear, \( D \), which meshes
with a bevel-gear, \( E \), supported by a horiz-
ontal shaft, \( F \), which is supported on top of
the beam \( A \). The outer end of the shaft \( F \) is
provided with a bevel-gear, \( G \), which meshes
with a bevel-gear, \( H \), supported by a vertical shaft,
\( I \), which carries the revolving cutters \( J \). In
order that the cutters may cut outwardly from
the beam, the gear \( H \) is arranged below the
gear \( G \). The revolving cutters are supported
at their centers, and have their ends curved
right and left, respectively, as shown, being
spaced on the shaft \( I \) by the sleeves \( K \) and
the beam through which said shaft passes.
This shaft \( I \) is supported at its ends by the
arms \( L \), which are secured to the beam. One
of the sleeves \( K \) is to be adapted to serve as
a bearing for one end of the shaft \( F \), the other
end being supported in a bearing attached to
the beam \( A \), as shown. At the side of the
beam is an arm, \( M \), for supporting the outer
ends of the stationary cutters \( N \). These cut-
ters have concave cutting-edges, and are
secured at their ends by the shaft \( I \), above
described, and a vertical shaft, \( O \), parallel with
the latter, and which is supported in the outer
end of the arm \( M \). The revolving and the sta-
tionary cutters are to cut with each other
like the blades of a pair of shears, they being
arranged in pairs one above another. Any
number of such pairs of cutters may be em-
ployed, according to the height of the stalks to
be cut; and instead of forming each cutter en-
tirely of steel, the body of the cutter may be
made of iron, and steel cutting-blades may be
removably secured thereto. With this con-
struction as the machine moves forward in a
line for bringing a row of stalks within range
of the cutters the stalks will be cut by the
concave edges of the revolving cutters and be
drawn against the forward moving concave
dges of the stationary cutters, so that they
cannot escape from the cutters until they are
cut into pieces, when they will pass rearward
through the space between the series of cut-
ters.

The above construction constitutes a cutter
for a single row of stalks; but it may be con-
verted into a double cutter at will by an at-
tachment consisting of a series of stationary
cutters suitably connected to the left-hand side
of the beam. This attachment consists of a beam,
\( A' \), having an arm, \( M' \), like the arm \( M \) in all
respects, and having revolving and stationary
cutters, the former of which revolve in an op-
posite direction from that of those above de-
scribed. These cutters receive their motion
from the shaft \( F \) by means of a shaft, \( F' \), which
is connected to the latter by a coupling, \( P \).
The shaft \( F' \) is provided with a bevel-gear, \( G' \),
gearing with a bevel-gear, \( H' \), on the vertical
shaft \( I' \) which carries the revolving cutters \( J' \).
To secure the left-hand action of the cutters,
\( J' \), the gear \( H' \) is located above the gear \( G' \).
This attachment is adjustably connected to the
beam \( A \) by the two slotted bars \( Q \), which are
bolted to the beam \( A \), and the screw-bolts \( R \),
which pass through the beam \( A' \), in order that
the machine may be adjusted to suit rows of
any usual distance apart. To accommodate
the shafts \( F \) to such adjustment, the coupling
\( P \) is to consist of a sleeve and set-screw or
equivalent device to allow the shafts to be
100 coupled long or short, as may be required.

Instead of having the revolving cutters
adapted to cut outwardly against stationary
cutters which are set off at the side or sides of

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STALK-CUTTER.


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the beam, they may be adapted to cut inwardly against stationary cutters, set inward from the said cutters. In the latter case a guard or guards may be employed for guiding the stalks in between the cutters.

In Fig. 4 I have shown a simpler means of driving the upright cutter-shaft from the driving-wheel, consisting of a chain belt, S, the direction of which is deflected from a vertical to a horizontal plane by guides T.

The guides may consist of a pair of sheaves.

I do not broadly claim a stalk-cutter having revolving blades; nor do I broadly claim a series of cutters for cutting standing stalks in pieces.

What I claim is—

1. The combination, with the main frame and its driving mechanism and cutters, of the duplicate attachment consisting of a separate frame carrying cutters, and adjustable means for setting said frames nearer to or farther from each other, substantially as shown and described.

2. The frame having the arm M at one side, the stationary cutters having their outer ends supported by said arm, and the revolving cutters supported at the inner ends of the stationary cutters, said cutters having concave edges, and being arranged in pairs, one above another, and means for driving the revolving cutters, substantially as shown and described.

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Witnesses:

A. G. Lyne,

Solon C. Kemon.