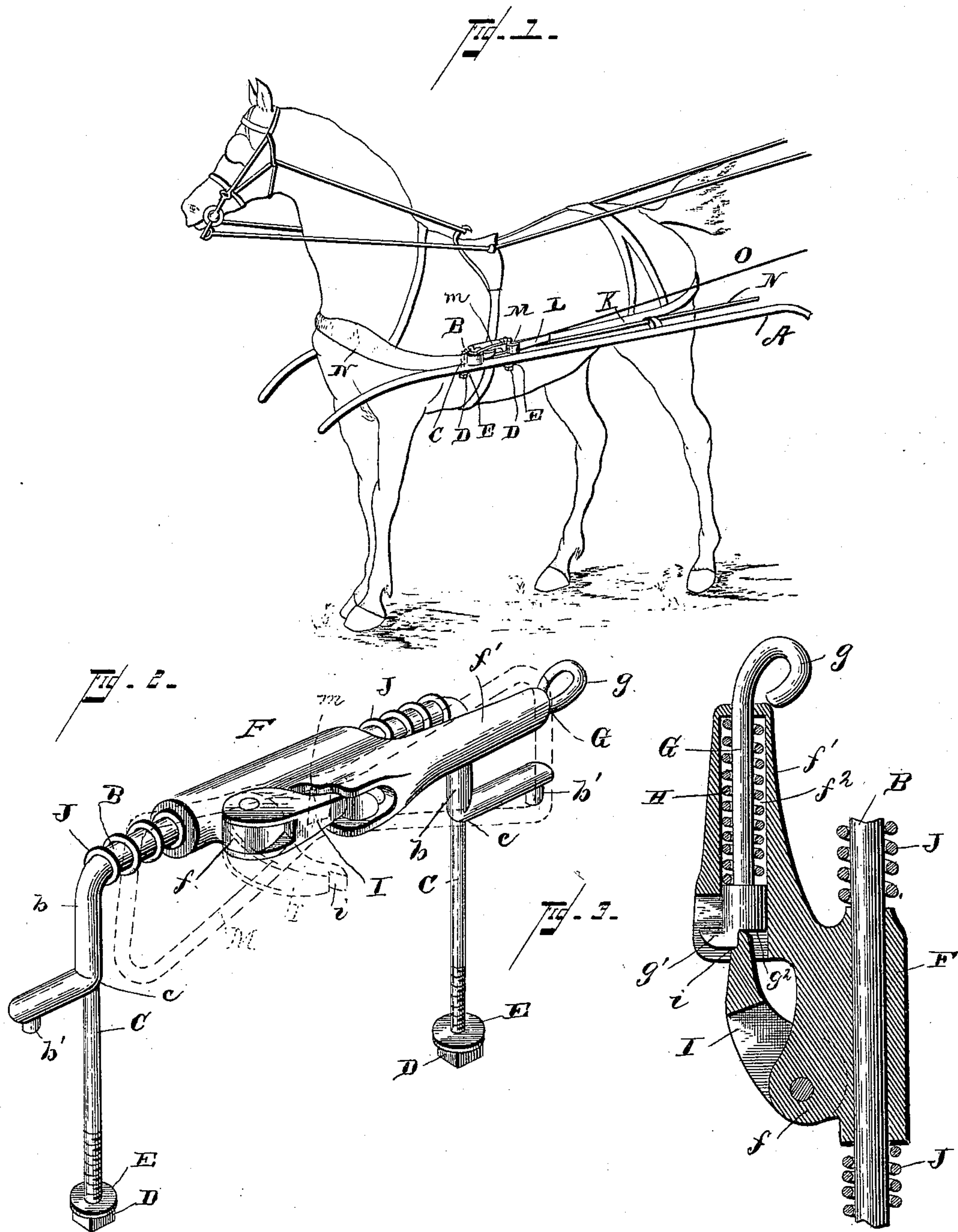


(No Model.)

J. H. NICHOLS.
HORSE DETACHER.

No. 436,185.

Patented Sept. 9, 1890.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN HARMON NICHOLS, OF UNIONVILLE, TENNESSEE.

HORSE-DETACHER.

SPECIFICATION forming part of Letters Patent No. 436,185, dated September 9, 1890.

Application filed May 6, 1890. Serial No. 350,763. (No model.)

To all whom it may concern:

Be it known that I, JOHN HARMON NICHOLS, a citizen of the United States, and a resident of Unionville, in the county of Bedford and State of Tennessee, have invented certain new and useful Improvements in Horse-Detachers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to improvements in horse-detachers, and more particularly to certain improvements under Letters Patent of the United States, which were granted to me under date of April 12, 1887, and numbered 361,230.

The object of the present invention is to simplify the construction described in the above-referred-to patent and to dispense entirely with the necessity of a singletree, the advantages arising therefrom appearing more fully hereinafter.

With these and other objects in view the invention consists in the improved construction and combination of parts, as hereinafter more fully pointed out.

In the drawings, Figure 1 is a perspective view showing my device properly applied to the harness. Fig. 2 is a similar view of the device detached from the harness, showing the buckle in dotted lines; and Fig. 3 is a horizontal section.

In the accompanying drawings, the letter A indicates the thills to which my improved device is attached. The improvement of course is arranged upon each thill, and inasmuch as they are identical in construction for the sake of brevity only one will be described. It consists of a longitudinal metallic rod B, having its ends bent into right-angular form, as indicated at *b b*, the horizontal portions of said right-angular extensions being provided with integral lugs *b' b'*, which fit into suitable notches in the thills and assist in firmly securing the device in proper position. These horizontal extensions are also provided with vertical rods C C, which are reduced in diameter, thus forming shoulders *c c* at the points of juncture with the horizontal extensions. These reduced rods are adapted to pass ver-

tically through the thills, and their lower ends are screw-threaded to receive nuts D D with interposed washers E E for the purpose of securing a firm connection with the thills. 55

The longitudinal rod B has loosely mounted thereon a sleeve F, said sleeve being provided near its forward end with a transversely-apertured lug or projection *f*, and at its rear end with a casing or tubular chamber *f'*, the latter being provided with a rearwardly-extending recess *f²*. 60

A metallic rod G is arranged within the casing or chamber *f'*, said rod being provided upon its outer end with an eye *g* and upon its inner end with an upwardly-extending shoulder *g'*, and also provided with an undercut or notch *g²*. This rod is encircled by a coiled spring H, which actuates the same so as to cause the locking of the device, as hereinafter explained. 70

Pivoted to the lug or projection *f* of the sleeve is a detent or pawl I, said pawl having its free end notched at *i*, so as to register with the notch in the end of the spring-actuated rod G when in engagement therewith. 75

Encircling the longitudinal rod B are coiled springs J J, the outer ends of said springs bearing against the right-angular extensions of the rod and the inner ends bearing against the sleeve. 80

The letter K indicates the holdback of the harness, to the end of which is attached a shorter connecting-strap L, the latter in turn being connected to the rear loop of a buckle M, the forward loop thereof having connected thereto the trace N. The two loops of the buckle are formed by a cross-piece *m*, which, as clearly indicated in Fig. 1 of the drawings, is adapted to be engaged by the detent or pawl, and thus serves to keep the animal in position within the thills. A suitable cord or strap O is attached to the eye formed at the end of the spring-actuated rod G, said cord or strap being of sufficient length to be readily reached by the driver. In this manner it will be seen that when the buckle is attached at each side of a set of harness to the trace and holdback, and a horse with this harness is placed between the thills of a vehicle having my improvement attached, the pivoted detents or pawls may be made to engage the 95 100

notch of the spring-actuated rod, (both the end of said rod and the pawl being slightly beveled to facilitate this arrangement,) the cross-pieces of the buckles being first placed
 5 in such a position relative to the pawls that the latter pass over said cross-pieces. When the pawls are thus in engagement, as shown in Figs. 1 and 2, it will be noticed that they practically form eyes for the retention of the
 10 cross-pieces, said pawls being curved and the corresponding portion of the sleeve F being also curved, as shown at f^3 .

In order to detach the animal, all that is necessary to be done is simply to pull the
 15 cords O, and thus draw the spring-actuated rods G rearward, the upwardly-extending shoulders or lugs g' thereof engaging the rear walls of the recesses f^2 of the casings and limiting their rear movement. When thus
 20 drawn back to their full extent, the pawls are out of engagement and can be thrown forward and the horse thus readily detached.

It is of course obvious that many minor changes may be made without departing from
 25 the spirit of my invention—as, for instance, the sleeve F upon the rod B may be formed integrally therewith and the springs upon said rod dispensed with, thus converting the sleeve into an immovable lug or central en-
 30 largement. I prefer, however, to construct the invention as shown in the drawings.

In practice I attach the device upon the thill in a position about five feet from the axle of the vehicle or three feet from the po-
 35 sition usually occupied by the singletree. By this arrangement the vehicle is drawn directly by the thills, thus giving the animal five feet leverage by which to control the vehicle. This gives the horse great advantage in con-
 40 trolling the vehicle over rough roads and makes it much more pleasant for the rider, as it is obvious that the drawing and holding back is on the springs encircling the rod B.

By the employment of my invention, also,
 45 only one hitching is required on each side, whereas by the old plans two hitchings are required on each side. Furthermore, this construction enables the vehicle to be held back in going downhill from the top of the thills,
 50 thus holding said thills down instead of raising them, as by the old plan. The harness is also cheaper, as traces and holdback-straps are only half the usual length.

When the cords are drawn and the horse
 55 released, the harness is neatly done up and the traces prevented from dropping in the mud; also, by holding the cord tightly the thills are held up until the horse is far enough away to prevent his stepping upon them and
 60 thus mutilating the same.

Besides the above-stated advantages the detacher is applicable to all carriages, wagons, plows, harrows, and, in fact, to any class of vehicles employing horses as a motive power,
 65 is simple in construction, and readily and conveniently operated.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent of the United States, is—

1. In a horse-detacher, the combination, 70 with a bar having its ends bent into right-angular form, the horizontal portions of the right-angular extensions being provided with suitable lugs fitting in recesses in the thills and also provided with vertical rods adapted 75 to pass through the thills of the vehicle and forming shoulders at the points of juncture with the horizontal extensions, the lower ends of said vertical rods being screw-threaded to receive nuts, of a spring-actuated sleeve upon 80 the rod, said sleeve being formed at its forward end with an inwardly-extending bearing-lug and at its opposite end with a rearwardly-extending tubular chamber, a detent or pawl pivoted to the forward bearing-lug, 85 and a spring-actuated rod working in the tubular chamber and adapted to be operated by a suitable cord, substantially as set forth.

2. In a horse-detacher, the combination, 90 with a bar having its ends bent at right angles and adapted to be inserted through the thill of a vehicle, of a spring-actuated sleeve upon the horizontal portion of said rod, said sleeve being formed at its forward end with an inwardly-extending bearing-lug and at its 95 opposite end with an inwardly and rearwardly extending tubular chamber, a detent or pawl pivoted to the forward bearing-lug and having its end beveled and notched, and a spring-actuated rod working in the tubular chamber 100 having its forward end beveled and notched and its rear end provided with a suitable operating-cord, substantially as set forth.

3. In a horse-detacher, the combination, 105 with a bar having its ends bent at right angles and adapted to be inserted through the thill of a vehicle, of a spring-actuated sleeve upon the horizontal portion of said rod, said sleeve being formed at its forward end with a rearwardly-extending bearing-lug and at its 110 opposite end with an inwardly and rearwardly extending tubular chamber, said chamber being provided upon the upper side at its inner end with a rearwardly-extending recess, the sleeve being also concaved intermediate the 115 lug and chamber, a curved detent or pawl pivoted to said bearing-lug and provided with a notched end, and a spring-actuated rod working within the chamber provided upon its inner end with a notch and with an up- 120 wardly-extending lug and upon its outer end with a suitable operating-cord, substantially as set forth.

4. In a horse-detacher, the combination, 125 with a buckle having a forward loop for attaching it to the traces and a rear loop for attaching it to the holdback-strap, said loops being formed by a central cross-bar, of a bar having its ends bent at right angles and adapted to be inserted through the thill of a vehicle, 130 the horizontal portion of said bar being provided with an enlargement, the latter formed at its forward end with an inwardly-extending bearing-lug and at its opposite end with

an inwardly and rearwardly extending tubular chamber; a spring-actuated rod working in the tubular chamber, and a detent or pawl pivoted to the forward bearing-lug and adapted to confine or secure the central cross-bar of the buckle, substantially as set forth.

In testimony that I claim the foregoing as

my own I have hereunto affixed my signature in presence of two witnesses.

JOHN HARMON NICHOLS.

Witnesses:

JESSE COVINGTON,

JAMES WILLIAM GANNAWAY.