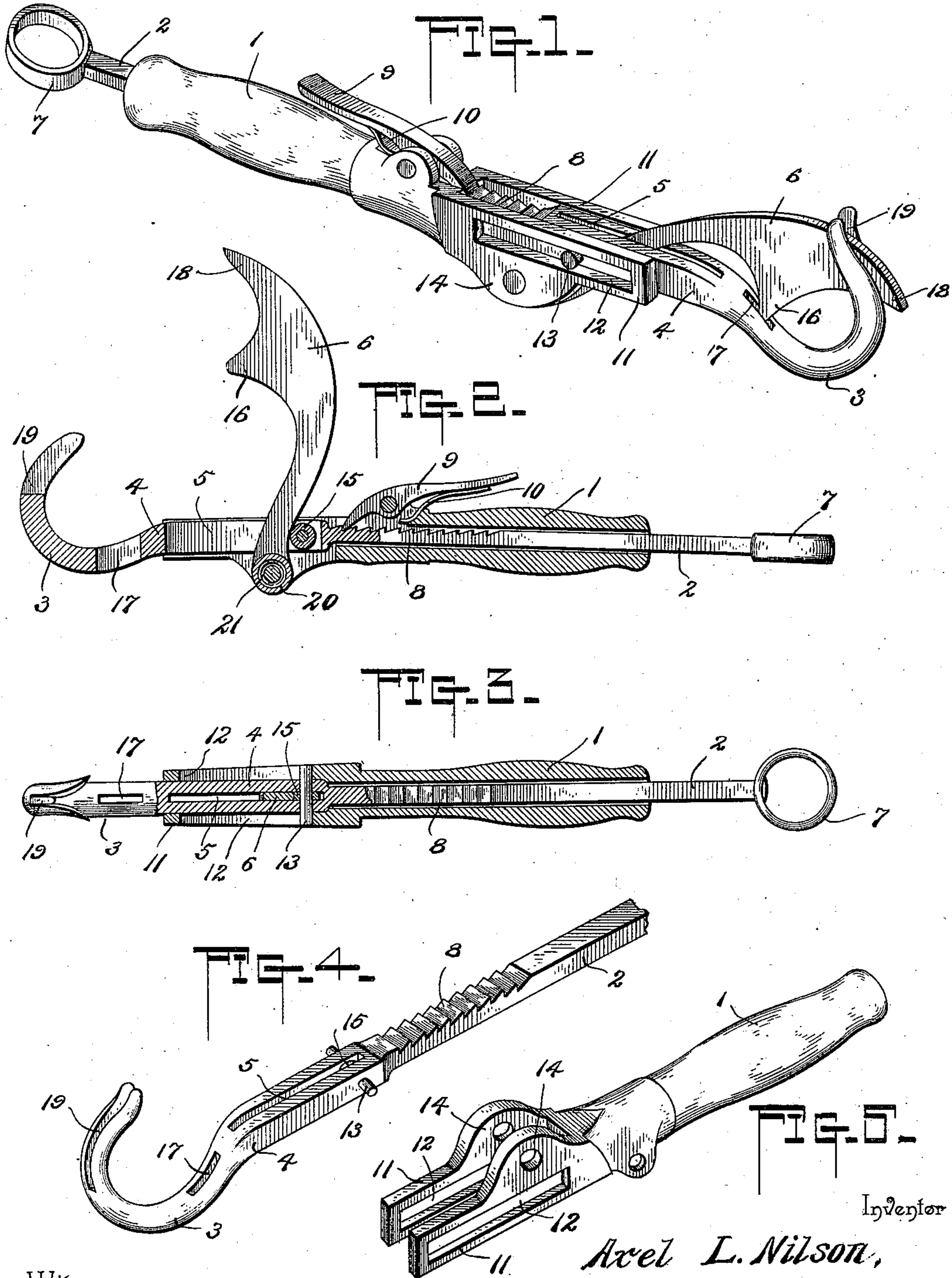


(No Model.)

A. L. NILSON.  
SHACKLE.

No. 574,564.

Patented Jan. 5, 1897.



Witnesses

*A. M. Dwyer.*  
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By *his* Attorneys,

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# UNITED STATES PATENT OFFICE.

AXEL LEO NILSON, OF OTTUMWA, IOWA.

## SHACKLE.

SPECIFICATION forming part of Letters Patent No. 574,564, dated January 5, 1897.

Application filed June 29, 1896. Serial No. 597,482. (No model.)

*To all whom it may concern:*

Be it known that I, AXEL LEO NILSON, a citizen of the United States, residing at Ottumwa, in the county of Wapello and State of Iowa, have invented a new and useful Shackle, of which the following is a specification.

This invention relates to shackles; and the object in view is to provide a simple, strong, and convenient article of this character which is to a certain extent automatic in action for clutching the leg of an animal or other object and also capable of being readily released instantly when desired.

The shackle, while specially designed for use in catching hogs and hoisting the same, is also adapted for other uses, and may be employed as a grapple for hoisting any material, may be attached to cultivators, wagons, and other vehicles as a substitute for the king-pin, and may also be utilized in lieu of a clevis for attaching whiffletrees, and the principle of the invention may also be utilized in the construction of various kinds of wrenches.

To this end the invention consists in an improved shackle embodying certain novel features and details of construction and arrangement of parts, as hereinafter particularly described, illustrated in the drawings, and incorporated in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a shackle constructed in accordance with the present invention, showing the same closed. Fig. 2 is a longitudinal section through the same open. Fig. 3 is a longitudinal section taken at right angles to Fig. 2. Fig. 4 is a detail perspective view of the sliding hook, its shank, and a portion of its stem. Fig. 5 is a detail perspective view of the stock or handle.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the accompanying drawings, 1 designates the stock or handle of the improved shackle, which may be of any convenient size and length, being provided with a longitudinal bore, which is preferably square or irregular in cross-section and adapted to receive slidably the correspondingly-squared or irregular stem 2 of a hook 3, forming one of the jaws of a shackle.

4 indicates the shank of the sliding hook

or jaw, which lies between the hook proper and the stem 2, and is longitudinally slotted, as indicated at 5, to permit the passage through it of the pivoted jaw 6 of the shackle. The stem 2 is provided at one end with an eye 7 for the attachment of a hoisting rope or chain, and at or near the junction of the stem 2 with the shank 4 said stem is notched or toothed, as at 8, adapting it to be engaged and held at any point by means of a pawl 9, fulcrumed intermediate of its ends on the handle or stock, one end of the lever engaging the notches or teeth in the stem and the other end being extended within reach of the operator's thumb or finger, whereby it may be readily manipulated for opening the shackle and releasing the object held thereby. The pawl 9 is held in engagement with the stem 2 by means of a leaf-spring 10, attached at one end to said lever and bearing at its free end against the stock 1.

The stock or handle 1 is extended to form a bifurcated frame 11, comprising parallel arms formed with opposing longitudinal slots 12, in which laterally-projecting studs or trunnions 13 on the shank of the hook move. The pivoted jaw 6 is fulcrumed at one end between the spaced ears 14 on the frame 11, and is actuated by means of an antifriction-roller 15, journaled within the slot in the shank of the hook. The outer edge of the pivoted jaw 6 is described in the arc of a circle, while the inner edge thereof is provided intermediate the ends of the clutch or jaw with a lateral offset or projection 16, which when the jaws are closed enters a socket or opening 17 in the base of the hook, thus enabling the jaws to mutually brace each other. The pivoted jaw is extended at its end to form a bill 18, and the point of the hook is slotted, as at 19, to receive the said bill when the shackle is closed. The jaws of the shackle are thus thoroughly braced relatively to each other.

The pivoted end of the jaw 6 is expanded to form a cylindrical hub portion 20, and within said portion is arranged a spiral spring 21, one end of which is attached to the fulcrum-pin of said jaw and the other end to the inside of its hub. When the release-pawl 9 is vibrated out of engagement with the stem 2, the spring 21 acts to throw the pivoted jaw away from the hook, and the edge of said jaw,



acting upon the roller 15, slides the shank and stem of the hook back, at the same time withdrawing the hook. This releases the leg of the animal or other object previously held in the shackle.

In operation it is only necessary to pass the hook 3 around the leg of the animal or other object to be shackled and give a quick pull on the handle or stock 1. This actuates the pivoted jaw into engagement with the hook and firmly clasps the object between it and the hook.

It will be apparent that the principle of the invention may be applied to various uses which will readily suggest themselves, and it will be understood that the device is susceptible of various changes in the form, proportion, and the minor details of construction, which may accordingly be resorted to, without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. The combination in a shackle, of a stock or handle, a sliding hook, and a jaw located opposite the hook, pivoted directly to the stock or handle and arranged to be engaged and actuated by said sliding hook, substantially as specified.

2. The combination with a handle having a longitudinal bore, of a hook having an integral shank slidably mounted therein, and a jaw pivotally connected directly to the handle and adapted to be operated by the hook when the latter is slid, substantially as described.

3. The combination with a handle having a longitudinal bore, of a hook having an integral shank slidably mounted therein and provided with a longitudinal slot, and pivoted jaw fulcrumed on the handle and extending through the slotted shank, the arrangement being such that the sliding of the hook will actuate the pivoted jaw and effect a closing of the jaws of the device, substantially as described.

4. The combination with the stock having a longitudinal bore, of a hook having a stem

slidably mounted therein and provided with a series of teeth or notches, a jaw pivoted directly to the stock and adapted to be actuated by the hook, and a pawl fulcrumed on the stock and engaging the teeth or notches in the stem of the hook for holding the jaw closed, substantially as described.

5. The combination of a stock having a longitudinal bore, a hook having a stem slidably mounted therein and provided with teeth or notches, a spring-actuated pawl for engaging the said teeth or notches, and a jaw pivoted directly to the stock or handle and arranged to be engaged and actuated by the sliding stem of the hook, substantially as specified.

6. The combination with the stock having a bifurcated extension or frame comprising parallel portions having longitudinal slots, of a hook having an integral shank slidably mounted in said bifurcated extension and provided with oppositely-extending studs or trunnions working in said slots, the said shank being also provided with a longitudinal slot and having an antifriction-roller journaled therein, and a pivoted jaw fulcrumed on the stock and extending through the slotted shank and adapted to be actuated by said roller in the outward movement of the hook, substantially as described.

7. The combination with the stock, of the sliding hook having its point slotted and provided at a point remote therefrom with a socket or opening, a pivoted jaw located opposite the hook and having an offset for entering said socket or opening, and a bill for entering the slot in the point of the hook and means on the sliding hook for actuating the pivoted jaw, substantially as and for the purpose described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

AXEL LEO NILSON.

Witnesses:

W. T. ARCHER,  
J. J. SMITH.