

No. 641,562.

Patented Jan. 16, 1900.

I. M. TOUSE.  
COMBINED HAY AND STOCK RACK.

(Application filed Aug. 29, 1899.)

(No Model.)

Fig. 4.

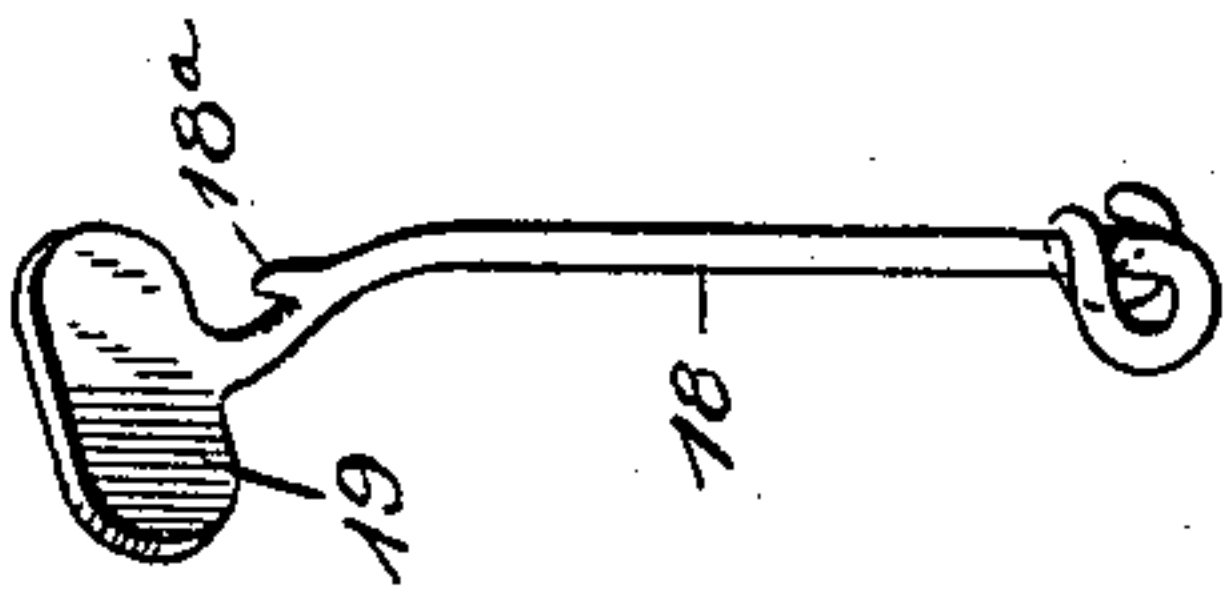


Fig. 3.

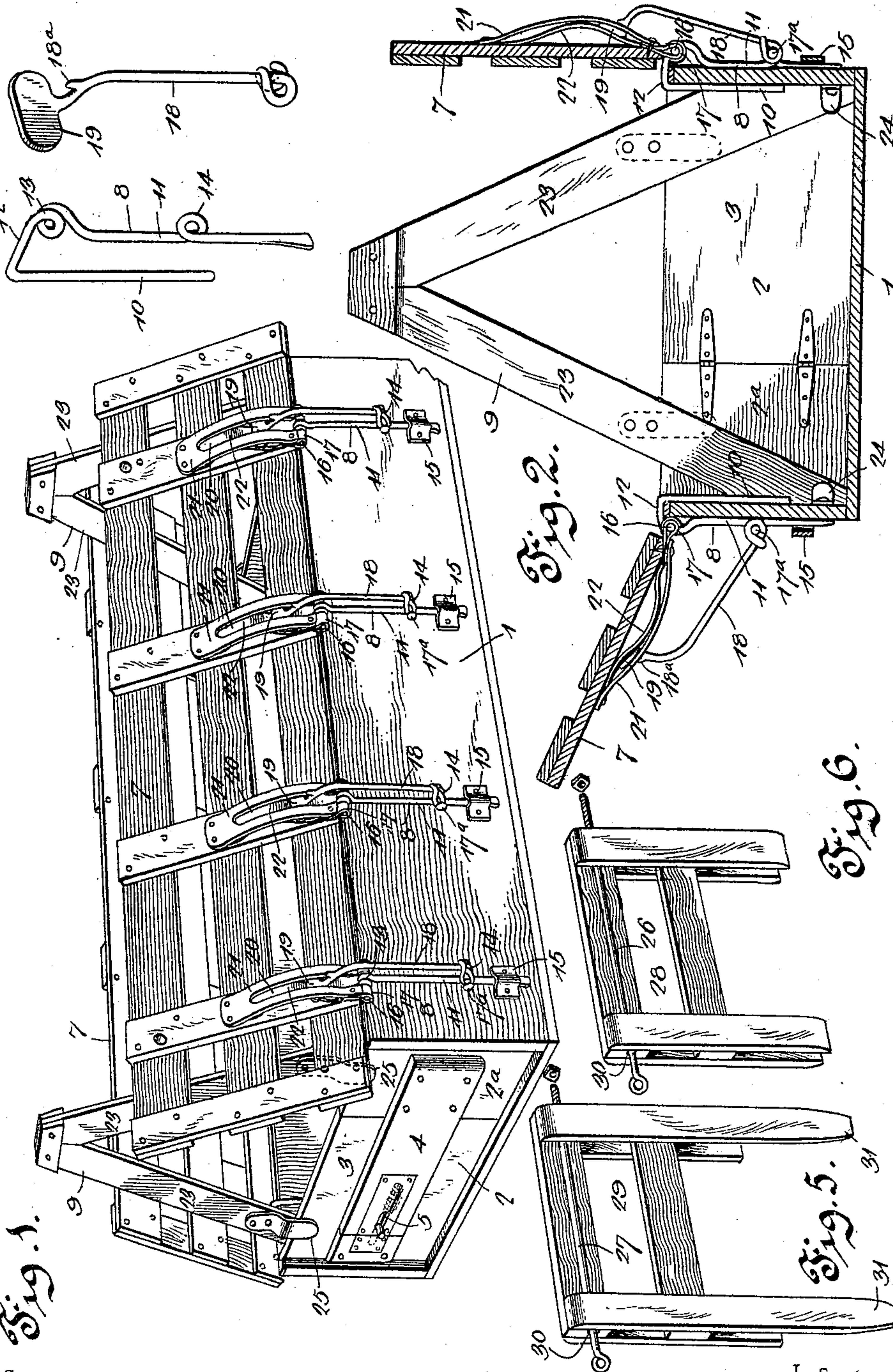
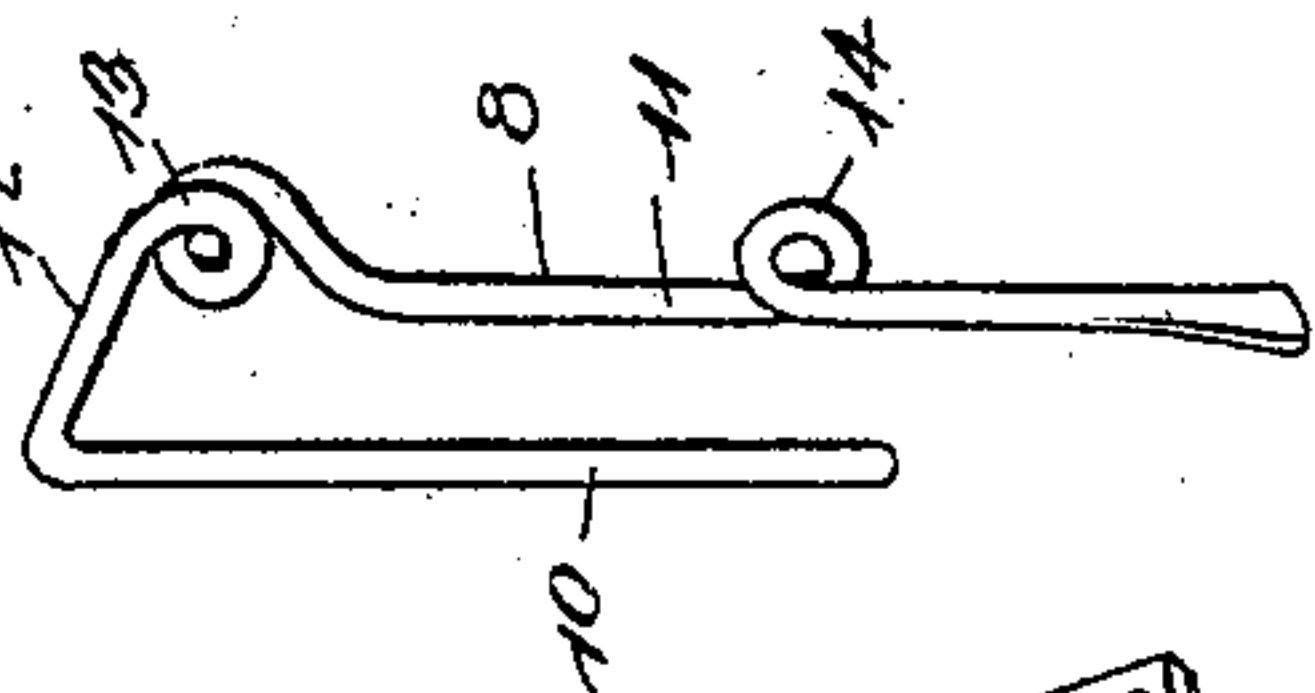


Fig. 1.

Fig. 2.

Fig. 6.

Fig. 5.

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# UNITED STATES PATENT OFFICE

IRA M. TOUSE, OF FRONTIER, MICHIGAN.

## COMBINED HAY AND STOCK RACK.

SPECIFICATION forming part of Letters Patent No. 641,562, dated January 16, 1900.

Application filed August 29, 1899. Serial No. 728,867. (No model.)

*To all whom it may concern:*

Be it known that I, IRA M. TOUSE, a citizen of the United States, residing at Frontier, in the county of Hillsdale and State of Michigan, have invented a new and useful Combined Hay and Stock Rack, of which the following is a specification.

The invention relates to improvements in combined hay and stock racks.

The object of the present invention is to improve the construction of combined hay and stock racks and to provide a simple and comparatively inexpensive one possessing great strength and durability, adapted to be readily arranged to form either a hay or stock rack, and capable of being changed from one position to another without noise.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a combined hay and stock rack constructed in accordance with this invention, the sides of the rack being folded inward against the standards in order to illustrate the construction more clearly. Fig. 2 is a transverse sectional view of the same. Fig. 3 is a detail view of one of the brackets. Fig. 4 is a detail perspective view of one of the hinged braces. Figs. 5 and 6 are detail views of the ends of the rack.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a wagon-body designed to be mounted on a running-gear in the usual manner and provided with a rear end-gate 2, preferably composed of sections 2<sup>a</sup> and 3, hinged together, as clearly illustrated in Fig. 2 of the accompanying drawings, and retained in alinement by a brace or bar 4, secured to the section 2<sup>a</sup> at one end and detachably connected at its other end to the section 3. The brace or bar 4 is provided with a catch 5, preferably consisting of a spring-actuated bolt mounted in a suitable housing and engaging a suitable keeper of the section 3.

The sides of the wagon-body support the sides 7 of the rack, and the sides 7, which are composed of longitudinal bars and transverse connecting-bars, are hinged to the brackets 8

and are adapted to be arranged in a vertical position to form a stock-rack and are capable of swinging outward and of being arranged at a slight inclination to form a hay-rack. When the sides are arranged in a vertical position to form a stock-rack, they provide a partial inclosure for cooping up fowl in the wagon-body.

The bracket 8, which is constructed of suitable metal, is substantially U-shaped, being composed of inner and outer sides 10 and 11 and a top connecting portion 12, which rests upon the upper edge of the side of the wagon-body. The outer side 11 is provided with upper and lower eyes 13 and 14, arranged, respectively, at the upper edge of the side of the wagon-body and at a point near the center of the outer side of the bracket. The lower portion of the outer side 11 of the bracket is flattened and is arranged within a keeper 15, secured to the outer face of the side of the wagon-body. The upper eye 13, which is arranged against the side of the wagon-body, receives a pintle 16, which passes through eyes 17, arranged in pairs at the lower ends of each of the cross-pieces of the sides 7 of the rack. The eyes, which may be provided by any suitable means, preferably are formed by slotted plates having the slotted or bifurcated portions bent upon themselves to provide the eyes. The lower eyes 14 of the brackets receive pintles 17<sup>a</sup> for hinging the lower ends of braces 18 to the brackets, and the upper ends of the braces are provided with heads 19 and are arranged in slots 20 of curved or bowed guides 21, which are secured to the outer faces of the cross-pieces of the sides of the rack, as clearly illustrated in Fig. 1 of the accompanying drawings. The upper portion of each of the hinged braces is T-shaped, as clearly shown in Fig. 4 of the drawings, and the guide 21 is bowed outward sufficiently to provide a space between it and the cross-bar to which it is secured to provide a space for the head of the brace 18, and the said brace slides from one end of the slot to the other as the side of the rack is raised and lowered. The hinged brace is provided at a point between its ends with a projection 18<sup>a</sup>, arranged to receive the upper portion of the slotted guide when the side of the rack is arranged in an inclined position to form a hay-rack.

In order to enable the position of the sides



of the rack to be changed without noise, bowed springs 22 are provided, and each of the springs is arranged to present a convex outer face to the adjacent brace 18. The spring 22 is arranged within the guide 21, as clearly illustrated in Fig. 2 of the accompanying drawings, and as the hinged side 7 is raised and lowered it engages the head 19 of the brace 18 and prevents any noise or rattling. These springs also prevent the irons from rattling when the vehicle is traveling over an uneven roadway. The brackets are detachably mounted on the sides of the wagon-body, and the hinged sides 7 of the rack are adapted to be readily lifted off of the sides of the wagon-body without removing any of the pintles from the eyes.

The standards 9 are composed of inclined sides 23, having their lower ends resting upon the bottom of the wagon-body and interposed between the end-gates and supports 24, consisting of plates secured to the sides of the wagon-body and provided with arms extending therefrom and fitting against the faces of the sides of the standards. The sides of the standards are provided between their ends with depending hooks 25, which engage the upper edges of the end-gates, as clearly shown in Fig. 1.

When the sides are arranged in a vertical position to form a stock-rack, they are secured by transverse rods 26 and 27 to the front and rear ends 28 and 29 of the rack, the sides being perforated at 30 to receive the rods, and the latter being threaded for the reception of the nuts; but any other suitable fastening devices may be employed, if desired. The front end 28 of the rack is provided with vertical bars arranged in pairs and adapted to straddle the front end-gate, and the rear end 29 of the rack is constructed in the same manner, with the exception that the inner bars 31 are extended and adapted to rest upon the bottom of the wagon-body and fit against the supports 24, similar to the sides of the hay-rack standards.

The invention has the following advantages: The combined hay and stock rack, which is simple and comparatively inexpensive in construction, possesses great strength and durability and is adapted to be quickly mounted on and removed from a wagon-body, and it may be changed from one position to another without noise. The cushioning-springs, which are housed within the bowed guides, are also adapted to prevent the irons from rattling when the vehicle is traveling over a rough roadway. The brackets, which are hook-shaped, engage the upper edges of the sides of the wagon-body and have their lower ends interlocked with the keepers, and they enable the sides of the device to be readily lifted off the wagon-body without removing any of the pintles from the eyes or bearings.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted

to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. In a device of the class described, the combination with a wagon-body, and a hay-rack side hinged to the wagon-body, of a guide mounted on the hay-rack side, a brace hinged to the wagon-body and operating in said guide, and a spring arranged to cushion the brace to prevent the same from rattling, substantially as described.

2. In a device of the class described, the combination with a wagon-body, and a hay-rack side hinged to the wagon-body, of a brace hinged to the wagon-body, a slotted guide receiving the upper end of the brace and mounted on the hay-rack side, and a spring mounted within the guide and cushioning the brace, substantially as described.

3. In a device of the class described, the combination with a wagon-body, and a hay-rack side hinged to the wagon-body, of a hinged brace mounted on the wagon-body, a curved guide mounted on the hay-rack side and provided with a longitudinal slot and receiving the upper end of the brace, and a bowed spring housed within the guide and engaging the brace to cushion the same, substantially as described.

4. In a device of the class described, the combination with a wagon-body, of hook-shaped brackets engaging the upper edges of the sides of the wagon-body, keepers mounted on the wagon-body and receiving the lower ends of the brackets, the rack sides hinged to the brackets, the bowed guides mounted on the rack sides and provided with slots, the braces hinged to the brackets and having T-shaped upper portions interlocked with the guides, and springs housed within the guides and cushioning the braces, substantially as described.

5. In a device of the class described, the combination with a wagon-body, hinged rack sides mounted on the wagon-body, hay-rack standards provided with inclined sides and having hooks for engaging the upper edges of the end-gates, and supports arranged within the wagon-body and fitting against the sides of the standards, substantially as described.

6. In a device of the class described, the combination with a wagon-body and a hay-rack side hinged to the body, of a slotted guide mounted on the hay-rack side, a brace hinged to the wagon-body and passing through the slot of the guide and provided with a projection arranged to support the said guide, and a spring mounted within the guide and engaging the brace, substantially as described.

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

IRA M. TOUSE.

Witnesses:

J. E. DONLEY,  
J. SHERMAN.