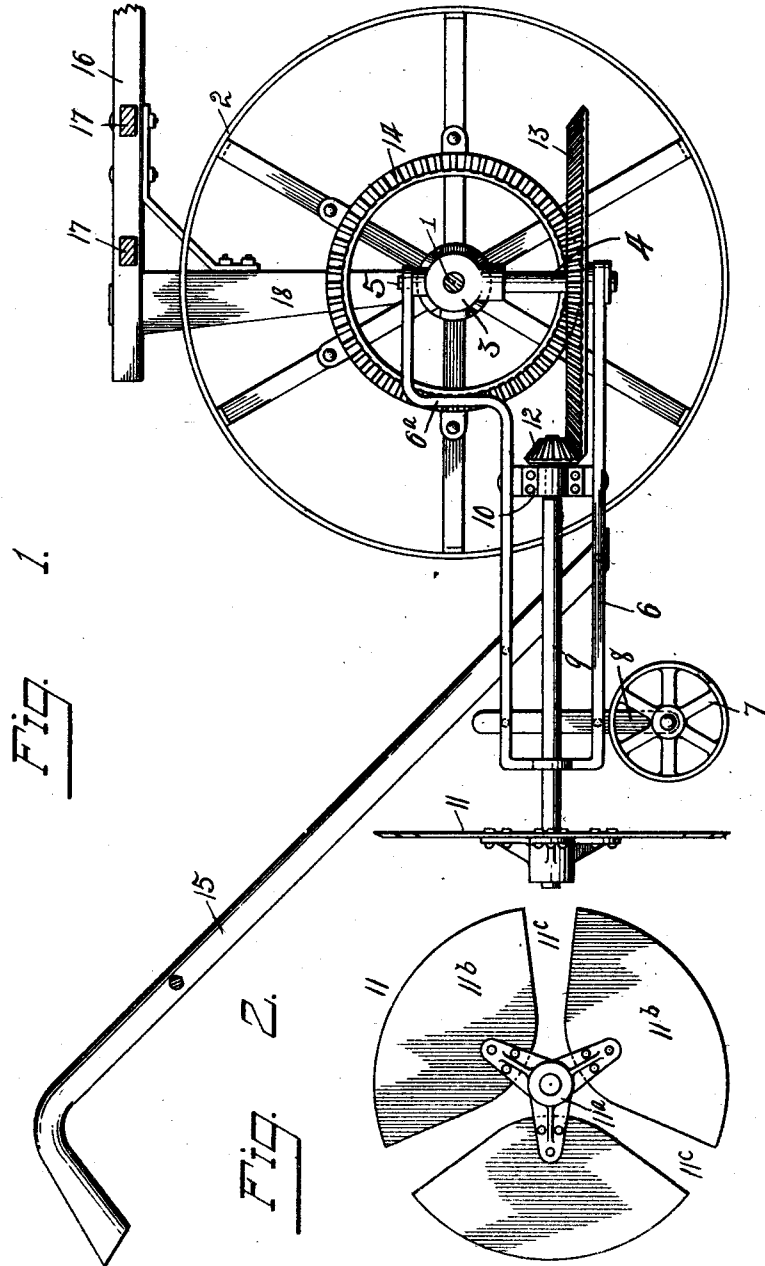


C. A. & C. L. VOLZ.
 BEET BLOCKER AND COTTON CHOPPER.
 APPLICATION FILED AUG. 19, 1912.

1,065,485.

Patented June 24, 1913.

2 SHEETS—SHEET 1.



WITNESSES:

E. H. Bill
 S. T. Klotz

INVENTORS:

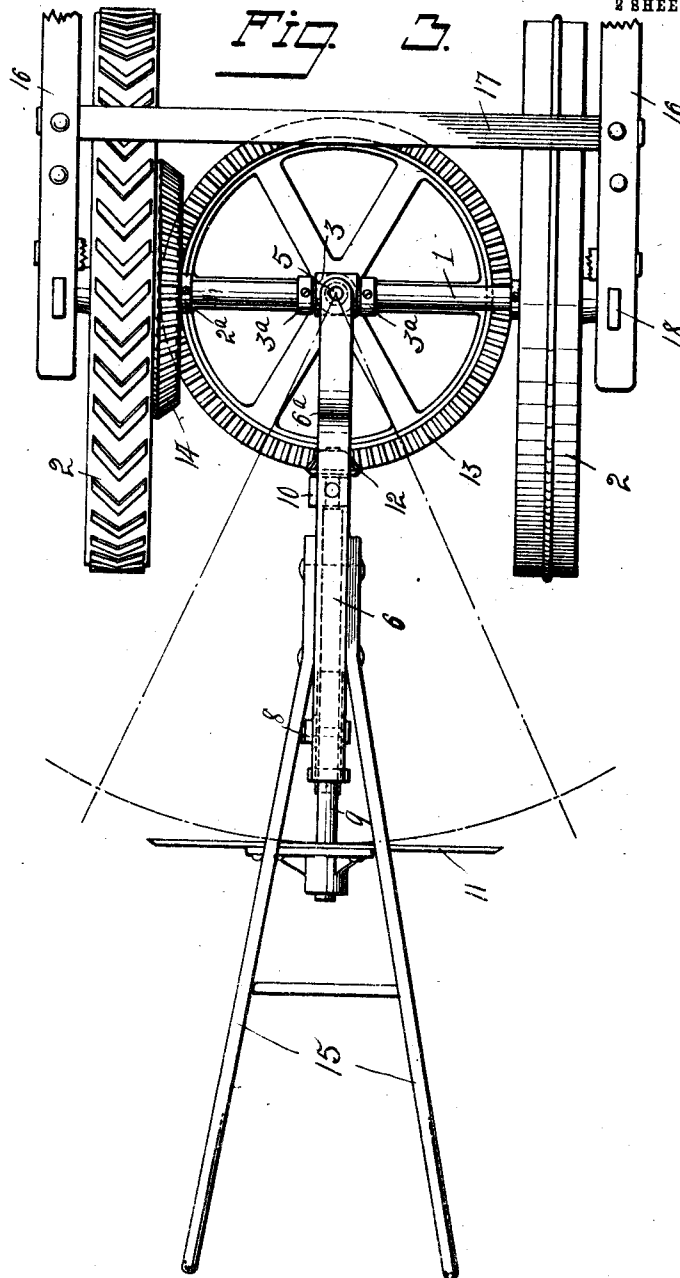
Charles A. Volz.
 Christian L. Volz.
 By Owen D. Owen,
 Attorney

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 C. H. Bille.
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INVENTORS.
 Charles A. Volz
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UNITED STATES PATENT OFFICE.

CHARLES A. VOLZ, OF PIGEON, MICHIGAN, AND CHRISTIAN L. VOLZ, OF TOLEDO, OHIO.

BEET-BLOCKER AND COTTON-CHOPPER.

1,065,485.

Specification of Letters Patent.

Patented June 24, 1913.

Application filed August 19, 1912. Serial No. 715,777.

To all whom it may concern:

10 Bt it known that we, CHARLES A. VOLZ, a
citizen of the United States, and a resident
of Pigeon, in the county of Huron and State
5 of Michigan, and CHRISTIAN L. VOLZ, a
citizen of the United States, and a resident
of Toledo, in the county of Lucas and State
of Ohio, have invented a certain new and
10 useful Beet-Blocker and Cotton-Chopper;
and we do hereby declare the following to
be a full, clear, and exact description of the
invention, such as will enable others skilled
in the art to which it appertains to make and
15 use the same, reference being had to the ac-
companying drawings and to the characters
of reference marked thereon, which form a
part of this specification.

20 Our invention relates to machines of the
class employed for chopping cotton for the
purpose of thinning the same when growing,
and also for use over rows of beets or other
growing plants, for thinning the rows so as
to leave the plants at the desired distance
apart.

25 The object of our invention is the provi-
sion of an improved machine of this charac-
ter which is simple and inexpensive in its
construction, and has its cutting member
trailing from the machine frame in such
30 manner so as to enable it to be swung hori-
zontally or vertically into any suitable posi-
tion as the cutting of plants or the follow-
ing of a row may require, whereby to en-
hance the practicability and commercial
35 value thereof.

40 The invention is fully described in the
following specification, and while, in its
broader aspect, it is capable of embodiment
in numerous forms, a preferred embodiment
thereof is illustrated in the accompanying
drawings, in which,—

45 Figure 1 is a side elevation of a machine
embodying the invention, with the driving
axle in section and one wheel removed.
Fig. 2 is a rear elevation of the cutting disk,
and Fig. 3 is a top plan view of the machine,
with one trailer-frame attached thereto and
with parts broken away.

50 Referring to the drawings, 1 designates
the axle of the machine, on each of the op-
posite ends of which is mounted a master or
ground wheel 2. A cross-head 3 is mount-
ed on the axle 1 between the wheels 2, 2, for
free rocking movements on such axle rela-
55 tive thereto and has a short shaft 4 fixedly
projecting downward from its lower end

and a stud 5 projecting upward from its
upper side in axial relation to the shaft.
The head 3 is held in properly adjusted
position on the axle 1 by collars 3^a, which
60 are secured to the axle at each side of the
head by set-screws, or in any other suitable
manner.

65 A frame 6, which is shown, in the present
instance, as being substantially U-shaped,
trails from the head 3, having the free end
of its lower leg pivoted to the lower end of
the shaft 4 below the axle and the free end
of its upper leg pivoted to the stud 5 above
the axle, thus adapting such frame to be
70 swung horizontally about the shaft 4 and
stud 5 as an axis and to be swung vertically
with the head 3 around the axle 1 as its
axis. The upper leg of the frame 6 is pref-
erably considerably closer to the axle 1 than
75 the other leg, and is angled near its head at-
taching end, as at 6^a, to broaden the space
between the free end portions of the legs so
that the major portion of the trailer-frame
is below the horizontal plane of the axle, as
80 shown. It is found in practice that the
forming of the frame 6 in this manner
makes it stronger and less susceptible to
wrenching stresses than would be the case
if the frame were of the same breadth
85 throughout its length.

90 A pilot-wheel 7 is carried at the lower end
of an arm 8, which is attached to and pro-
jects downward from the rear end portion
of the frame 6, and is intended to travel
on the ground to maintain the rear end of
the frame 6 in proper spaced relation there-
to. A shaft 9 is carried by the frame 6 lon-
95 gitudinally thereof, being journaled in the
rear end of such frame and in a cross-piece
10 attached thereto. This shaft carries a
disk 11 at its rear end without the frame 6
and a bevel pinion 12 at its forward end,
which pinion is in mesh with a larger bevel
100 gear 13 that is mounted loosely on the shaft
4 and in turn meshes with a drive bevel gear
14 on one of the wheels 2, whereby to com-
municate rotation to the cutting disk from
one of said wheels.

105 The cutting disk 11 is shown as compris-
ing a spider 11^a, which is mounted on the
shaft 9 and to the arms of which are se-
cured blades 11^b, which are of segmental
form and cooperate to form a radially
110 notched disk. The blades 11^b are shown, in
the present instance, as being three in num-
ber to form three equidistantly spaced

notches or spaces 11^c in the disk between which plants at properly spaced distances apart may pass without injury while the intermediate plants are cut out by the blades 11^b as the disk revolves.

The trailer-frame 6 has a pair of guiding-handles 15 extending upward and rearward therefrom to be grasped by an operator walking at the rear of the cutting disk to enable him to guide the movement of the trailer-frame as the crookedness or condition of the row being operated over may require.

16 designates the thills of the machine which are connected adjacent to their rear ends by cross-pieces 17 and have arms 18 extending downward from their rear ends and attaching to the outer ends of the axle 1.

It is evident that the frame 6 trails a sufficient distance from the axle 1 to enable the disk 11 to swing at the rear of the wheels 2, 2, in an arc the radii of which are of considerable length, thus enabling the operator to easily swing the disk a considerable distance to one side or the other of a line drawn centrally over and at right angles to the axle 1 as the curved or irregular form of a row of plants may require. It is also evident that the loose mounting of the head 3 on the shaft and the pivoted trailing of the frame 6 enables the frame and cutter disk to have universal or compound swinging movements relative to the axle to facilitate the guiding of the cutter disk or the raising of the same from plant cutting position.

We wish it understood that the invention is not limited to any specific construction

or arrangement of the parts except in so far as such limitations are specified in the claim.

Having thus described our invention what we claim as new and desire to secure by Letters Patent is,

In a machine of the class described, an axle, wheels carried by and supporting said axle, a cross-head carried for rocking movements by said axle, a substantially U-shaped frame trailing from said cross-head with the free ends of its legs pivoted thereto for horizontal rocking movements, the upper one of said legs having its free end portion angled upward and forward from its major portion to dispose the major portion of the frame below the horizontal plane of the axle, a shaft journaled in said frame longitudinally thereof, means for communicating rotation from one of said wheels to said shaft, a cutter disk carried by said shaft at the rear of the frame, means for supporting the rear end of the frame, and controlling-handles extending upward and rearward from the frame.

In testimony whereof, we have hereunto signed our names to this specification in the presence of two subscribing witnesses.

CHARLES A. VOLZ.
CHRISTIAN L. VOLZ.

Witnesses for Charles A. Volz:

W. J. DUFTY,
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Witnesses for Christian L. Volz:

C. W. OWEN,
FLORENCE AUL.