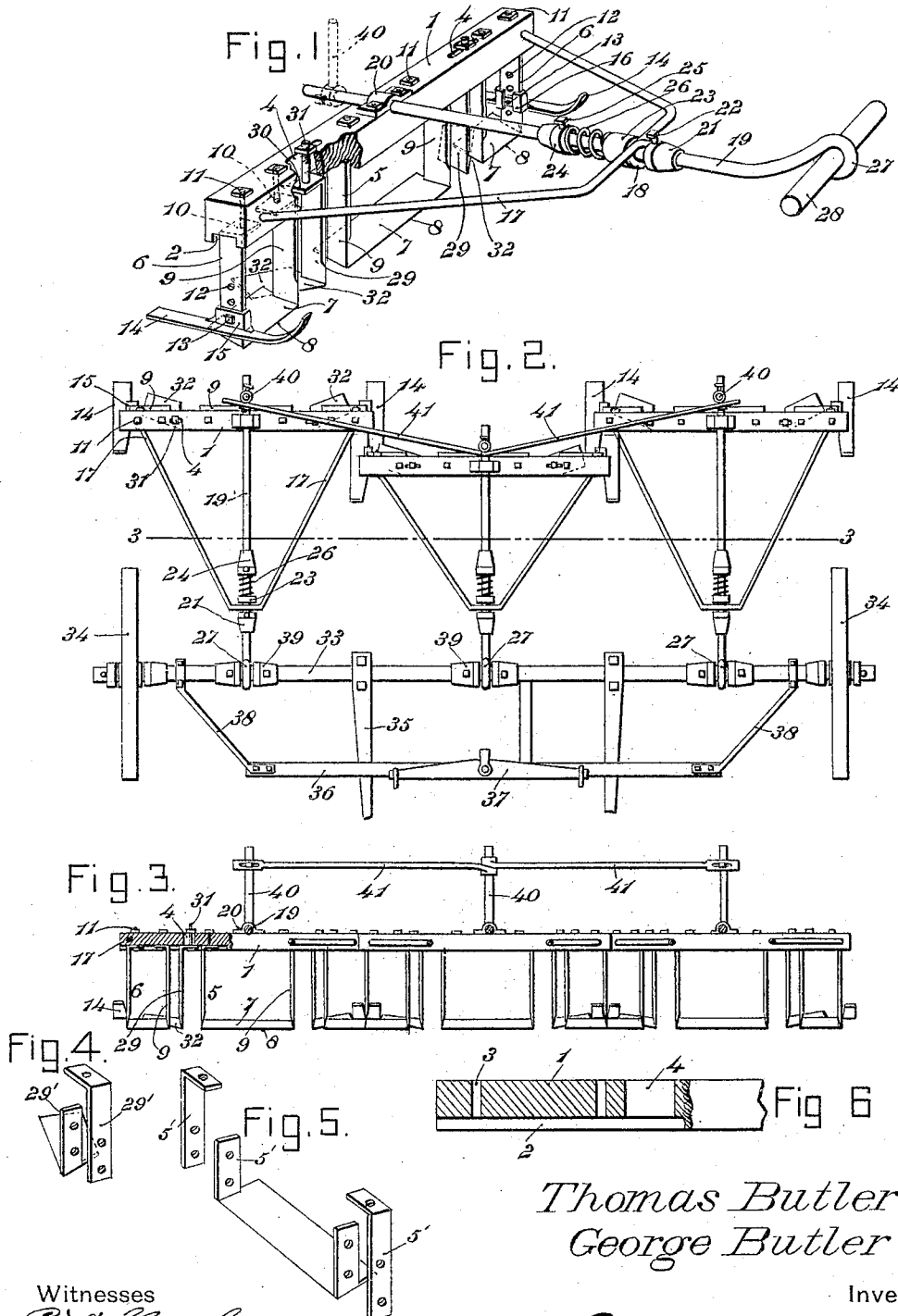


T. & G. BUTLER.
BEET BLOCKER.

APPLICATION FILED APR. 29, 1905.



Witnesses
E. J. Howard
Wm. Ragner

Thomas Butler
 George Butler
 Inventors
 by *C. Snow*
 Attorneys

UNITED STATES PATENT OFFICE.

THOMAS BUTLER AND GEORGE BUTLER, OF JACKSONPORT, WISCONSIN.

BEET-BLOCKER.

No. 802,137.

Specification of Letters Patent.

Patented Oct. 17, 1905.

Application filed April 29, 1905. Serial No. 258,063.

To all whom it may concern:

Be it known that we, THOMAS BUTLER and GEORGE BUTLER, citizens of the United States, residing at Jacksonport, in the county of Door and State of Wisconsin, have invented a new and useful Beet-Blocker, of which the following is a specification.

This invention relates to devices for blocking or thinning beets; and it has for its object to present a device whereby this operation may be performed in a simple, rapid, and economical manner, another object of the invention being to present a device of this class constituting a unit which may be manipulated by hand, the construction being such, however, that a plurality of units may be combined to form a device of greater capacity for work, which shall be adapted to be propelled by draft-animals.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of embodiment of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that various changes and modifications may be made within the scope of the invention and without departing from the spirit or sacrificing the efficiency of the same.

In said drawings, Figure 1 is a perspective view of one of the units of the improved beet-blocking device. Fig. 2 is a top plan view illustrating a machine composed of a plurality of units. Fig. 3 is a vertical transverse sectional view taken on the plane indicated by the line 3 3 in Fig. 2. Figs. 4 and 5 are perspective detail views illustrating modifications in the construction of the cutters. Fig. 6 is a sectional detail view of a portion of the blocker-head.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

Each unit of the device comprises a head 1, having in its under side a groove or channel 2 and provided with vertical apertures 3 and slots 4 for the passage of fastening means, whereby the cutters and blockers are connected with said head.

The blockers 5 and 6 each consist of a blade 7, having a front cutting edge 8 and provided at the ends thereof with upstanding arms 9, disposed at right angles to the blade, and provided at their upper extremities with in-turned lugs 10, which are apertured for the passage of the bolts or fastening members 11, which latter extend through the apertures 3 in the head member 1. The lugs 10 are of a width to fit in the channel 2, so that the blockers when secured by the fastening-bolts will be held very firmly in position. The cutting-blades 7 are of a width exceeding the width of the arms 9, and said blades extend some distance in the rear of said arms in order that the plants removed by the blocks may be readily shed from the latter. It is preferred that the front edges of the arms 9 be sharpened at the lower ends of said arms for a suitable distance above the blades 7 in order to assist in removing the desired plants without danger of disturbing the stands that are to be left.

The blockers 5 and 6 are disposed, respectively, under the center and under the ends of the head 1, the blocker 5 being of a width exactly equal to the distance that is to be left between the stands. The blockers 6 are of less width, it being intended that each of said blockers 6 shall clear a less space than a complete block, the operation being completed on the return trip of the device by overlapping the outer cut previously made, as will be readily understood.

The outer arm 9 of each of the outer blockers 6 is provided with a plurality of perforations 12 for the passage of bolts or fastening members 13, whereby shoes 14 are mounted adjustably upon the said arms for the purpose of gaging the depth of the cut. Said shoes are provided with clips 15, having flanges 16, engaging the arms 9, upon which the shoes will thus be securely mounted.

The head member 1 is provided with a forwardly-extending yoke 17, having an eye or bearing 18, in which is supported a draft-rod 19, the rear end of which is supported in a bearing 20 upon the head member 1. Said rod is provided in front of the bearing 18 with a collar 21, adjustable by a set-screw 22. In rear of the eye 18 the said rod is provided with a loose sleeve or collar 23 and with a set-collar 24, adjustably secured by a set-screw 25, a spring 26 being placed between the collars 23 and 24, the tension of which spring is exerted to force the rod 19 nor-

mally in a rearward direction. The draft-rod 19 is provided at its front end with an eye 27 for the reception of a bar or handle member 28.

5 For the purpose of gaging and regulating the widths of the stands that are to be left by the blocking operation cutters are provided, the same comprising each a shank or arm 29, provided at its upper end with an
10 inturred lug 30, engaging the channel 2 in the head where it is secured by means of a bolt 31, extending through one of the slots 4, thus providing for the lateral adjustment of the cutter. The shanks 29 are provided at
15 their lower ends with obliquely-disposed upwardly and outwardly extending blades 32, overlapping the inner edges of the blockers 6. It will be readily seen that the cutters cooperate with the central blocker 5 to regulate
20 the width of the stands, the cutters being adjustable to a greater or less distance from the central blocker, which will be governed by the condition of the crop that is to be operated upon.

25 The device or unit thus far described may be manually operated by dragging it across the field, the direction of its movement being across the rows of plants. The shoes will regulate the depth of the cut. If obstructions
30 should be encountered, the spring 26 will yield sufficiently to prevent injury to the machine.

To assemble together a plurality of units for operation by animal-power, the several
35 units are connected by the eyes 27 at the front ends of the draft-rods 19 with an axle member 33, having supporting-wheels 34, thills or shafts 35, connected by a cross-bar 36, carrying the whiffletree 37, and brace members 38, connecting said cross-bar with the
40 axle. The latter is provided with set-collars 39, whereby the draft-rods of the units are adjusted and prevented from lateral movement, and said draft-rods are provided near their rear
45 ends with upwardly-extending arms 40, suitably connected therewith and spaced apart by means of connecting-rods 41 in such a manner that the rear ends of the units will be maintained the desired distance apart. The
50 several units are so disposed as to overlap the distance required to make blocks of the requisite widths.

In Figs. 4 and 5 of the drawings has been illustrated a modification in the construction
55 of the cutters and blockers, which consists simply in making the arms or upright members of each, (here designated, respectively, 29' and

5',) of two pieces adapted to be separately connected by means of bolts, rivets, or similar fastening devices which will enable the
60 blades to be removed when worn out at less expense than would otherwise be possible.

From the foregoing description, taken in connection with the drawings hereto annexed,
65 the operation and advantages of this invention will be readily understood by those skilled in the art to which it appertains. A single unit makes an effective implement for manual use and enables the small farmer to thin
70 the beet-crop with much less expense for labor than by the use of an ordinary hoe. For operation upon larger crops three or more units may be connected substantially in the manner described for operation by one or more draft-
75 animals.

Having thus described the invention, what is claimed is—

1. In a device of the class described, a head member, a plurality of blocking members supported by said head member and each including
80 a blade having upright supporting members at the ends thereof; and a cutter having a single supporting-upright supported adjustably between two blocking members and overlapping one of the latter.
85

2. In a blocker, a plurality of units each comprising a head member, blockers and cutters supported thereby, and a longitudinally-slidable draft member spring-pressed in a rearward direction; and means for adjustably spacing
90 and connecting the front and rear ends of said units.

3. In a blocker, a plurality of units each comprising a head member, blockers and cutters supported thereby, and a longitudinally-
95 movable draft member; a wheel-supported axle connecting the front ends of the draft members; means for spacing said draft members and retaining them against lateral movement; and independent spacing and supporting
100 means for the rear ends of the units.

4. In a blocker, a plurality of units, spacing and connecting means for retaining said units in overlapped relation, and draft means applied to the connecting means at the front
105 ends of the units.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

THOMAS BUTLER.
GEORGE BUTLER.

Witnesses:

JAMES S. HALSTEAD,
JOS. G. DALEMONT.