(No Model.)

2 Sheets—Sheet 1.

S. K. PADEN.

FIFTH WHEEL.

No. 525,995. Patented Sept. 11, 1894.

Fig. 1.

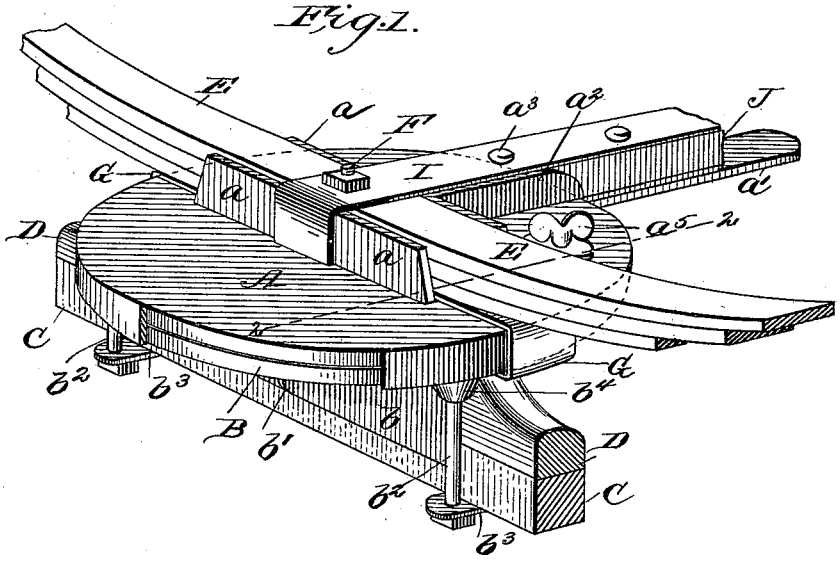


Fig. 2.

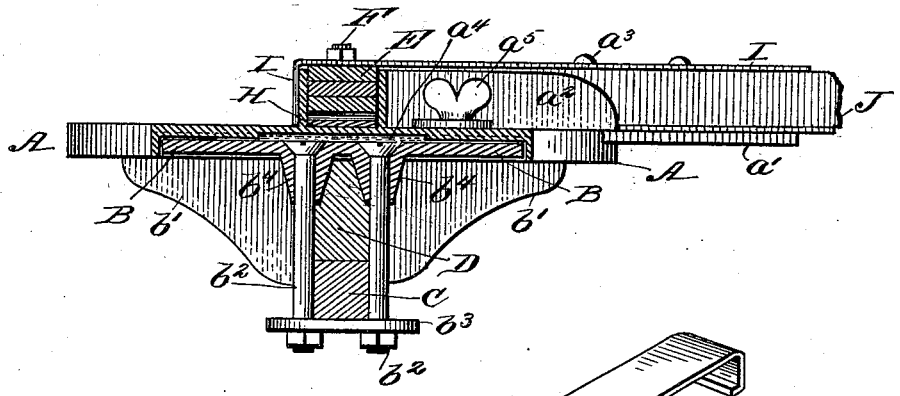
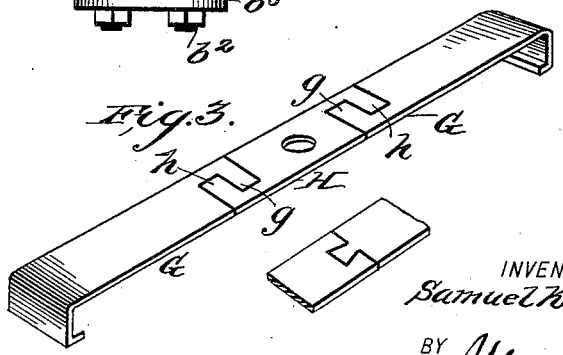


Fig. 3.



WITNESSES:
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(No Model.)

2 Sheets—Sheet 2.

S. K. PADEN.

FIFTH WHEEL.

No. 525,995. Patented Sept. 11, 1894.

Fig. 4.

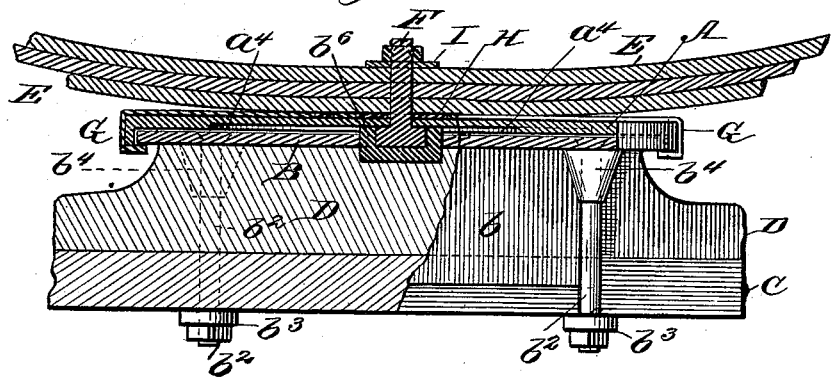


Fig. 5.

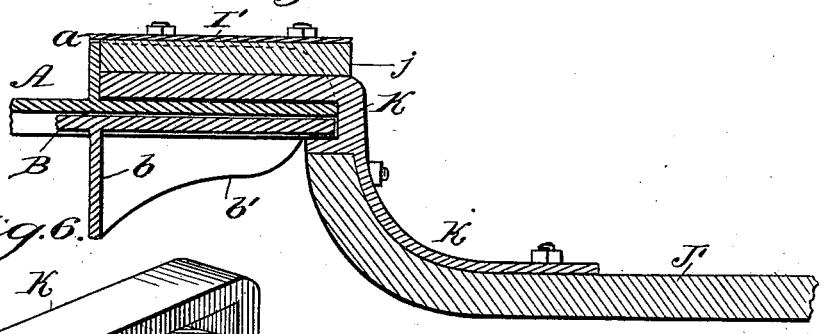


Fig. 6.

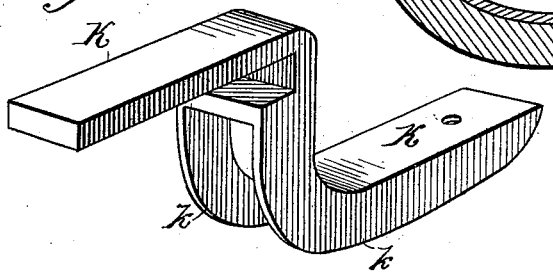


Fig. 8.

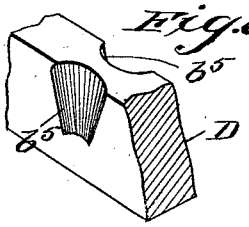
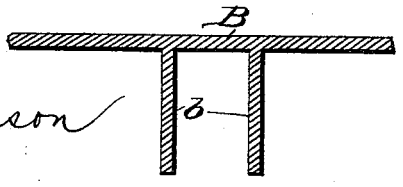


Fig. 7.



WITNESSES:
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UNITED STATES PATENT OFFICE.

SAMUEL KANNADY PADEN, OF PETERSBURG, OHIO.

FIFTH-WHEEL.

SPECIFICATION forming part of Letters Patent No. 525,995, dated September 11, 1894.

Application filed January 12, 1894. Serial No. 496,597. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL KANNADY PADEN, of Petersburg, in the county of Mahoning and State of Ohio, have invented a new and useful Improvement in Fifth-Wheels, of which the following is a specification.

My invention is an improvement in that class of fifth-wheels in which a king-bolt, or analogous connection is dispensed with, and two plates or disks are employed, the same being rigidly attached to the axle and bolster respectively, and adapted to rotate on each other, being held together by side clips or hooks.

The objects I have in view are to simplify the construction, reduce the cost, lessen the friction, and increase the strength and durability of such fifth-wheels. To these ends, I have adopted the construction and arrangement of parts hereinafter specified.

In the accompanying drawings—Figure 1 is a perspective view of my invention—a portion being broken away. Fig. 2 is a central longitudinal section on line 2—2 of Fig. 1. Fig. 3 is a perspective detail view of clips which I employ. Fig. 4 is mainly a vertical transverse section, a portion being shown in elevation. Fig. 5 is a central longitudinal section of a portion of the fifth-wheel and a drop reach connected therewith. Fig. 6 is a perspective view of the device to which the drop reach is attached. Fig. 7 is a vertical section of the base plate of the fifth-wheel. Fig. 8 is a perspective view of a portion of the axle bolster.

The letters, A and B, indicate, respectively, the upper or cap plate and lower, or base, plate or disk, which constitute the fifth-wheel proper. The former, A, is provided with a pendent peripheral rim, which embraces the edge of the base plate, B, and excludes dust. The said base plate, B, (Fig. 2) is provided on its under side with two pendent parallel integral flanges, *b b*, having lateral braces, *b'*. The axle, C, and its bolster, D, are fitted between these flanges, *b*, and secured by screw-bolts, b^2, and clip plates, b^3. The heads of the screw-bolts, b^2, are countersunk (Fig. 2) in the inner side of the base plate, B, and bosses, b^4, are formed on the under side of said plate for a two-fold purpose; first, to provide sockets for the heads of the bolts, b^2, without increasing the thickness of the plate B, as a whole; and, second, to form stops which prevent endwise movement of the bolster, D, by reason of their engagement with the latter as shown in Figs. 2 and 4. For this purpose, the bolster is provided with sockets or recesses, b^5, to receive the said bosses, which fit snugly therein.

The cap plate, A, has upwardly projecting parallel integral flanges, *a*, between which the front spring E, of the vehicle is secured by means of a screw bolt F which passes through both spring and cap plate and has an enlarged cylindrical head *f* on its lower end (Fig. 4). Said head *f*, enters a hole or socket in the center of the base plate B, and forms the pivot on which the latter turns. This socket is lined with a bushing, b^6, of Babbitt metal to reduce friction and take the wear incident to use. Such bushing is made removable, so that a new one may be readily substituted when ever required.

The means for holding the cap plate A, and base plate B, together, are two lateral clips or hooks G G, (Figs. 3 and 4,) which lie beneath the spring E, and extend over and embrace the side edges of both the cap plate A and base plate B, as shown. The inner ends of said clips, G, (Fig. 3,) are notched to form hooks, *g*, adapted to engage corresponding ones, *h*, on a central connecting plate, H, which is arranged between the flanges, *a*, and directly beneath the center of the spring, E, being secured by the same bolt, F, that passes through the spring, cap plate and reach iron, I, which latter extends across the spring and is bent down over the front flange, *a*. A dovetail connection may be substituted for the hooks, as shown in a portion of Fig. 3.

The reason for constructing the clip in parts is to permit attachment of the same to the cap and base plates. That is to say, if the clips G, G, were formed entire, or in one piece, the latter could not be applied because the flanges, *a*, would prevent it being slid on over the cap plate.

The hooks *g*, *h*, of the clips G and their connecting plate, H, are fitted closely together, and their upper surfaces are flush, so that the lower leaf of the spring, E, rests flat upon both. Thus the one bolt, F, serves to hold together all these parts, to-wit: the cap plate

A, spring, E, clips G, connecting plate, H, and reach iron I, and also forms the pivot of the base plate, B.

The advantages of this construction and arrangement of parts in respect to simplicity, economy of manufacture, and facility of attachment and detachment of parts are apparent.

When a straight reach J, (Figs. 1 and 2,) is employed, the cap plate A, is provided with a rear extension, a', (Fig. 2,) in the form of a narrow bar or tongue, which is bolted to the reach as shown, and the head of the latter lies between parallel flanges a^2, which are integral with the cap plate, A, and is secured by a screw-bolt, a^3, whose head is countersunk in the under side of said plate A; but when a drop reach, J', is employed, as shown in Figs. 5 and 6 its curved head is secured to the outer curved shank of a clip K, whose upper portion or head lies between the aforesaid flanges a^2, and is secured, like the straight reach J by means of a countersunk bolt, which passes also through a superposed wooden block j, and the reach iron I, as shown. The curved shank of said clip K, has lateral parallel flanges k projecting from its under side, and between which the reach J', is tightly fitted. The inner ends of said flanges k, project beneath the contiguous rims or edges of the cap plate A, and base plate B, as shown in Fig. 5, and thus subserve the same function as the lateral clips or hooks G, before described. In brief, the clip K, very efficiently supplements the function of clips G.

As shown in Figs. 2 and 4, the central portion of the cap plate A, is cut away or recessed on its under side, to form a chamber a^4, for lubricant, the oil or other lubricant employed being introduced, when required, through a hole in the cap plate which is normally closed by a winged screw-plug a^5, Figs. 1 and 2.

What I claim is—

1. In a fifth-wheel, the combination with the axle and the wooden bolster having recesses or sockets in opposite sides, of the base plate having pendent, parallel, integral flanges which closely embrace the sides of axle and bolster, and pendent tubular bosses fitting in the bolster sockets, and screw-bolts and clip plates, arranged as shown and described.

2. In a fifth-wheel, the combination with the axle and the base plate secured thereto, the flanged cap plate applied to the latter, the spring arranged over the cap plate, a removable clip which is interposed between said spring and cap plate and embraces the edges of the said cap plate and base plate, and a bolt that passes through and secures together the spring, clip, and cap plate, as shown and described.

3. In a fifth-wheel, the combination with the cap plate and base plate, a spring arranged on the cap plate, aligned clips which embrace the edges of both plates, and are detachably connected at their inner ends, and means for holding the spring down on the cap plate, as shown and described.

4. In a fifth-wheel, the combination with the base plate, the cap plate, clips adapted for embracing the edges of both plates, and having their inner ends provided with locking projections, a connecting plate having its ends correspondingly constructed for detachably engaging said clips, a spring resting upon said connecting plate, and a bolt passing through cap plate, connecting plate and spring, substantially as shown and described.

5. In a fifth-wheel, the combination with the base plate, the cap plate, clips embracing the edges of both plates, flanges fixed parallel on the cap plate, a spring and plate placed between said flanges and in contact with them as specified, said plate being engaged with the clips and connecting them, and a screw bolt which clamps the spring and plate in place, as shown and described.

6. In a fifth-wheel, the combination with the base plate, and cap plate, the latter having rear parallel flanges, of the curved clip for attachment of the drop reach, the same having shoulders adapted to project beneath the edge of the base plate, and a straight portion which fits and is secured between said flanges, as shown and described.

7. In a fifth-wheel, the combination with the cap plate and base plate of the drop reach clip having parallel flanges projecting from the under side of its shank, and their upper ends abutting the under side of the base plate, as shown and described.

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Witnesses:

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