

(No Model.)

J. W. WETMORE.
VEHICLE SPRING.

No. 482,933.

Patented Sept. 20, 1892.

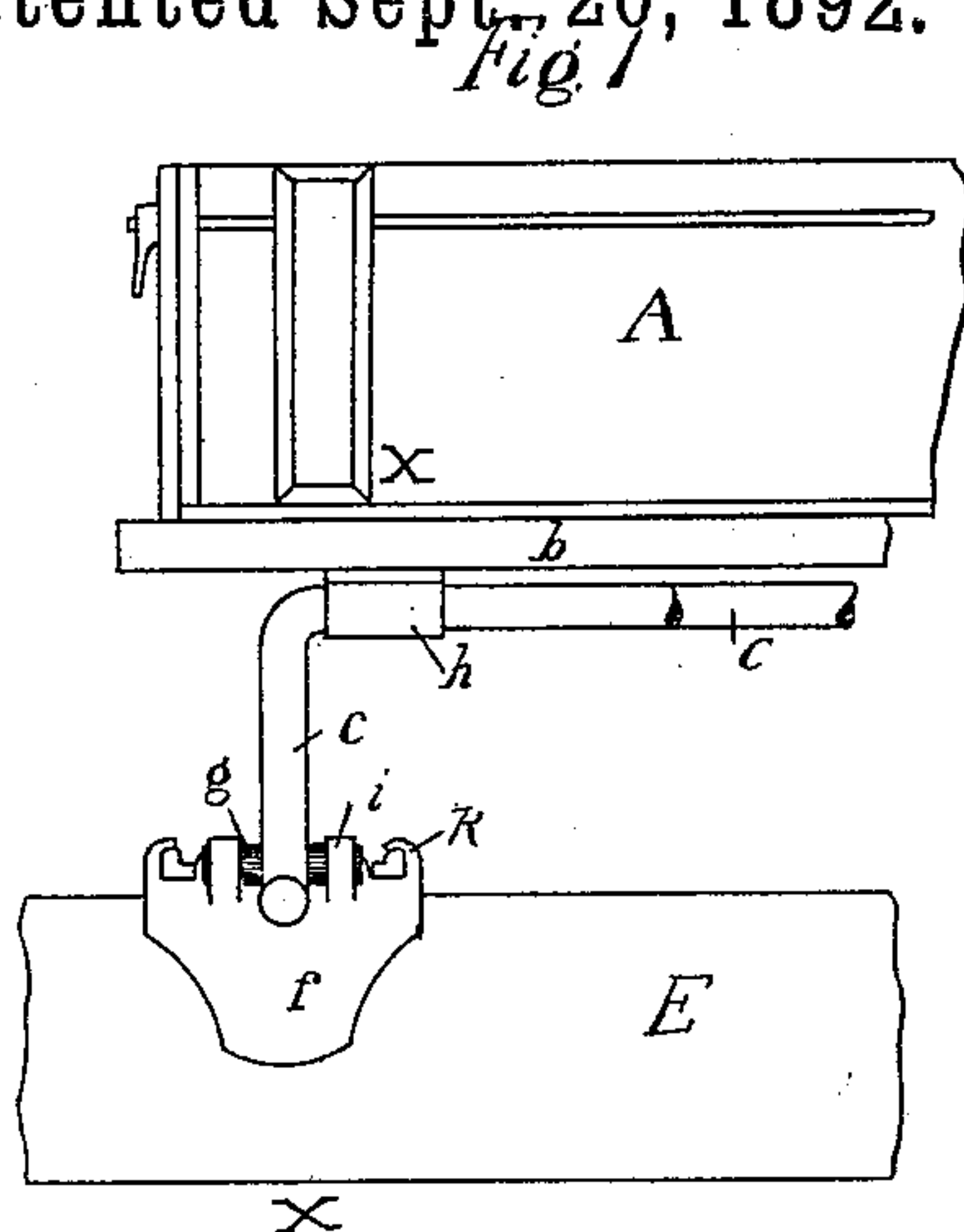
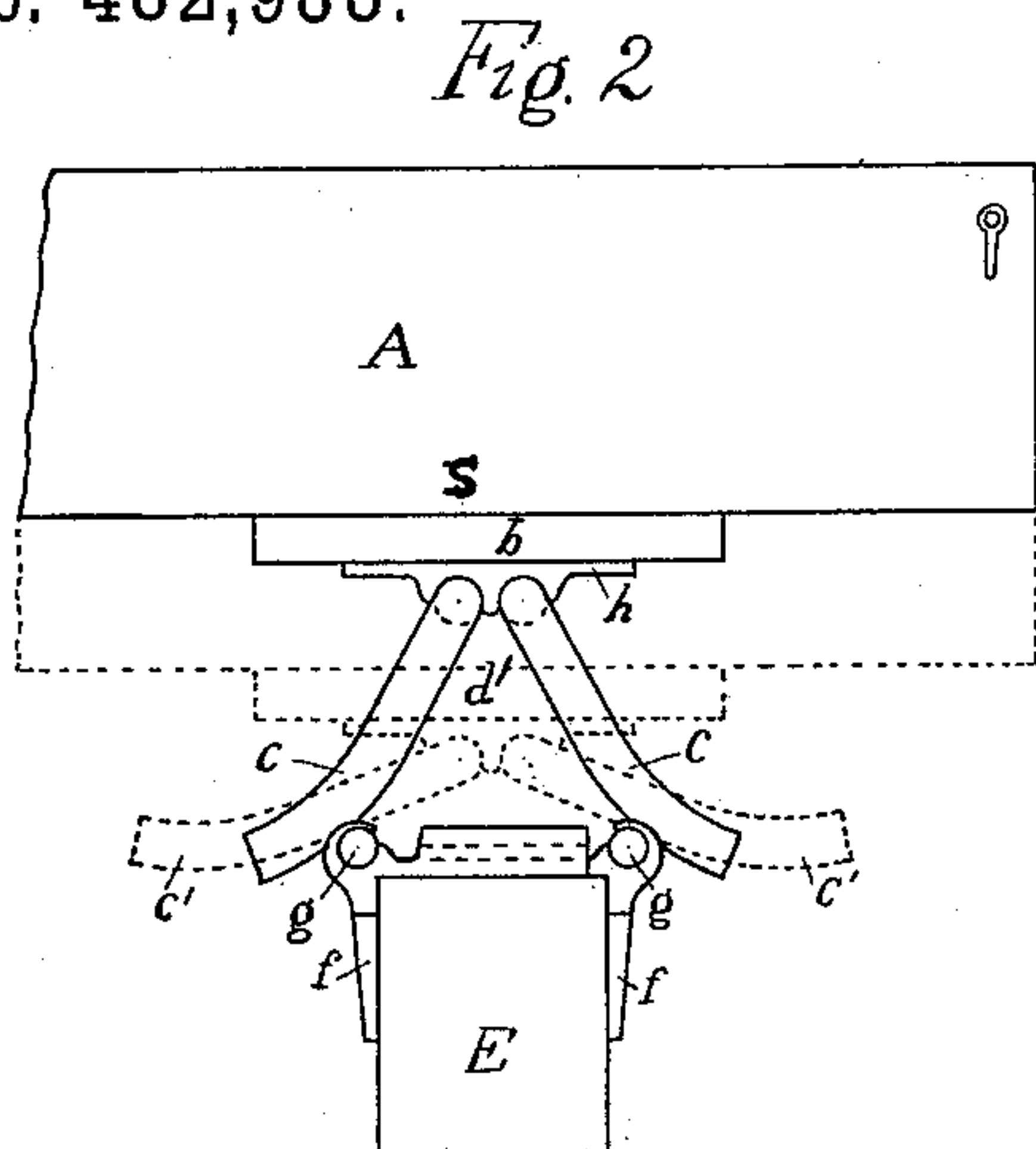
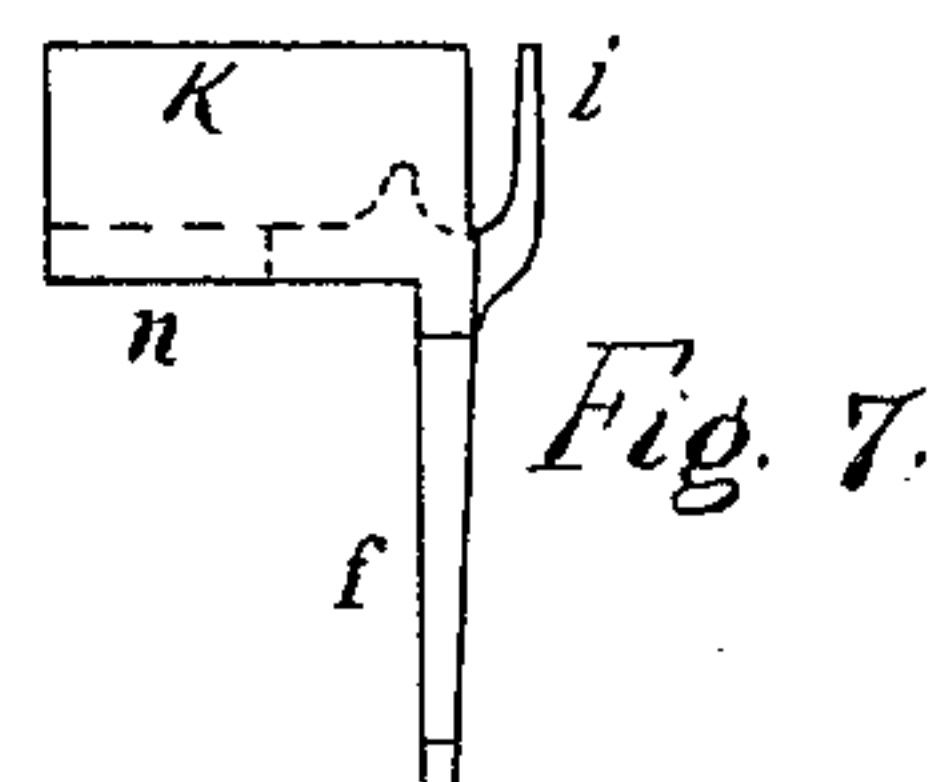
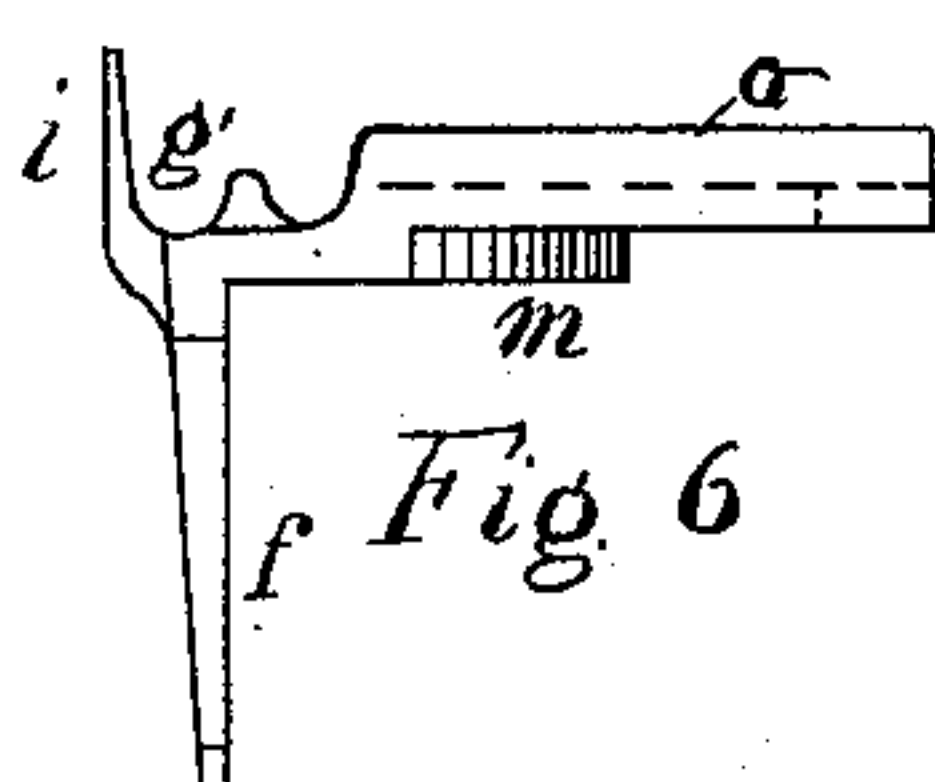
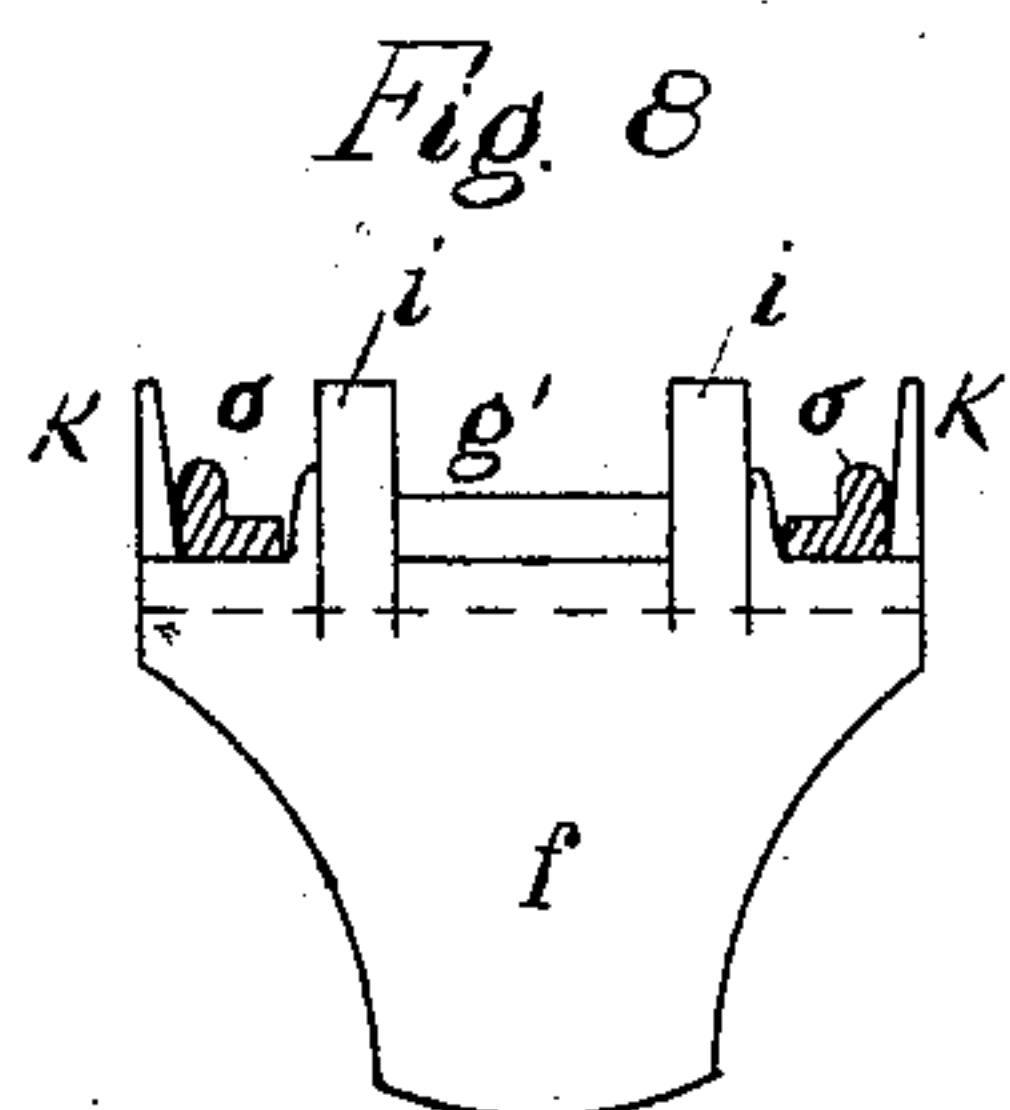
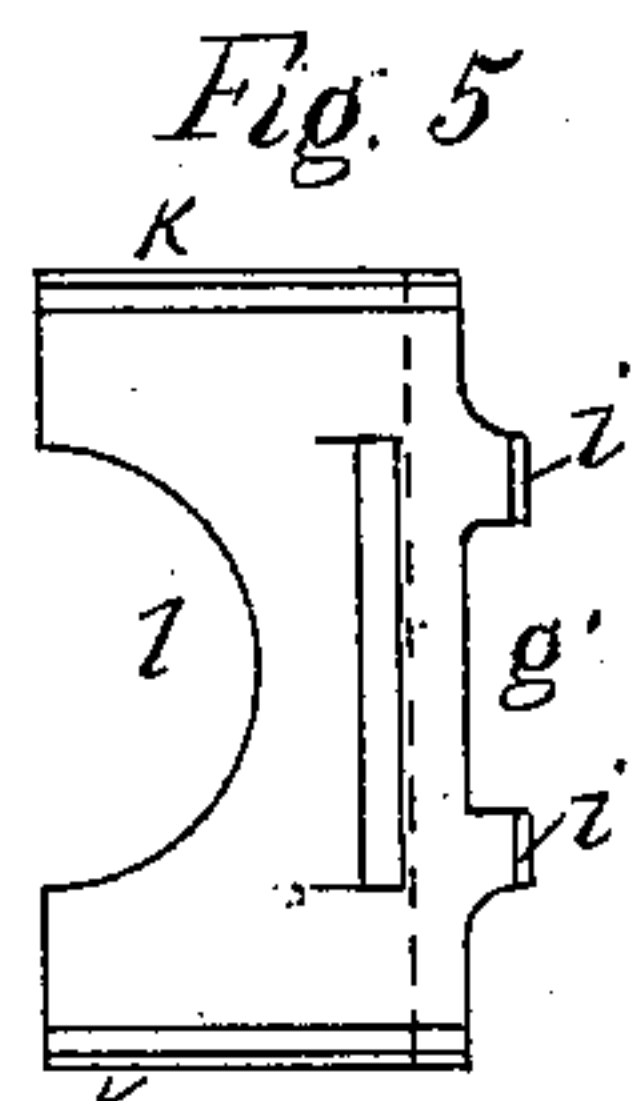
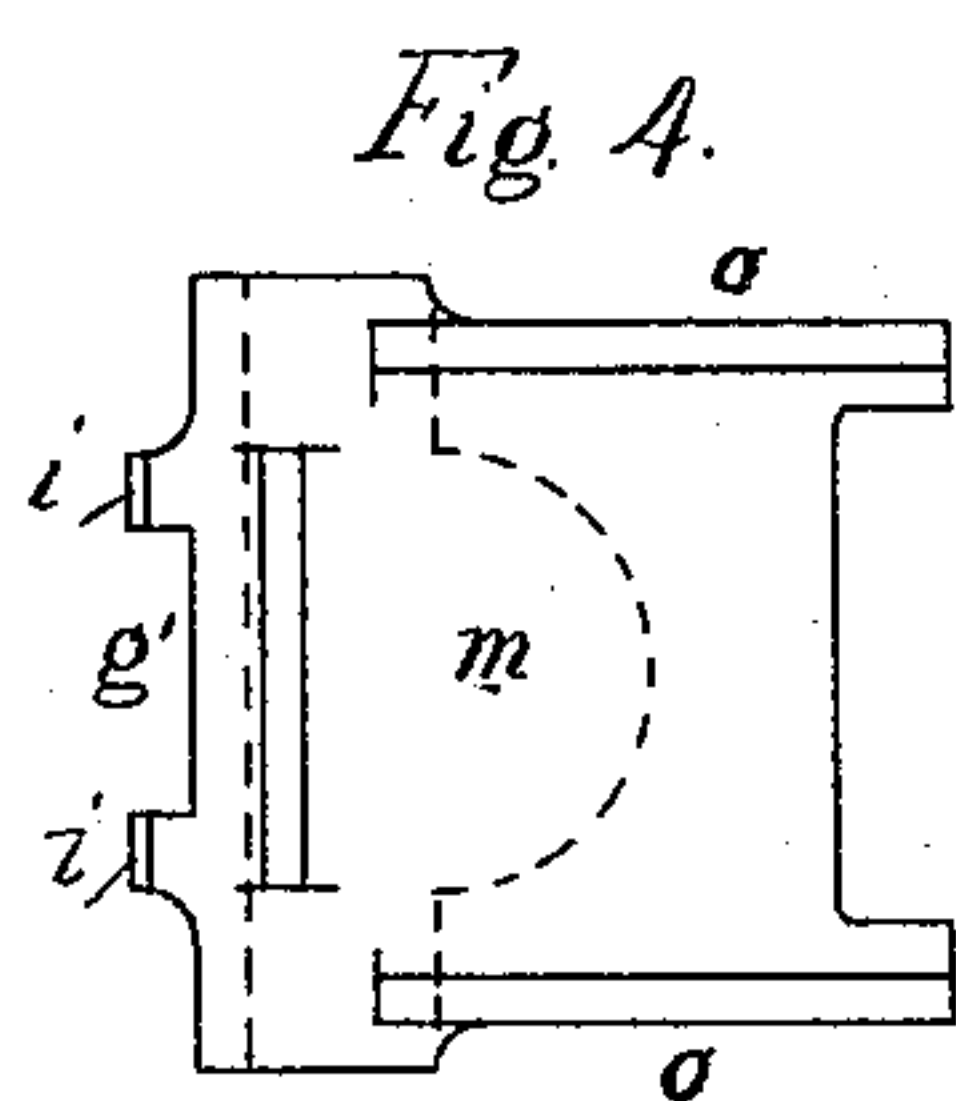
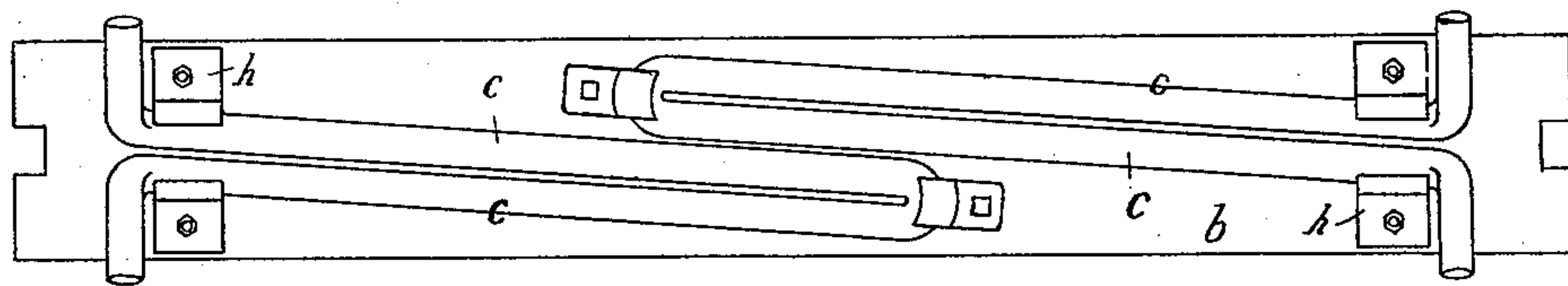


Fig. 3.



WITNESSES.

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JEROME W. WETMORE, OF ERIE, PENNSYLVANIA.

VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 482,933, dated September 20, 1892.

Application filed May 18, 1891. Serial No. 393,146. (No model.)

To all whom it may concern:

Be it known that I, JEROME W. WETMORE, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Vehicle-Springs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, forming part of this specification.

My invention relates to improvements in vehicle-springs which are movably placed on the bolsters of wagons and the bolster-plates on which they rest.

The objects of my improvements are, first, to simplify the construction of torsion bolster-springs; second, to remove in a considerable degree the forward and backward strain of the load from the stakes to the bolster; third, to secure a uniform shortening of the leverage of the torsion-spring as the weight of the load is increased or the depression of it from concussion is greater, and, fourth, to secure a bolster-plate adjustable to the width of the bolster. I attain these objects by the construction illustrated in the accompanying drawings, in which—

Figure 1 represents sections of the back end or forward end of the body of the wagon, the bolster, bolster-plate, and spring; Fig. 2, a section of the side of the body and a cross-section through *xx*, Fig. 1; Fig. 3, a view of the spring and the spring-board, looking up from the under side; Figs. 4 and 5, vertical views of the two parts of the bolster-plate; Figs. 6 and 7, cross or side views of the two separate parts of the bolster-plate; Fig. 8, an enlarged view of the side of the bolster-plate as seen on E, Fig. 1, but the clips *k* have not been bent down over the ribs *o*.

A is the body of the wagon; *b*, the spring-board; *c*, the spring; *c'*, the spring after depression; *d'*, the spring-board in a new position by the weight of a heavy load; E, the axle-tree; *f*, the sides of the bolster-plate; *g*,

Figs. 1 and 2, the steel friction rod or plate held in place by end lugs and clips *i*; *h*, a plate on the spring-board to hold the spring and receive its pressure; *i*, the clips which are bent over the steel friction-block *g*; *k*, the clips of the section, Figs. 5 and 7, which are bent over the ribs *o*, Figs. 4, 6, and 8; *l*, the arc recess in the part of the bolster-plate, Fig. 5, into which the under part of the bolster-plate in Fig. 4 enters in order to give more bearing-surface to the left-hand part of the plate, Fig. 4, on the axle-tree *w*. The dotted line above *n*, Fig. 7, shows the thickness of the plate, which is cut out to receive the tongue *m*.

o are the ribs on the plate, Figs. 4, 6, and 8, over which the clips *k* are bent to make a firm junction of the two parts of the plate; *g'*, Figs. 4, 5, 6, and 8, the beds of the friction-blocks in the bolster-plate; *s*, the place of the stake of the bolster. The arms of the spring may be flattened where they bear on the friction-plates.

The operation of the spring is as follows: When the load depresses the arms of the spring, the ends, pressing still more off the bolster-plate, the torsion-leverage is regularly shortened, so that the spring bears the increased load or the shock from the roughness of the roads without so much increasing the strain on it and without the great reaction which takes place when there is no or not so much and so regular shortening of the lower arms of the springs.

Until the bolster or spring-board is very much depressed the arms of the spring, passing obliquely off of the bolster-plate, throw the strain less on the stakes and more on the bolster. When the spring is completely depressed, the strain is on the stakes, but at their bases.

What I claim is—

An adjustable bearing-plate for vehicle-springs, consisting of two separate parts adapted to be secured to the axle-tree, each said part being provided with similar vertical side plates *f*, recesses *g'*, friction-rods *g*, and clips *i*, adapted to secure the said rods in the said recesses, one of the said parts being also

provided with the horizontal side ribs *o* and
the tongue *m*, adapted to rest on the top of
the axle-tree, and the other said part being
provided with the recess *l*, adapted to engage
5 the said tongue, and the clips *k*, adapted to
be bent over the said side ribs, substantially
as set forth.

In testimony whereof I affix my signature in
presence of two witnesses.

JEROME W. WETMORE.

Witnesses:

C. V. FAULKNER,
WALTER SCOTT.