

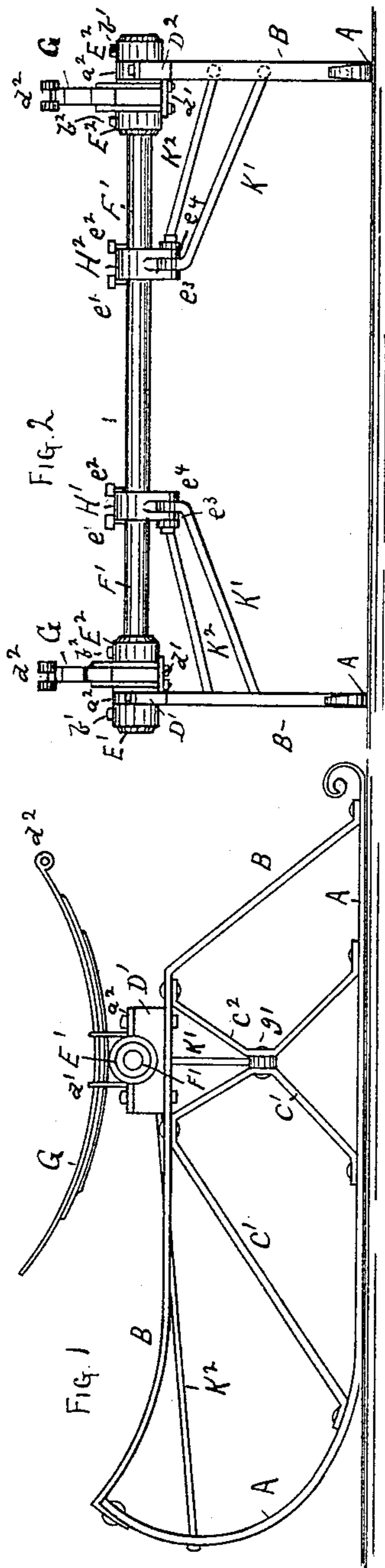
(No Model.)

T. SCOTT.

SLEIGH ATTACHMENT FOR VEHICLES.

No. 346,323.

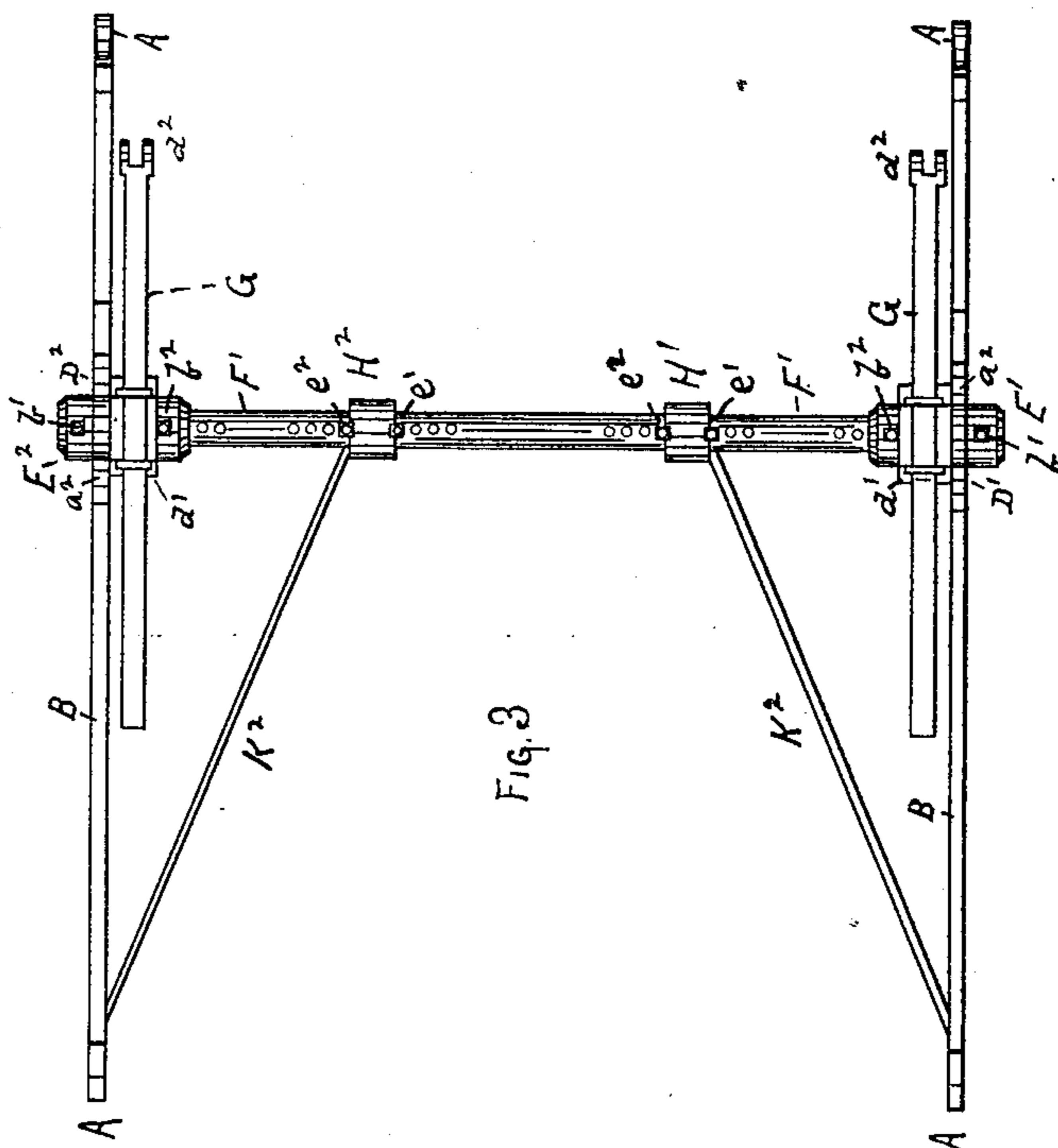
Patented July 27, 1886.



WITNESSES.

Wm. C. Brown.

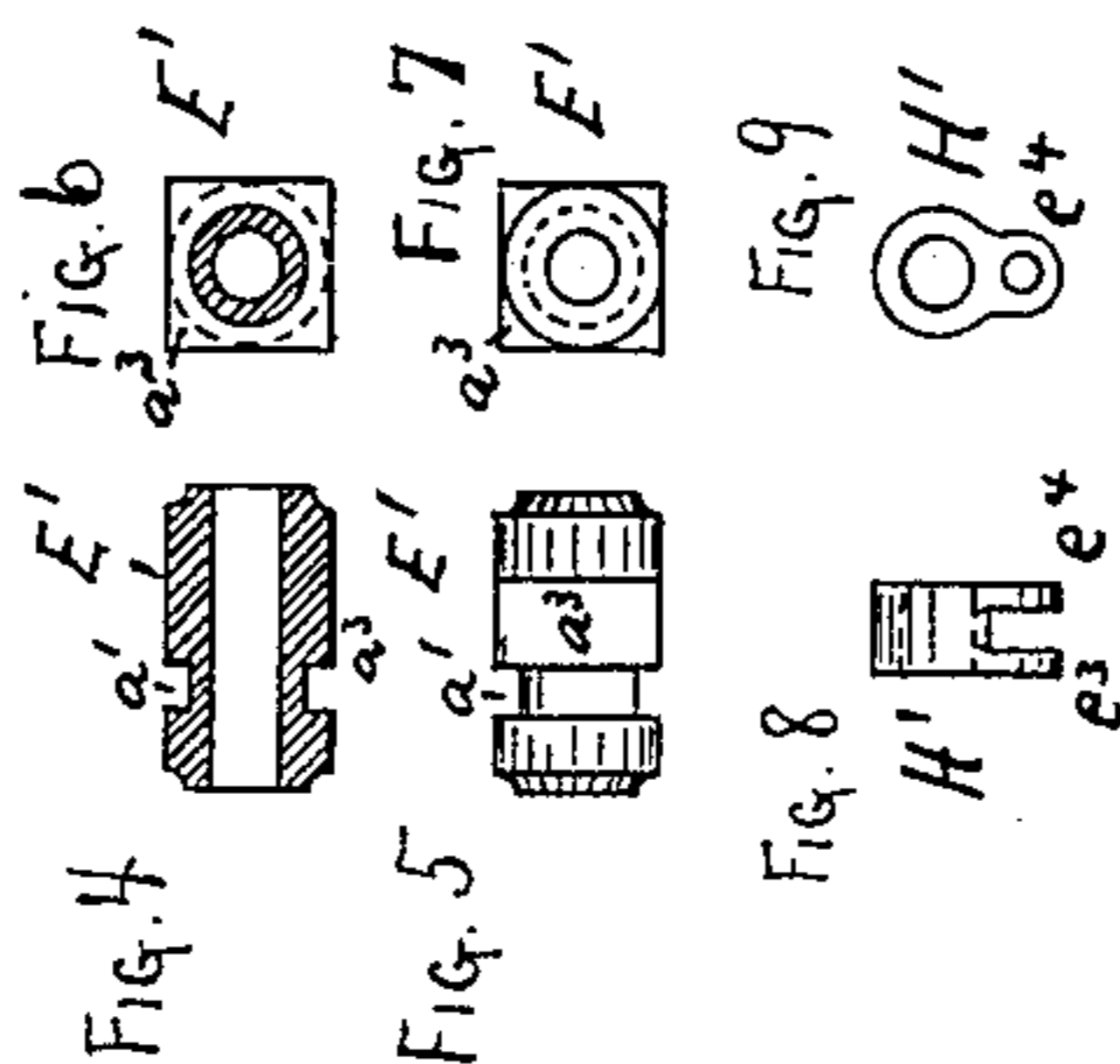
H. S. Webster.



Thomas Scott.

INVENTOR, BY

Charles N. Woodward. Atty.



UNITED STATES PATENT OFFICE.

THOMAS SCOTT, OF ST. PAUL, MINNESOTA, ASSIGNOR TO MARGARETT L. SCOTT, OF SAME PLACE.

SLEIGH ATTACHMENT FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 346,323, dated July 27, 1886.

Application filed June 5, 1885. Serial No. 167,791. (No model.)

To all whom it may concern:

Be it known that I, THOMAS SCOTT, a citizen of the United States, a resident of St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Bob-Sleigh Attachments to Vehicles, of which the following is a specification.

This invention relates to "bob-sleighs" adapted to be attached to the running-gear of the bodies of ordinary vehicles; and it consists in the construction, combination, and arrangement of parts, as hereinafter shown and described.

In the drawings, Figure 1 is a side elevation. Fig. 2 is a rear elevation, and Fig. 3 is a plan view of one of the bobs complete. Figs. 4, 5, 6, and 7 are detached views of one of the coupling-sleeves. Figs. 8 and 9 are detached views of one of the swivel brace couplings.

The runners are formed of iron bars A, turned upward at their forward ends, and with their forward and rear ends connected by bent raves B, as shown.

C' C² are curved or bent braces connecting the runners A and the raves B, and bolted or otherwise fastened thereto, as shown.

Upon the top of each of the raves B, above the points where the braces C' C² are attached to them, are "chocks" D' D², having semicircular cavities in their upper parts, in which annular recesses a' in collars or sleeves E' E² rest, the latter held in place upon the chocks by caps a². These collars or sleeves are hollow and fit upon a tubular axle or bar, F', and are secured to the ends of the axle by bolts or cap-screws b' running down through the collars and tapped into the tubular axle. Each of the runners and its attached rave and braces are thus left free to oscillate around the tubular axle.

Inside the caps a² each of the collars E' E² is formed with a square section, a³, or with a section having a flat or slightly hollowed upper surface adapted to receive the lower side of the springs of the vehicles. In the drawings I have shown a half-spring, G, attached to each of these square or flattened sections by the usual clips, d'. One end of each of these half-

springs is shown provided with the usual perforated ears, d², by which the two parts of the spring are secured together, while the other end of the half-spring is shown left blank and extended in length, so that the mechanic in fitting the springs to the vehicles can form the eye or perforated ear on the blank end to fit the other half of the spring already upon the vehicle.

It is frequently found difficult to match the runners to the different forms of vehicles, the arrangement of the springs and their locations and construction differing so widely; but it is generally found that this difference consists in the length of the springs; hence, if I provide with each set of runners a half-spring with one end left blank, so that it can be adapted to the spring already on the vehicle, very few vehicles will be found that this set of runners cannot be very easily applied to. If a vehicle is found whose springs are in a position adapted to the runners, the half-spring G may be dispensed with. The inner ends of the collars E' E² are provided with set-screws b² by which they may be fixed more securely to the axle F', the two sets of set-screws b' b² being amply sufficient to support the collars upon the axles. The axles F' will be provided with a number of perforations at short distances apart, into which the screws b' b² will be tapped, so that the collars E' E² may be adjusted along the tubular axle to bring the runners or the flattened or square sections nearer together or farther apart, so that the runners may be adapted to the vehicle or its running-gear.

At suitable points on the tubular axle, between the collars E' E², two other collars, H' H², will be mounted and prevented from having any end movement thereon by set-screws e' e², which, while holding the collars H' H² from end-play, do not interfere with their oscillation upon the axle. From the lower sides of these collars H' H² ears e³ e⁴ depend, and between these ears or upon their sides are pivoted braces K' K², the braces K' running downward and outward, and ending between the nearest meeting-points of the braces C' C², as shown, between which they are held by bolts

g', while the braces K² diverge toward and are connected to the forward ends of the runners A near their tops. By this means the runners are free to oscillate about the axle as a center, but at the same time they are prevented by the braces K' K² from moving inward or outward either horizontally or laterally. By this simple means each of the runners is free to run into the irregularities of surface on the ground without affecting the axle or the body of the vehicle, and each runner is independent of all the other runners under the vehicle, so that if one runner runs into a hollow or over an obstruction it does not affect any of the other runners. I also attain a great advantage in forming the axle F' tubular, as I thereby unite the greatest possible strength with the greatest degree of lightness. I also secure by this arrangement a bob-sleigh that is adapted to any and all forms of vehicles, and that may be adjusted to fit any width of body. If required, the sleeves or collars E' E² may be reversed from their positions as shown in the drawings, so that the runners will come inside the springs.

Having thus described my invention, what I claim as new is—

1. The runners of a bob-sleigh and bearings mounted thereon, in combination with tubular collars rotatively mounted in said bearings, an axle mounted in said tubular collars and laterally adjustable therein, said axle being connected to said collars so as to turn therewith, intermediate tubular collars rotatively mounted on said axle between the runners and laterally adjustable on said axle, and brace-rods connecting said intermediate collars to the runners, substantially as set forth.

2. The runners of a bob-sleigh and bearings D² D², mounted thereon, in combination with

tubular collars E² E², rotatively mounted in said bearings, an axle, F', mounted in said tubular collars, and set-screws b' b', which pass through said collars and tap into said axle, whereby said axle is adjustably fixed to said collars, substantially as set forth.

3. The runners of a bob-sleigh, bearings mounted thereon, tubular collars mounted in said bearings, and an axle adjustably secured to said collars, in combination with tubular collars H' H², rotatively mounted on said axle between the runners, set-screws e' e², which tap into said axle and adjustably retain the collars thereon, and brace-rods K' K², secured to said collars and to the runners, substantially as set forth.

4. The runners of a bob-sleigh and bearings located thereon, in combination with tubular collars rotatively mounted in said bearings, an axle secured to said collars to turn therewith, and half-springs secured to said collars, and arranged parallel with the runners, substantially as set forth.

5. The runners of a bob-sleigh and bearings located thereon, in combination with tubular collars rotatively mounted in said bearings, an axle secured to said collars to rotate therewith, and half-springs secured at their centers to said collars parallel with the runners, each of said springs having one end left blank, substantially as and for the purpose herein set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

THOMAS SCOTT.

Witnesses:

C. N. WOODWARD,
J. P. LEITNER.