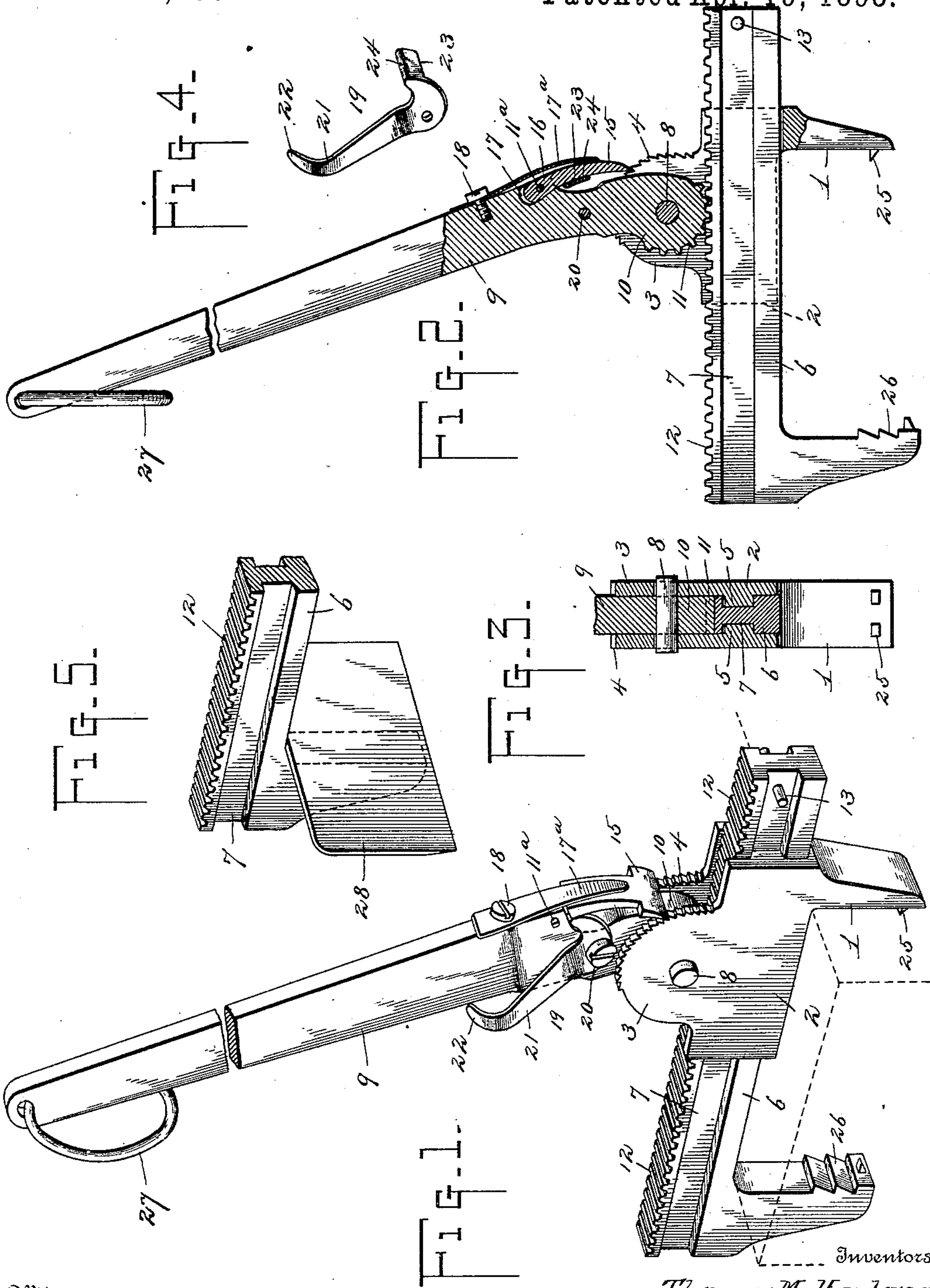


(No Model.)

T. M. HENDERSON & T. E. FREEMAN.
HITCHING DEVICE.

No. 602,750.

Patented Apr. 19, 1898.



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS M. HENDERSON AND THOMAS E. FREEMAN, OF PORTSMOUTH,
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HITCHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 602,750, dated April 19, 1898.

Application filed December 8, 1897. Serial No. 661,191. (No model.)

To all whom it may concern:

Be it known that we, THOMAS M. HENDERSON and THOMAS E. FREEMAN, citizens of the United States, residing at Portsmouth, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Hitching Devices; and we 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.

This invention relates to improvements in hitching devices.

The object of the invention is to provide a device of the character mentioned whereby horses and other animals may be securely hitched, so as to prevent the same running away, and, furthermore, the invention aims to provide an improved hitching device which is so constructed that the same may be readily applied to a curbstone or the like when desired.

A further object of the invention is to embody in the construction of the hitching device simple and efficient means whereby the same shall be securely retained in its applied position, and thus obviate liability of the horse or other animal operating the jaws to free the device from the position referred to.

With these and other objects in view, which will appear as the nature of the improvements is better understood, the invention consists substantially in the novel construction, combination, and arrangement of parts, as will be hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a hitching device constructed in accordance with the present invention, a curbstone being shown in dotted lines to illustrate the manner of applying the device. Fig. 2 is a longitudinal sectional view thereof. Fig. 3 is a transverse sectional view taken through the pivotal point of the operating-lever. Fig. 4 is a detail perspective view of the cam-lever employed for operating the locking-pawl carried by the operating-lever. Fig. 5 is a similar view of the stationary jaw as constructed for application to that form of curbstone

wherein a seam lies between the same and the pavement.

Referring to the drawings, the numeral 1 designates a stationary jaw, which jaw is provided with a pair of upwardly-extending parallel-spaced ears 2, terminating in oppositely-disposed segments 3, each of which is provided with a series of ratchet-teeth 4, for a purpose to be presently stated.

The inner faces of the ears 2 are each provided with a longitudinally-disposed rib 5, and arranged between said ears is a sliding jaw 6, which jaw is substantially L-shaped and provided in the sides of its long arm with longitudinal grooves 7, adapted to receive the ribs 5. It will thus be seen that said ribs form a pair of guides upon which the sliding jaw 6 is adapted to move, and by reason of the ribs being disposed within the grooves 7 it is also obvious that the sliding jaw 6 will be maintained in proper relation to the stationary jaw 1.

Pivotally secured between the segments 3 by means of a pin 8 or its equivalent is one end of an operating-lever 9, and it will be observed that said end is in the form of a cam 10, which is provided with a series of peripheral teeth 11, and said teeth 11 are adapted to engage a series of teeth 12, arranged upon the upper side of the long arm of the sliding jaw 6, the construction described acting in the capacity of an ordinary rack and pinion for the purpose of sliding the jaw 6 toward and away from the stationary jaw 1, a stop-pin 13 being arranged within the end of the jaw 6 which is opposite to its engaging portion for limiting the sliding movement of said jaw.

Pivotally secured to the operating-lever 9, as at 14, is a locking-pawl 15, a shank 16 being disposed within a notch or recess 17, formed in the lever 9, and it will be observed that the pin 11^a passes through said shank. The end of the pawl 15 which is opposite to the shank 16 is of sufficient width to extend entirely across the peripheral faces of both of the segments 3, said pawl engaging the teeth 4 of the segments, and thus preventing rearward movement of the lever 9 when the device has been applied to a curbstone, and

for retaining the pawl 15 in engagement with said teeth 4 a leaf-spring 17^a is employed, which spring is secured, as at 18, to the lever 9. It is thus evident that the pawl 15 will be
 5 normally retained in engagement with the teeth 4; but in order that said pawl may be released from such engagement a cam-lever 19 is employed, the latter being pivoted, as at 20, to one side of the operating-lever 9
 10 and having its handle 21 extending along said side. The free end of said handle 21 is, however, bent toward the lever 9, as at 22, and said bent end bears against the side of the lever 9 and rides along the same during the
 15 movement of the cam-lever 19. By reason of the bent portion 22 a sufficient degree of resiliency is imparted to said handle as will force said bent portion 22 upon the upper edge of the lever 9, and thus said handle 21
 20 is prevented descending, whereby the lever 19 is locked. An arm 23 is carried by the lever 19 at a point adjacent its pivot 20, and said arm 23 lies between the inner face of the pawl 15 and the lever 9, said arm being pro-
 25 vided with a cam-surface 24, and by reason of said surface it will be seen that the pawl 15 moves away from or toward the teeth 4, according to the movement of the handle 21.

The inner faces of the engaging portions of
 30 the stationary and sliding jaws may be provided with spurs 25, while in addition to said spurs the engaging portion of the sliding jaw 6 may also be provided with teeth 26, whereby said jaws may be effectually held upon
 35 the objects to which the same are applied.

A ring 27 is also carried by the free end of the lever 9 for attaching a hitching-strap, chain, or the like thereto.

In Fig. 5 the stationary jaw 1 is shown as
 40 constructed for use with that form of curbstone wherein a seam lies between the same and the pavement, and referring to said figure it will be noted that said jaw is provided with a depending plate 28, which plate may
 45 be suitably connected to the jaw and is preferably of metal of sufficient thickness for the purpose intended. This plate is adapted to enter the ground between the curb and the pavement, and thus secure the jaw 1 in proper
 50 position, the form of jaw shown in the other figures of the drawings being designed for application to a curbstone which extends above the surface of the pavement.

The operation and manner of applying the
 55 herein-described hitching device is as follows: When it is desired to attach the device to a curbstone which projects above the surface of the pavement, the sliding jaw 6 is moved away from the stationary jaw 1 by the oper-
 60 ating-lever 9, through the medium of the cam 10 and the teeth 12, until a sufficient space exists between the engaging portions of said jaws for the reception of the curbstone. The device is now applied to the latter and the
 65 pawl 15 permitted to engage the teeth 4 of the segments 3. By moving the operating-lever 9 downwardly or toward the curbstone

it will be seen that the sliding jaw 6 is moved toward the stationary jaw 1, the locking-pawl 15 sliding over the teeth 4, and thus locking
 70 the lever 9 against reverse movement. It is thus evident that the device will be securely affixed to the curbstone, and by reason of the locking-lever 9 being prevented moving in a reverse direction it is also apparent that the
 75 same is only capable of movement toward the jaw 6, which movement serves to tighten the grip of the jaws 1 and 6 upon the curbstone. The horse or other animal is thus securely
 80 held, it of course being understood that the hitching-strap has been attached to the harness in the usual manner; but when it is desired to release the device from engagement with the curbstone the cam-lever 19 is swung
 85 upon its pivot, so that the cam-surface 24 acts upon the pawl 15 to disengage the latter from the teeth 4, when the lever 9 may be moved in such direction that the jaw 6 is slid away from the stationary jaw 1.

While the herein-described invention is pri-
 90 marily designed as a hitching device, it is evident that the same may be employed as a nut-wrench or pipe-tongs, and it will also be understood that the invention is susceptible of various changes in the form, proportion,
 95 and minor details of construction, which may be accordingly resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In a device of the class described, a stationary jaw, a sliding jaw carried thereby, a lever pivotally connected to said stationary
 105 jaw, and suitably connected with the sliding jaw for actuating the latter, and means for engaging the operating-lever with the fixed jaw for locking said lever against reverse movement, substantially as described. 110

2. In a device of the class described, a stationary jaw, a sliding jaw carried thereby, an operating-lever pivotally connected to the stationary jaw, and suitably connected to the
 115 sliding jaw for actuating the latter, means for locking the operating-lever against reverse movement, and means for actuating said locking means, substantially as described.

3. In a device of the class described, a stationary jaw, a sliding jaw carried thereby, a
 120 lever pivotally connected to said stationary jaw, and suitably connected with the sliding jaw for actuating the latter, and a locking-pawl carried by said operating-lever and adapted to engage the stationary jaw for lock-
 125 ing said operating-lever against reverse movement, substantially as described.

4. In a device of the class described, a stationary jaw, a sliding jaw carried thereby, an operating-lever for actuating said sliding jaw,
 130 a locking-pawl carried by said operating-lever and adapted to engage the stationary jaw to prevent reverse movement of said lever, and a lever carried by the operating-lever for ac-

tuating said locking-pawl for releasing the latter from engagement with the stationary jaw, substantially as described.

5 In a device of the class described, a stationary jaw, a sliding jaw carried thereby, an operating-lever for actuating said sliding jaw, a locking-pawl carried by said operating-lever and adapted to engage the stationary jaw to prevent reverse movement of said lever, and
10 a lever carried by the operating-lever and provided with a cam-surface adapted to engage the locking-pawl to release the latter from engagement with the stationary jaw, substantially as described.

15 6. In a device of the class described, a stationary jaw having a series of parallel upwardly-extending ears provided with longitudinal ribs, a sliding jaw arranged between said ears and having each of its sides provided with a groove, said grooves being adapted to receive said ribs, whereby the sliding jaw is adapted to move on the ribs, an operating-lever pivoted between said ears for actuating the sliding jaw, and means thereon
20 for engaging the fixed jaw for preventing reverse movement of the operating-lever, substantially as described.

7. In a device of the class described, a stationary jaw having a series of parallel upwardly-extending ears provided with longitudinal ribs, a sliding jaw arranged between said ears and having each of its sides provided with a groove, said grooves being adapted to receive said ribs, whereby the sliding
30 jaw is adapted to move on the ribs, an operating-lever pivoted between said ears for actuating the sliding jaw, means for preventing

reverse movement of the operating-lever, and means for releasing said locking means, substantially as described.

8. In a device of the class described, a stationary jaw provided with parallel upwardly-extending ears each of which is provided with a longitudinal rib, a sliding jaw disposed between said ears and having each of its sides provided with a groove, said grooves being adapted to receive said ribs, whereby the sliding jaw is adapted to move along the ribs, oppositely-disposed segments formed on said ears, and each provided with a series of peripheral teeth, an operating-lever pivoted between said ears and provided with a cam, peripheral teeth formed on said cam, a series of teeth formed on the sliding jaw adapted to be engaged by the teeth of said cam, whereby
40 45 50 55 60 when said lever is operated the sliding jaw is adapted to move toward and away from the stationary jaw, a locking-pawl pivoted to the operating-lever and adapted to engage the teeth of the segments, whereby the operating-lever is locked against reverse movement, and a lever pivoted to said operating-lever and provided with a cam-surface adapted to engage the locking-pawl for releasing the latter from engagement with the stationary jaw, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

THOMAS M. HENDERSON.
THOS. E. FREEMAN.

Witnesses:

K. R. GRIFFIN,
S. HUNTER GRIFFIN.