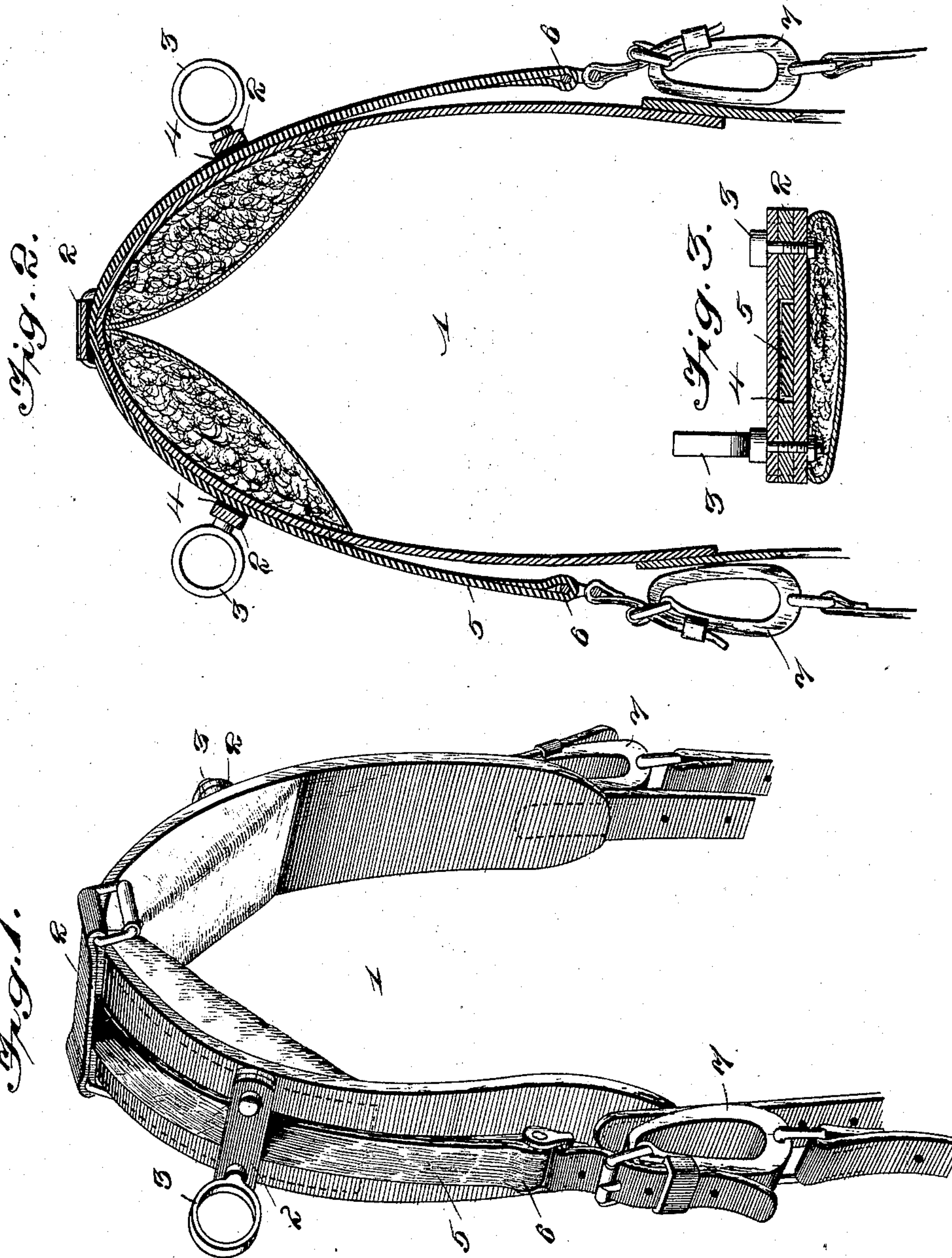


(No Model.)

G. M. KIRWIN.
BACK BAND FOR HARNESS.

No. 591,258.

Patented Oct. 5, 1897.



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Witnesses

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UNITED STATES PATENT OFFICE.

GARRETT M. KIRWIN, OF NEWPORT, RHODE ISLAND.

BACK-BAND FOR HARNESS.

SPECIFICATION forming part of Letters Patent No. 591,258, dated October 5, 1897.

Application filed June 19, 1896. Serial No. 596,180. (No model.)

To all whom it may concern:

Be it known that I, GARRETT M. KIRWIN, a citizen of the United States, residing at Newport, in the county of Newport and State of Rhode Island, have invented a new and useful Back-Band for Harness, of which the following is a specification.

My invention relates to back-bands for harness; and the object in view is to provide in connection with a harness-saddle an improved back-band which is adapted to yield under moderate strains applied to either shaft of a vehicle without displacing the body portion of the back-band and which is also adapted to slide longitudinally on the saddle when one of the shafts is subjected to an excessive strain to avoid displacement of the saddle or breakage of any of the connections.

In carrying out my invention I have devised a back-band of elastic construction which is extended continuously over the saddle and is adapted to slide longitudinally thereover; but in order to prevent the shifting of the back-band when subjected to only a moderate strain at one end, as by the weight of the occupant of a vehicle being thrown upon one of the shafts, I have adopted a band of frictional or adhesive material which is maintained in its normal position when subjected to only moderate strains by frictional contact with the saddle. That material which I have found to be efficient, in that it is adapted to carry out the functions above mentioned, is rubber, and in practice I have found it desirable to use a continuous rubber back-band connected terminally with the tug-loops.

My invention is more fully described hereinafter in connection with the drawings, and the novel features thereof are specifically pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a back-band constructed in accordance with my invention applied in the operative position to a harness-saddle and having terminally-attached loops for supporting the thills. Fig. 2 is a longitudinal section of the same. Fig. 3 is a transverse section through one of the back-band guides.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

The harness-saddle 1 is provided with cen-

tral and side back-band guides 2, so constructed as to allow longitudinal play of the flat back-band 5 without permitting lateral displacement, the side guides being held in place by suitable fastening devices 3, of which those contiguous to one edge of the saddle are constructed to form terret-rings. The side guides are recessed, as shown at 4, to form openings of greater cross-sectional area than the back-band to facilitate sliding movement of the latter.

In the construction illustrated the back-band consists of a cross-sectionally flat band of rubber terminally looped, as shown at 6, and extending continuously over the saddle through said central and side guides 2, any suitable means being employed for connecting the tug-loops 7 with said looped extremities of the back-band. That portion of the back-band which extends over the saddle from a point a short distance below one of the side guides to a corresponding point at the opposite side is in contact with the surface of the saddle, while the terminal portions of the back-band are deflected slightly from the surface of the saddle and are free to be moved laterally to suit the interval between the shafts. Thus while the terminal portions of the back-band are free for lateral movement that portion which lies between the side guides is held in contact with the surface of the saddle, and in case of longitudinal movement of the back-band such movement must be accomplished in opposition to the frictional contact of the back-band with the saddle. Hence when in use a moderate strain applied to either of the shafts of a vehicle will be absorbed by the elasticity of the band, thus causing an extension of the contiguous deflected terminal portion of said band without longitudinally changing the position of the band upon the saddle, whereas excessive strain applied to either of the shafts, such as under ordinary circumstances would displace the saddle or injure the connections between the parts of the harness, will cause the back-band to slide longitudinally through the guides on the saddle.

It is obvious that if the elasticity of the terminal portions of the back-band is to be utilized solely in relieving jars applied to the shafts of a vehicle connected therewith an ex-

cessive strain applied to one of the shafts would be liable to strain the elasticity of the band and thus result in a permanent injury thereto, and, on the other hand, if the sliding quality of the band were to be utilized solely as a means of relieving strains applied to the shafts each application of pressure to a shaft would displace the back-band upon the saddle. Furthermore, a non-elastic back-band mounted to slide longitudinally over or through the saddle would not be adapted to relieve strains applied to both shafts simultaneously; but by employing an elastic or extensible back-band slidingly mounted upon the saddle I am enabled to compensate for moderate jars applied to either one or both shafts by the elasticity of the band, while excessive strains are adapted to cause the longitudinal shifting of the back-band to avoid displacement or breakage.

Obviously the elasticity of a terminal portion of the band could not be utilized in a back-band mounted to slide longitudinally over the saddle without means being provided to resist the sliding movement under ordinary circumstances or when the band is subjected to moderate strains, and hence, as above indicated, I have found the rubber back-band preferable for the purpose, the frictional or adhesive quality of the band when held in contact with the surface of the saddle for a considerable distance, as between the side guides 2, serving to hold the band at its central portion in its normal position in opposition to moderate strains. Obviously the amount of resistance offered to the shifting of the back-band may be varied by varying the positions of the side guides, for the reason that said resistance will be increased as the extent of the contacting surfaces of the back-band and saddle is increased.

The greatest utility of the improved back-band is in connection with harness employed for vehicles, such as milk-wagons and the like, from and to which the driver is continuously dismounting and returning, as in delivering merchandise to customers, and the result of this continual straining of the shafts, unless provision is made for relieving the

strain, is to cause soreness of the back of the horse, due to the slight lateral shifting of the saddle. With the construction illustrated, however, this tendency to shift the saddle is wholly absorbed by the back-band, and hence the animal is relieved of the inconvenience above mentioned.

Having described my invention, what I claim is—

1. The combination with a saddle, of a continuous elastic back-band extending over and mounted to slide longitudinally upon the saddle and adapted for terminal attachment to thill-supports, substantially as specified.

2. The combination with a saddle, of a longitudinally-elastic rubber back-band extending continuously over and mounted to slide longitudinally upon the saddle, and adapted for terminal attachment to thill-supports, substantially as specified.

3. The combination with a saddle, of a longitudinally-elastic back-band of frictional or adhesive material, extending over and mounted to slide longitudinally upon the saddle and having attached thill-supports, and side guides on the saddle for holding the central portion of the back-band in frictional contact with the surface of the saddle, to prevent longitudinal shifting of the back-band when subjected to moderate longitudinal strains, substantially as specified.

4. The combination with a saddle having guides, of a longitudinally-elastic rubber back-band extending over and mounted to slide longitudinally upon the saddle, and having frictional or adhesive contact therewith at its center, to prevent longitudinal shifting of the back-band when subjected to moderate strains, said back-band having terminally-attached thill-supports, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GARRETT M. KIRWIN.

Witnesses:

THOMAS A. JENNINGS,
JOHN RILEY.