

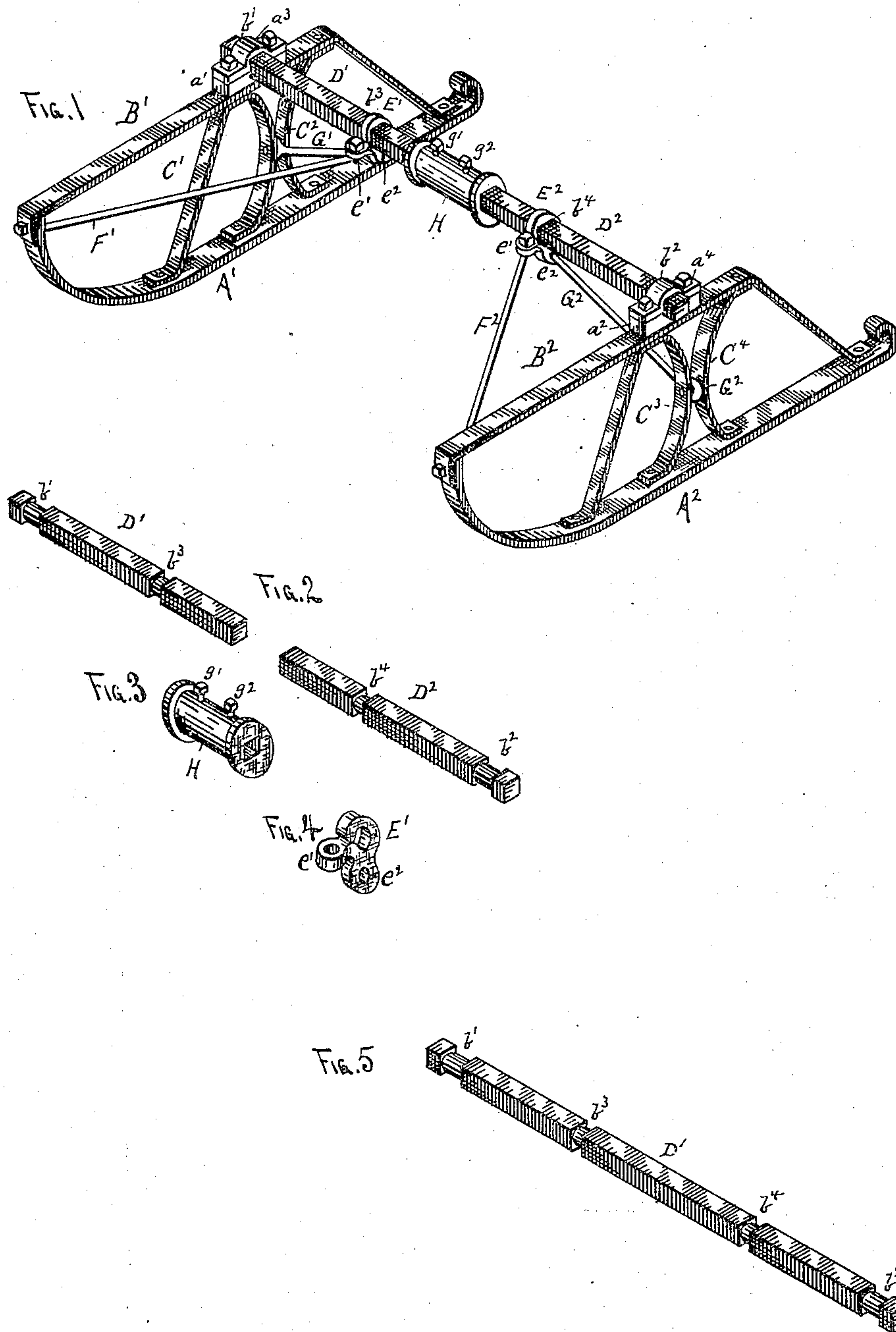
(No Model.)

T. SCOTT.

SLEIGH.

No. 306,535.

Patented Oct. 14, 1884.



WITNESSES.  
H. V. Rutherford  
Louis Fisher Jr.

Thomas Scott,  
INVENTOR, BY  
Louis Fisher & Co.  
attys.



# UNITED STATES PATENT OFFICE.

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

## SLEIGH.

SPECIFICATION forming part of Letters Patent No. 306,535, dated October 14, 1884.

Application filed January 21, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS SCOTT, a citizen of the United States, and a resident of St. Paul, in the county of Ramsey, in the State of Minnesota, have invented certain new and useful Improvements in Sleighs, of which the following specification is a full, clear, and exact description, reference being also had to the accompanying drawings, in which—

Figure 1 is a perspective view of one of the pairs of runners. Fig. 2 is a perspective view of the axle detached. Fig. 3 is a perspective view of the coupling-sleeve detached. Fig. 4 is a perspective view of one of the swivel-collars detached. Fig. 5 is a perspective view of the axle as formed when the coupling-sleeve is not used.

This invention is intended to be used more particularly to replace the wheels of ordinary wagons, carriages, &c., when sleighs are required, but may be used as permanent parts of ordinary sleighs. Two sets of the runners will be used on each vehicle; but for the purpose of illustration I have shown only one set, A' A<sup>2</sup> representing the runners, and B' B<sup>2</sup> the raves connected by their ends to the ends of the runners, as shown.

C' C<sup>2</sup> C<sup>3</sup> C<sup>4</sup> are curved and bent braces connecting the runners A' A<sup>2</sup> and raves B' B<sup>2</sup>, and riveted, bolted, or otherwise fastened to the raves and runners.

Upon top of each of the raves B' B<sup>2</sup>, above the braces, are "chocks" a' a<sup>2</sup>, having semi-circular hollows in their upper parts, in which rounded sections b' b<sup>2</sup> (see Figs. 2 and 5) of a square axle, D', are held by caps a<sup>3</sup> a<sup>4</sup>, the axle thus being free to revolve upon the chocks or bearings thus formed. At suitable points between the ends of the axle two other sections or journals, b<sup>3</sup> b<sup>4</sup>, are "rounded" and shouldered, as shown in Figs. 2 and 5, and fitting into these rounded portions are collars E' E<sup>2</sup>. The axle is free to revolve within these collars, and each collar is provided with two eyes, e' e<sup>2</sup>, by which they are connected to the forward upper ends of the runners A' A<sup>2</sup> by braces F' F<sup>2</sup>, and to the nearest meeting-points of the braces C' C<sup>2</sup> C<sup>3</sup> C<sup>4</sup> by braces G' G<sup>2</sup>, as shown in Fig. 1. By this arrangement each

runner and its attached raves and braces are free to oscillate upon the axle independently of the other one, so that if one runner runs over an obstruction or into a hollow it will turn upon the axle, and not affect either the body of the vehicle or the other runners.

By means of the braces G' G<sup>2</sup> each runner and its attached raves and braces are rigidly held in an upright position at or nearly at right angles to the axle, but at the same time, by being attached at one end to the loose collars E' E<sup>2</sup>, the braces do not interfere with the free oscillation of the runners upon the axle. The braces F' F<sup>2</sup> also serve an important function in holding the runners parallel with each other, and at right angles to the axle horizontally, while at the same time not interfering with the free oscillation of the runners around the axle.

Extra steel shoes may be attached to the runners, if desired. These runners may be made as light or heavy as required, to adapt them for use under the heaviest freight-wagons or the lightest buggies or gigs. The axle will sometimes be made in two parts, D' D<sup>2</sup>, as shown in Figs. 1 and 2, with its inner ends secured in a hollow sleeve, H, by set-screws g' g<sup>2</sup>, so that the runners may be adjusted nearer to or farther away from each other, to adapt them to any width of vehicle. This adjustment will not always be required, however, as most vehicles are nearly the same width; but it will be found very convenient under some circumstances.

In Fig. 5 the axle is shown in one solid piece, as it will be formed when the sleeve H is not used.

Having described my invention and set forth its merits, what I claim is—

1. The combination of an axle, D, affixed to the body of a vehicle, and provided with journals b' b<sup>2</sup> near its ends, and with shouldered rounded sections or journals b<sup>3</sup> b<sup>4</sup> on its middle part, raves B' B<sup>2</sup>, provided with bearings a' a<sup>2</sup>, receiving the end axle-journals, collars E' E<sup>2</sup>, turning on the middle axle-journals, runners A' A<sup>2</sup>, having thereon oppositely-curved braces C' C<sup>2</sup> and C<sup>3</sup> C<sup>4</sup>, as described, braces F' F<sup>2</sup>, extending from the collars E' E<sup>2</sup>

to the forward ends of the runners, and braces  $G' G^2$ , extending from the said collars to the braces  $C' C^2$  and  $C^3 C^4$ , substantially as and for the purpose herein specified.

- 5 2. The combination of an axle formed in two parts, with its inner ends connected by a sleeve, H, and rigidly attached to the body of a vehicle, runners loosely pivoted to the outer ends of said axle, collars  $E' E^2$ , loose upon said  
10 axle, and braces  $F' F^2 G' G^2$ , connecting said

runners with said collars, substantially as and for the purpose specified.

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

THOMAS SCOTT.

Witnesses:

C. N. WOODWARD,  
LOUIS FEESER, Sr.