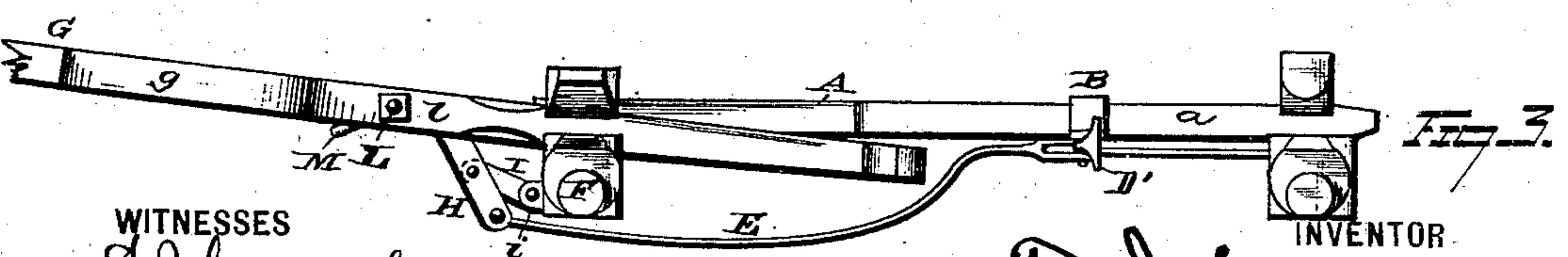
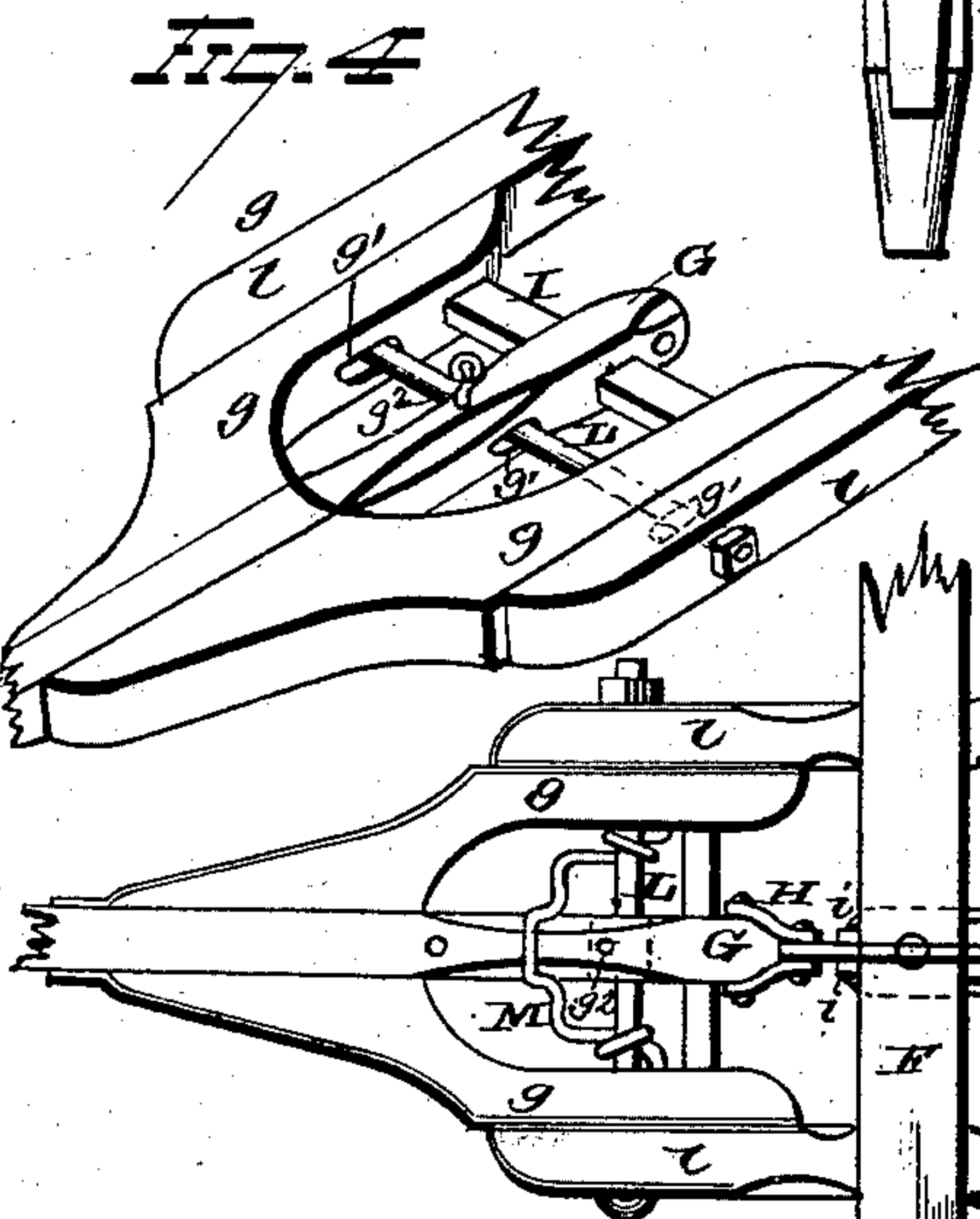
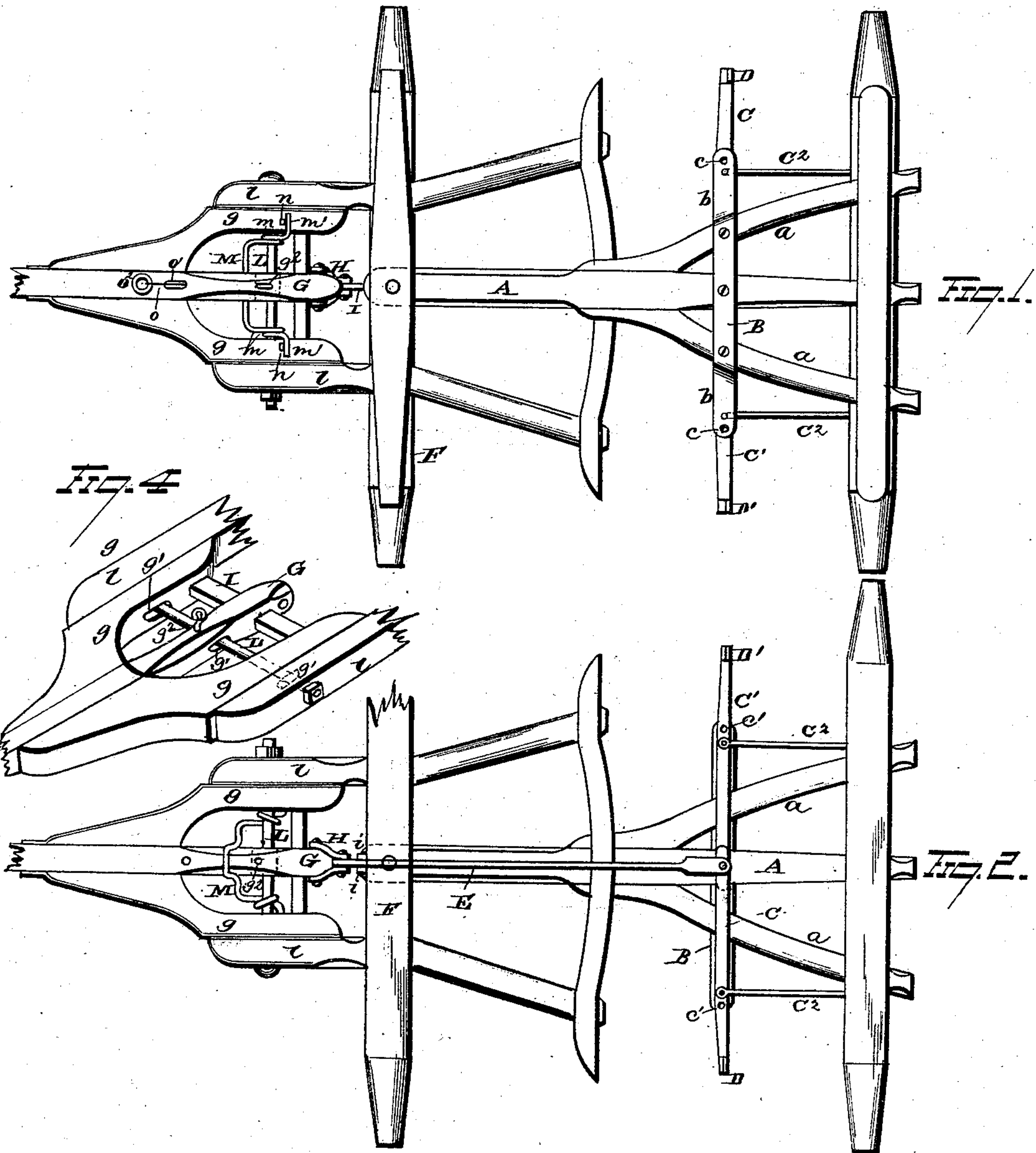


F. J. WENKER.
Vehicle-Brake.

No. 223,827.

Patented Jan. 27, 1880.



WITNESSES
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FRANKLIN J. WENKER, OF CLYMAN, WISCONSIN.

VEHICLE-BRAKE.

SPECIFICATION forming part of Letters Patent No. 223,827, dated January 27, 1880.

Application filed November 29, 1879.

To all whom it may concern :

Be it known that I, FRANKLIN J. WENKER, of Clyman, in the county of Dodge and State of Wisconsin, have invented certain new and useful Improvements in Vehicle-Brakes; and I 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to an improvement in automatic brakes for wagons and other vehicles.

Heretofore brakes of this class have ordinarily been very complicated in construction, and in use are found defective in that they are liable to frequent breakage and disarrangement of parts. Again, these brakes as heretofore constructed are very expensive by reason of their complication and multiplication of parts.

The object of my invention is to produce an automatic vehicle-brake designed to be operated by the back-pressure of the pole or tongue of the vehicle, which shall be composed of few parts, thus avoiding complication in construction and operation, and producing the brake at reasonable cost.

With this object in view the invention consists in the combinations and relative arrangements of parts, as will be hereinafter set forth, and specified in the claims.

In the drawings, Figure 1 represents a plan view of the running-gear of a wagon having my improved brake applied thereto. Fig. 2 is a reverse plan view of the gear with the brake attached. Fig. 3 is a side elevation of the same; and Fig. 4 is a detail view, illustrating the slotted tongue-hounds and tongue and the manner of connecting the brake-rod to the tongue or pole.

A represents the reach of the wagon, and *a* the hind hounds thereof. B is a support, preferably constructed of metal, which is firmly secured by screws or bolts to reach A and hind hounds, *a a*. This support is bent downwardly at either end at nearly a right angle, thus forming the arms *b b*, to which the brake-

arms C C' are pivoted at about the center of the latter.

C² C² are two rods or braces, which are secured at their rear ends to the front side of the rear axle, while their forward ends connect, respectively, with the heads of the bolts which connect the brake-arms C C' to the supporting-arms *b b*, the office of said braces C² C² being to give strength and rigidity to the brace-arms *b b*, and prevent their displacement.

The supporting-arms *b b* are provided with one or more pivot-holes, *c c*, corresponding to the holes *c' c'* in arms C C', to enable the latter to be pivoted at variable distances from their outer ends, and thus insure any desired leverage that may be required. These brake-arms C C' are provided at their outer ends with the brake-shoes D D', which latter are preferably made removable, so as to be replaced when worn, and the opposite extremities of said arms meet immediately under the reach A, where they are pivoted to the connecting-rod E, which latter extends forwardly under the reach A and front axle, F, and is connected at its forward extremity to the pole or tongue G by the lever H. This lever H may be constructed of a single piece of metal, and bifurcated at one end to form arms for connection to the pole; or it may be constructed, as shown in the drawings, of two separate pieces of metal, the connecting-rod E being pivoted between the lower ends thereof, while the upper extremities of the same are bent outwardly and upwardly, and secured one on either side of the tongue or pole.

I is a brace, one end of which is pivoted in the brackets *i i* on the front axle, and the opposite end is pivoted to the lever H about midway between the ends of the latter, thus insuring a steady action of the lever.

G represents the pole or tongue of the vehicle, and *g g* the tongue-hounds, secured in the hounds *l l* by the tongue-bolt L. The tongue G and the tongue-hounds *g g* are, respectively, formed with the elongated slots *g' g' g'*, through which the tongue-bolt L passes, and which permit of a slight endwise movement of the tongue and tongue-hounds. The tongue G is provided with a pin, *g²*, which passes through

an eye in the tongue and serves to lock the tongue in position, as will be hereinafter set forth.

M represents a locking-bail, which is formed of a metallic rod pivoted at either end of the tongue-bolt by the coil-loops *m m*, the ends of the rod extending upwardly and being bent at right angles, forming arms *m' m'*, to engage with the lugs or catches *n n* on the tongue-hounds, while the central or main part of the bail extends below the tongue and is formed into a loop, to which cord *o* is secured, the latter extending upwardly through slot or eye *o'*, and having a ring or loop, *o²*, secured to its free end.

The operation of the brake is as follows: In descending an inclined road with the wagon, the tongue G will yield rearwardly to a distance equal to the length of slots *g' g' g'*, and by such motion will operate the lever H, which, in turn, forces forward the connecting-rod E, thereby operating the brake-arms C C', and pressing the brake-shoes D D' firmly against the rear wheels.

In using a wagon provided with my improved brake for light farm-work, where frequent braking is not required, the pin *g²* may be inserted through the eye in the tongue when the latter is in its ordinary position, and thus prevent the back-pressure of the tongue and the operation of the brake. This pin is readily removable, so that by simply removing the same the brake becomes operative.

In hauling hay, lumber, or other bulky loads, it frequently happens that the brake is not required for use; but the pin-adjustment, as above described, would be inconvenient for such use, as its removal would necessitate the alighting of the driver from the load. The locking-bail M is, however, specially designed for work of this character. By pulling on cord *o* the arms *m' m'* are forced over lugs or catches *n n*, and

by securing ring *o²* to the load the tongue is locked in its normal position.

If desired, the ring *o²* may be secured to the bolster of the wagon when it is desired to lock the tongue in position for any length of time.

By loosening the cord *o* the bail M will fall, thus releasing arms *m' m'* and unlocking the tongue.

A brake made in accordance with the above description may be cheaply constructed and easily applied to wagons of any description, while its simplicity of parts renders it effective and durable in use.

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

1. The combination, with the running-gear of a vehicle, of brake-arms C C', brace B, connecting-rod E, lever H, tongue G, and locking-pin *g²*, substantially as set forth.

2. The combination, with the hind hounds and rear axle of a vehicle, of a brace spanning the hounds, and brake-arms pivoted to the outer ends of said brace, and brace-rods extending from the axle and attached to the pivotal connection of the brake-arms and their supporting-brace, substantially as set forth.

3. The combination, with pivoted brake-arms and a connecting-rod, of a lever having its upper end pivoted to the tongue and its lower end pivoted to the forward end of the connecting-rod, and a pivotal brace, one end of which is connected with the axle and the other end pivoted to the swinging lever, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 17th day of November, 1879.

FRANKLIN J. WENKER.

Witnesses:

MICHAEL CUNINGHAM,
AUGUST WIGGENHORN.