(No Model.)

E. TAKKEN.

WAGON GEAR.

No. 486,304. Patented Nov. 15, 1892.

Fig: 1.

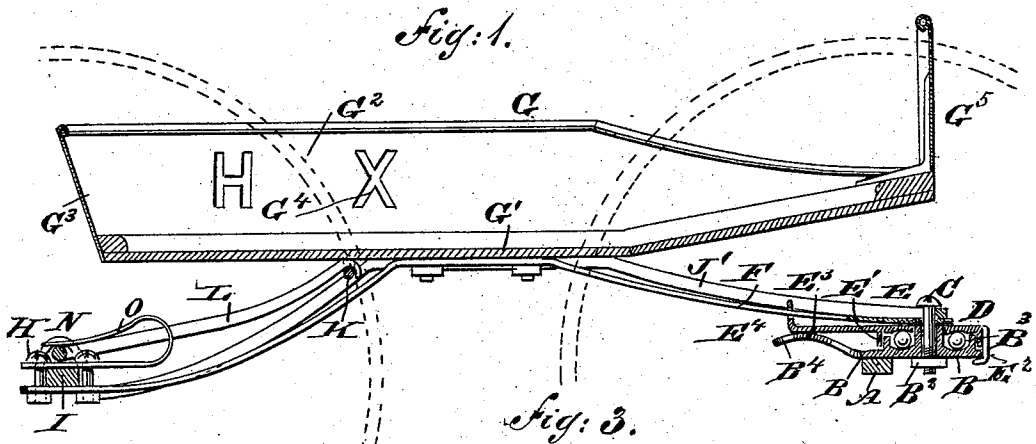


Fig: 3.

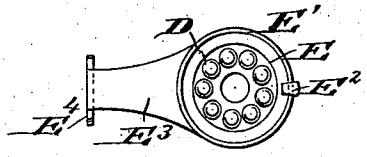


Fig: 2.

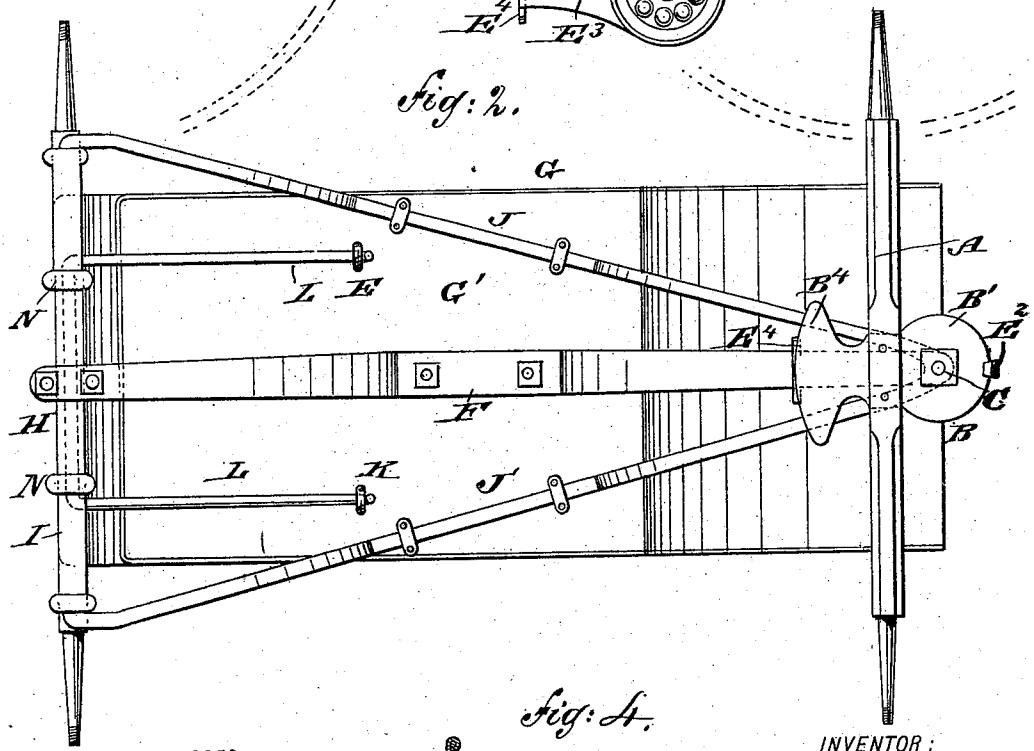
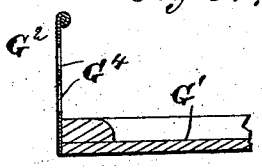


Fig: 4.



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EVERT TAKKEN, OF HOLLAND, MICHIGAN.

WAGON-GEAR.

SPECIFICATION forming part of Letters Patent No. 486,304, dated November 15, 1892.

Application filed February 18, 1892. Serial No. 421,961. (No model.)

To all whom it may concern:

Be it known that I, EVERT TAKKEN, of Holland, in the county of Ottawa and State of Michigan, have invented a new and Improved Wagon-Gear, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved wagon-gear which is simple and durable in construction, permits of easy riding in the wagon-body, and relieves the axles of all undue strain.

The invention consists of certain parts and details and combinations of the same, as will be described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of the improvement as applied. Fig. 2 is an inverted plan view of the same. Fig. 3 is a plan view of the ball-bearing of the fifth-wheel, and Fig. 4 is a transverse section of part of the wagon-body.

The front axle A supports a fifth-wheel B, formed with a plate B′, extending to the front of the axle and carrying a hub B^2, engaged by the king-bolt C. On the plate B′ is also arranged an annular groove B^3, in which are held a series of balls D, forming part of a ball-bearing for the fifth-wheel, the top plate E of the fifth-wheel resting on the said balls, as is plainly shown in Fig. 1.

On the front plate E, on the under side thereof, is formed an angular flange E′, engaging a corresponding V-shaped flange on the plate B′, so that the top plate E is guided and is not liable to be displaced. The top plate E is also mounted to turn on the hub B^2, and on the front end of the said plate is formed a downwardly-extending arm E^2, formed at its lower end with a lug engaging the under side of the plate B′, so as to prevent displacement in an upward direction of the top plate E.

The top plate E is formed with a rearward extension E^3, resting on a curved extension B^4, projecting rearward from the plate B′, as is plainly shown in Fig. 1. On this rearward extension B^3 is formed an upwardly-extending eye E^4, through which passes the front end of a flat spring F, engaging the king-bolt C and resting on top of the cover-plate E of the fifth-wheel D. The spring F is bent upward and rearward from the fifth-wheel to extend to the under side of the bottom G′ of the body G, the said spring then extending for a short distance along the said body, being secured thereto by suitable bolts or other means. The rear ends of the spring F are bent downward to be connected by a clip H with the axle I. It is understood that the flat spring F extends from the middle of one axle to the other, at the same time passing about on the middle of the wagon-body G. (See Fig. 2.)

Near the outer ends of the rear axle I are secured the ends of two spring-bars J, bent similarly to the spring F and secured at or near their middle to the under side of the bottom of the wagon-body G, as is plainly shown in the drawings. The two bars J and J′ extend toward each other from the rear to the front, the front ends of the said bars being united and engaging at this point the king-bolt C on top of the front end of the spring F.

On the under side or the bottom G′ of the wagon-body G and on the rear end of the same are secured the staples K, engaged by the front end of a U-shaped bar L, extending rearward and having its middle part extending over the axle I. This middle portion of the bar L is engaged by bearings N, clipped or otherwise secured to the rear axle I at opposite sides of the spring F.

The top plate O of the clip H, which fastens the spring F to the rear axle I, is formed with a rearwardly and upwardly curved spring-arm O′, pressing with its free end on the middle portion of the bar L, so as to prevent rattling of the latter in its bearings N.

The wagon-body G has its bottom G′ formed of wood, while the sides G^2, as well as the rear end G^3, are formed of sheet metal, so that the wagon-body is rendered very strong and durable, at the same time being very light. The sheet-metal sides G^2 are cut to form letters or other characters G^4, indicating advertisements or the name of the owner of the wagon, or the characters may be employed for other

purposes. The dash-board G^5 is also formed of sheet metal, and it, as well as the lower edges of the sides G^2 and H^3, is riveted, nailed, or otherwise fastened to the frame of the bottom G.

It will be seen that a wagon constructed in this manner permits of easy riding in the wagon-body, as all the jolting motion or jars are taken up by the spring F and the spring-bars J and J'. The turning of the wagon is rendered very easy on account of the ball-bearing in the fifth-wheel B, as described.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the front and rear axles, of a fifth-wheel secured to the front axle and extending in front of the same, a king-bolt held on the fifth-wheel, and a spring having one end secured to the center of the rear axle and its other end to the king-bolt, the central portion of the spring being bent upward to permit it to be secured to the under side of a body, substantially as described.

2. The combination, with the front and rear axles and a fifth-wheel carried by the front axle, of a spring having one end secured to the center of the rear axle and its other end to the fifth-wheel and spring-bars having their rear ends secured to the outer ends of the rear axle and their forward converging ends united and connected with the fifth-wheel, the central portions of the said spring and bars being bent upward to permit them to be secured to the under side of the body, substantially as herein shown and described.

3. The combination, with the front and rear axles, of a fifth-wheel carried by the front axle and provided with a rearwardly-projecting extension having an upwardly-extending eye, and a spring having one end secured to the rear axle and its forward end passed through the eye of the fifth-wheel and connected with the said wheel, substantially as herein shown and described.

4. The combination, with the front and rear axles, of a fifth-wheel formed with ball-bearings and mounted on the front axle, a king-bolt held on the fifth-wheel, a spring having one end secured to the rear axle and its other end to the king-bolt, and spring-bars having their forward ends united and engaging the king-bolt and their rear ends secured to the rear axle, substantially as herein shown and described.

5. The combination, with the body and the rear axle, of a U-shaped bar mounted in bearings on the axle and having its ends secured to the under side of the body and a curved spring secured to the axle and having its free end bearing on the middle portion of the U-shaped bar, substantially as and for the purpose set forth.

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