

No. 677,875.

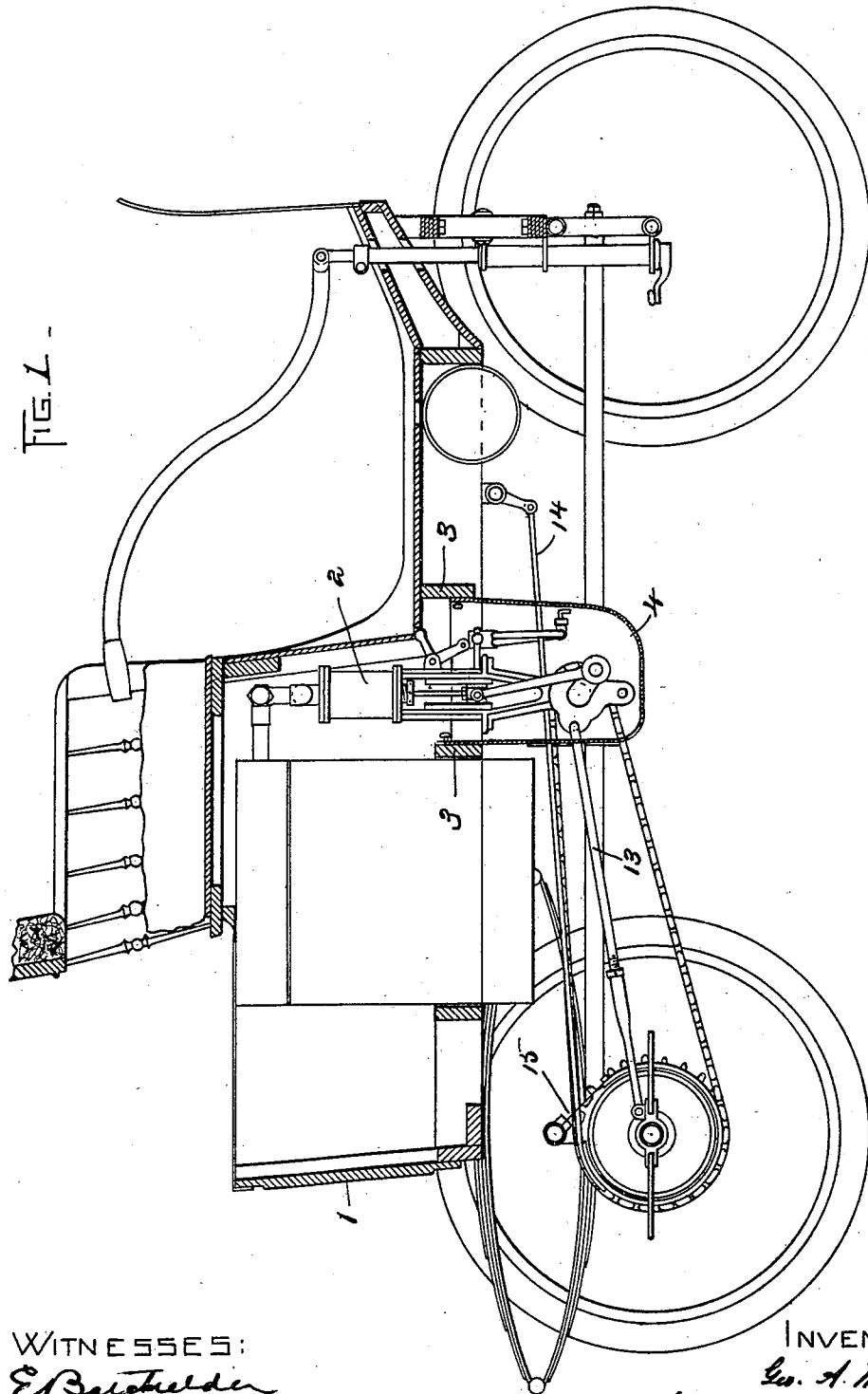
Patented July 9, 1901.

G. A. MACKER.
ENGINE PROTECTOR FOR MOTOR VEHICLES.

(No Model.)

(Application filed May 2, 1900.)

2 Sheets—Sheet 1.



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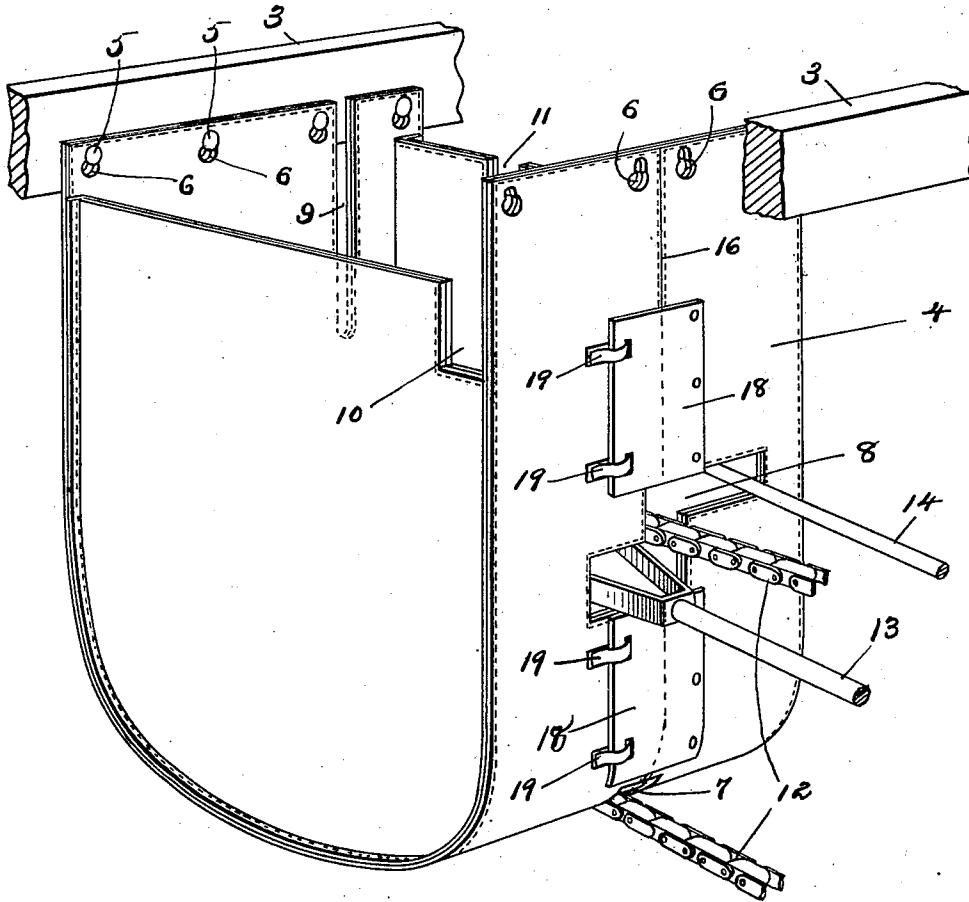


FIG. 2

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UNITED STATES PATENT OFFICE.

GEORGE A. MACKER, OF WESTBORO, MASSACHUSETTS, ASSIGNOR TO THE
LOCOMOBILE COMPANY OF AMERICA, OF NEW YORK, N. Y.

ENGINE-PROTECTOR FOR MOTOR-VEHICLES.

SPECIFICATION forming part of Letters Patent No. 677,875, dated July 9, 1901.

Application filed May 2, 1900. Serial No. 15,191. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. MACKER, of Westboro, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Engine-Proteectors for Motor-Vehicles, of which the following is a specification.

This invention relates to automobile vehicles having an engine or motor carried by the body of the vehicle and partially exposed below said body.

The object of the invention is to protect said exposed portion of the engine or motor from dust or foreign matter.

Of the accompanying drawings, Figure 1 represents a longitudinal sectional view of a steam-carriage provided with the improved protector. Fig. 2 represents a perspective view of the protector and adjacent parts with portions in section.

The same reference characters indicate the same parts in both figures.

Referring to the drawings, 1 designates the body of the motor-vehicle, and 2 designates the engine or motor carried by said body and its lower part exposed below said body. The engine is shown as supported in a vertical position with its crank-shaft lowermost between two sills 3 3, forming a part of the body-framing. In this position the engine is naturally exposed to the dust and dirt of the roadway, which has a tendency to injure or increase the wear of its running parts. To protect these parts, I provide a protector or sheath 4, substantially cup-shaped in form and removably positioned, preferably by means of an attachment to the sills 3 3, and covering the exposed part of the engine 2. The attachment of the sheath 4 to the sills 3 3 may be by means of gudgeons 5 5 on said sills and buttonholes 6 6, formed in the upper margin of the sheath along its front and rear sides and adapted to fit over the gudgeons 5.

The sheath or protector 4 is preferably composed of a flexible yielding material, such as leather, so as to secure lightness and prevent rattling and also to permit the device to be readily positioned and removed and to retain to the maximum extent its dustproof character when in place. To impart the desired stiffness and durability, the walls of the

sheath may be made of two or more layers of the material.

Apertures are provided in the sheath 4, as shown at 7 8 9 10 11, for the passage of certain parts of the carriage associated with or adjacent to the engine. Such parts, for instance, are the driving-chain 12, connecting the crank-shaft of the engine with the driving-wheels, the radius-bar 13, adapted to take the thrust of the chain, the brake-rod 14, extending from the front of the vehicle to a brake 15, associated with the rear axle, and certain pipes or fittings which pass through the apertures 10 11 in the sides of the sheath. These apertures are all open at the top either to their full width or by means of a cleft extending from the apertures to the margin of the sheath in order to allow the sheath to pass around the parts when it is positioned or removed. As seen in Fig. 2, the lowermost aperture 7 in the rear wall of the sheath is occupied by the lower stretch of the chain 12. The aperture 8 next above is occupied by the upper stretch of the chain and also by the radius-bar 13 and the brake-rod 14. Said brake-rod, furthermore, passes through the aperture 9 in the front wall of the sheath. At 16 is represented a vertical cleft connecting the apertures 7 and 8 with each other and extending to the margin of the sheath. The cleft is narrowed by bringing its sides together when the sheath is in position; but these sides may readily be separated by flexure to open the cleft around the parts 12 13 14 when the sheath is being put in its place or removed therefrom. To cover the cleft and connect its sides when the sheath is in position, there are provided flaps 18 18, located between the two apertures 7 8 and above the aperture 8, said flaps being fastened along one edge to one of the sides of the cleft and removably secured by fasteners 19 19 to the other sides of the cleft.

I claim—

1. The combination with the vehicle-body and the engine partially exposed below said body, of a sheath or protector removably positioned and inclosing the exposed part of said engine, said sheath having an aperture for the passage of a part or parts adjacent to the exposed part of the engine, and a cleft

extending from said aperture to the margin of the sheath to permit the latter to be positioned or removed.

2. The combination with the vehicle-body and the engine partially exposed below said body, of a sheath or protector removably positioned, and inclosing the exposed part of said engine, said sheath having an aperture for the passage of a part or parts adjacent to the exposed part of the engine, a cleft extending from said aperture to the margin of the sheath to permit the latter to be positioned or removed, and a flap covering said cleft.

3. The combination with the vehicle-body and the engine partially exposed below said body, of a sheath or protector removably positioned and inclosing the exposed part of said engine, said sheath having two apertures for the passage of parts adjacent to the exposed part of the engine, a cleft extending between said apertures, and a flap covering said cleft.

4. The combination with the vehicle-body and the engine partially exposed below said body, of a removable sheath or protector composed of a flexible material such as leather and covering the exposed part of the engine, said sheath having an aperture for the passage of a part or parts adjacent to the engine, and a relatively narrow cleft extending from

said aperture to the margin of the sheath to permit the latter to be positioned or removed, the sides of said cleft being separated by flexure during such positioning or removal. 35

5. The combination with the vehicle-body and the engine partially exposed below said body, of a removable sheath or protector composed of a flexible material, such as leather, and covering the exposed part of the engine, said sheath having an aperture for the passage of a part or parts adjacent to the engine, a relatively narrow cleft extending from said aperture to the margin of the sheath to permit the latter to be positioned or removed, the sides of said cleft being separated by flexure during such positioning or removal, and fastening means connecting the sides of the cleft. 40 45

6. The combination with the vehicle-body having sills 3 3, and the engine carried by said body and partially exposed below the same, of a cup-shaped sheath or protector supported by said sills independently of the engine, and fastening devices removably securing said sheath to the sills. 50 55

In testimony whereof I have affixed my signature in presence of two witnesses.

GEORGE A. MACKER.

Witnesses:

ADAMS F. BROWN,
HARRY W. KIMBALL.