

J. SKEEN.
Fifth-Wheels.

No. 155,988.

Patented Oct. 13, 1874.

Fig. 1.

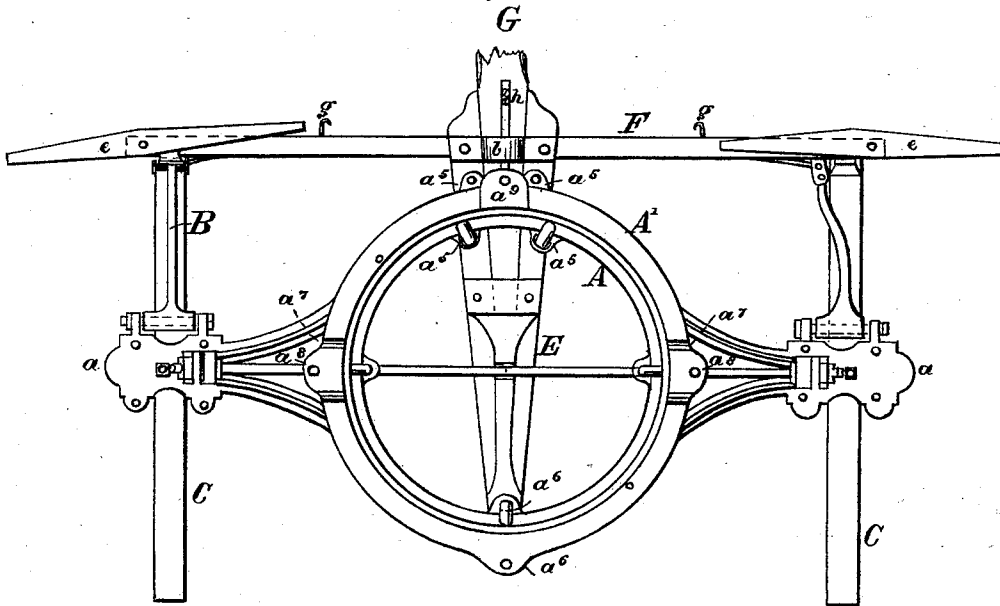


Fig. 2.

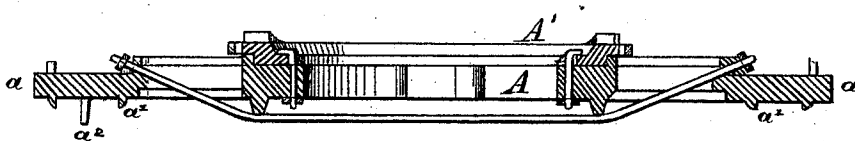
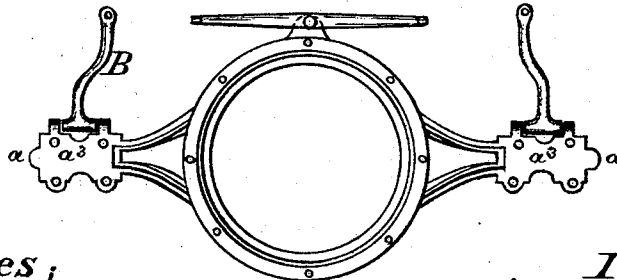


Fig. 6.



Witnesses;
R. N. Syer,
Chas. Thurman.

Inventor;
Jacob Skeen
by Geo. W. Syer & Co
Attys.

J. SKEEN.
Fifth-Wheels.

No. 155,988.

Patented Oct. 13, 1874.

Fig. 3.

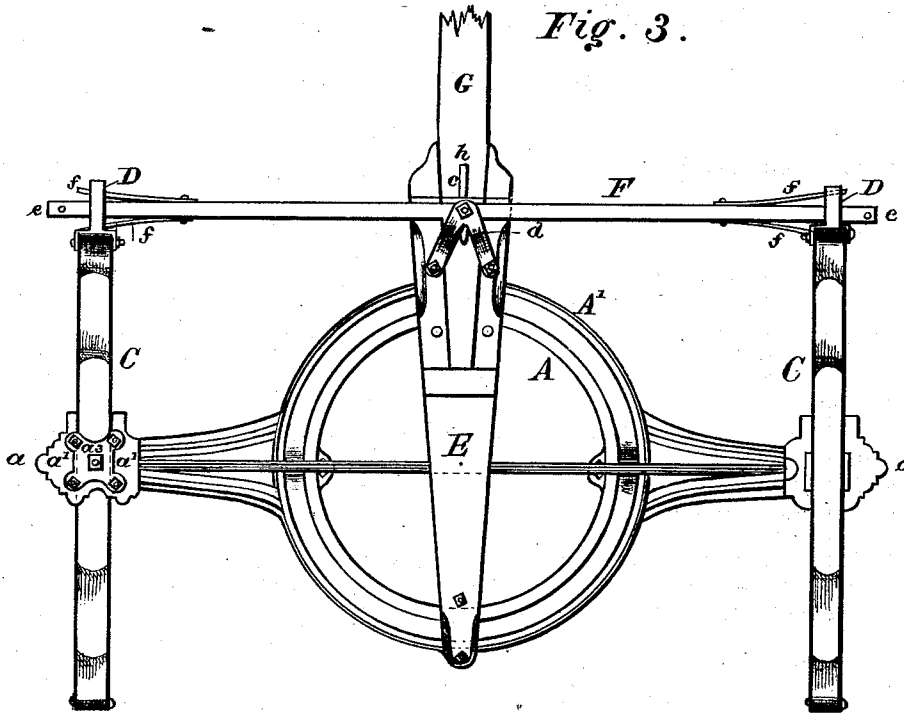


Fig. 4.

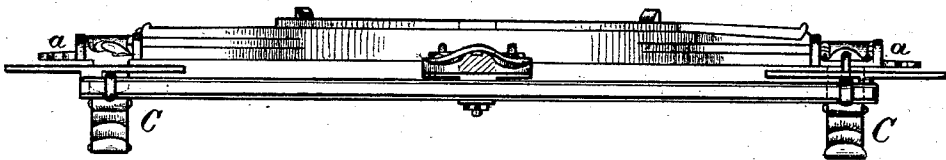
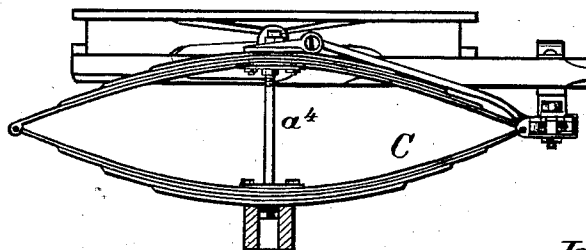


Fig. 5.



Witnesses;
R. N. Syer,
Chas. Thurman.

Inventor;
Jas. Skeen
by Geo. W. Dyer & Co
Attys.

UNITED STATES PATENT OFFICE.

JACOB SKEEN, OF ALLEGHENY, PENNSYLVANIA.

IMPROVEMENT IN FIFTH-WHEELS.

Specification forming part of Letters Patent No. **155,988**, dated October 13, 1874; application filed February 12, 1874.

To all whom it may concern:

Be it known that I, JACOB SKEEN, of Allegheny City, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Fifth-Wheels and their attachments; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The object I have in view is the construction of a fifth-wheel, and its connections and attachments, for various sorts of vehicles, whether wagons for burdens, or carriages for persons, or intended to be used with one or two or more horses, which fifth-wheel and its attachments shall be strong, durable, cheap, and convenient; and my invention therein consists in the peculiar construction of the two principal parts of the fifth-wheel, whereby they may be securely and conveniently attached to the several connections in draft-rods, of which one kind is attached both to the fifth-wheel and the springs, and the other to the fifth-wheel alone, in a novel draft-bar, having double springs acting within loops upon the ends of the draft-rods, in a tongue furnished with a spring-latch, and in various combinations of the principal operative parts, all constructed as more particularly herein-after set forth.

In order to enable those skilled in the art to make and use my improvements, I proceed to describe the same in connection with the drawings, in which—

Figure 1 is a top-plan view of the fifth-wheel, its connections, and attachments; Fig. 2, a vertical section of the fifth-wheel; Fig. 3, a bottom-plan view of the fifth-wheel, its connections, and attachments; Fig. 4, a front elevation of the same; Fig. 5, an end elevation of the same; and Fig. 6, a top-plan view of the fifth-wheel as adapted for use with a single horse.

Similar letters denote corresponding parts in each figure.

A represents the lower part, and A' the upper part, of my fifth-wheel, which is an improvement upon that described in Letters Patent No. 128,429, granted to me June 25, 1872, and No. 115,245, granted to me May 23,

1871. The lower portion of this fifth-wheel has lateral arms *a*, of the shape shown in Fig. 1, upon the under side of the extremities of which are cast side buttresses *a'*, intended to embrace the top of the spring C, which is secured between them, and may have a central stud, *a''*, to pass through a hole in the spring, or there may be a hole through the arm *a* corresponding with a hole in the spring. A Plate, *a'''*, of the form shown in Fig. 3, placed under the spring, is riveted or bolted to the arm *a* by bolts or rivets passing through its corners and close to the sides of the spring. A bolt, *a''''*, having a head, may pass down through the arm *a*, and the plate *a'''*, and down through the whole of the spring and the axle.

To the fronts of the arms *a*, and preferably in ears cast upon the same, are pivoted draft-rods B, which may be pivoted loosely to the front ends of the springs, and, if so, preferably by the same bolt which pivots the ends of the spring, and terminate in loops D, where the fifth-wheel is intended to be used for two horses; or may be left free at their outer ends, and have no loops, when intended to be connected with shafts for use for one horse, as shown in Fig. 6. There are also four ears, *a''''*, upon the front, and two, *a'''''*, upon the rear, sides of this portion of the fifth-wheel, one-half of each four, as well as of the two, being upon the inside, and the other half upon the outside of the fifth-wheel, by means of which the hounds E are properly secured to the under side of said fifth-wheel.

It will be observed, however, that the fastenings, which pass through the ears on the inside of the fifth-wheel, terminate above in the hooks, which hold the two parts of the fifth-wheel together.

The upper portion of the fifth-wheel A' has also buttresses *a''*, which embrace and give support to a bolster or proper cross-bar, and immediately outside of them other ears, *a''''*, which project over the circular portion of the lower wheel, giving place for bolts or other fastening for the bolster or cross-bar to the fifth-wheel without interfering with its freedom of rotation. There are also other ears, *a'''''*, projecting in the same way and for a similar purpose with those just described, to which

the front end of a coupling pole or reach may be securely fastened.

The fifth-wheel described may be used with or without a truss-rod, as may be desired.

The divided front of the hounds E is covered with an arch-plate, *b*, curved upward centrally, and immediately below it, upon the under side of the hounds, is another plate, *c*, so arranged in position that the bolts or rivets passing down through the ends of the plate *b*, and through the hounds, also pass through the ends of the plate *c*, and secure them all together. Beneath this plate *c*, between it and a clip, *d*, which is secured to the hounds, and bends downwardly to the front, the draft-bar F is pivoted, having a little freedom of motion, restrained by reason of the passage of its ends *e* through the loops before named. Upon these ends, in front and behind, are placed leaf springs *f*, which serve to give the draft-bar a normal central position in the loops, preserve its line of parallelism with the front axle, and divide the strain of the draft between the ends of the fifth-wheel and the springs. Upon the extreme ends of the draft-bar, outside of the loops, are placed the single-trees, and upon the front of the draft-bar, between the loops and the hounds, are placed the hooks *g*, for the purpose of attaching thereto the tugs or draft-chains when shafts and a single horse are used, it being understood that, in such use, no single-trees will be required, the draft-bar described answering all the requirements of a single-tree.

The tongue G slips in and out between the fronts of the hounds, and has a spring-latch, *h*, which engages with either of the plates *b* or *c*, by means of which it may be instantly and conveniently removed or placed and held in position.

Upon the under side of the hounds may be secured an india-rubber spring, which coincides in position with one centrally placed on the axle.

The fifth-wheel before described is made of cast metal, and may be composed either of brass, malleable iron, steel, or what is now known as "converted steel," and therefore can be made very strong, durable, and cheap.

Among the advantages of my improvements described are the following:

The fifth-wheel may be cast of various sizes, degrees of thickness in various parts, and weight of metal, so as to adapt it for almost any variety of wagons or vehicles. It is capable of a complete rotation, and needs no finishing up in any part after casting, as the friction between the two faces of the fifth-wheel will in use, in a short time, give each part the necessary degree of smoothness, and it is desirable, for many reasons, not to impair more than is essential the skin of the metal as it is left in casting. In case the faces in use become unequally worn, the defect is readily remedied by drilling suitable holes in the upper or lower fifth-wheel and running in bab-bitt or other proper metal, giving the upper

part a series of rotations as the metal hardens; and this process can be repeated from time to time, as occasion may require. By means of the construction, also, of the upper part of the fifth-wheel, it is readily adapted for the reception of a bolster or cross-bar without any intermediate gear or the use of clips, which are always expensive; and, in like manner, it is adapted for the reception of a coupling-pole or a reach.

The form of the lower part of the fifth-wheel, with its arms extending over the side springs, gives all the advantages of a platform-spring at a much less expense, and the method of securing these arms to the spring by means of the buttresses and the plate used is more convenient and cheaper than by clips, and, in addition, gives greater support and strength to the center of the spring.

The manner of pivoting the draft-rods to the arms of the fifth-wheel, and also to the end of the spring, has the advantages of a direct pull upon the fifth-wheel when there is little weight upon the springs, and of dividing the pull between the fifth-wheel and the spring when the latter is depressed by weight, or by a jolt or shock to the carriage. So, also, with regard to coupling the shaft-rods directly to the arms of the fifth-wheel; to the construction of the draft-bar, so that it can also serve as a single-tree; to furnishing its ends with double springs and inclosing them in loops; to the manner in which the tongue is held in place by a latch-spring; the advantages are quite obviously greater convenience in use, less expense, and more durability.

I am aware of the patent to R. D. Wilson of January 2, 1872; also, of J. J. L. Meincke, April 23, 1868; and disclaim the inventions described and shown therein.

Having thus described my improvements, and enumerated some of their advantages, what I claim as new therein, and of my invention, is—

1. The upper fifth-wheel A, having the ears a^8 , substantially as described and shown.
2. The lower fifth-wheel A', having the ears a^5 a^6 , substantially as described and shown.
3. The lower fifth-wheel A, having side buttresses a^1 adapted to embrace the top of the spring C, said buttresses being provided with a stud, a^2 , to pass through the spring, or having a hole corresponding with a hole in the spring, adapted to receive a bolt, a^4 , all substantially as described and shown.
4. The lower fifth-wheel A, having arms *a* with ears upon their fronts, adapted for shackling the draft-rods B, substantially as described and shown.
5. The fifth-wheel A A', the part A' having buttresses a^7 and ears a^8 a^9 , and the part A having wings *a* and buttresses a^1 , constructed and combined substantially as described and shown.
6. The combination of the fifth-wheel A A', the part A having arms *a* with shackling-ears upon their fronts, with the draft-rods B, the

several parts constructed substantially as described and shown.

7. The combination of the fifth-wheel A A' with the hounds E, substantially as described and shown.

8. The combination of the fifth-wheel A A', the plate a^3 , and the spring C, substantially as described and shown.

9. The combination of the fifth-wheel A A', the plate a^3 , the spring C, and the bolt a^4 , substantially as described and shown.

10. The draft-rods B, terminating in loops D, contiguous to and connected with the ends

of the spring C, all combined substantially as described and shown.

11. The draft-bar F, having springs f , in combination with the loops D, substantially as described and shown.

12. The tongue G, having a latch-spring h , substantially as described and shown.

This specification signed and witnessed this 3d day of February, 1874.

JACOB SKEEN.

Witnesses:

R. N. DYER,

CHAS. THURMAN.