(No Model.)

N. F. BLOOMINGER.

CULTIVATOR.

No. 444,986. Patented Jan. 20, 1891.

Fig. 1.

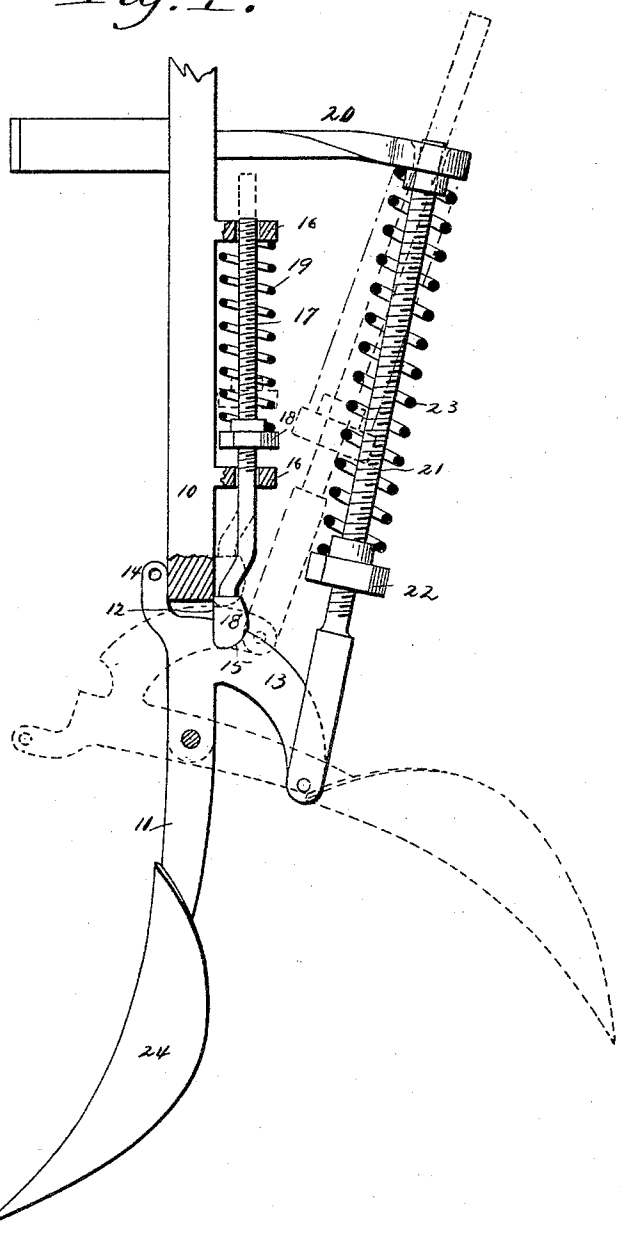
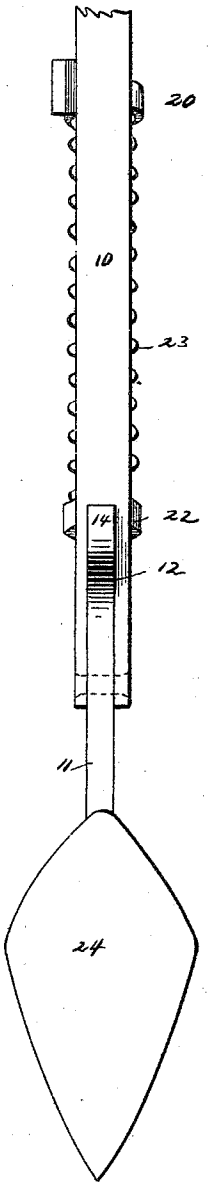


Fig. 2.



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NATHANIEL F. BLOOMINGER, OF ROCHESTER, ILLINOIS.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 444,986, dated January 20, 1891.

Application filed September 29, 1890. Serial No. 366,545. (No model.)

To all whom it may concern:

Be it known that I, NATHANIEL F. BLOOMINGER, of Rochester, in the county of Sangamon and State of Illinois, have invented a new and useful Improvement in Cultivators, of which the following is a full, clear, and exact description.

My invention relates to an improvement in cultivators, especially to an improved construction of the shank, and has for its object to provide a means whereby when the share or blade is brought in engagement with an obstruction of a weight beyond the lifting capacity of the implement the said share or blade will yield and be carried automatically rearward until the obstruction is passed, at which moment the share will be automatically returned to its normal working position, thus effectually guarding the share and the parts of the implement connected therewith against the liability of becoming broken, bent, or otherwise destroyed or injured.

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 figures of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the cultivator-shank, illustrating the application of the invention, a portion of the shank and the attachment being in section; and Fig. 2 is a front elevation of the same.

The cultivator-shank is constructed in two sections 10 and 11, the upper section 10 being of much greater length than the lower section. The lower extremity of the upper section is provided with a longitudinal end slot 12, and the lower section 11 of the shank is pivoted in the said end slot, the pivot-pin being passed through the upper section near its lower extremity. The lower section, however, is of sufficient length above its pivot-pin to nearly engage with the upper wall of the slot 12. The lower portion of the lower section is downwardly and forwardly curved, and the upper extremity of the lower section is provided with a rearwardly and downwardly curved extension 13 and a forwardly and upwardly curved stud 14. The said stud is adapted to engage with the front surface of the upper shank-section above the upper wall of the slot 12 when the lower shank-section is in its normal position, as shown in positive lines, Fig. 1.

The rear extension 13, near its junction with the main body of the lower shank-section, has produced in its upper edge a cavity or pocket 15, and in brackets 16, projected from the rear face of the upper shank-section, a rod 17 is held to slide. The rod 17 is vertically located, and its lower end is provided with a head 18, adapted to enter the recess or pocket 15. That portion of the rod between the brackets 16 is threaded, and near the lower bracket upon the threaded surface of the rod a nut 18 is located. Between the nut 18 and the upper bracket the rod is surrounded by a coiled spring 19, which spring has a bearing against the nut and also against the upper bracket.

The rod 17, which may be properly termed a "lock-latch," is adapted to maintain the lower section of the shank in its normal or working position. From a point at or near the upper end of the shank-section 10 a horizontal bracket 20 is rearwardly projected, and through a suitable aperture in the end of the bracket the upper end of a rod 21 is held to slide, the lower end of the rod being pivotally connected with the lower extremity of the extension 13 of the lower shank-section. The rod 21 is also threaded, and is provided with a nut 22, and a spring 23 is coiled around the threaded portion of the rod, having a bearing against the under face of the bracket and the upper face of the nut. By manipulating the nuts 18 and 22 the resistance necessary to force the lower shank-section rearward may be increased or decreased.

In operation the springs 19 and 23 are sufficiently strong to maintain the lower shank-section in a proper position for work in ordinary soil; but should the share 24, attached to the lower end of the shank-section, be brought in engagement with a bowlder of large size or other obstruction beyond the power of the implement to dislodge the said

lower shank-section will be carried backward and the head of the latch-rod forced from the pocket 15 and made to engage with the upper convexed surface of the extension 13, and when the said shank-extension is pressed rearward the rod 21 is forced upward against the tension of the spring 23. The lower shank-section will be held in this position while passing over the obstruction; but the moment the obstruction is passed both of the springs 19 and 23 act to restore the section to its normal position, the spring 19 also serving to force the head of the screw-rod 17 into the pocket 15.

If in practice it is found desirable, any form of lever may be attached to the stud 14, through the medium of which lever the operator may at any moment trip the lower section of the shank.

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

1. In a cultivator, the combination, with a shank constructed in two hinged sections, the lower section being provided with a stop-lug at one side and a downwardly-curved extension at the opposite side, of a spring-pressed latch adapted to enter a pocket in the curved extension of the shank, and a spring-pressed sliding bar connected with the lower extremity of said extension, as and for the purpose specified.

2. In a cultivator, the combination of a shank formed of two sections pivoted together, the lower section being provided with a stop-lug on one side and on the other side with a downwardly-curved arm having a recess, and a spring-pressed and sliding bar carried by the upper section and engaging the recess of the said arm, substantially as described.

3. In a cultivator, the combination, with a shank comprising an upper section slotted at its lower end, a lower section pivoted in the slot of the upper section and provided with a forwardly and upwardly extending stop-lug, and a downwardly and rearwardly curved extension having a pocket formed therein, of a spring-pressed latch-bar held to slide above and engage with the curved extension of the lower shank-section, a bracket projected laterally from the upper shank-section, a bar held to slide in said bracket, having its lower end pivotally connected with the lower shank-extension and provided with a threaded body, a nut screwed upon the threaded surface of the bar, and a spring encircling the bar and having a bearing against the nut and the bracket, as and for the purpose specified.

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