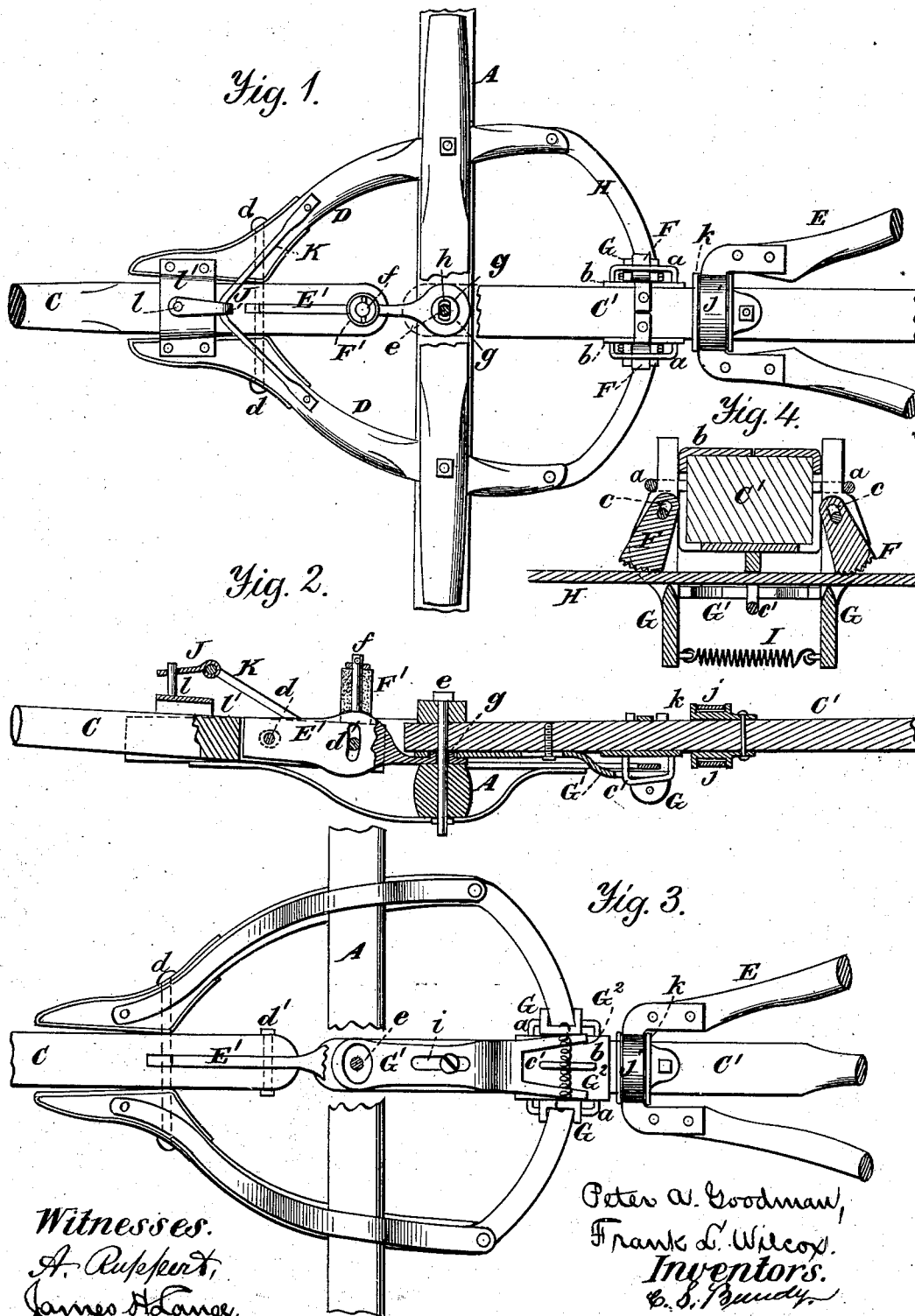


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Lock for Wagon-Hound.

No. 219,354.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN LOCKS FOR WAGON-HOUNDS.

Specification forming part of Letters Patent No. **219,354**, dated September 9, 1879; application filed June 12, 1879.

To all whom it may concern:

Be it known that we, PETER A. GOODMAN and FRANK L. WILCOX, of Menomonee, in the county of Dunn and State of Wisconsin, have made certain Improvements in Tongue or Hound Locks for Vehicles; and we do hereby declare that the following is a full, clear, and exact description of the invention, which 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 the letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a plan view of our improved hound or tongue lock for vehicles. Fig. 2 is a longitudinal section thereof, taken about centrally through it. Fig. 3 is a detailed inverted view of the same, showing more clearly the gripping-pawl-releasing lever; and Fig. 4 is a transverse section through the reach, gripping pawls or dogs, and the sway-bar or fifth-wheel.

This invention has relation to improvements in hound or tongue locks for vehicles; the primary object of which is to prevent the lateral swaying of the tongue or its striking the horses or team, and, secondarily, to avoid the weight of the tongue or poles being borne by the neck of the horses.

The nature of the invention consists of spring pawls or dogs adjusted to the reach and gripping the sway-bar or fifth-wheel, fixed to the front axle, carrying the tongue-hounds; of the adjustability of the lock or dogs to compensate wear and accommodate them to different thicknesses of fifth-wheel or sway-bar; of a plate or bar, preferably edgewise disposed, and connecting the rear end of the tongue to the front axle, upon which plate is mounted a rubber cushion or spring, with its lower end resting on the said end of tongue; and of a sectional lever, adapted by the turning either to the right or left of the front axle to separately release the gripping dogs or pawls from the sway-bar or fifth-wheel, substantially as hereinafter more fully set forth.

In the accompanying drawings, A marks the front axle, C' the reach, C the tongue, D the front hounds, and E the rear hounds, of the running-gear of a vehicle.

F F are two dogs or pawls, with their up-

per ends hung in forwardly-extending portions of U-shaped or bifurcated plates G, disposed one upon each side of the reach C', to which they are connected at their upper ends by the insertion of said ends in staples *a a*, preferably fastened to plates *b b*, in turn fastened to the sides of the reach. These bifurcated plates, at their lower ends, receive and permit the sway-bar or fifth-wheel H to pass through them, so as to expose it to the gripping action of the dogs or pawls, to make which gripe more firmly they are serrated or provided with transverse teeth, biting the fifth-wheel or sway-bar. These dogs or pawls are adapted, by having two or more apertures or elongated slots, *c*, through them, through which their pivotal pins or pintles are inserted, to be adjusted vertically, to compensate wear, either in connection with the fifth-wheel or the dogs themselves, or to accommodate their application to different thicknesses of fifth-wheel or sway-bar. To aid this adjustment of the dogs or pawls, their pivotal or suspending pins or pintles are provided with heads and nuts for their ready removal and readjustment. The removal of the dogs or pawls will permit the detachment of the U-shaped plates G from both the reach and fifth-wheel.

The lower or dependent ends of the plates or levers G are connected together by means of a spring, I, to cause the dogs or pawls to bite or gripe the fifth-wheel or sway-bar, and thus effect the automatic locking of the fifth-wheel, with the front axle, to the reach. This being the case, it will be observed that the tongue, which is connected by the hounds to the axle, will be prevented, should one or more of the wheels meet or pass over an obstacle, from swaying laterally and striking the horses. The fifth-wheel or sway-bar is clipped or connected by a staple, *c'*, to the reach.

The tongue or pole C is pivoted between the hounds D by a bolt, *d*, passing through the same, which hounds are adapted, by their forward ends having a suitable amount of divergence, to allow the tongue to have a limited lateral or horizontal movement when it is desired to turn a curve.

E' is an edgewise-disposed plate or bar, let into a slot in the rear end of the tongue or pole C, and connecting that end of the tongue

to the front axle. The forward end of this plate is held in place by the tongue-bolt *d*, and at the rear end of the tongue by a bolt or pin, *d'*, passing through a vertical slot in the same, while its extreme rear end is flat, and made preferably in the form of a disk, through which passes the king-bolt *e*, connecting the reach to the front axle. The slot made in the plate *E'*, which receives the pin *d'*, permits a limited vertical play of the tongue to receive concussion.

Formed upon the upper edge of the plate *E'* is a stud or projection, *f*, provided with a rubber or elastic cushion or spring, *F'*, with its upper end secured thereon by a washer and pin, while its lower end, straddling the plate *E'*, bears or rests on the tongue at its rear end. Though the tongue is permitted to have a limited amount of vertical movement, the spring *F'* serves to hold it in a balanced position, and thus prevent its outer end swaying downwardly, and its weight being borne by the necks of the horses or team.

*G*¹ is a slide or lever, with its forward end receiving the king-bolt *e*, and having an aperture or hole, which receives an elevation or tubular stud, *g*, of the disk portion of the plate *E'*, it being tubular for the passage through it of the king-bolt. This same plate is provided with a transverse slot, *h*, at this point, as is also the lever *G*¹, to permit of their having lateral movement, in connection with the tongue, when turning a curve, to cause the releasing of the dogs, and thus permit the easy turning of the vehicle.

The slide or lever *G*¹ is provided with a slot, *i*, at its pivotal point, to allow it to have the requisite movement. Its outer end is provided with two divergent arms, *G*² *G*², to act on the dogs or cam-action pawls *F*.

In turning the vehicle, it will be seen that that arm of the lever *G*¹ next to the inside of the curve will bear against or be applied to the contiguous dog or pawl, and release it from the fifth-wheel or sway-bar, the other dog sliding on the fifth-wheel in an opposite direction to its gripping or biting face, thus permitting the turning of the vehicle without having to forcibly overcome the resistance of the dogs.

It will be further observed that the reach *C'* is swiveled to its rear-axle hounds by semicircular collars *j*, one attached to each side of the hounds, and encompassing an annulus or

flanged ring, *k*, with projecting plates, through which are inserted fastenings entering the reach. This swiveled joint allows the hind axle to have an independent movement of the reach, by which, in event of their capsizing, the vehicle will not be upset bodily.

J is the hammer-strap, fitting over the whiffle-tree-securing stud *l*, fastened to a metallic bridge or plate, *l'*, secured to the tongue-hounds. The opposite end of this strap is hinged or looped to an upwardly and forwardly inclined rigid *V*-shaped bar or frame, *K*, fastened to the tongue-hounds.

Having thus fully described our invention, we claim and desire to secure by Letters Patent—

1. The combination, with the reach and fifth-wheel of a vehicle, of the dogs or cam-action pawls having a vertically-adjustable movement in a suitable frame in which they are hung, substantially as shown and described.

2. The combination, with the dogs or cam-action pawls, of the *U*-shaped plates within which they are hung, and adapted to be vertically adjusted, substantially as and for the purpose specified.

3. The combination of the dogs or pawls hung in *U*-shaped plates, with their upper ends fitted in staples on the reach and their lower ends connected together by a spring, with the fifth-wheel and reach of a vehicle, substantially as and for the purpose specified.

4. The combination, with the spring-dogs, of the bifurcated or two-armed lever provided with a lateral or transverse slot and a plate, with a stud or projection entering said lever and connected to the tongue, substantially as and for the purpose set forth.

5. The combination, with the tongue, of the edgewise-disposed plate connected to the king-bolt of the front axle, and provided with a projection or stud, having an elastic cushion or spring bearing on the tongue, substantially as and for the purpose specified.

In testimony whereof we claim the foregoing as our own and affix our signatures in the presence of two witnesses.

PETER A. GOODMAN.
FRANK L. WILCOX.

Witnesses:

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