(No Model.)

T. W. MOORE.

HARNESS.

No. 457,891. Patented Aug. 18, 1891.

Fig. 1.

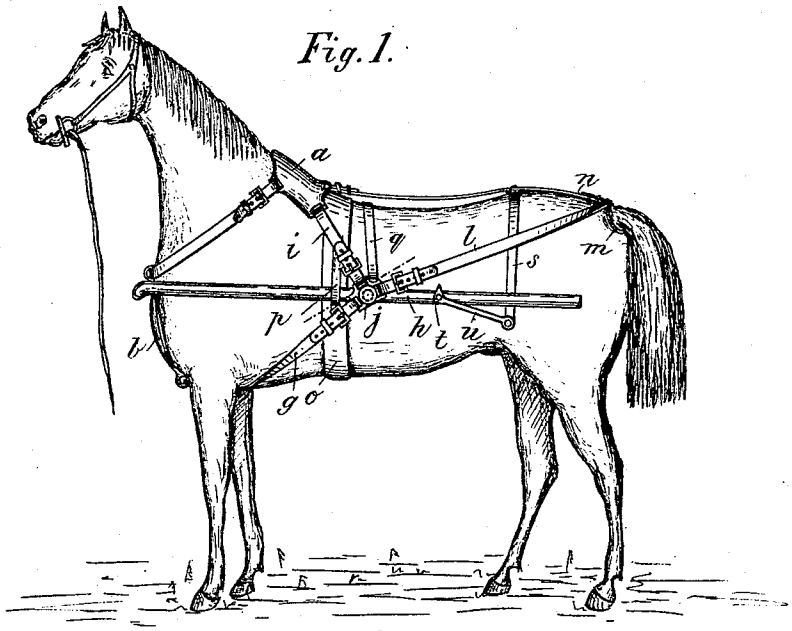


Fig. 2.

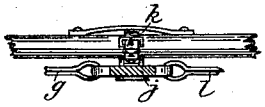


Fig. 5.



Fig. 3.

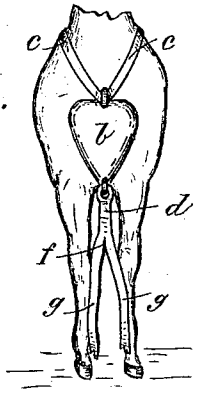
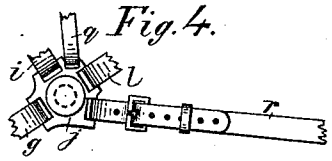


Fig. 4.



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UNITED STATES PATENT OFFICE.

THOMAS W. MOORE, OF PLAINFIELD, NEW JERSEY, ASSIGNOR TO THOMAS W. MOORE, JR., OF FAIR HAVEN, WASHINGTON.

HARNESS.

SPECIFICATION forming part of Letters Patent No. 457,891, dated August 18, 1891.

Application filed September 20, 1890. Serial No. 365,600. (No model.)

To all whom it may concern:

Be it known that I, THOMAS W. MOORE, a citizen of the United States, and a resident of Plainfield, in the county of Union and State of New Jersey, have invented new and useful Improvements in Harness, of which the following is a specification.

My invention consists in an improved contrivance for single or double harnesses for horses, but more particularly for single ones, by which it is designed to provide light harnesses of simpler construction, and so that the stress of the draft will be distributed on the withers and breast of the horse with greater freedom for the working of the shoulders, and also so that in single harnesses the traces may be hitched directly to the shafts of the vehicle; and the invention is also designed to enable the driver in a sulky to apply his weight or a part of it to the back of the horse in or about the locality of the croup, when desired, as a means of causing him to resume the trot after "breaking up," all as hereinafter fully described, reference being made to the accompanying drawings, in which—

Figure 1 is a side elevation of a harness constructed according to my invention and applied to a horse. Fig. 2 is a detail, partly in plan view and partly in horizontal section, indicating the fastening of the traces to the shafts. Fig. 3 is a front elevation of part of the harness, showing the breast-pad suspended from the neck of the horse and part of the traces suspended from it. Fig. 4 is a detail showing the adaptation of the invention for double harness. Fig. 5 is a detail showing a modified arrangement of the device for weighting the croup.

I provide a pad *a*, adapted to rest on the withers of the horse, and another pad *b* being suspended by the neck-strap *c* from the wither-pad under the neck of the horse and being of such limited breadth that it leaves the points of the shoulders free and unobstructed for their natural action, which is more or less obstructed by the ordinary collar and hames, breast-strap, or any breast-pad wide enough to cover the shoulders, which is especially objectionable when high speed is the object. The breast-pad is suspended at its upper extremity and at the vertical axis from the lower extremity of the neck-strap and so that it can vibrate on the vertical axis to accommodate such motion as is due to the working of the breast.

To the lower end of the pad *b*, which terminates at the top of the fore legs, the trace-strap *d* is attached also in the vertical axis, and so as to allow the pad freedom to vibrate, said strap being parted at *f* a suitable distance back of the connection with the pad to permit the separate traces *g* thus formed to be extended upward obliquely behind the fore legs to the shafts *h* without interference with the free working of the legs, and from the hinder portions of the wither-pad I also connect the shafts *h* by the straps *i*, extending downward obliquely to said shafts and preferably at the same points where the traces are connected; but they may be connected elsewhere. The best way is to connect both the traces and straps to a metal frame *j*, having a strap *k* for fastening it to the shaft. It will be seen that the traces drawing from the one strap between the legs and thus extended up the sides to the shafts may be thus connected to them without a whiffletree, because there is no vibration such as the whiffletree is necessarily provided for, and thus besides dispensing with the whiffletree the traces are much shorter, and it will also be seen that the stress is distributed on the withers, neck, breast, and under the breast in a manner calculated to be much easier on the horse, and so that he has greater freedom of the fore legs, and for a simpler arrangement of the hold-back-straps *l*, I connect them to the crupper *m* at the junction of the back-strap *n* with the crupper, or thereabout, and extend them to and connect them with the shafts or said frame *j*, where the traces and straps *i* are connected, or thereabout, which avoids the breeching and applies the stress above the quarter-joint.

The point of junction of the traces and straps *i* may be as far forward as the surcingle *o*, if desired, and said surcingle may hold the shafts by the loops *p*, so that part or all of the down-thrust by the traces may be sustained on the back of the horse behind the withers through

the surcingle, and another back-strap *q* may be applied farther back and connected with the frame *j* for a further distribution of the stress on the back of the horse, or to sustain it all, if desired. For a double harness I will provide other sections of traces, as *r*, connected with the frame *j*.

From the back-strap *m* over the croup I suspend the straps *s* with suitable foot-levers *u*, or it may be stirrups suspended at the ends of said straps, said levers suspended at one end by the said straps and at the other end pivoted to the shafts about where the toe-rests are placed for the rider in the sulky, so that the rider may at any time press the levers down, and thus weight the horse when breaking into a gallop as a means of causing him to resume the trot. The straps may be longer and be looped and attached directly to the shafts, so that the rider may make use of the loops, instead of the levers, for so weighting the croup.

I claim—

1. The combination, in a harness, of the wither-pad, neck-strap, breast-pad, traces connected with the lower end of the breast-pad and extending backward and upward suitably for connecting with the shafts at the sides, and straps adapted for suspending the traces and sustaining the down-thrusts thereof, said traces and straps joined at the sides of the horse, substantially as described.

2. The combination, in a harness, of the wither-pad, neck-strap, breast-pad, traces connected with the lower end of the breast-pad and extending backward and upward, and the straps connected with the wither-pad and extending downward and backward, said traces and straps joined with each other and adapted to connect with the shafts at the sides of the horse, substantially as described.

3. The combination, in a harness, of the wither-pad, neck-strap, breast-pad, traces connected with the lower end of the breast-pad and extending backward and upward, straps connected with the wither-pad and extending downward and backward, and a back-strap, said traces and straps joined with each other and adapted to connect with the shafts at the sides of the horse, substantially as described.

4. The combination, in a harness, of the wither-pad, crupper, back-strap connecting the wither-pad and crupper, and the holdback-straps connected to the crupper at the junction with the back-strap, or thereabout, and adapted to connect with the shafts or other part connected to said shafts at the sides of the horse, substantially as described.

5. The combination, in a harness, of the wither-pad, crupper, back-strap connecting said wither-pad and crupper, the straps suspended from the back-strap in the locality of the croup, and the foot-levers suspended at one end from said straps and pivoted at the other end to the shafts, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 5th day of September, 1890.

THOMAS W. MOORE.

Witnesses:
WILFRED B. EARLL,
W. J. MORGAN.