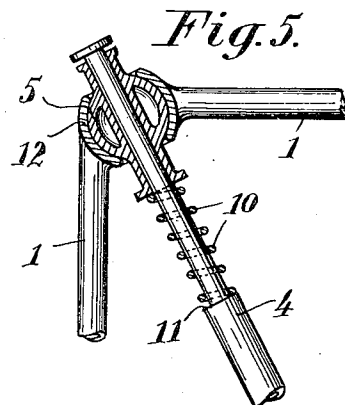
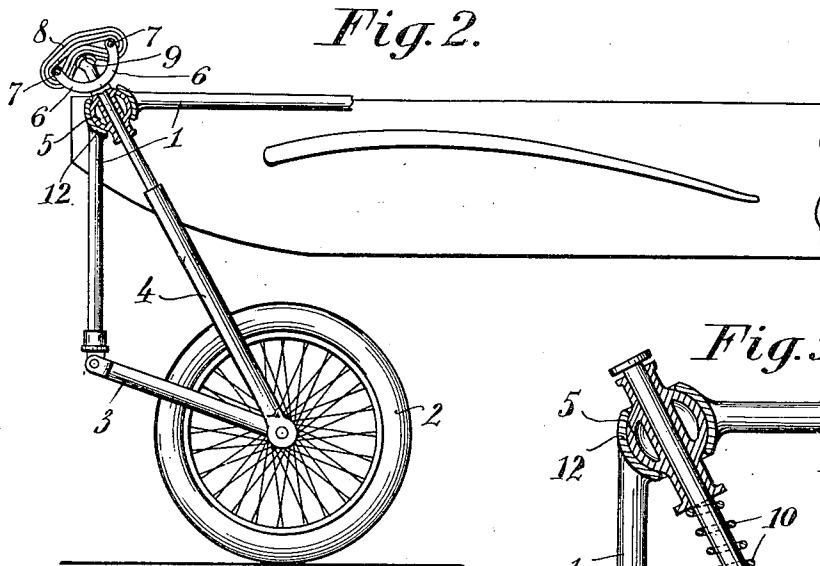
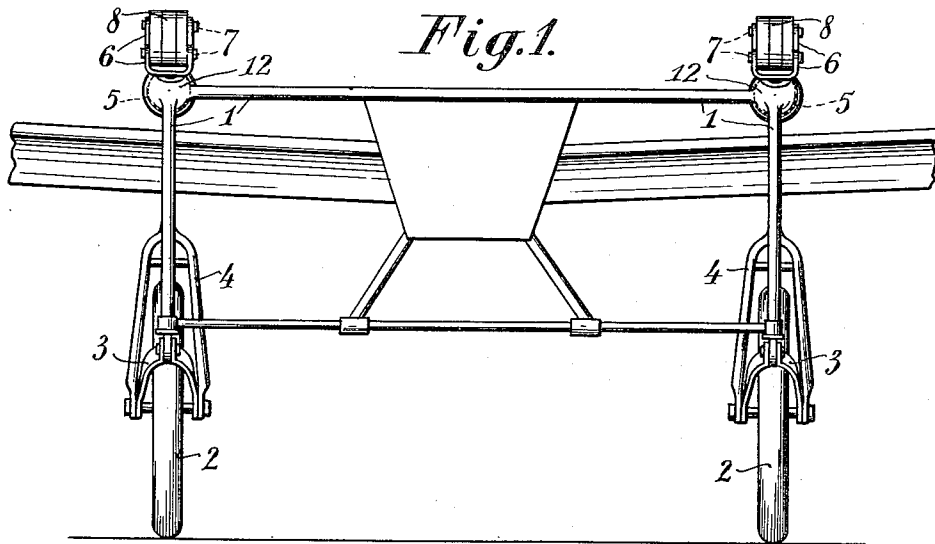


1,058,256.

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CHASSIS FOR AEROPLANES.
APPLICATION FILED NOV. 30, 1912.

Patented Apr. 8, 1913.

2 SHEETS—SHEET 1.



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2 SHEETS-SHEET 2.

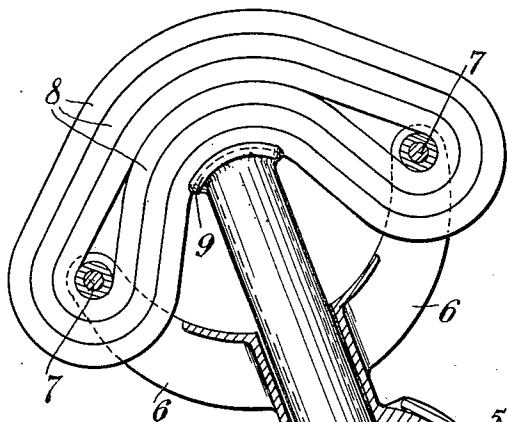


Fig. 3.

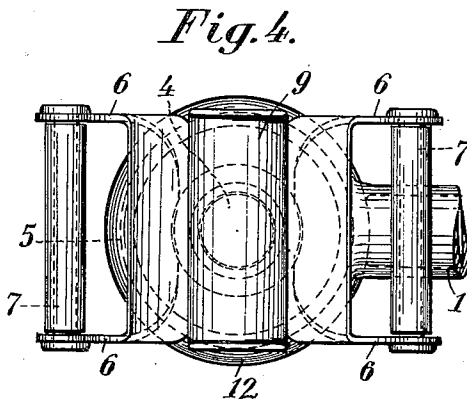


Fig. 4.

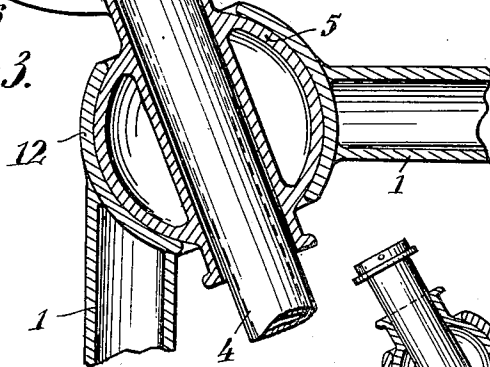


Fig. 6.

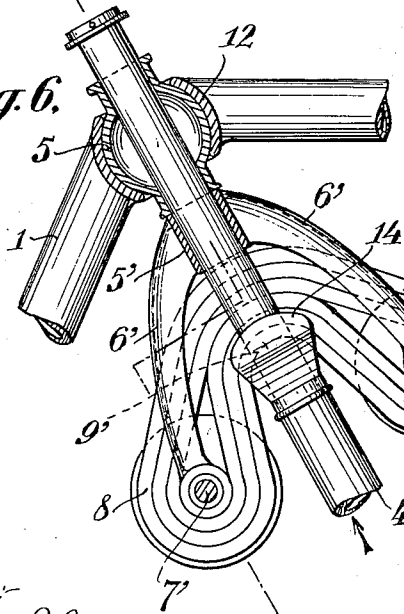
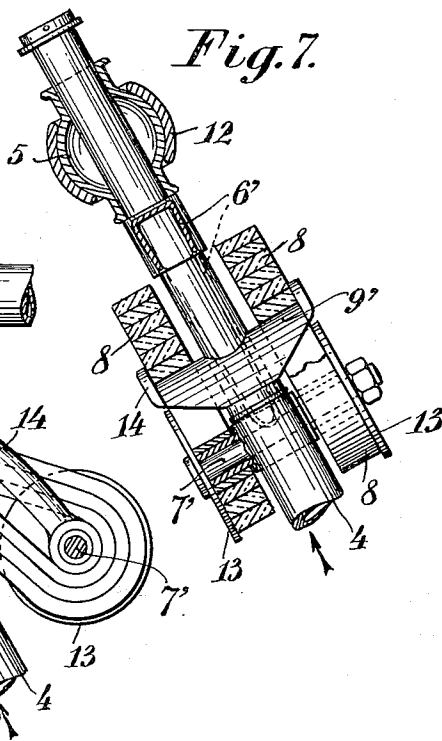


Fig. 7.



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CHASSIS FOR AEROPLANES.

1,058,256.

Specification of Letters Patent.

Patented Apr. 8, 1913.

Application filed November 30, 1912. Serial No. 734,275.

To all whom it may concern:

Be it known that I, CARL PAULAL, a subject of the Emperor of Austria-Hungary, residing at No. 2 Porzellangasse, Vienna IX/1, Austria-Hungary, have invented certain new and useful Improvements in Chassis for Aeroplanes, of which the following is a specification.

This invention has for its object to provide an improved spring chassis for flying machines and more particularly a chassis of the kind wherein the road wheels are connected to the chassis body by elastic jointed triangles.

According to this invention the upper end of the compression rod of the jointed triangle extends without side play through a spherical journal which is mounted in a spherical bearing fixed to the chassis.

In one modification the spherical journal is extended beyond its bearing and is formed with diametrically opposite forks for holding rubber bands or the like against which bears a saddle-shaped enlargement of the compression rod that extends from its road wheel axle. In this example the rubber bands are always in tension and their whole power is utilized to take the shocks without becoming injuriously twisted or entangled.

This invention is illustrated by way of example in the accompanying drawings in which:—

Figures 1 and 2 are respectively a front and side elevation of one modification of the improved chassis. Figs. 3 and 4 are respectively a vertical section and a plan of the spring suspension arrangement. Fig. 5 is a vertical section of another modification. Figs. 6 and 7 are views partly in section taken at right angles to each other of a further modification.

As shown in Figs. 1 and 2, the improved chassis consists substantially of the framing 1 (that carries the bearings and the machinery) and the road wheels 2 which are connected to the framing by rods 3 and 4. The upper corners of the framing form bearings 12 for spherical journals 5 (Figs. 1 to 4) through which the rods 4 pass without any side play, while the rods 3 are connected to the vertical bar of the framing in the usual manner which enables them to rock in two planes. The spherical journals 5 are extended upward beyond their bearings where they form two forks 6 facing each

other, each fork carrying a pin 7. The pins 7 are covered with endless elastic bands 8 for instance rubber bands, stretched over them against which the rods 4 (which are preferably adjustable as to their length) bear with saddle-shaped enlargements 9. The number and strength of the rubber bands depend naturally on the degree of absorption of the shocks which are transmitted from the road wheels 2 through the rods 4 to the elastic buffers and thus rendered innocuous.

In the construction shown in Fig. 5 there is used instead of the rubber buffer a compression spring 10 (coiled spring) interposed between a shoulder 11 on the rod 4 and the spherical journal 5.

The construction shown in Figs. 6 and 7 differs from that shown in Figs. 1 to 4, chiefly by the arrangement that the rubber bands 8 are situated below the spherical journal 5. For this purpose two facing arms 6' (each carrying at its end a cross pin 7') extend downward from a downwardly directed sleeve-like extension 5' of the spherical journal 5. Two layers of endless rubber bands 8, 8 are stretched over the cross pins 7' and over the ends of saddle-shaped extensions 9' mounted on the rod 4, and are secured from falling off by end disks 13 and extensions 14. The shocks and pressures transmitted in the direction of the arrow to the rod 4 are transmitted by the extensions 9' to the rubber bands 8 which are supported by the spherical journal 5.

As already mentioned in the arrangement according to this invention the elastic bearings always take the whole of the shock stresses in the same manner, the positions of the road wheels or the chassis triangles being quite immaterial because the elastic buffer (rubber bands 8, coiled spring 10) always moves with the compression rod of the chassis triangle.

A particular advantage of the use of rubber band buffers is that the injurious twisting and entanglements of the bands which are liable to occur in existing arrangements are now obviated.

What I claim is:—

1. In a chassis for aeroplanes, the combination with the chassis framing from which each road wheel is supported by an elastic jointed triangle, of a spherical bearing fixed to the upper corner of said

triangle, an axially perforated spherical journal in said bearing, and a compression member of said triangle extending at its upper end without play through the perforation in said spherical journal.

2. In a chassis for aeroplanes, the combination with the chassis framing from which each road wheel is supported by an elastic jointed triangle, of a spherical bearing fixed to the upper corner of said triangle, an axially perforated spherical journal in said bearing, and a compression member of said triangle extending at its upper end without play through the perforation in said spherical journal, said compression member and said spherical journal being both extended beyond said spherical bearing, and an elastic tension buffer located between the extension of said compression member and the extension of said spherical journal.

3. In a chassis for aeroplanes the combination with the chassis framing from which each road wheel is supported by an elastic jointed triangle, of a spherical bearing fixed to the upper corner of said triangle, an axially perforated spherical journal in said bearing, and a compression member of said triangle extending at its upper end without play through the perforation in said spherical journal, a saddle-like extension on the

end of said compression member projecting beyond said spherical bearing a pair of forked extensions on said spherical journal projecting beyond said spherical bearing, and elastic bands stretched around said forked extensions and over said saddle-like extension, thereby constituting an elastic tension buffer for said compression member.

4. In a chassis for aeroplanes, the combination with the chassis framing from which each road wheel is supported by an elastic jointed triangle, of a spherical bearing fixed to the upper corner of said triangle, an axially perforated spherical journal in said bearing, and a compression member of said triangle extending at its upper end without play through the perforation in said spherical journal, downward extensions of said spherical journal located below said spherical bearing lateral extensions of said compression member located below said spherical bearing, and an elastic tension buffer between said downward extensions and said lateral extensions.

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

CARL PAULAL.

Witnesses:

HERMAN WUNDERLICH,
KARL REHARS.