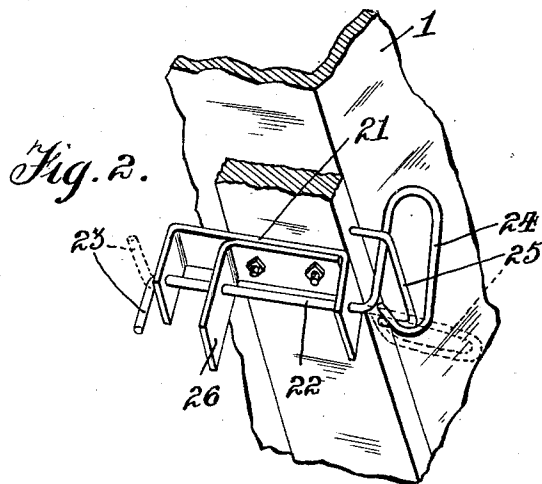
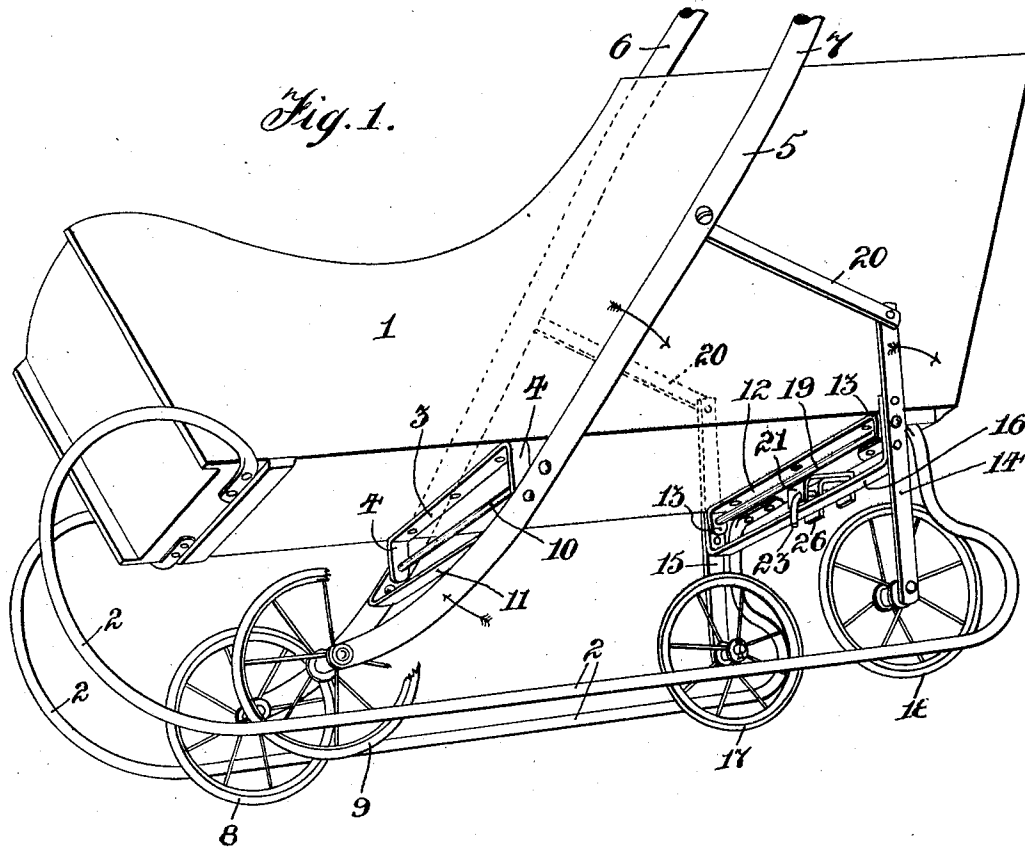


W. BEILSTEIN.
 CONVERTIBLE SLEIGH.
 APPLICATION FILED JUNE 3, 1912.

1,062,760.

Patented May 27, 1913.



Witnesses.
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UNITED STATES PATENT OFFICE.

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CONVERTIBLE SLEIGH.

1,062,760.

Specification of Letters Patent.

Patented May 27, 1913.

Application filed June 3, 1912. Serial No. 701,235.

To all whom it may concern:

Be it known that I, WILHELM BEILSTEIN, a subject of the King of Great Britain, residing at Berlin, county of Waterloo, Province of Ontario, Dominion of Canada, have invented new and useful Improvements in Convertible Sleighs, of which the following is a specification.

The invention relates to a convertible sleigh as described in the following specification and illustrated in the accompanying drawings that form part of the same.

The invention is an amplification of the invention described in my former United States application Serial No. 611,040, filed February 27th, 1911, and it consists essentially in the novel construction and arrangement of parts whereby the sleigh may be locked in a converted or unconverted position, that is to say with sleigh runners contacting the ground or with wheels contacting the ground.

The objects of the invention are to provide greater facilities for converting the sleigh into a wheel carriage or vice versa, for the propulsion of the device when in such converted or vice versa position, and generally to simplify the construction of the device and improve its running qualities.

The invention is illustrated in the accompanying drawings in which—

Figure 1 is an underside perspective view with the upper portion of the propelling handle and a portion of one of the wheels broken away. Fig. 2 is an enlarged perspective detail of the locking catch.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings 1 designates the sleigh body supported on the fixed runners, 2, secured at front and rear to the sleigh body as customary in sleighs.

3 is a bracket secured to the under side of the sleigh body, 1, intermediate of its length toward the front end thereof and having downwardly turned ends 4 forming bearings as hereinafter more fully described.

5 is the propelling handle of the sleigh comprising a pair of levers, 6 and 7 rigidly coupled by a grip at the upper end and extending downwardly one at each side of the sleigh body and having wheels 8 and 9 at the lower ends respectively, said wheels being mounted on inwardly extending short axles rigidly secured to the lower ends of

said levers thereby disposing the said wheels inward of the sleigh runners 2 and beneath the sleigh body.

10 is a pivot rod secured at each end to the levers 6 and 7 and extending through the downwardly turned ends 4 of the bracket 3 thereby pivoting said levers in the bracket and permitting the wheels 8 and 9 to be put into contact or out of contact with the ground by the swinging of said levers on pivot 10.

11 is a brace extending across between the levers 6 and 7 and secured at its ends thereto.

12 is a bracket similar to the bracket 3 and secured to the under side of the sleigh adjacent to the rear end thereof and having the downwardly turned ends 13 forming bearings.

14 and 15 are a pair of arms disposed one at each side of the sleigh body and rigidly coupled together by the brace 16, thereby forming a swingable frame. Said levers 14 and 15 are provided at the lower ends with the wheels 17 and 18 mounted thereon in a similar manner to the mounting of the wheels 8 and 9.

19 is a pivot rod journaled in the downwardly turned ends 13 and rigidly connected at its ends to the arms 14 and 15 at a point intermediate of their length, thereby permitting the wheels 17 and 18 to be moved into or out of contact with the ground by the swinging of said arms on the pivot 19.

20 are a pair of coupling rods disposed respectively at either side of the sleigh each being pivotally connected at one end to the upper end of one of the arms 14 and 15 and at the opposite end to one of the levers 6 and 7 at a point above the pivot 10. It will thus be seen that on lifting or lowering the levers 6 and 7 for the purpose of raising or lowering the wheels 8 and 9, the movement will be transmitted to the arms 14 and 15 through the medium of the coupling rods 20 thereby correspondingly moving the wheels 17 and 18. Assuming for instance that the wheels are in contact with the ground that is to say in the position shown in the drawings and it is desired to remove them from contact with the ground. The propelling handle moves rearwardly and downwardly thereby raising the wheels 8 and 9 and by this movement the rods 20 are pushed rearwardly thereby swinging the wheels 17 and 18 forwardly and also out of contact with

the ground. It is obvious that the movement of the front wheels is correspondingly transmitted to the rear wheels when it is desired to put them again in contact with the ground.

21 is an inverted U-shaped bracket secured approximately central of the width at the rear end to the under side of the sleigh, each end of said bracket forming a bearing for a rotatable locking bar, 22, journaled in said ends and having the cranked inner end 23 and the looped opposite end 24.

25 is an elongated eye rigidly secured to the rear end of the sleigh body and through which the loop 24 is threaded. Each end of the eye 25 forms a stop limiting the swinging of the loop 24 therein and the relation of the cranked end 23 to the loop 24 is such that when the said loop is thrown over to one end of the eye 25 the cranked end is in a depending vertical position as clearly shown in Fig. 1 and in full lines in Fig. 2, and when thrown over to the opposite end of the loop 25 the said cranked end 23 takes a horizontal position as shown in dotted lines in Fig. 2 for the purpose hereinafter more fully described.

26 is a stop plate rigidly secured to the under side of the sleigh body and preferably threaded on the locking bar 22 in alignment with the bracket 21. The stop plate 26 extends downwardly a short distance below the ends of the bracket 21 in order that it may contact the brace 16 when the wheels 17 and 18 are thrown to their lowermost limit, the forward end of the bracket 21 being short enough to permit the free movement of the said brace to and from the stop 26.

In the use of the invention supposing it to be in use for the present with the runners contacting the ground and it is desired to pass over dry ground the locking bar 22 is rotated, that is to say the looped end 24 is thrown over until it occupies the position shown in dotted lines in Fig. 2. The propelling handle is now moved in an upward direction and all four wheels are moved into contact with the ground as hereinbefore described and at the limit of such movement the brace 16 passes the forward end of the bracket 21 until it abuts the stop 26. The locking bar 22 is now rotated that is to say the looped end 24 is thrown over to the opposite end of the eye 25 thereby bringing the cranked end 23 into the depending vertical position and rigidly holding the brace

16 between itself and the stop 26 and consequently preventing either upward or downward movement of the propelling handle and to all intents and purposes making it rigid with the sleigh. When it is necessary to put the runners 2 in contact with the ground it is only necessary to throw over the loop 24 into the opposite position thereby moving the cranked end into a horizontal position so that the brace 16 will clear it in swinging forward, the weight of the sleigh on the wheels is then sufficient to push them upwardly and consequently to move the brace 16 away from the stop 26.

It is not essential that the wheels should be locked in their uppermost position as the weight of the propelling handle is sufficient to hold them in the upper position with the wheels abutting the under side of the sleigh body, but if the loop 24 is again thrown over until the cranked end 23 occupies the depending vertical position it will readily be seen that the said cranked end forms a stop preventing the rearward passage of the brace 16 and consequently the downward movement of the wheels.

It must be understood that the details of the invention herein described may be modified so long as the essential features are adhered to as claimed in the following claim for novelty.

What I claim is—

In a convertible sleigh the combination with the sleigh body supported on fixed runners, of a propelling handle extending above and below the sleigh body and carrying wheels at the lower end means for pivoting said handle to the sleigh toward its front end, a swingable frame carrying wheels at its lower end, means for pivoting said frame to the sleigh toward its rear end means for coupling said handle and said frame for obtaining simultaneous movement, a stop secured to the sleigh body and limiting the movement of said frame in one direction, a bracket secured beneath the sleigh body, and a rotatable member journaled in said bracket and having a cranked inner end and means at its outer end for rotating said cranked end into and out of engagement with the frame.

Signed at Berlin, Ontario, in Canada, this eighteenth day of March, 1912.

WILHELM BEILSTEIN.

Witnesses:

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