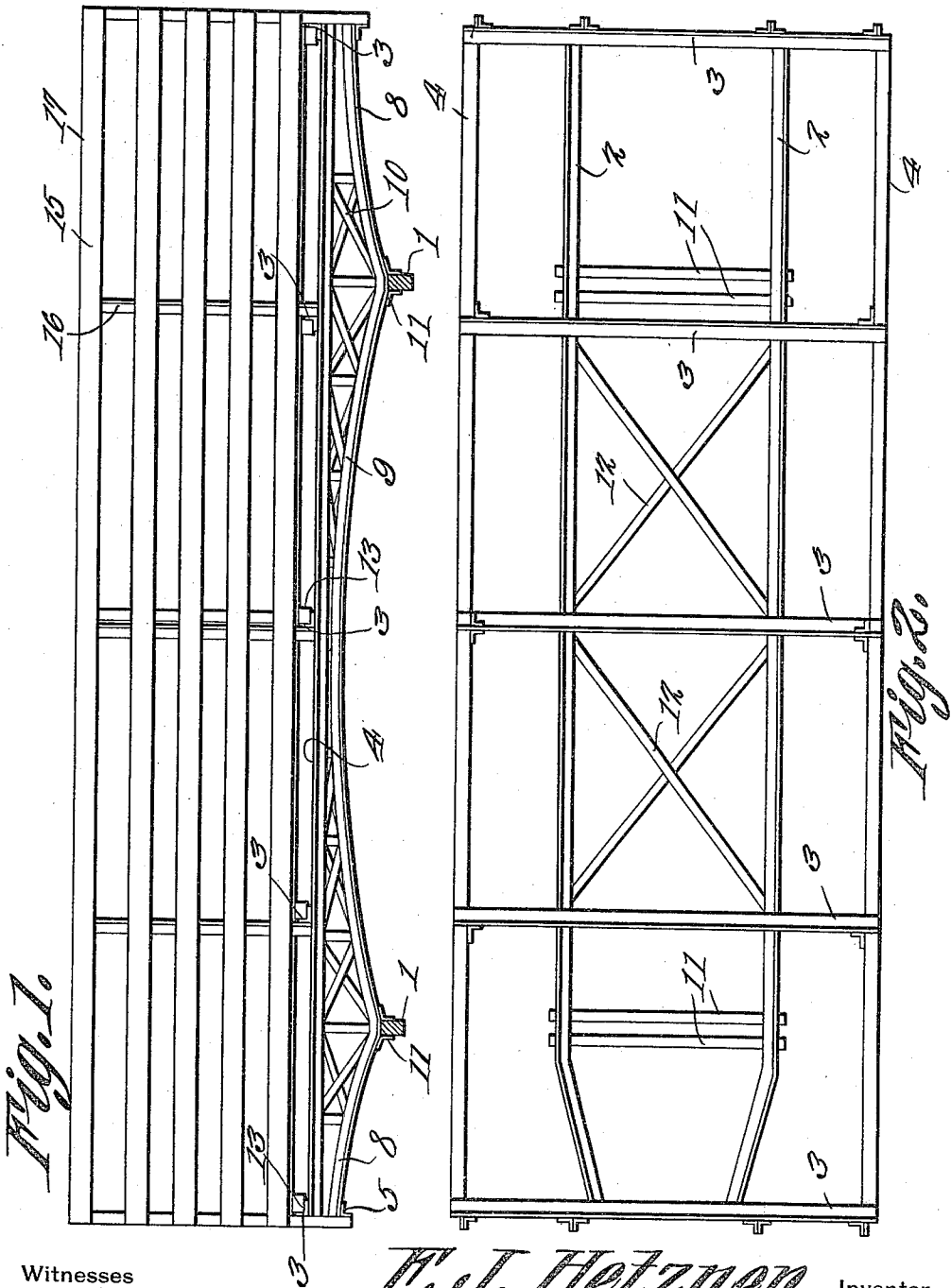


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RACK.

APPLICATION FILED MAY 26, 1915.

1,163,821.

Patented Dec. 14, 1915.  
3 SHEETS—SHEET 1.



Witnesses

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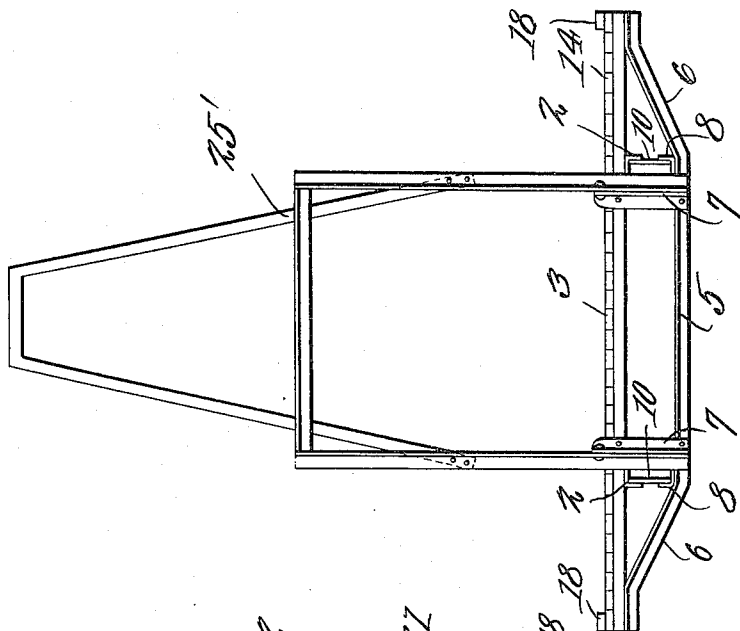
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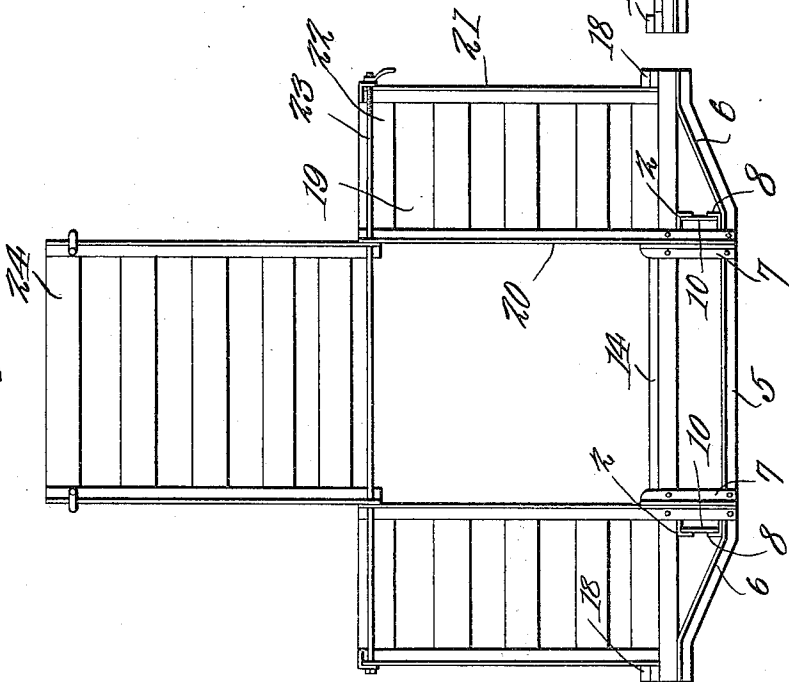
3 SHEETS—SHEET 2.

1,163,821.

*Fig. 4.*



*Fig. 3.*



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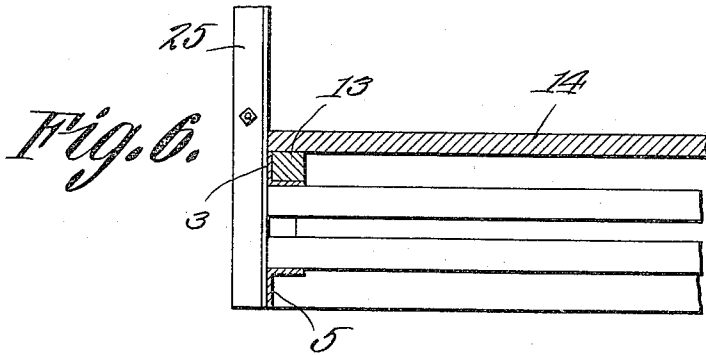


Fig. 6.

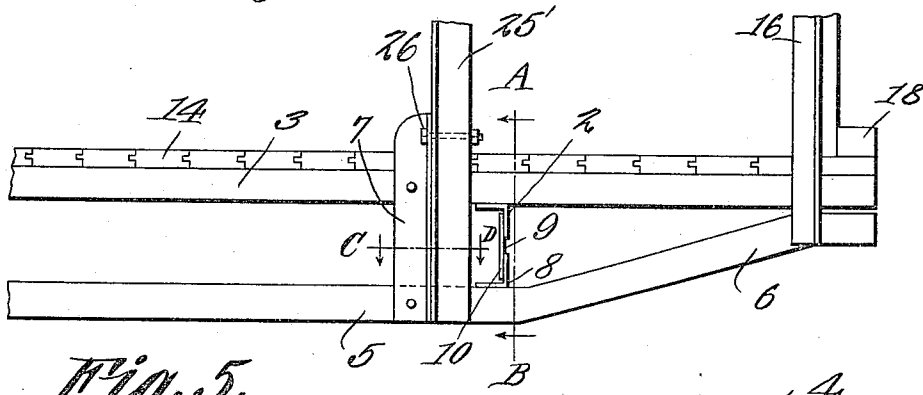


Fig. 5.

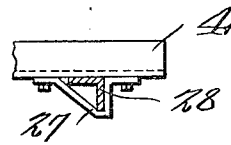


Fig. 8.

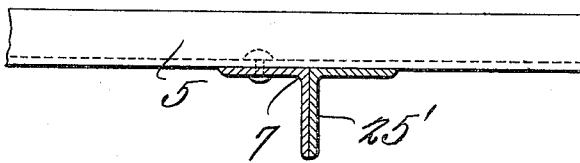


Fig. 7.

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# UNITED STATES PATENT OFFICE.

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## RACK.

1,163,821.

Specification of Letters Patent.

Patented Dec. 14, 1915.

Application filed May 26, 1915. Serial No. 30,640.

To all whom it may concern:

Be it known that I, FRANK J. HETZNER, a citizen of the United States, residing at Delaware, in the county of Delaware and State of Ohio, have invented a new and useful Rack, of which the following is a specification.

This invention relates to a rack such as a hay rack, stock rack and the like, one of the objects of the invention being to provide a durable structure of this character made up entirely of metal, the construction being such that it is possible to make it of light strips of metal whereby the rack is little if any heavier than the ordinary wooden rack commonly employed.

A further object is to provide certain arrangements of parts whereby the structure is properly braced in all directions so as to be capable of supporting considerable loads.

Another object is to provide certain improvements in a hay rack, the end members of the rack being so mounted as to readily fold downwardly onto the platform or upwardly to active position.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a side elevation of the structure arranged for use as a stock rack. Fig. 2 is a top plan view of the platform frame of the rack. Fig. 3 is an end elevation of the rack, the stock gate being open. Fig. 4 is an end elevation of the structure arranged as a hay rack. Fig. 5 is an enlarged end elevation of a portion of the hay rack structure. Fig. 6 is a section on line A—B Fig. 5. Fig. 7 is an enlarged section on line C—D Fig. 5. Fig. 8 is a horizontal section through one of the standards or stakes and showing a modified means for securing the same to the platform.

Referring to the figures by characters of reference 1 designates beams constituting the bolsters of the rack and which are adapted to support the platform structure. This platform structure, exclusive of the floor,

is made up entirely of metal and includes side angle beams 2 extending throughout the length of the platform and having secured thereon at regular intervals, cross beams 3 likewise formed of angle iron, the beams 2 having depending flanges while the angle irons 3 rest flat thereon and have upwardly extending flanges. The outer ends of the beams or angle irons 3 are connected by longitudinally extending angle irons 4 constituting the sides of the platform frame.

Arranged under the end beams 3 are angle beams 5 the ends of which are inclined upwardly toward the ends of the said beams 3 and are secured thereto and to the ends of the side angle irons 4, these inclined portions being indicated at 6. Angle strips 7 connect the end beams 3 to the angle beams 5 and project slightly above the beams 3 as shown particularly in Fig. 5. Secured upon the angle beams 5 close to the inclined portions 6 thereof are the end portions of angle strips 8, these end portions being curved downwardly to points directly above the bolsters 1 and then describing an elongated arch extending from one bolster to the other, this arch being indicated at 9. The strips 8 are located directly under the angle strips 2 and are connected thereto by lattice-work such as indicated generally at 10 so that the angle strips 2 and 8 together with their connections, constitute efficient trusses which are exceedingly light. Cross strips 11 may be secured to the angle strips 8 at the ends of the arch 9 so as to receive between them the bolsters 1.

The frame herein described may be reinforced by crossed braces 12 secured to the angle strips 2.

Seated on the transverse angle strips 3 are wooden sills 13 which may be bolted or otherwise secured to said angle strips and the floor 14 of the rack is fastened to these sills.

Where the structure is to be used as a stock rack, side panels 15 are provided, each of these panels extending throughout the length of the platform and including standards made up of angle strips 16, and slats 17 secured to the standards. The lower ends of the angle strips are adapted to project through the floor and back of the side strips 4, the lower slats of the panels resting against the inner sides of stop cleats 18 secured along the sides of the floor. Interposed between the ends of the side panels

15 are end panels 19. Each end panel includes standards 20, which are bolted to the end angle beams 3 and beams 5, and outer side standards 21 which are fitted against the end standards of the side panels. These standards 20 and 21 are connected by cross slats 22. A fastening rod 23 is extended transversely through the upper ends of the standards 20 and 21 and through the ends of the side panels and this rod constitutes a pivot for a gate 24 adapted to close the middle portions of the end panels. In Fig. 3 the gate has been shown swung upwardly to open position.

15 When it is desired to use the structure as a hay rack, the side and end panels are dispensed with and in lieu thereof end frames 25 made up of angle strips are hingedly connected to the upwardly projecting ends of the angle strips 7 by means of bolts 26, the lower ends of the frames 25 bearing against the outer sides of the beams 5, they being pressed thereagainst by the load of hay on the floor 14. When the rack is not in use, the end frames can be swung downwardly onto the floor 14, as will be obvious.

30 Instead of fastening the sills to the angle strips 3, they can be permitted to rest loosely thereon so that it is thus possible readily to lift the floor 14 and its sills off of the supporting frame provided therefor. The weight of the floor will be sufficient to maintain it in proper position under other conditions.

35 By having the front ends of the beams 2 converging forwardly as shown in Fig. 2, the front wheels of the vehicle are permitted to swing under the platform a greater distance than would otherwise be possible.

40 Instead of connecting the standards or stakes 16 to the machine as hereinbefore described, brackets 27 may be secured to the sides of the beams 4, these brackets being so shaped as to receive the lower end portions of the stakes 28.

What is claimed is:—

1. A rack including a frame made up of

connected longitudinal and transverse angle strips, longitudinal trusses extending under said longitudinal strips, sills seated on the transverse angle strips, and a floor secured to the sills. 50

2. A rack including a frame made up of transverse and longitudinal angle strips, said transverse angle strips having upstanding flanges, means for reinforcing the frame longitudinally, said means constituting bolster engaging means to support the frame, sills seated on the transverse angle strips, and a floor secured on the sills. 60

3. A rack including a frame made up of longitudinal and transverse angle strips, trusses extending longitudinally under the frame and constituting bolster engaging means to support the frame, transverse beams secured under the end portions of the trusses, angle strips secured to the transverse beams and to the ends of the frame, and rack members hingedly connected to the upper end portions of said angle strips and mounted to swing relative to the frame. 70

4. A rack including a frame made up of longitudinal and transverse angle strips, trusses extending longitudinally under the frame and constituting bolster engaging means to support the frame, transverse beams secured under the end portions of the trusses, angle strips secured to the transverse beams and to the ends of the frame, sills mounted on the transverse angle strips, a floor secured on the sills, end rack members hingedly connected to the angle strips and foldable onto the floor, the lower ends of said angle strips cooperating with the transverse beams to limit the upward and outward swinging movement of said end members. 85

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

FRANK J. HETZNER.

Witnesses:

H. REID CELLARS,  
PERCY TILTON.