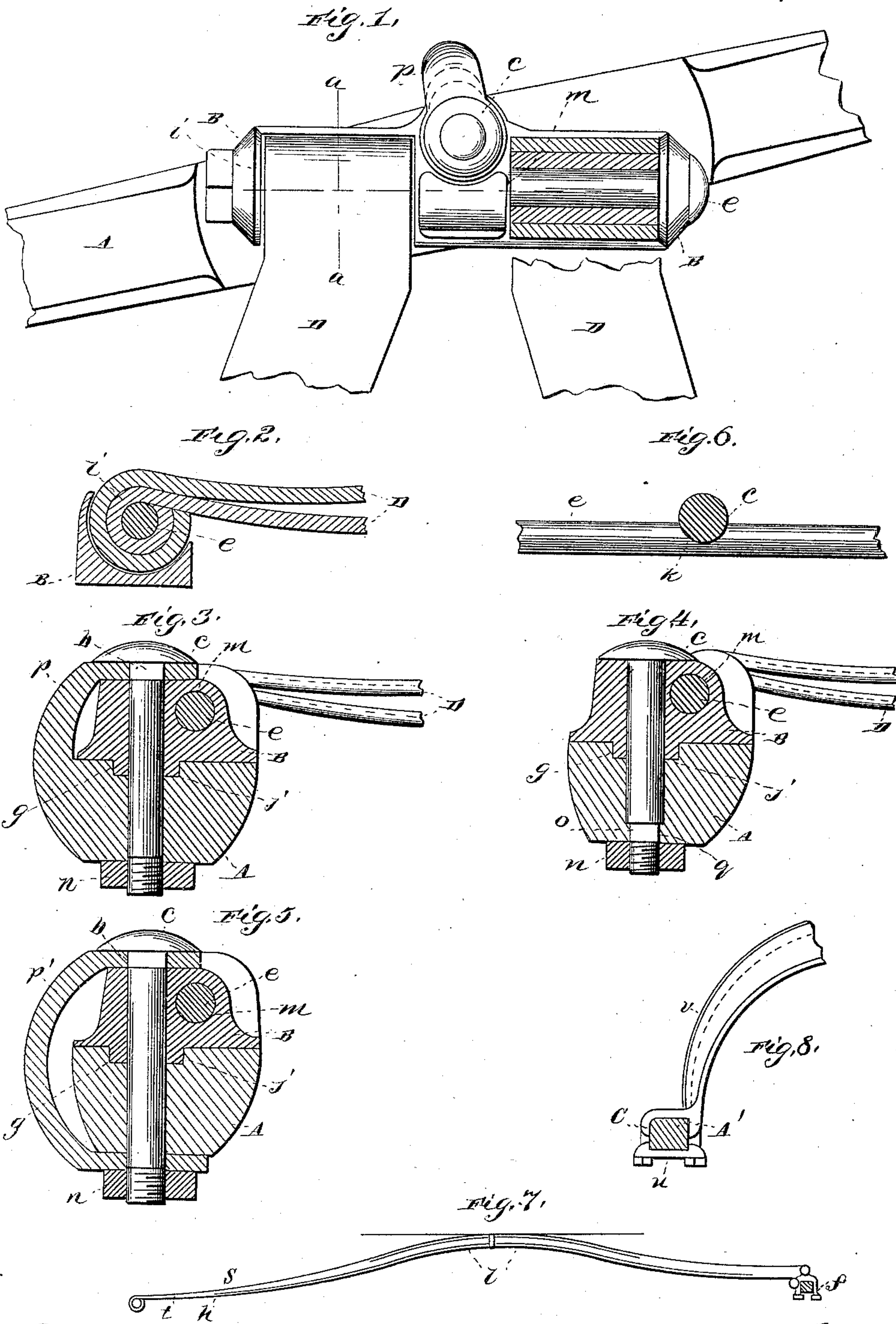


(No Model.)

D. G. WYETH.  
BUGGY GEAR.

No. 461,971.

Patented Oct. 27, 1891.



Witnesses:

Arthur D. Seaton  
Charles Nelson

Inventor:

David G. Wyeth  
by Arthur D. Seaton  
His atty.



# UNITED STATES PATENT OFFICE.

DAVID G. WYETH, OF NEWARK, OHIO.

## BUGGY-GEAR.

SPECIFICATION forming part of Letters Patent No. 461,971, dated October 27, 1891.

Application filed September 17, 1890. Serial No. 365,312. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID G. WYETH, a citizen of the United States, residing at Newark, in the county of Licking, in the State of Ohio, have invented a new and useful Improvement in Buggy-Gears, of which the following is a specification.

My improvement relates to buggies in which it is desired to use long vehicle-springs, which will also perform the offices of a reach; and the objects of my invention are to simplify and compact the fifth-wheel arrangement or connection of such springs with the front vehicle-axle and to have such connection strong and of parts which may readily be renewed or repaired. I attain these objects by the mechanism illustrated in the accompanying drawings, wherein—

Figure 1 is a top plan view of front end of vehicle-springs, coupling, and middle portion of front vehicle-axle, with one spring cut away and one side of coupling shown in lateral section. Fig. 2 shows a section of Fig. 1 at *a a*. Fig. 3 is a vertical section of Fig. 1 at the middle thereof. Fig. 4 is a section like to Fig. 3, showing a modification; and Fig. 5 is a like section showing further modifications. Fig. 6 is a view of middle portion of notched spring-bolt with king-bolt in section. Fig. 7 represents one of the vehicle-springs in its entire length, with rear vehicle-axle in section. Fig. 8 shows shaft or pole coupling.

Similar letters refer to similar parts.

In Fig. 1, A represents a middle portion of the front vehicle-axle, and B the coupling or fifth-wheel, held upon the said axle by the king-bolt *c*. The spring-bolt *e* is secured in the coupling B through the holes *m m m* and receives and holds the front ends of the vehicle-springs D D, the bolt passing through the eyes *i* at the said ends of said springs. The coupling B may be conveniently cast of malleable iron, and it rests and turns upon the middle of said axle A and on its lower side has a lug or boss *g*, Fig. 3, adapted to work or bear in the cup *j* in said axle. The coupling B is open upon its upper side, so as to receive the front ends of the vehicle-springs D D. The spring-bolt *e* may be secured by a nut at one of its ends, as commonly made, or by the means shown in Fig. 7, where said

bolt has a notch *k* at its middle, and the king-bolt *c* fits into this notch and thus prevents said spring-bolt from working out.

The king-bolt *c*, passing through the coupling B and axle A, may be secured by a nut *n* at its lower end, and riveted also, if desired. This king-bolt *c* may be made square in its part which stands in the axle A, or a portion of said part, as in *o* in Fig. 4. Then, with the hole *q* at the bottom of said axle A made square to correspond, the king-bolt *c* and axle A turn together and the nut *n* will not work off. Moreover, by this latter arrangement there will be little or no wear in the hole in said axle, and the coupling B, if worn, may be easily replaced by a new one. As shown in Fig. 3, the king-bolt *c* may be made square in that part which stands in the clip *p* or *p'* as in Fig. 5, and said clip *p* or *p'* have a corresponding square hole *b* to contain said spring-bolt, when the same ends as last named will be effected. The middle portion of axle A may be curved slightly downward, so that the spring-bolt *e* will be in a line with the vehicle-spindles of front vehicle-axle, so that said axle may roll easily. A lug or clip *p* may be made integral with the front of the middle part of said axle A and brought up and over the coupling B, as shown in section in Fig. 3. This clip is perforated at the top to pass the king-bolt *c*, and its office is to assist in holding the coupling B firmly in its bearing upon the axle A. In Fig. 5 is shown a detachable clip *p'*, which is perforated at either end to pass the king-bolt *c*, and its function is the same as clip *p*. The vehicle-springs D D, near the front end thereof, may be turned to the right and left, respectively, (see Fig. 1,) so as to enter the coupling B parallel with each other in order that the eyes *i i* of the same may be at right angles to such parallel ends and in a line with the spring-bolt *e*.

Referring to Fig. 8, the vehicle-spring D is seen to be made up of two long plates, an upper and a lower one, with shorter leaves upon the lower. The number of leaves is not important, though the extra leaves are conveniently placed upon the lower long leaf *t* in order that there may be space or slack room *h* between the upper and lower long leaves *s*



and *h*. The upper leaf *s* may have less curve in its forward part, so as to provide or add to the slack room *h*. The springs *D* are bolted, riveted, or otherwise suitably fastened together at the middle part thereof, as at *l*, upon and to which middle part the vehicle-body rests and is secured. The springs *D* are arranged triangularly with the rear vehicle-axle, and the rearend of each spring is attached by a clip *f* to the rear axle near the spindle. These springs come near together in front to enter the coupling *B*, as explained. No buggy-reach other than the two springs *D* is used.

I secure the buggy shafts or pole rigidly to the front axle *A* in such position that when the vehicle is in use said axle will be in a nearly upright position and the coupling *B* work properly thereon. The shafts or pole may be thus fastened by methods already in use or by the means shown in Fig. 9, where *A'* represents a section of the vehicle-axle *A* at a point where the shaft-coupling is usually attached, and *C* is a clip securing one shaft or one end of a pole-brace *v* to said axle. This clip *C* is shaped to fit to the said shaft or brace, to which it is properly secured by bolts, rivets, or screws, and is secured to the axle *A* by the clip-bar *u*.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a buggy-gear, of two springs *D* *D*, adapted to attach to the rear vehicle-axle near either end thereof and having the front ends adapted to be secured in the coupling *B* by the spring-bolt *e*, the coupling *B*, adapted to receive the front ends of said springs and having the boss *g* and perforated to receive the spring-bolt *e* and the

king-bolt *c*, respectively, the axle *A*, having the cup *j* adapted to receive said boss *g*, and being perforated to receive the king-bolt *c*, and having the lug *p* integral therewith, the king-bolt *c*, and spring-bolt *e*, all combined and arranged substantially as set forth.

2. The combination, in a buggy-gear, of two vehicle-springs *D* *D*, approaching near together at the front ends thereof and adapted to be secured by the spring-bolt *e* to and in the coupling *B* and adapted at their rear ends to be attached to the rear vehicle-axle near the respective ends thereof, the coupling *B*, adapted to receive the front ends of said springs and perforated to receive the spring-bolt *e* and the king-bolt *c*, respectively, and having the boss *g*, adapted to work in the cup *j*, the axle *A*, having the cup *j* and perforated to receive the king-bolt *c*, and said king-bolt *c* and spring-bolt *e*, all substantially as described.

3. The combination, in a buggy-gear, of two vehicle-springs *D* *D*, adapted at their rear ends, respectively, to be attached to the respective ends of the rear vehicle-axle near the spindles thereof and at their front ends to be attached in the coupling *B* by the spring-bolt *e*, the said coupling *B*, perforated to hold said spring-bolt *e* and the king-bolt *c*, and having the boss *g*, adapted to work and turn in the cup *j*, the axle *A*, having the cup *j* and perforated to hold the king-bolt *c* and having the vehicle shafts or pole secured rigidly to said axle *A*, and the said king-bolt *c* and spring-bolt *e*, all substantially as set forth.

DAVID G. WYETH.

Witnesses:

MILTON R. SCOTT,  
JACOB R. DAVIES.