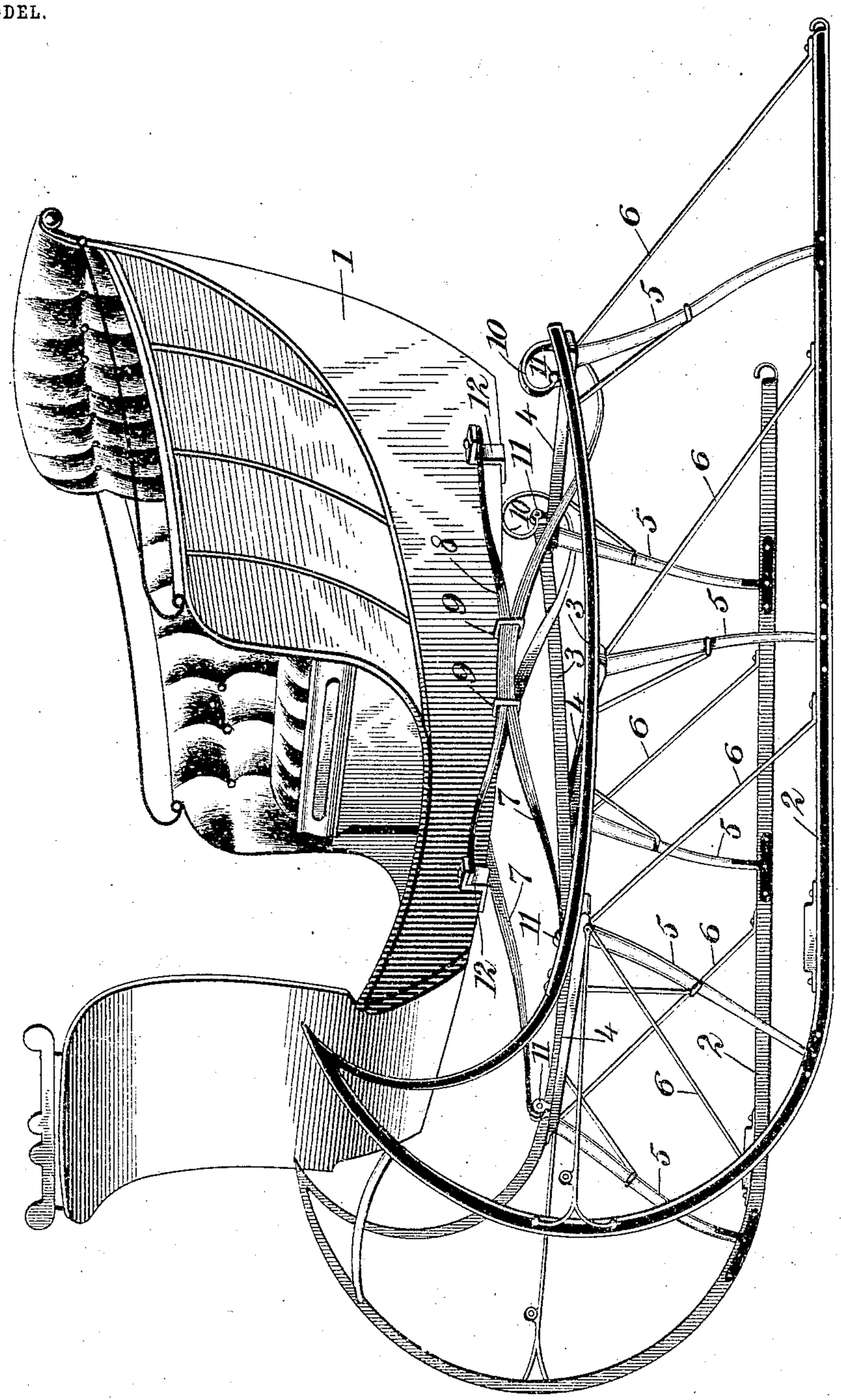
No. 774,532. PATENTED NOV. 8, 1904.

W. C. PROUTY.

SPRING SLEIGH.

APPLICATION FILED MAY 4, 1904.

NO MODEL.



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No. 774,532. Patented November 8, 1904.

UNITED STATES PATENT OFFICE.

WILLIAM C. PROUTY, OF WAYNE, MICHIGAN, ASSIGNOR TO PROUTY-GLASS CARRIAGE COMPANY, OF WAYNE, MICHIGAN.

SPRING-SLEIGH.

SPECIFICATION forming part of Letters Patent No. 774,532, dated November 8, 1904.

Application filed May 4, 1904. Serial No. 206,351. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. PROUTY, a citizen of the United States, and a resident of Wayne, in the county of Wayne and State of Michigan, have invented a new and Improved Spring-Sleigh, of which the following is a full, clear, and exact description.

This invention relates to spring-sleighs, and has for its principal object the provision of a sleigh in which the body is supported upon a spring structure of novel design which may be applied to a sleigh running-gear of ordinary construction and which is so constructed that it may be connected with the sleigh-body and running-gear in such manner that no rattling will result and there will be but little tendency to loosen the spring connections.

In attaining the object above stated I make use of a sleigh-body of ordinary construction and a running-gear of an ordinary type, which may, if desired, be provided with some supplemental brace-rods to stiffen the running-gear to meet the strains imposed thereon by the springs disposed between the running-gear and the sleigh-body.

The springs which I employ are of special construction, and the principal novelty thereof lies in a construction such that rigid or fixed shackles may be used exclusively to connect the springs with the running-gear, so insuring a thoroughly durable connection of the springs with the running-gear and preventing rattling that might otherwise take place.

A sleigh embodying the present invention is hereinafter described in detail, and the novel features thereof are clearly pointed out in the claims, it being understood that changes in the form and proportions of the parts described and in their exact mode of assemblage may be varied within the scope of the appended claims without departing from the spirit of the invention.

Reference is to be had to the accompanying drawing, in which the sleigh described is illustrated by a single perspective view thereof, suitable characters of reference being employed to designate the various parts of the structure.

Referring to the drawing, 1 designates the sleigh-body, which is of a well-known design.

2 2 are the runners of the sleigh, and 3 3 are the raves or fenders, which rest upon transverse beams 4, which are in turn supported by the knees 5, which rest at their lower ends upon the runners, to which they are connected in any suitable manner and which are securely fastened at their upper ends to the beams 4. Suitable braces 6 are employed to stiffen the running-gear structure, the braces being secured at their lower ends to the runners, from which they extend obliquely upward and are connected in any suitable manner with the beams, knees, or raves.

The spring structure upon which the body is supported consists of two semi-elliptical leaf-springs 7, arranged with the concave curvature directed downward, and two semi-elliptic leaf-springs 8, having the concave curvature directed upward, the springs 8 being secured upon the springs 7 intermediate of their ends by means of clips 9 or other suitable fastenings. The rear ends of the springs 7 are extended beneath the rearmost beam 4 of the running-gear and are bent upward and over the said beam in curls or bends 10; but at their forward ends the springs 7 are substantially straight. The springs 7 are connected with the running-gear at both forward and rear ends by means of fixed or rigid shackles 11, which are secured upon the running-gear in any suitable manner and in proper position relative thereto, as upon the front and rear beams 4. The springs 8, which carry the body of the sleigh, are attached at their extremities to brackets 12, rigidly secured upon the under side of the body by means of bolts or other suitable fastenings.

From the foregoing description it will be readily seen that the body of the sleigh is supported by a very elastic spring structure and that owing to the length of the spring parts the springs are adapted to yield readily to compensate for a jar or jolt affecting the running-gear at practically any point. The springs, moreover, are so constructed that they

will yield in any direction necessary to compensate for or to counteract any jolt or jar to which the running-gear may be subjected.

Owing to the curls or bends 10 at the rear ends of the springs 7, it is possible to employ the rigid shackles 11 at both ends of the said springs without interfering with the longitudinal extension of the springs when the sleigh receives its load and the springs are placed under strain. This feature is one of cardinal importance in a spring structure for sleighs, because the rigidity of the running-gear makes the tendency of the springs to loosen much greater than in wheeled vehicles.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a sleigh, the combination of a running-gear having braced sides, transverse bars connecting the top portions of said sides, rigid shackles secured to the front and rear transverse bars, a pair of longitudinally-disposed semi-elliptic leaf-springs having the concave sides thereof downward, and having the rear ends thereof bent upward in helical form to form curls, said curls terminating in rearwardly-extending sections pivotally attached at their extreme ends to said rear shackles upon the rear transverse bar, the forward ends of the springs being pivoted to the front shackles carried on the front transverse bar, a second pair of leaf-springs mounted and secured upon the first-mentioned springs and having their concave sides upward, and a sleigh-body having brackets extending outwardly from its side and secured to the ends of said upper springs to bring the bottom of the sleigh-body between said upper springs.

2. In a sleigh, the combination of a running-gear, front and rear rigid shackles mounted thereon, a pair of longitudinally-disposed semi-elliptic leaf-springs having the concavities thereof downward, and having the rear ends thereof bent upward in helical form to form curls, said curls terminating in rearwardly-extending sections pivotally attached at their extreme ends to said rear shackles, the forward ends of the springs being pivoted to the front shackles, a second pair of leaf-springs mounted and secured upon the first-mentioned springs and having their concavities upward, and a sleigh-body mounted upon the ends of said upper springs.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM C. PROUTY.

Witnesses:
FREDERICK WALDEN,
W. H. BREWER.