No. 701,664. Patented June 3, 1902.

K. ZUIDEWIND & A. VAN PUTTEN.

DEVICE FOR TOPPING BEETS.

(Application filed Mar. 14, 1902.)

(No Model.)

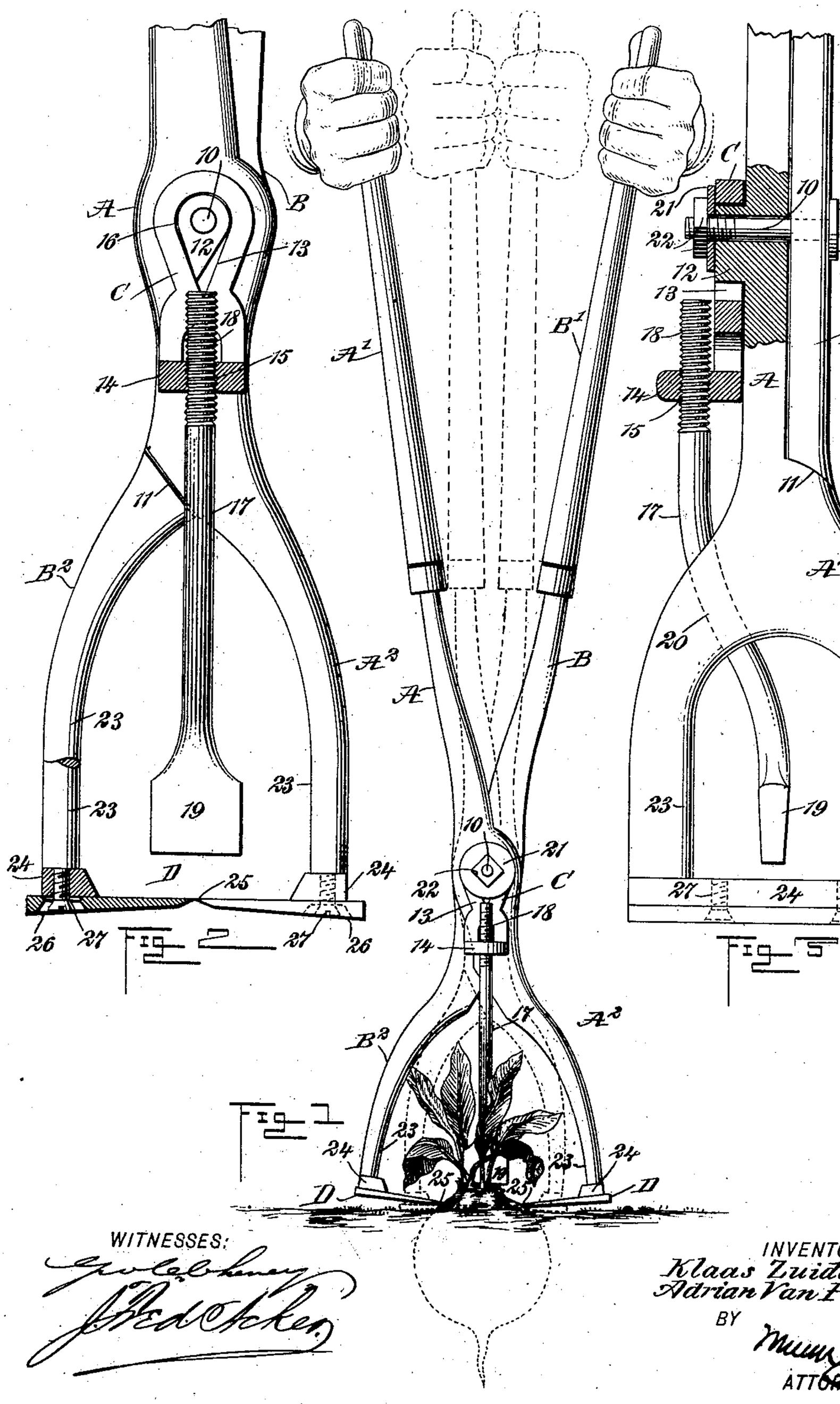

Fig. 1. Fig. 2. Fig. 3. Fig. 4. Fig. 5.

WITNESSES:

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KLAAS ZUIDEWIND AND ADRIAN VAN PUTTEN, OF HOLLAND, MICHIGAN.

DEVICE FOR TOPPING BEETS.

SPECIFICATION forming part of Letters Patent No. 701,664, dated June 3, 1902.

Application filed March 14, 1902. Serial No. 98,189. (No model.)

To all whom it may concern:

Be it known that we, KLAAS ZUIDEWIND and ADRIAN VAN PUTTEN, citizens of the United States, and residents of Holland, in the county of Ottawa and State of Michigan, have invented a new and Improved Device for Topping Beets, of which the following is a full, clear, and exact description.

The purpose of our invention is to provide a light, simple, durable, and economic hand-operated device which will cleanly and expeditiously remove the tops or crowns of beet-roots or the upper woody portion containing little or no sugar and to so construct the device that it may be operated by a person in a standing position and so that it will free itself from dirt and will automatically release the severed top when the device is opened.

A further purpose of the invention is to provide an adjustable gage for regulating the depth of the cut, which gage will automatically center itself above the meeting edges of the knives employed or the space between said edges and upon contact with the top of a beet will indicate to the operator that the device is in position to close the knives upon the beet.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of the device, illustrating in positive lines the position of the parts when the knives are first brought into engagement with the beet and showing in dotted lines the position of the parts when the knives have severed the top or crown from a beet. Fig. 2 is an enlarged sectional front elevation of the lower portion of the device, the cutting edges of the knives being shown in contact, the washer and nut for the pivot-pin being omitted; and Fig. 3 is a sectional side elevation of the lower portion of the device.

Two handles A and B are employed, preferably connected by a suitable pin 10, and the handles are provided with shoulders 11, which when brought into engagement limit the forward movement of the handles, and said handles are also preferably provided with removable extension-sections A′ and B′, so that the device may be manipulated while the operator is standing and so that the device may be stored in a small compass.

The front handle A is provided at the pivotal portion of its outer face with an integral or attached pear-shaped shoulder 12, the lower portion of which is its pointed section, and the pointed section of the shoulder is directed more or less to one side of a vertical line drawn through the center of the pivot-pin. The shoulder 12 is adapted to support a gage-carrier C, comprising a body 13 and a foot 14, extending outward at right angles to the body, being provided with a threaded aperture 15. At the upper portion of the body of the carrier a pear-shaped opening 16 is produced, adapted to receive the pear-shaped shoulder 12 of the front handle A; but the opening 16 is larger than the shoulder 12, so that the carrier may swing and preserve a vertical position, whether the handles are brought together or carried apart, or a perpendicular position relative to the space between the knives D, to be hereinafter particularly referred to.

The carrier C is associated with a gage-rod 17, provided with a threaded upper end 18 and an enlarged flattened foot or lower section 19. The threaded end of the gage-rod is received at the threaded aperture 15 of the carrier, so that the rod may be adjusted vertically to regulate the depth of the cut at the crown of a beet, and said rod between its ends is provided with a rearward and downward curve 20, (particularly shown in Fig. 3,) so that when the rod is supported by the carrier C the lower end of the rod will be substantially beneath the lower portions of the handles and in a vertical position substantially parallel with the vertical inner faces of the handles, and the enlarged lower end or foot 19 of the rod will occupy a position transversely of the cutting edges of the knives D, as is shown in Fig. 2. The space between the lower end or foot 19 of the gage-rod and the upper faces of the knives will determine the depth of the cut to be made at the crown of the beet. The carrier C is held in position by a washer 21 and nut 22 upon the forward end of the pivot-pin 10, which is threaded.

Each handle A and B at its lower end is at-

tached to or made integral with a forked or bifurcated frame-section, and these sections are respectively designated as A^2 and B^2. The frame-sections A^2 and B^2 constitute the body of the device and are curved outward at their upper ends from the sides of the handles and then extend vertically downward, one section opposite the other, and the members 23 of each frame-section are connected by side bars 24, having flat under surfaces and beveled inner longitudinal edges, as is shown in Fig. 2, in order to readily shed the dirt.

The knives D, heretofore referred to, are two in number and extend from end to end of the side bars 24 and a slight distance beyond the outer longitudinal edges of the side bars and sufficiently beyond the inner or beveled edges of the said side bars 24 to cause their inner edges 25, which are cutting edges, to meet when the handles are fully closed or are brought together, as is shown in Fig. 2. The knives D are adjustably attached to the side bars 24, so that they may be adjusted relative to each other when worn, and such attachment is effected by producing transverse slots 26 in the heel-sections of the knives and passing screws 27 through said slots into the side bars 24, as is also shown in Fig. 2. The upper surfaces of the knives are flat. Their cutting edges 25 are beveled from beneath, and their bottom surfaces are inclined, the knives being thickest at their heels. The bottom surfaces of the knives are thus inclined, so that the heels of the knives will not engage with the ground until after the cutting process is completed, thereby avoiding undue friction and affording the knives a better chance to take hold of the beet at a proper depth.

The knives are intended to separate a distance of seven or eight inches, more or less; but no matter at what distance the knives are carried apart the gage-rod 17 will automatically take a position perpendicularly over the central portion of the space between the knives and will occupy the same position relative to the cutting edges of the knives when said edges are brought together. Thus the severed crown of the beet will be held between the gage-rod and the knives until the knives are again separated to make another cut, whereupon the severed crown will be released and will drop from the device.

In operation the gage-rod is adjusted relative to the knives to regulate the depth of the cut, the handles are opened, and the body of the device is brought over the beet to be cut, and as soon as the foot 19 of the gage-rod 17 is felt resting upon the upper surface of the beet the operator will know it is time to close the handles, whereupon the knives entering the crown of the beet at opposite sides will cut in direction of each other, quickly and cleanly severing the top portion of the beet.

It is evident the earth will not interfere with the action of the knives, since the body is open at all sides and any dirt taken up will quickly find an escape.

The device is simple, durable, and economic, it is easily manipulated, and is particularly well designed for the purpose intended.

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

1. In a device for topping beets, the combination with pivotally-connected handles and knives horizontally carried by the handles, of a gage-bar having adjustable and swinging support at the pivot of the handles, which gage-bar automatically assumes a position transversely of and above the cutting edges of the knives when said cutting edges meet and a central position over the space between the cutting edges of the knives when said knives are separated, whereby said bar serves as a gage for the depth of the cut and indicates when the cutting action should be performed, and also serves to hold the severed portion of the beet on the knives after the cut is made, as described.

2. In a device for topping beets, pivotally-connected handles, a bifurcated frame carried by each handle, a horizontal knife adjustably attached to each frame, having cutting edges in the same horizontal plane when the handles are closed, and an adjustable and swinging gage-bar carried by one of the handles and automatically assuming a position within the frames transversely above the knives and centrally with relation to the knives in their open or in their closed position, as described.

3. In a device for topping beets, the combination with pivotally-connected handles, horizontal knives carried by the handles, and a pear-shaped shoulder forming a portion of the outer face of one of the handles, the point of the shoulder being at one side of a vertical line drawn through the center of the pivot, of a carrier having a pear-shaped opening to receive the said similarly-shaped shoulder, which opening is sufficiently large to admit of decided rocking motion of the carrier on the shoulder, a horizontal foot forming a portion of the carrier, having an aperture whose wall is threaded, and a gage-rod provided with a threaded section to enter the aperture in the foot of the carrier and a lower section which is above the knives and is vertically and transversely disposed to the cutting edges of the knives and similarly and centrally disposed to the space which may occur between the knives, as specified.

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

KLAAS ZUIDEWIND.
ADRIAN VAN PUTTEN.

Witnesses:
CORNELIUS VER SCHURE,
JACOB VER SCHURE.