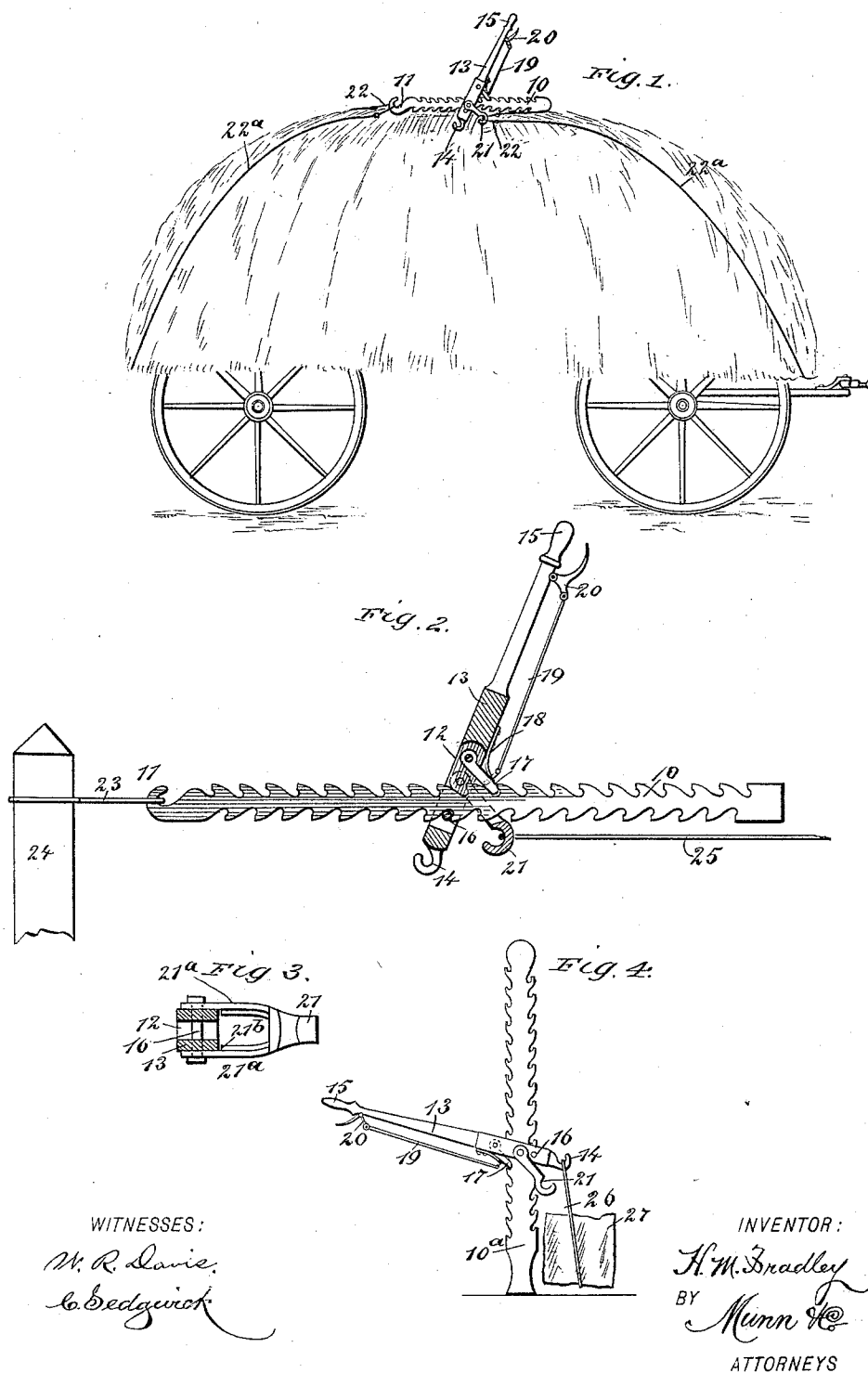


(No Model.)

H. M. BRADLEY.
LOAD BINDER.

No. 467,363.

Patented Jan. 19, 1892.



UNITED STATES PATENT OFFICE.

HARRY M. BRADLEY, OF CAÑON CITY, COLORADO.

LOAD-BINDER.

SPECIFICATION forming part of Letters Patent No. 467,363, dated January 19, 1892.

Application filed May 1, 1891. Serial No. 391,192. (No model.)

To all whom it may concern:

Be it known that I, HARRY M. BRADLEY, of Cañon City, in the county of Fremont and State of Colorado, have invented a new and
5 Improved Load-Binder, of which the following is a full, clear, and exact description.

My invention relates to improvements in load-binders; and the object of the invention is to produce a simple, cheap, and efficient
10 device by means of which a load of any kind may be tightly bound, and which is also well adapted for use as a wire-tightener, post-puller, lifting-jack or wagon-jack, and for many other analogous uses.

15 To this end my invention consists in certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying
20 drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 shows the application of the device to a load. Fig. 2 is an enlarged detail
25 view of a binder, partially in section, showing the manner in which it is used for stretching wire. Fig. 3 is a transverse section taken through the slotted portion of the handled lever and showing the manner in which the
30 hook is pivoted to the lever; and Fig. 4 is a side elevation of the device, showing how it is used as a lifting-jack.

A ratchet-bar 10 is provided with curved teeth on opposite edges, which teeth have con-
35 caved bearing-faces, and with a hook 11 at one end, the opposite end being left blunt, as shown in Fig. 2. This bar extends through a longitudinal slot 12 in the lower end of a lever 13, which lever is provided at its extreme
40 lower end with a hook 14 and at its upper end with a handle 15. A round bolt 16 extends transversely through the lower portion of the slot 12 and is adapted to engage the teeth on the under side of the ratchet-bar 10,
45 and pivoted in the upper portion of the slot is a pawl 17, which projects from one side of the lever 13 and is adapted to engage the teeth on the upper side of the ratchet-bar, the pawl being held in engagement with the teeth
50 by a spring 18, which is secured to the lever

13 and which presses upon the top of the pawl. A rod 19 is secured to the top of the pawl and extends upward and connects with a bell-crank lever 20, which lever is pivoted at its elbow on the lever 13, adjacent to the
55 handle 15, so that it may be conveniently grasped and tilted, and the pawl thus raised out of engagement with the ratchet-teeth. A hook 21 is pivoted loosely on the lower portion of the lever 13, the hook having two side
60 members 21^a, which clasp the lever opposite the lower portion of the slot 12, and these members have shoulders 21^b on their inner sides, which shoulders limit the upward movement of the hook. When the ratchet-bar is
65 in position in the slot of the lever 13, the pawl 17 will be normally pressed into engagement with the teeth on one side of the ratchet-bar, and this will cause the bolt 16 to engage the teeth on the opposite side.

The device is used as follows: If it is to be used as a load-binder, as shown in Fig. 1, the hook 11 on the ratchet-bar is secured to one of the spectacle-shaped devices 22, (shown in Fig. 1,) which device consists of a wire or rope
75 with an eye at each end, and the hook 21 is secured to the other. The binding-cords 22^a are then drawn tightly through the eyes of the spectacles 22 and secured at the corners of the load in the usual manner. The lever
80 is then moved backward and forward to tighten the cords, which it does in the following manner: When the lever is thrown backward, the pressure of the pawl-spring will hold the bolt 16 in engagement with the teeth
85 on the under side of the bar, and when the lever is thrown forward the pawl, by engaging the teeth on the upper edge of the bar, will advance the lever on the bar, the pawl preventing it from slipping, so that the oppo-
90 site binding-cords will be brought nearer together, and by moving the lever backward and forward on the ratchet-bar it will advance tooth by tooth until the binding-cords are sufficiently tightened, and the pawl will
95 prevent it from slipping, so that the load will be securely bound.

When used as a wire-tightener, the hook 11 is secured to a wire 23, which is attached to a post 24, as shown in Fig. 2, and the hook 21
100

is secured to the wire 25, which is to be tightened, and then by moving the handle-lever 13 backward and forward the lever may be advanced on the ratchet-bar, as described, until the wire is sufficiently tightened.

In Fig. 4 I have shown a ratchet-bar 10^a, which is not provided with a hook, but which is adapted to rest on one end, as shown, and this form of the device is adapted to be used as a lifting-jack, wagon-jack, post-puller, or for similar work. When used for lifting purposes—as, for instance, to lift a rock—the hook 14 is secured to a cable 26, which is wrapped around the rock, the bell-crank is tilted so as to release the pawl 17, and the bolt 16 of the lever 13 will rest in one of the concave bearing-faces of a tooth. Then by pressing down on the handle the rock is raised. If a post is to be pulled, the cable 26 is wrapped around the post in the same way as it is wrapped around the rock, and then by actuating the lever in the manner described the post may be lifted from the ground.

To use the device as a wagon-jack, the hooked end 14 of the lever is placed beneath the axle to be raised, the pawl is released, and then by pressing downward on the handle end of the lever the axle will be raised.

It is obvious that the device may be used

also for a great many analogous purposes which I have not described.

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

1. A device of the character described, comprising a bar having teeth on its upper and lower edges and provided at one end with means for attaching a cord or wire thereto, and a lever slotted to receive the ratchet-bar and provided with a bolt extending through the slot to engage one set of teeth of the bar, a pawl for engaging the other set of teeth, and with a hook to receive a cord, wire, or cable, substantially as described.

2. A device of the character described, comprising a slotted lever having a transverse bolt in the lower portion of the slot, a ratchet-bar mounted in the slot of the lever and provided with teeth on its upper and lower edges and with a hook at one end, a spring-pressed pawl pivoted on the lever to engage the upper teeth of the ratchet-bar, and a hook pivoted on the lever adjacent to the slot, substantially as described.

HARRY M. BRADLEY.

Witnesses:

SAMUEL A. BENTLEY,
CHARLES D. BRADLEY.