(No Model.)

B. B. HILL.

LUG FOR CARRIAGES.

No. 306,750. Patented Oct. 21, 1884.

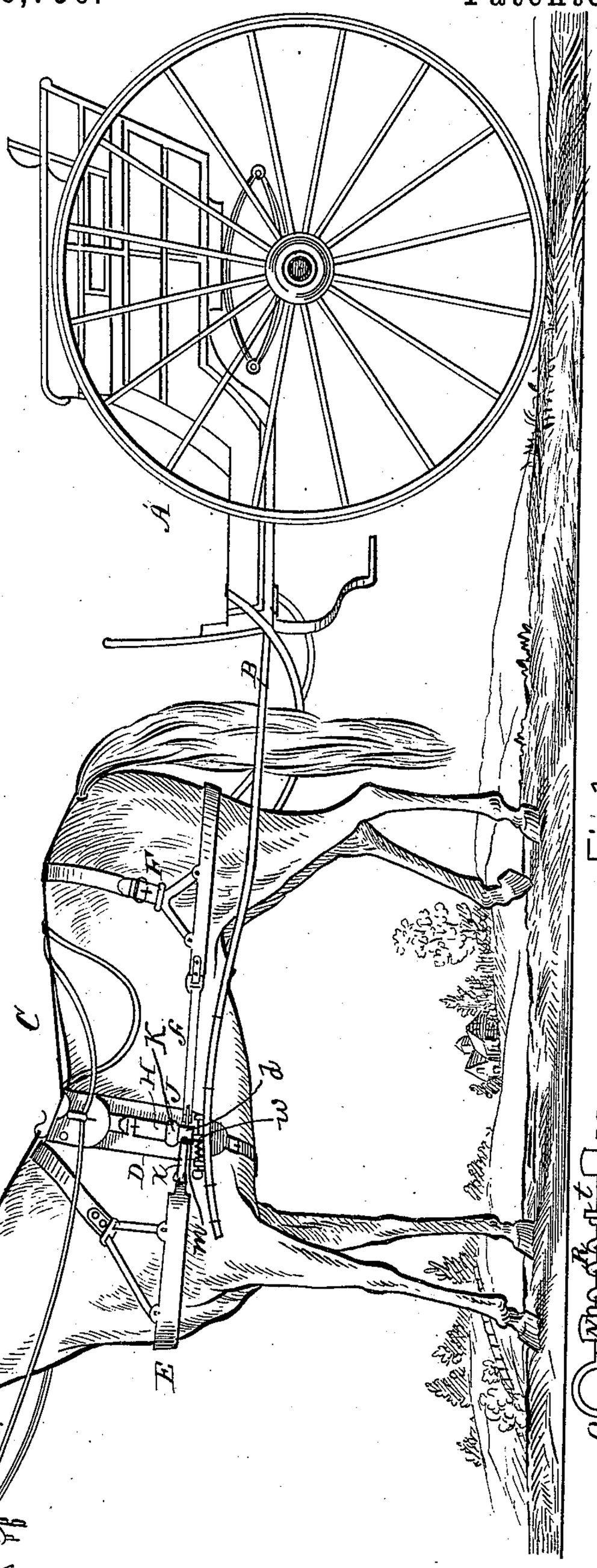

Fig. 1.

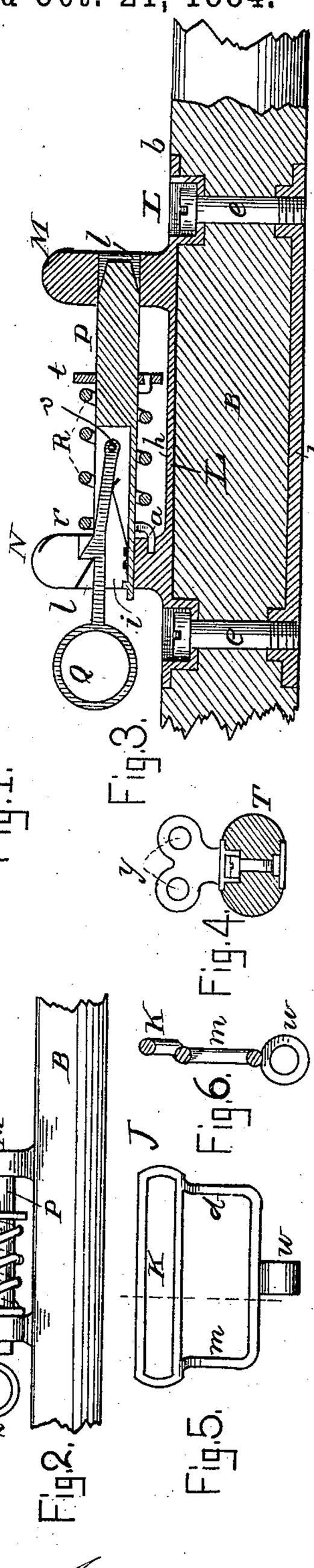

Fig. 3.

Fig. 4.

Fig. 6.

Fig. 5.

Fig. 2.

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UNITED STATES PATENT OFFICE.

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LUG FOR CARRIAGES.

SPECIFICATION forming part of Letters Patent No. 306,750, dated October 21, 1884.

Application filed July 16, 1884. (No model.)

To all whom it may concern:

Be it known that I, BARTON B. HILL, of Lowell, in the county of Middlesex, State of Massachusetts, have invented a certain new and useful Improvement in Lugs for Carriages, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an isometrical perspective view representing my improvement in use; Fig. 2, an enlarged side elevation of the lug represented as attached to a portion of the shaft; Fig. 3, a vertical longitudinal section of the same; Fig. 4, a vertical transverse section, showing a modification of the lug applied to the pole of a carriage; Fig. 5, a side elevation of the harness-loop, and Fig. 6 a vertical transverse section of the same.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates more especially to the lighter class of carriages; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a more desirable and effective device of this character is produced than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the body of the carriage, and B the shafts.

To more readily illustrate the improvement, the carriage is represented as in readiness for use, or harnessed to the horse C. The harness is provided with an ordinary saddle, D, breastplate E, breeching F, and bridle or headstall G. The back-strap H is provided at either end with a loop, J, the end of the strap being secured to the cross-bar K. A short tug or trace, *x*, is attached to either end of the breastplate E, the rear ends of the trace being respectively secured to the side bar, *m*, of the loop J. A holdback-strap, *f*, is attached to either end of the breeching F, the forward ends of the holdback-straps being respectively secured to the side bar, *d*, of the loop J. A plate, L, provided with two upwardly-projecting standards, M N, is let into the top of the shaft B at a point which is opposite the loop J when the harnessed horse C is in proper position in the carriage, each of said standards being provided with a hole, *l*, for receiving a horizontally-arranged bolt, P. This bolt is provided with a slot, *i*, and pivoted in said slot at *v* there is a spring lever, Q, provided with a dog or catch, *r*, adapted to engage the standard N when the bolt is inserted in the hole *l* in said standard. Attached at *a* to the inner face of the standard N there is a horizontally-arranged coiled spring, R, provided at its inner end with the ring *t*, the hole through the ring and the coils of the spring being sufficiently large to freely receive the bolt P. The loop J is provided with a ring or auxiliary loop, *w*, adapted to receive the bolt P; and in the use of my improvement the bolt P is withdrawn from the standards M N, and the shaft B raised until said auxiliary loop is brought into proper position between the standard M and ring *t*, after which the bolt is passed through the standard N, spring R, ring *t*, loop *w*, and standard M until the catch *r* on the spring-lever Q engages the standard N, thereby securely connecting the harness with the carriage in a manner which will be readily obvious without a more explicit description. The plate L is provided near either end with a socket, *b*, which is sunk in the shaft, the sockets being designed to receive the screws *e*, by which the lug is secured to the shaft, the screws passing through the shaft into a plate, *h*, on its under side, as best seen in Fig. 3. When the carriage is provided with a pole, T, two bolts, P, are used, the standards being formed double, or with two holes, *y*, as shown in Fig. 4.

It will be obvious that the ordinary holdback-irons and whiffletree are entirely dispensed with, the standards M N, bolt P, and spring R performing substantially the same functions as those parts when used in connection with the loop J and a suitable harness.

It will also be obvious that the sudden jar or strain on the horse incident to the use of the ordinary whiffletree will be neutralized

by the spring R, rendering it much easier for the horse to start the carriage than when harnessed in the usual manner.

It will be understood that two of the lugs are employed to each carriage, or one for either shaft. The hole *l* in the standard N is countersunk or enlarged at its outer end to enable the bolt P to be readily inserted.

I do not confine myself to the use of the plate L, as the standards may be so constructed as to be attached directly to the shaft, nor to the use of the ring *t*, as this may also be dispensed with, if desired. Other means than the loop J may also be employed for connecting the lug with the harness, if preferred, without entirely departing from the spirit of the improvement.

Having thus explained my invention, what I claim is—

1. In a carriage-lug, the standards M N, spring R, and bolt P, provided with the spring-lever Q, combined and arranged to operate substantially as set forth.

2. As an improved article of manufacture, the plate L, provided with the sockets *b* and standards M N, having the holes *l*, the spring R, provided with the ring *t*, and the bolt P, provided with the pivoted spring-lever Q, having the catch *r*, constructed, combined, and arranged to operate substantially as described.

3. The standards M N, spring R, and bolt P, provided with a spring lever, Q, in combination with the shaft B, substantially as set forth.

4. The standards M N, spring R, and bolt P, provided with the spring-lever Q, in combination with the loop T, having the auxiliary loop *w*, substantially as described.

5. In a carriage-lug, the combination of the following instrumentalities, to wit: two standards adapted to be attached to the shaft of the carriage, a detachable bolt provided with a catch and supported by said standards, and a spring for neutralizing the strain on the horse in starting the carriage, said bolt being adapted to engage a loop or other shaft-support on the harness, substantially as set forth.

6. The standard N, having the hole *l*, and provided with a horizontally-arranged inwardly-projecting spring, R, carrying the ring *t*, the bolt P, provided with the spring-lever Q, having the catch *r*, adapted to engage the standard N, the standard M, provided with the hole *l*, the plate L, provided with the sockets *b*, screws *e*, and plate *h*, in combination with the shaft B, substantially as described.

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