

No. 842,186.

PATENTED JAN. 29, 1907.

A. DUDLY, SR.
THILL SUPPORT.

APPLICATION FILED JUNE 9, 1906.

Fig. 1.

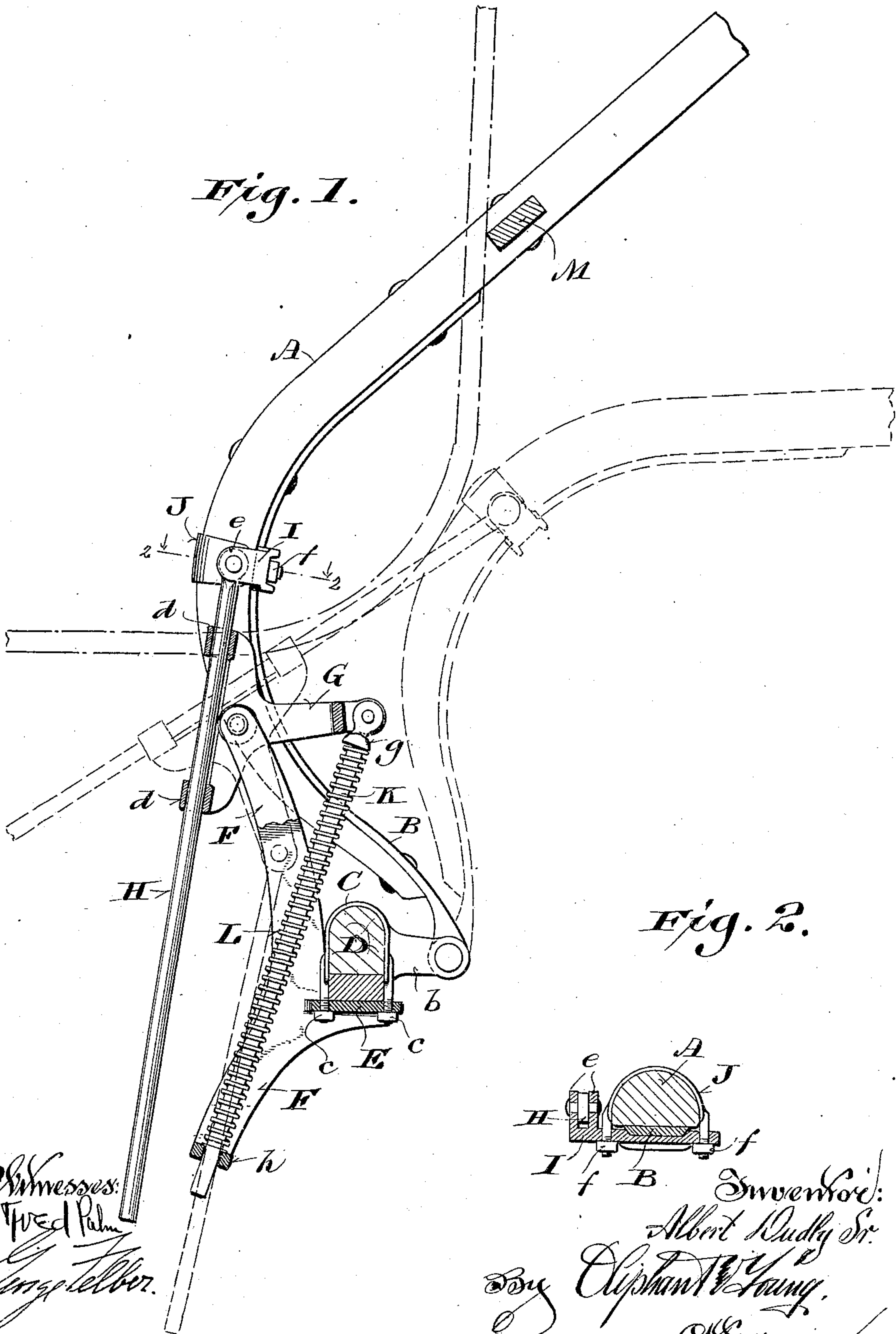
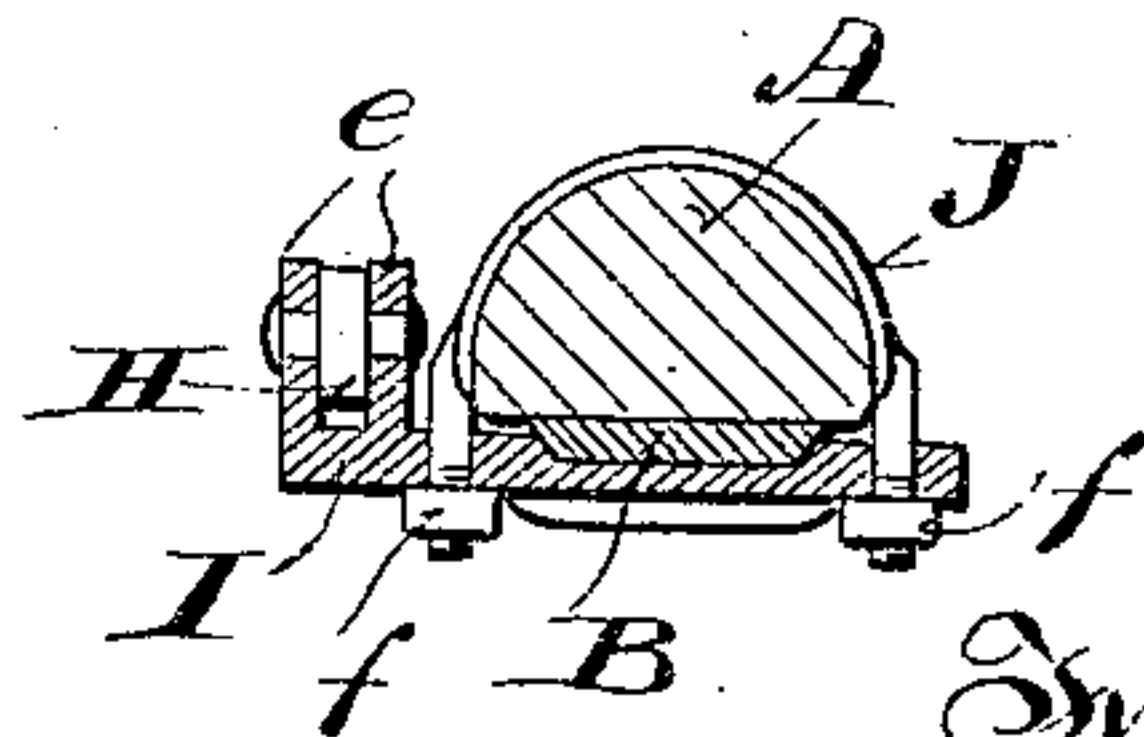


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

ALBERT DUDLY, SR., OF MENOMINEE, MICHIGAN.

THILL-SUPPORT.

No. 842,186.

Specification of Letters Patent.

Patented Jan. 29, 1907.

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To all whom it may concern:

Be it known that I, ALBERT DUDLY, Sr., a citizen of the United States, and a resident of Menominee, in the county of Menominee and State of Michigan, have invented certain new and useful Improvements in Thill-Supports; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in what is herein shown, described, and claimed, its object being to provide simple, economical, and durable vehicle attachments by which to support thills in elevated position when the vehicle comprising the thills is not in use, to take the weight of said thills off the back of an animal hitched between the same, and to prevent rattle.

Figure 1 of the drawings represents a side elevation of a thill-support in accordance with my invention and illustrates an application of the same. Fig. 2 of said drawings represents a sectional view on the plane indicated by line 2 2 in the other figure aforesaid.

Referring by letter to the drawings, A indicates a fragment of one of a pair of thills having the iron B thereof shackled in the ordinary manner to arms *b* of clip C on the axle D of a buggy or other vehicle. As herein shown, the horizontal base E of a rear bracket is engaged by the ends of the clip and nuts *c* are run on the screw-threads of the clip ends against the bracket-base; but said clip and bracket may be separately attached to the axle, as found most convenient or desirable in practice.

In trunnion connection with the upper ends of parallel sides F of the bracket is a cross-head lever G, and the lever-head is fashioned to provide guides *d* for a rod H, in pivotal connection at its upper end with ears *e* of another bracket I, held by a clip J and nuts *f* to the thill. In pivotal connection with the forward end of the lever is the shouldered end *g* of another rod K, that extends through a guide-aperture in a foot *h*, connecting the lower ends of the sides of said bracket. A spiral spring L under tension surrounds the rod K between the shoulder of same and the foot of the bracket, and the sides of said bracket are inclined in opposite directions from the horizontal base E of same.

In the drawings the thill is shown swung up, the cross-head M, that connects the pair

of thills, being against the dashboard (shown by dotted lines) of the vehicle and the spring L expanded. In this position of the thill the rod H has its shortest leverage, which leverage increases as the thill is lowered, and in the same proportion the spring L is compressed, it being practically fully compressed when said spring is approximately horizontal or in position to be connected to the harness of a draft-animal, at which time the lever G is approximately parallel to the sides F of the bracket and the load of said thill virtually balanced. If at any time the thill is lowered from the position shown in dotted lines, the lever G swings on its trunnions to approximately dead-center without material further compression of the spring.

When the thill is swung up from the position shown in dotted lines, the leverage of the rod H gradually shortens and the spring L expands in the same proportion until the lever G is swung past dead-center to hold said thill in elevated position.

From the foregoing it will be understood that the greatest manual effort is required to start the thill from the extreme limit of adjustment in either direction and that when said thill is in working position the tension of the spring L is such as to compensate for lost motion in the various connections, and thus prevent rattle.

I claim—

1. A thill-support comprising a bracket having a base attachable to a vehicle-axle, a lever fulcrumed in connection with the upper end of the bracket, another bracket attachable to a thill, a rod in pivotal connection with the thill-bracket and guided in connection with the rear end of the lever, another rod in pivotal connection with the forward end of said lever and guided in a foot portion of the axle-bracket, and a spiral spring under tension on the latter rod against the foot portion of said axle-bracket.

2. A thill-support comprising a bracket having a base attachable to a vehicle-axle and parallel sides in rear of the base inclined therefrom in opposite directions, a lever in trunnion connection with the upper ends of the bracket sides, another bracket attachable to a thill, a rod in pivotal connection with the thill-bracket and guided in connection with the rear end of the lever, another rod in pivotal connection with the forward end of said lever and guided in a foot con-

necting the sides of the bracket, and a spiral spring under tension on the latter rod against the foot of said axle-bracket.

3. A thill-support comprising a bracket
5 having a base attachable to a vehicle-axle, a lever fulcrumed in connection with the upper end of the bracket, another bracket attachable to a thill and provided with ears, a rod in pivotal connection with the ears of the
10 thill-bracket and guided in connection with the rear end of the lever, another rod in pivotal connection with the forward end of said lever and guided in a foot portion of the axle-bracket, and a spiral spring under tension on
15 the latter rod against the foot portion of said axle-bracket.

4. A thill-support comprising a bracket, having a base attachable to a vehicle-axle, a cross-head lever fulcrumed in connection
20 with the upper end of the bracket, another bracket attachable to a thill, a rod in pivotal connection with the thill-bracket and for which rod the cross-head of the lever is provided with guides, another rod in pivotal

connection with the forward end of said lever 25 and guided in a foot portion of the axle-bracket, and a spiral spring under tension on the latter rod against the foot portion of said axle-bracket.

5. A thill-support comprising a bracket 30 having a base attachable to a vehicle-axle, a lever fulcrumed in connection with the upper end of the bracket, another bracket attachable to a thill, a rod in pivotal connection with the thill-bracket and guided in connection 35 with the rear end of the lever, and a tension-spring in conjunction with the axle-bracket and the other end of the lever to hold the thill and said lever in one position of their adjustment.

In testimony that I claim the foregoing I have hereunto set my hand, at Menominee, in the county of Menominee and State of Michigan, in the presence of two witnesses.

ALBERT DUDLY, SR. 40

Witnesses:

JACOB J. MARTINEK,
J. F. KALISEK.