

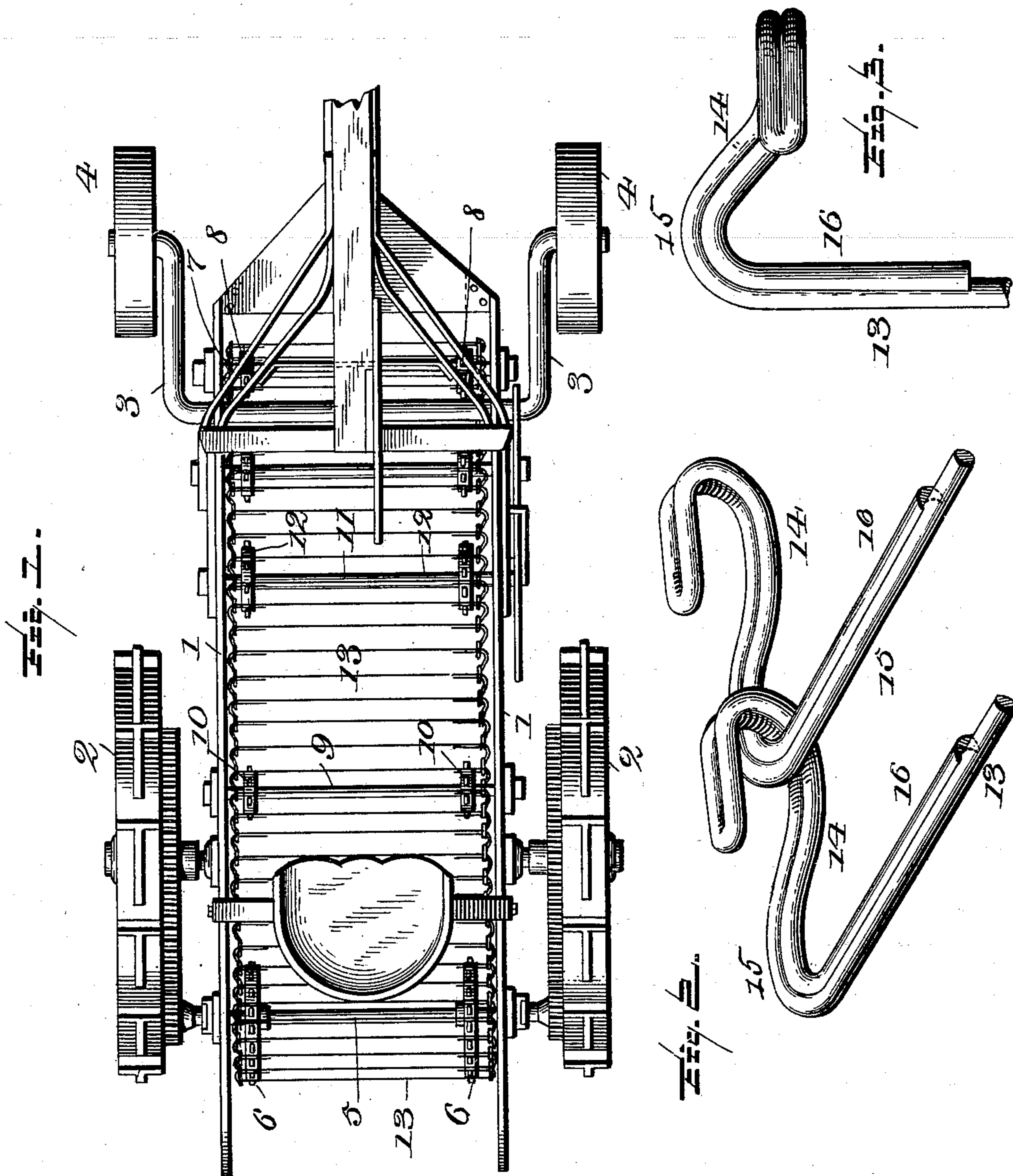
No. 628,444.

Patented July 11, 1899.

P. BROWN.
POTATO DIGGER.

(Application filed Nov. 3, 1898.)

(No Model.)



Witnesses
L. C. Hille
M. M. Merrill

Inventor
Peter Brown
by R. G. Henderson
Attorney

UNITED STATES PATENT OFFICE.

PETER BROWN, OF GREELEY, COLORADO.

POTATO-DIGGER.

SPECIFICATION forming part of Letters Patent No. 628,444, dated July 11, 1899.

Application filed November 3, 1898. Serial No. 695,393. (No model.)

To all whom it may concern:

Be it known that I, PETER BROWN, a citizen of the United States, residing at Greeley, in the county of Weld and State of Colorado, have
5 invented certain new and useful Improvements in Potato-Diggers; and I do 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
10 make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to potato-diggers, and
15 has more particularly for its object to provide certain improvements in the endless carrier or separator illustrated in United States Letters Patent No. 575,691, granted to me January 26, 1897, for a potato-digger. In that patent I described and claimed certain improvements in the endless separator or carrier.

My present invention relates more particularly to certain improvements upon that endless carrier or separator, said improvements
25 having for their object to materially prolong the life of the carrier or separator.

The invention accordingly consists in certain features of construction in the carrier or separator, which features will be hereinafter
30 more particularly described and then sought to be specifically defined by the claims, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 represents a plan view of a potato-digger, which may be of any approved pattern, but which for purposes of illustration I have shown as formed substantially as illustrated in my said patent, before mentioned, with my present improvements added; and
40 Fig. 2 represents a perspective view of a part of the endless carrier or separator containing my improvement; Fig. 3, a plan view of part of the endless carrier.

In the drawings, the numeral 1 designates
45 the frame of the machine, which is carried by the main drive-wheels 2 and is provided at its forward end with the crank-axle 3 and gage-wheels 4. The frame is provided at the rear with the shaft 5, which has the sprocket-wheels 6 for transmitting motion to the end-
50 less carrier or separator, said shaft and sprocket-wheels deriving their motion from

the main drive-wheels, as in my former patent referred to. At the forward end of the frame is a shaft 7, provided with sprocket-
55 pulleys 8, which serve to guide the endless carrier, a similar shaft 9 being provided between the two ends of the frame and having sprocket-pulleys 10, which likewise serve to support and guide the carrier in its move-
60 ment. A shaft 11 may also be employed, and it may be provided with eccentrically-mounted sprocket-wheels 12, which will serve to impart an up-and-down motion to the endless carrier, as in my former patent mentioned.
65 The details of the machine need not be further described, as the same may be substantially as illustrated and described in my aforementioned patent.

My endless carrier or separator in the present instance is formed of a number of cross-
70 rods 13, of metal, which are provided with portions 14, extending at an angle to the cross-rods at both ends and formed into hooks, as illustrated, so that the hooks of one rod
75 will engage with the next succeeding rod, and thus form an endless-chain carrier or separator. I have found by experience that considerable wear takes place upon the cross-
80 rods and also upon the hooks of the same where they engage with each other and that the greatest wear occurs at the bend where the hook portions extend from the cross-rods, the same being occasioned by the sides of the
85 hooks rubbing against the sides of the extended portions forming the hooks. Considerable wear also takes place at the point where the hooks engage the cross-bars and also at the points where the sprocket wheels or pulleys engage the cross-bars. At these
90 various points of contact, especially when the dirt or soil from the potatoes will lodge in such points of contact, considerable friction is created, which causes the metal at those
95 points to wear out in a comparatively short time. It is therefore desirable that provision should be made to overcome that disadvantage and that at such points of contact there should be as few sharp edges or surfaces pre-
100 sented as possible. For the purpose of overcoming the disadvantages mentioned I not only fold the metal upon itself at the hook portions, as illustrated in my former patent, but I carry the folded portion parallel and

preferably in contact with the extended portions 15 of the cross-bars, so as to form not only a double thickness of the metal at this point where the bend is formed in making the hook and where there is considerable friction and wear, but also so as to have an extra thickness of the metal along the cross-bar itself inwardly from the ends where the hooks are formed, as shown by the inwardly-extended portion 16 of the folded portion. This not only gets rid of the abrupt end of the hook at the junction between the hook and the cross-bar, where considerable wear occurs, but also enables me to extend the folded portion, so as to afford an increased thickness of metal along the cross-bars at the points where the sprocket wheels and pulleys engage with the cross-bars. This improvement not only prolongs the life of the carrier or separator, but also causes the same to travel easier and more smoothly, so that less friction occurs in the movement of the same. I have found from use of the invention that material advantages are gained by these features of construction over other forms of carriers and that certain advantages are obtained over the construction of carrier described and claimed in my aforementioned patent. The carrier thus formed is comparatively cheap of manufacture and runs easily and will last a very much longer time than other constructions with which I am familiar. This construction also enables the section of links of the carrier or separator to have a broader bearing one with the other, so that there is less tendency of the links or cross-bars to move lengthwise or to twist or shift obliquely to their length, and consequently the carrier will move more smoothly and yet will be vibrated or shaken by the eccentric-pulleys or other means provided for that purpose.

Having described my invention and set forth its merits, what I claim is—

1. In a potato-digger, the combination with the frame and suitable supports for an endless carrier, of the endless carrier or separator formed of a series of transverse rods, each

rod having its ends bent laterally away from the rod and then forwardly toward the rod to form hooks and then folded so as to follow the lines of the hooks, the folded portion lying alongside the laterally and forwardly bent portions and extended along the bend formed at the juncture of the transverse rod and hook portions so as to form a hook of double thickness and strengthen the bend between the transverse rod and hook portions, substantially as and for the purposes described.

2. In a potato-digger, the combination with the frame and the shafts provided with sprocket wheels or pulleys, of the endless carrier or separator formed of a series of transverse rods, each rod having its ends bent laterally away from the rod and then forwardly toward the rod to form hooks and then folded so as to follow the lines of the hooks, the folded portion lying alongside the laterally and forwardly bent portions and extended along the bend formed at the juncture of the transverse rod and hook portions and thence along the transverse rod so as to form a double thickness where the hooks and rod portions come in contact with each other and where the sprocket wheels or pulleys come in contact with the rods, substantially as and for the purposes described.

3. In a potato-digger, the combination with the frame and suitable supports for an endless carrier, of the endless carrier or separator formed of a series of transverse rods formed with hooks at their opposite ends, each of said hooks being composed of parallel portions lying side by side, one of the portions being extended along the side of the other to follow the line of the bend where the hook joins the transverse rod, substantially as and for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

PETER BROWN.

Witnesses:

ALBERT IGO,
F. H. BADGER.