

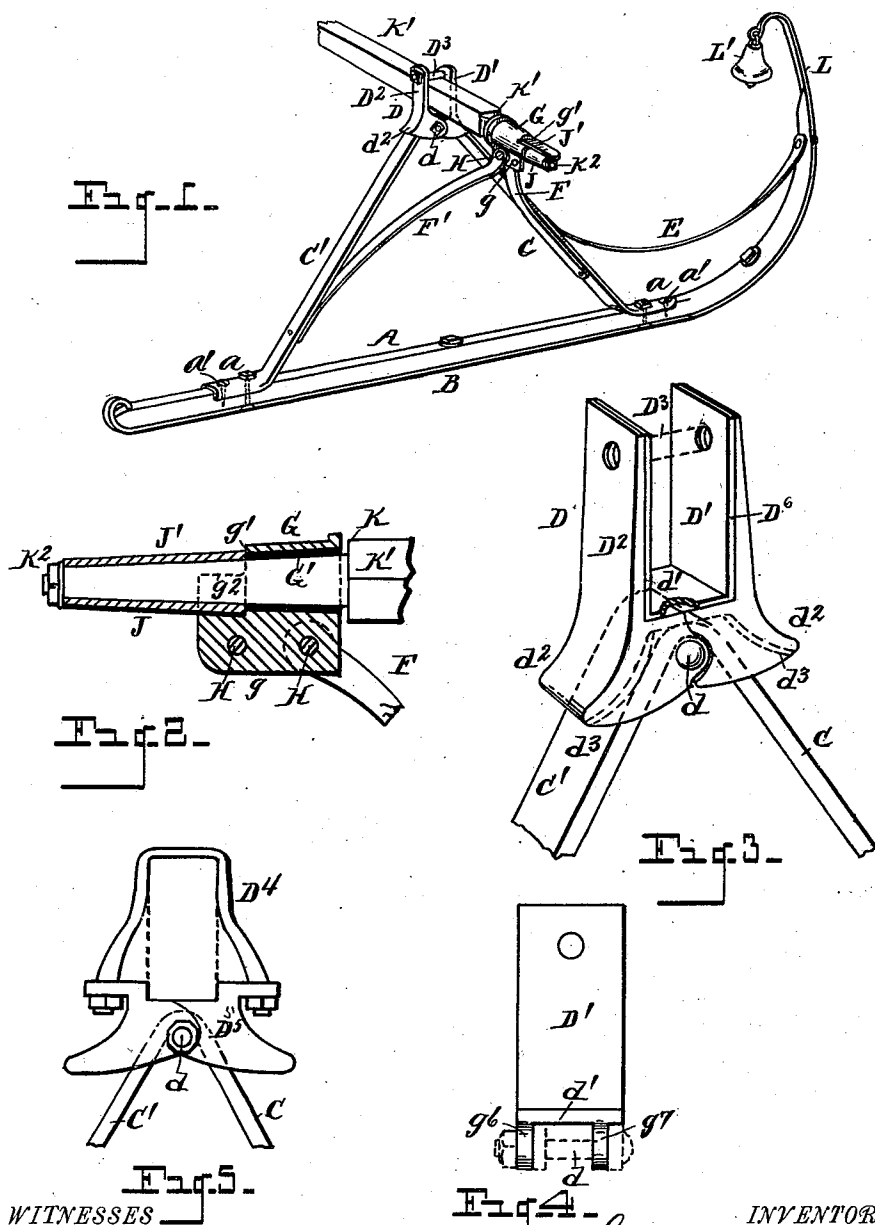
(No Model.)

2 Sheets—Sheet 1.

S. E. OVIATT.
RUNNER FOR VEHICLES.

No. 560,279.

Patented May 19, 1896.



WITNESSES
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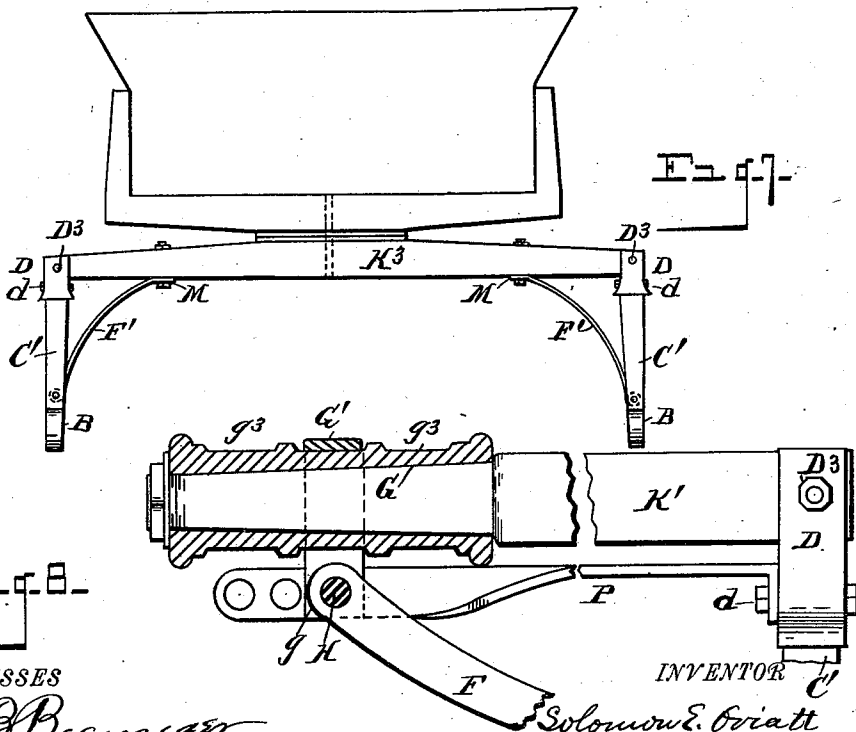
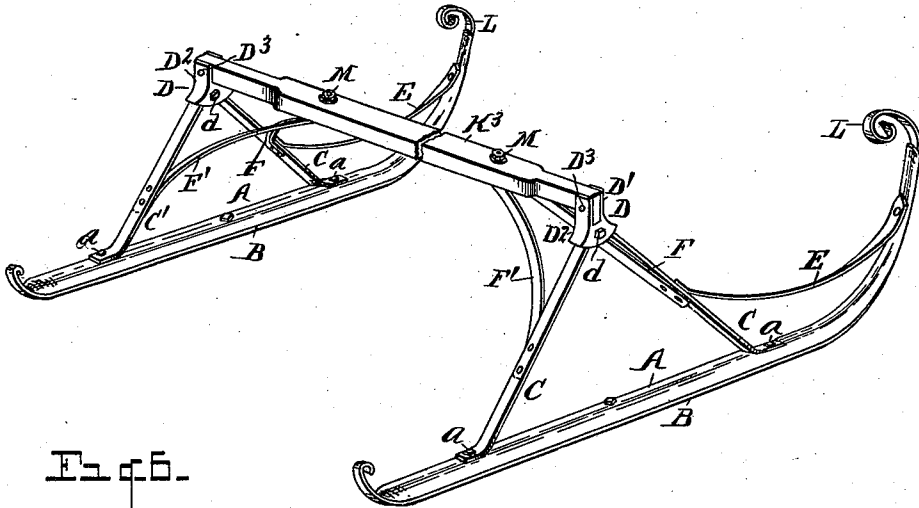
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2 Sheets—Sheet 2.

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RUNNER FOR VEHICLES.

No. 560,279.

Patented May 19, 1896.



WITNESSES

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UNITED STATES PATENT OFFICE.

SOLOMON E. OVIATT, OF LANSING, MICHIGAN.

RUNNER FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 560,279, dated May 19, 1896.

Application filed September 9, 1895. Serial No. 561,884. (No model.)

To all whom it may concern:

Be it known that I, SOLOMON E. OVIATT, a citizen of the United States, residing at Lansing, county of Ingham, State of Michigan, have invented a certain new and useful Improvement in Runners for Vehicles; and I declare the following to be a full, clear, and exact description of the same, 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, which form a part of this specification.

My invention has for its object an improved runner for bob-sleighs and for wheeled vehicles which shall be tasty in its appearance and efficient and durable in its construction and operation.

My invention consists of the construction, combination, and arrangement of devices hereinafter described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a view in perspective embodying my invention as applied to a runner for wheeled vehicles. Fig. 2 is a vertical cross-section of the same through the socket G and sleeve J. Fig. 3 is a detail view in perspective of the axle-clamp. Fig. 4 is a view of one of the jaws. Fig. 5 illustrates a modification in the construction of the jaws. Fig. 6 is a view in perspective illustrating my invention as applied to bob-sleighs. Fig. 7 is a rear elevation of the same. Fig. 8 is a view in section through the socket G, showing a modification in the construction thereof, other parts being shown in elevation.

I carry out my invention as follows:

A represents a runner of wood or other suitable material, and B the metal shoe therefor. C C' represent supporting-arms bolted to the wooden runner A at its lower ends. The lower extremities of the arms C C' are flanged to rest upon the upper edges of the wooden runner A. I prefer to engage the lower extremities of the arms C C' to the runner A by means of one or more bolts *a*, passing through the shoe and serving at the same time to secure the shoe to the runner. In Fig. 1 I have also shown a screw *a'*, passed only through the runner A and the flange of the arm. By this construction should the countersunk head of the bolt which passes

through the shoe wear, so as to become loose from the shoe, still the arm would be firmly engaged to the runner A. The upper ends of the arms C C' converge. The arms may be made of a single integral piece of metal of inverted-V shape and support a clamp D at the top thereof. This clamp may be of any suitable construction to engage a vehicle-axle K', as shown in Figs. 1, 2, and 8, or a beam K³, as shown in Figs. 6 and 7. As shown, the clamp is constructed of two jaws D' D², having a jointed engagement at their lower ends upon said arms, a bolt *d* uniting the two jaws and passing under the adjacent portion of said arms, the base *d'* of the jaws resting upon the arms. This construction provides for a tilting of the runner when passing over uneven surfaces. The base of the jaws is constructed with a lateral flange *d*², extending downward laterally over the top of the corresponding supporting-arm, said flange limiting the oscillation of the runner within a desired scope. Underneath the flange *d*² might be located, if desired, a flexible bushing or spring *d*³. It will thus be observed that the clamp as a whole has a jointed engagement upon the supporting-arms, while also the two jaws of the clamp have a jointed engagement the one with the other, whereby the jaws may be firmly compressed or engaged upon the axle, as by means of a tightening-bolt D³ at the upper ends of the jaws above the axle. Instead of extending the jaws upward at the sides of the axle or beam and uniting them by a bolt over the axle or beam a clip D⁴ might be employed thereover, having its lower ends engaged with a rocking plate D⁵, engaged upon the top of the supporting-arm, as indicated in Fig. 5. When applied to a bob-sleigh, the bolt D³ might pass also through the beam, as shown in Figs. 6 and 7.

E is a brace united with the forward arm C and extending forward to the front of the runner. This brace may consist of a metal strap, as indicated in Figs. 1 and 6, or it might be constructed of a block of timber, as may be preferred.

F F' denote brace-arms united at their lower ends with the supporting-arms C C' and extending laterally and upwardly therefrom, as shown, and which may be provided at

their upper ends with a socket G to receive the end of the axle and assist in supporting the axle. This socket, if employed, may be constructed with a perforated lug or rib *g*, extending downwardly therefrom, through which bolts H unite said socket with said brace-arms. This socket may be constructed in the nature of a sleeve to receive the axle, as shown. Upon the projecting end of the axle I contemplate the engagement of a sleeve J, provided with a step-plate J' at the top thereof, the sleeve J and step-plate J' serving to conceal the end of the axle and as a protection from oil or grease thereon. To prevent the step-plate, where employed, from turning, I prefer to cut away the adjacent portion of the socket G, as indicated at *g'*, to form lateral shoulders *g''*, upon which the adjacent portion of the step-plate may rest, such a construction evidently preventing the turning of the socket J and the step-plate J'. Within the socket G, I prefer to provide a yielding packing G' of any suitable material, as of leather or rubber for example, and the sleeve J will obviously serve, moreover, to hold said packing in the socket at the corresponding end thereof, while the shoulder K of the axle K' will hold said packing from working out of the socket in the opposite direction.

K² is the usual nut on the end of the axle. I prefer to locate a flexible packing D⁶ at the inner surfaces of the jaws D' D², or on the inner surfaces of the clip if used instead, to protect the finish of the wood connected with the axle, and at the same time to make a closer fit of the jaw or clip on the axle. It will be understood that the wood connected with the axle in vehicles of different sorts may vary in size considerably; but this construction allows my improved runner to be readily attached to various sizes of axles.

L is a curved nose-piece at the forward end of the runner, preferably made of spring metal, to add to the finish of the runner as a whole, and at the same time to serve as a support for a bell L'. Making the nose of spring metal will obviously occasion a vibration of the bell.

The rib of the socket G may be extended to any desired length and be provided with a series of orifices, through which it may be bolted to the brace-arms, this construction permitting the lateral adjustment of the socket to give a wider or narrower track to the runner and to avoid any obstructions upon the vehicle-axle or its attachments. I prefer to construct each of the jaws of the clamp with ears *g⁶ g⁷*, the ears upon one jaw overlapping the ears of the other jaw. This construction permits the two jaws to be made from a single pattern. It will be observed that the packing in the socket G serves an important function, inasmuch as the socket thereby has a yielding engagement with the adjacent portion of the axle, which is essential on account of the jointed engagement of the axle-clamp

D upon the supporting-arms C C'. Were the socket G rigidly connected with the axle, the runner could not oscillate and the strain might cause a breakage of the device, which, however, is effectually overcome by providing the yielding packing in the socket, allowing the axle to adjust itself in position when the runner oscillates relative to the axle-clamp D.

When my invention is applied to bob-sleighs, the socket G is omitted, the extremities of the beam being engaged in the clamps D. When the sockets G are employed, they are located outside the clamps D, as shown in Fig. 1, in which case the brace-arms F F' project outwardly from the arms C C'; but when the sockets G are omitted, as in the application of the invention to bob-sleighs, the braces F F' extend inwardly from the arms C C' and are united to the beam in any suitable manner, as by means of bolts M, passed through the beam.

As shown in Fig. 8, the socket G is shown as provided with a clip G', to which the braces are bolted, the periphery of the socket being formed with plural seats *g³*, upon any one of which the clip G' might be located to adapt the device for different widths of track. A brace P may also be employed connecting the said clip with the adjacent clamp D to add firmness to the construction, the brace P having an adjustable connection with said clip to hold the clamp in desired position.

The braces F F', when extended outwardly from the arms C C', are made to have a suitable oscillatory movement upon the bolts M or other fastening means and are made to spring at their opposite ends to permit the runners to have the pivotal motion described.

What I claim as my invention is—

1. The combination with a runner, of an inverted-V-shaped support, an axle-clamp constructed of two jaws resting upon said support, and a bolt pivotally uniting said jaws and passing transversely under the adjacent portion of said support to secure the jaws thereupon and permit the oscillation of the runner, substantially as set forth.

2. The combination with a runner, of a support, an axle-clamp having two jaws jointly engaged the one with the other and with said support to permit the oscillation of the runner, said jaws constructed with ears projecting downwardly over the upper ends of said arms to limit the oscillation of the runner, substantially as set forth.

3. The combination of a runner, an inverted-V-shaped support rising therefrom, an axle-clamp consisting of two independent jaws, a bolt pivotally uniting said jaws and passing transversely under the adjacent portion of said support to secure the jaws thereupon and permit the oscillation of the runner, and means to compress the upper ends of the jaws upon the axle, substantially as set forth.

4. The combination with a runner, of an in-

verted-V-shaped support, an axle-clamp constructed of two independent jaws resting upon said support, a bolt pivotally uniting said jaws and passing transversely under the adjacent portion of said support to secure the jaws thereupon and permit the oscillation of the runner, and means to compress the upper ends of the jaws upon the axle, and brace-arms F F' connected with said support, substantially as set forth.

5. The combination with a runner, of an inverted-V-shaped support, an axle-clamp constructed of two independent jaws resting upon said support, a bolt pivotally uniting said jaws and passing transversely under the adjacent portion of said support to secure the jaws thereupon and permit the oscillation of the runner, and means to compress the upper ends of the jaws upon the axle, brace-arms F F' connected with said support, and a socket connected with the upper ends of said brace-arms, substantially as set forth.

6. The combination with a runner, of supporting-arms C C', an axle-clamp supported upon said arms, brace-arms F F', a socket G supported upon said brace-arms, a packing within said socket, a sleeve J to engage the outer end of the axle, said sleeve provided with a step-plate, said socket cut away to

form supporting-shoulders for said step-plate, substantially as set forth.

7. The combination with a runner A, of supporting-arms C C', an axle-clamp jointly supported upon said arms, a nose-piece of spring metal upon the forward end of the runner, and a bell attached to said nose-piece, substantially as set forth.

8. The combination with a runner A, of supporting-arms constructed of an inverted-V-shaped metallic bar, a clamp consisting of two jaws resting upon the top of said brace-arms, and a bolt passing under the apex of said bar jointly uniting the clamp thereupon and the jaws one with another, substantially as set forth.

9. The combination of a runner, a clamp jointly supported thereon, a socket G, braces connected with said socket and with the support for the clamp, and a brace P adjustably connecting the socket and clamp, substantially as set forth.

In testimony whereof I sign this specification in the presence of two witnesses.

SOLOMON E. OVIATT.

Witnesses:

N. S. WRIGHT,
M. A. MARTIN.