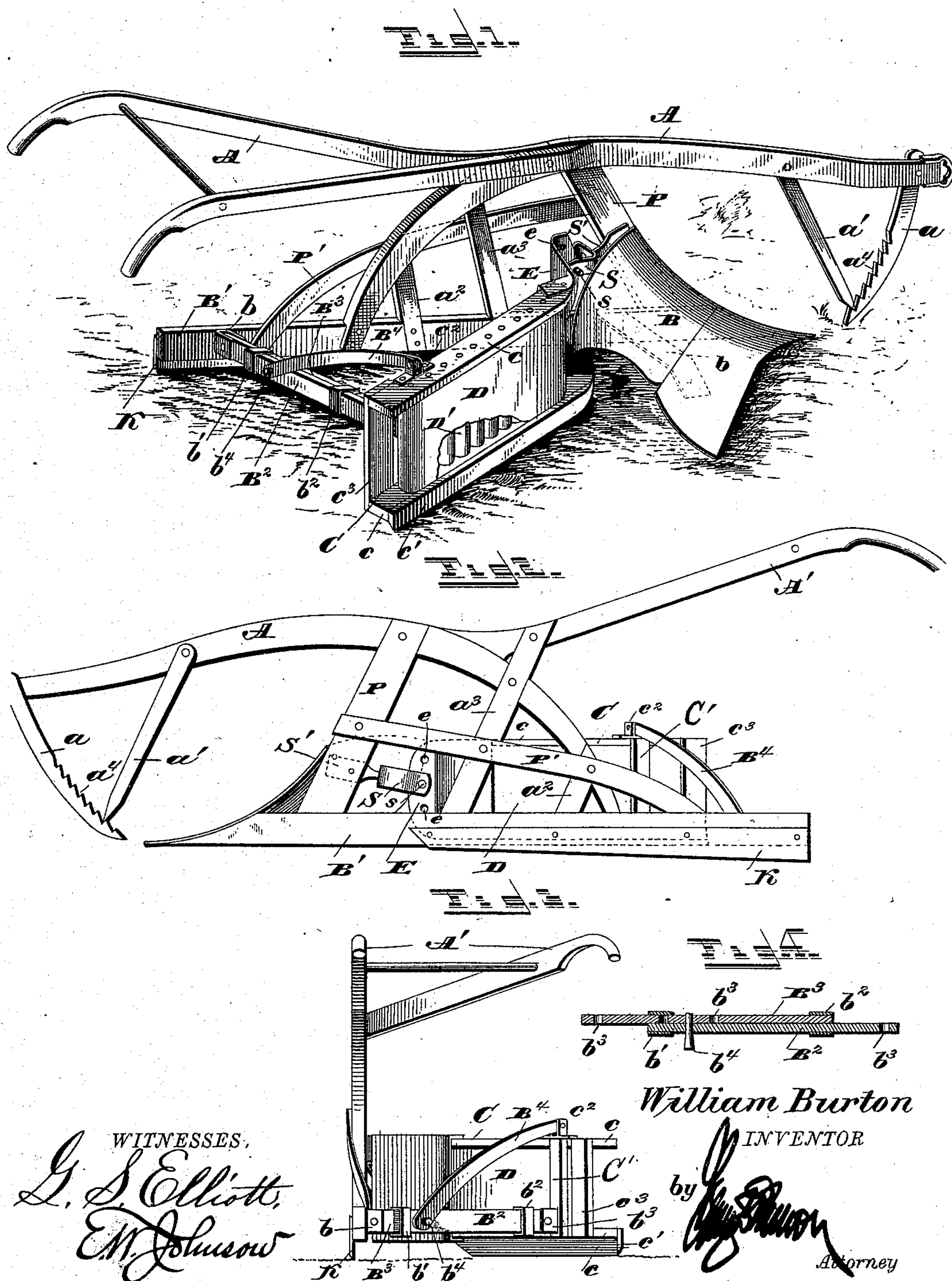


(No Model.)

W. BURTON.
DITCHING PLOW.

No. 401,998.

Patented Apr. 23, 1889.



UNITED STATES PATENT OFFICE.

WILLIAM BURTON, OF LAKE VILLAGE, INDIANA.

DITCHING-PLOW.

SPECIFICATION forming part of Letters Patent No. 401,998, dated April 23, 1889.

Application filed November 28, 1888. Serial No. 292,117. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BURTON, a citizen of the United States of America, residing at Lake Village, in the county of Newton and State of Indiana, have invented certain new and useful Improvements in Ditching-Plows; and I 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 use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in ditching-plows; and it consists in the novel construction and combination of parts, as will be more fully hereinafter described and claimed.

The essential feature of the invention is the provision of an adjustable extension to the mold-board of the plow having a belt inclosing and moving upon anti-friction rollers.

The object of the improvement is to provide means whereby clayey and sticky soil may be carried away from the plow proper, the parts being simple and effective in their construction and operation, strong and durable, easily handled, and readily understood. I attain this object by the construction illustrated in the accompanying drawings, wherein like letters of reference indicate similar parts in the several views, and in which—

Figure 1 is a perspective view of a plow with my improved attachments in connection therewith. Fig. 2 is a side elevation thereof. Fig. 3 is a rear end elevation. Fig. 4 is a detail view in horizontal section of the extension adjusting-bars.

A indicates the plow-beam, having handles A' secured thereto. The rear end of said plow-beam is curved downward and secured to a trailing beam, B', attached at its front end to the plow B and extending rearward for a considerable distance, and forms a support for the connection of the parts of the device, and also acts in the capacity of a land-side. From the said beam A a post, P, depends at a forward incline down behind the plow B, and is secured at its lower end to the forward part of the beam B'. Secured at

its forward end to said post P, and extending down and attached to the rear of the beam B', is a brace-bar, P'. Short brace-bars a^2 and a^3 are bolted at their lower ends to the beam B', and at their upper ends are attached to the beam P' rear of the plow-beam A, and the brace a^3 is extended and secured to one of the handles A'. It will be seen by the above construction that the parts are firmly braced and rendered strong and durable.

To the post P a strap of metal, S', is secured, which is reduced and headed at its rear. A swivel-link, S, is fitted on the reduced end of the strap and pivotally held thereon by the head of said strap. This link S is triangular in shape, bent from a strip of metal, the rear ends being drawn closely together and apertured. The said rear ends of the link S embrace an angularly-bent metallic plate, E, secured at its rear end to a drag-frame, C, which forms an extension of the mold-board B. The front end of said plate E, which is embraced by the link S, is provided with a series of apertures, e , and by means of a removable pin, s , passing through the rear apertured ends of the link S and the apertures in the front end of said plate E, the front end of frame C is made adjustable, and may be raised from or lowered toward the ground, as may be desired and found necessary.

The frame C consists of two horizontally-arranged beams, c , connected at the rear by a vertical strip, c^3 . The lower beam, c , has a runner, c' , connected to the outer edge thereof, which depends below the under surface of said beam, and has its forward end upturned to give said frame C guidance and easy passage over the ground. A series of vertically-disposed rollers, D', are mounted between and have bearing at their ends in said beams c . Surrounding these rollers D' and inclosing the same is a belt, D, and upon this belt the dirt or soil from the mold-board of the plow B is thrown, and conveyed thereby away from the said mold-board.

To the inner side of the frame C a vertical strip, C', is secured, and to the bottom of this strip C' a clip, b^3 , is attached. In said clip b^3 the outer end of a bar, B², is secured, said bar having a metallic sleeve, b' , attached to its opposite end, freely embracing a parallel

bar, B³, which is connected to a clip, *b*, secured to the beam B' at its inner end, and has a sleeve, *b*², attached to its outer end freely embracing the bar B². By this means the frame C is made adjustable to and from the beam B'. To the upper side of the top beam, *c*, of frame C a clip, *c*², is secured, and between the ears thereof the outer end of a curved tie-brace, B⁴, is mounted, the inner end of said
 10 brace being attached to the outer side of bar B². By means of this brace any tendency to a resistance or binding on the bar B² by a careening of the frame C is avoided. As shown in Fig. 4, the beams B² and B³ are preferably
 15 formed with apertures *b*³, and when adjusted upon each other a pin, *b*⁴, or that to which the inner end of brace B⁴ is connected, is passed through said aperture in the beams, and they are thus locked.

20 To the rear part of the landside of the beam B' a knife, K, is attached, depending below the lower edge of said beam, and acts to prevent the plow entire from sliding in either one direction or the other, as would be the
 25 result in plowing certain kinds of soil if the said knife were not used.

To the front end of the plow-beam A a depending colter, *a*, is pivotally secured. This colter consists of an elongated curved bar
 30 with serrations *a*⁴ of an upward angle formed in part of the rear edge thereof. A short distance in rear of said colter a locking-bar, *a*¹, is secured, and has a lower pointed end adapted to engage the serrations *a*⁴ in said
 35 colter. When said colter is adjusted, it is locked against rearward strain by the said bar *a*¹.

The frame C is adjusted as desired, and the soil from the mold-board of the plow is thrown
 40 onto the belt D thereof and is carried rearward and away from the plow. This attachment is especially advantageous in working clayey and wet soil, by preventing the same backing in upon the mold-board and keeping
 45 the same comparatively clean at all times.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a ditching-plow, the combination of

the plow-frame and a belt-carrying frame 50 adjustable vertically at its front and laterally at its rear end, substantially as described.

2. In a ditching-plow, the combination of the plow-frame and a belted roller-frame adjustable secured at front to the plow-standard and connected at rear to the extended
 55 landside by adjustable braces, substantially as described.

3. In a ditching-plow, the combination of the plow-frame having an extended landside, 60 the belted roller-frame secured at front to the plow-standard by a swivel-joint, adjustable braces connecting the extended landside with the rear end of the roller-frame near the bottom, and a brace pivoted at one end to the
 65 top of the roller-frame and adjustably secured at its other end to the adjustable brace, substantially as described.

4. In a ditching-plow, the combination of the plow-frame having an extended landside, 70 the belted roller-frame provided at front with a plate having a vertical series of apertures, a swivel secured at one end to the plow-standard and adjustably connected at its other end to said plate, a horizontal brace connecting
 75 the extended landside with the rear end of the roller-frame near the bottom, and a brace pivoted at one end to the top of the roller-frame and adjustably connected at its other end to the horizontal brace, substantially as de- 80
 scribed.

5. In a ditching-plow, the combination of the plow-frame having an extended landside, B', a belted roller-frame pivoted at its forward end to the plow-standard and connected 85 at its rear end to the rear end of the landside by adjustable braces, and a long blade, K, secured to and projecting below the landside, to prevent lateral movement of said landside, substantially as described. 90

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

WILLIAM ^{his} × BURTON.
 mark

Witnesses:

JAS. A. DEWOLF,
 JACOB HESS.