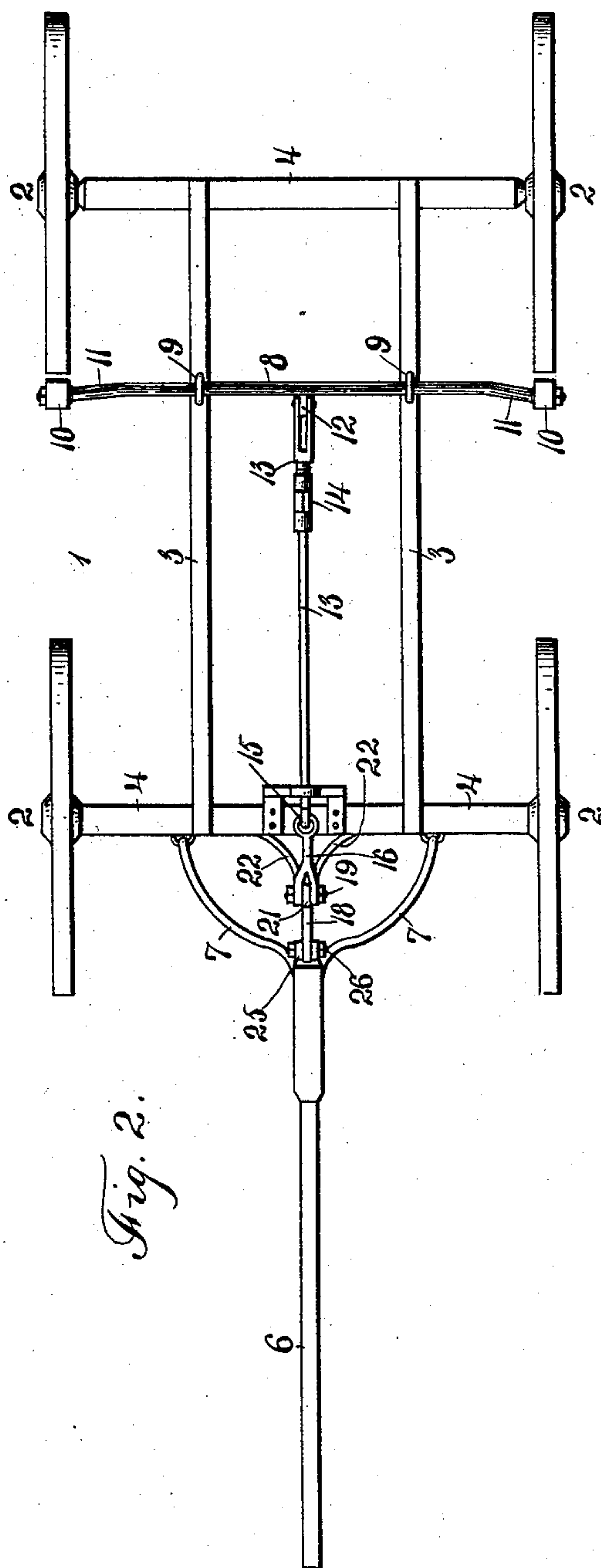
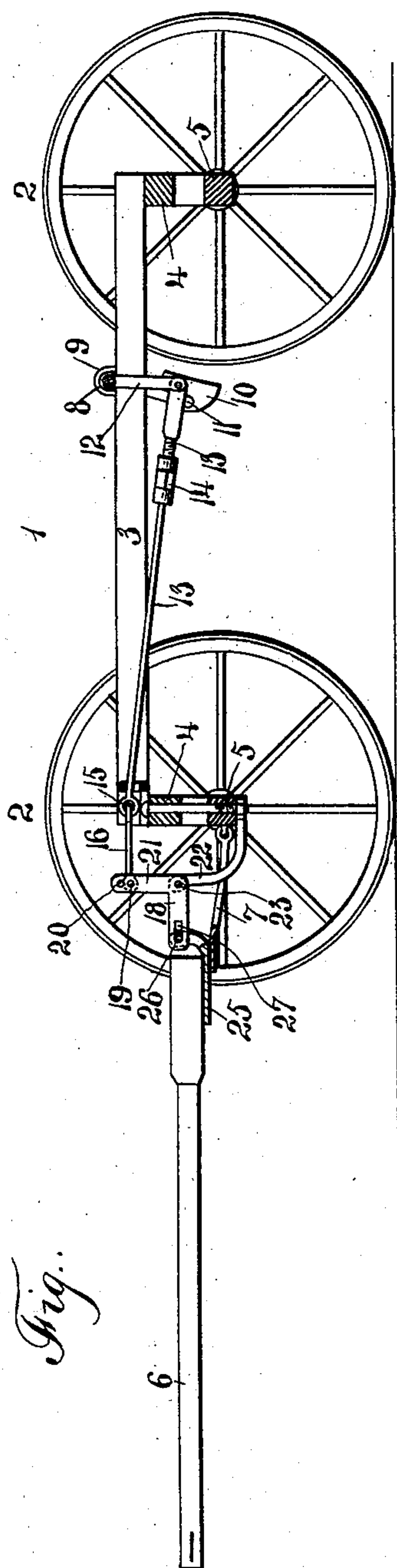


(No Model.)

A. G. DAHL & V. LAUER.
AUTOMATIC VEHICLE BRAKE.

No. 601,127.

Patented Mar. 22, 1898.



Witnesses
W. E. Allen
Victor J. Evans

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UNITED STATES PATENT OFFICE.

ADOLPH G. DAHL AND VICTOR LAUER, OF LITTLE BERGER, MISSOURI.

AUTOMATIC VEHICLE-BRAKE.

SPECIFICATION forming part of Letters Patent No. 601,127, dated March 22, 1898.

Application filed September 3, 1897. Serial No. 650,502. (No model.)

To all whom it may concern:

Be it known that we, ADOLPH G. DAHL and VICTOR LAUER, citizens of the United States, residing at Little Berger, in the county of Gasconade and State of Missouri, have invented certain new and useful Improvements in Automatic Vehicle-Brakes; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a novel automatic vehicle-brake, the object being to provide a simple, efficient, and comparatively inexpensive brake mechanism for attachment to wagons or other vehicles which operates to automatically force the brakes into frictional contact with the wheels by the holdback of the draft-animals and consequent elevation of the tongue—as, for instance, on a downgrade.

To the accomplishment of this and other objects subordinate thereto the invention consists in connecting a rotary brake-shaft with the vehicle-tongue in a manner to cause the rotation of the shaft by the elevation of the tongue to bring the brake-shoes into frictional contact with the wheels.

Referring to the drawings, Figure 1 is a longitudinal sectional view of the running-gear of a wagon, showing our brake mechanism attached, the tongue being shown elevated and the brake-shoes applied to the wheels in dotted lines; and Fig. 2 is a plan view of the subject-matter of Fig. 1.

Referring to the numerals on the drawings, 1 indicates the running-gear, consisting, as usual, of the wheels 2, reach-beams 3, body-bolsters 4, and axles 5.

6 indicates the tongue, provided, as usual, with a tongue-fork 7 at its rear end pivotally secured by suitable couplings to the front end of the running-gear.

8 indicates what may be termed the “brake-shaft,” journaled in suitable bearings 9, located at any desired point, but preferably upon the reach-beams, and having terminal brake-shoes 10, carried by the crank ends 11 of the shaft and designed to be forced into or out of contact with the wheels 2 by the rotation of the shaft 8.

12 indicates an arm or lever extending downwardly from the brake-shaft 8 and pivotally connected at its lower end to one extremity of a brake-rod 13, having a turn-buckle 14 for adjusting its length and extending to the front of the running-gear, where it is loosely connected, as indicated at 15, to a link 16, adjustably connected at its opposite end to a bell-crank lever 18 by a transverse bolt 19, engaging one of a series of apertures 20 in a vertical arm 21 of the lever 18. The bell-crank lever may be supported in front of the running-gear in any suitable manner; but we prefer to employ a lever-supporting bracket 22, having a transverse pin-
23 at its upper extremity, passing through the angle of the bell-crank lever 18, and the opposite end of the bracket being secured to the under side of the axle 3.

25 25 indicate a pair of upwardly-extending bearing-lugs at the rear end of the tongue, through which is passed a transverse bolt 26, engaging an elongated slot 27 in the horizontal arm of the bell-crank lever 18. It will now appear that when the vehicle is being propelled on a downgrade the draft-animals will exert a holdback, and as this pull exerted upon the end of the tongue serves to elevate the latter the bell-crank lever 18 will be swung and will cause the brake-rod to be reciprocated, and the brake-shaft will be rotated to apply the brake-shoes to the wheels, and thus automatically brake the wagon without attention from the driver. The loose connection between the link and brake-rod is preferably located in substantial alinement of the king-bolt, and the front axle may by this provision be swung relatively with respect to the body of the vehicle without deranging the automatic brake mechanism, and the adjustment between the link and the bell-crank lever and the extensibility of the brake-rod proper enable the mechanism to be quickly applied to vehicles of various sizes; but while the present embodiment of our invention appears at this time to be preferable we do not desire to limit ourselves to the structural details set out, but reserve the right to change, modify, or vary such details at will within the scope of our invention.

Having thus described our invention, what

we claim as new, and desire to secure by Letters Patent, is—

1. The combination with the running-gear of a vehicle comprehending a pivotally-mounted axle, of a rotary brake shaft and shoes, a bell-crank lever pivotally carried by a support fixed to the said axle, a tongue operatively connected to one arm of the lever, a brake-rod connected at one end to the brake-shaft, and a link connected at one end to the other arm of the lever and loosely connected at its opposite end to the extremity of the brake-rod, said loose connection between the rod and link being directly above the pivotal connection of the axle, substantially as specified.

2. The combination with the running-gear and tongue, of a rotary brake shaft and shoes, an arm extending from said shaft, an extensible brake-rod connected to the arm, a bell-crank lever operatively connected with the tongue, and a link intermediate of the bell-

crank lever and brake-rod, substantially as specified.

3. The combination with the running-gear and tongue, of a brake-shaft provided with brake-shoes and a depending arm, an extensible brake-rod pivotally connected to the arm, a bell-crank lever pivotally supported at its angle in front of the running-gear, a loose pivotal connection between one arm of the bell-crank lever and tongue, a link loosely connected to the brake-rod and adjustably connected to the opposite arm of the bell-crank lever, substantially as specified.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

ADOLPH G. DAHL.
VICTOR LAUER.

Witnesses:

CHRIST SCHEIBLE,
CHRIST STOECKLIN.