No. 720,796. PATENTED FEB. 17, 1903.

G. G. FLOYD.

CAR AXLE BOX.

APPLICATION FILED MAY 19, 1902.

NO MODEL.

Fig. I.

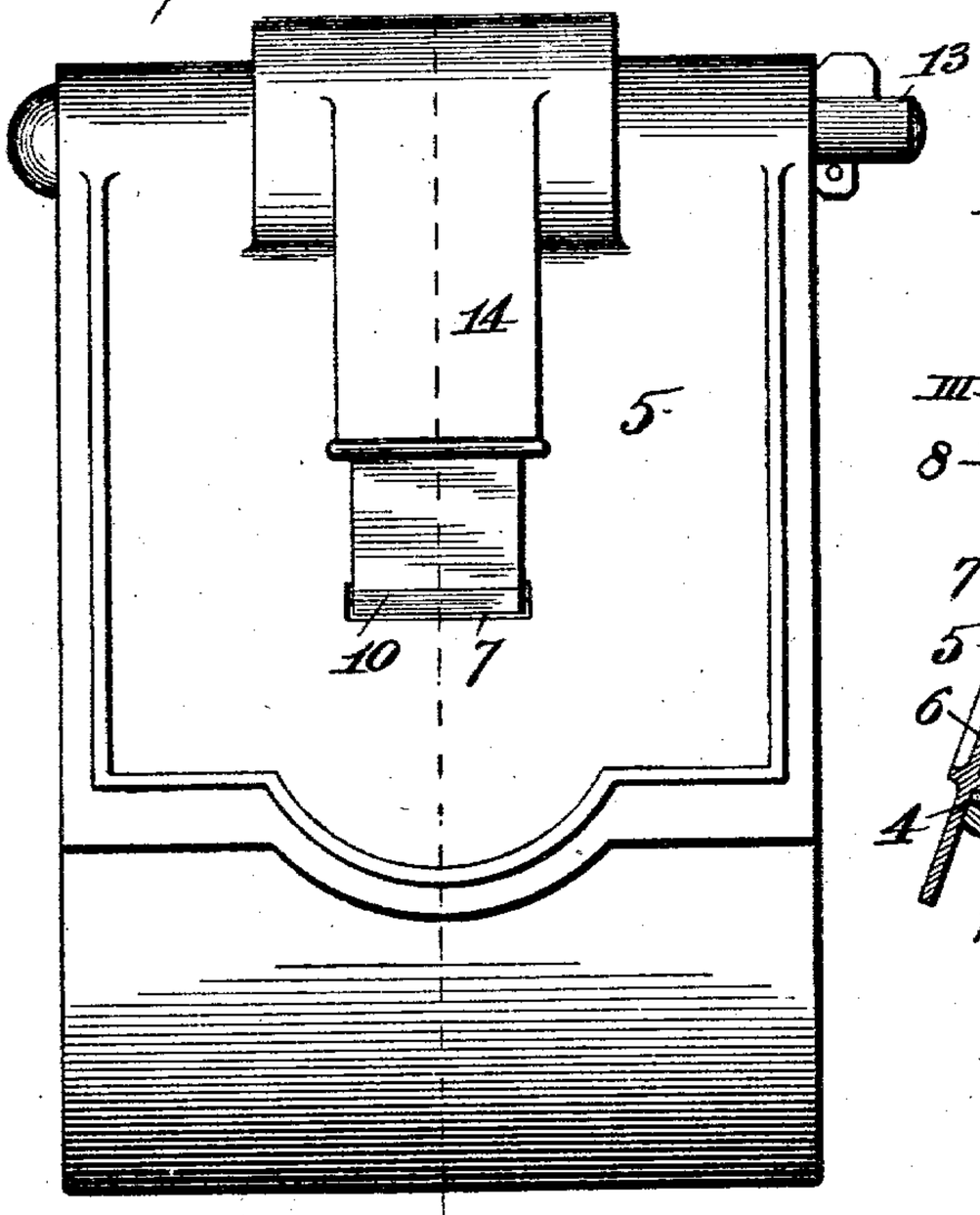


Fig. II.

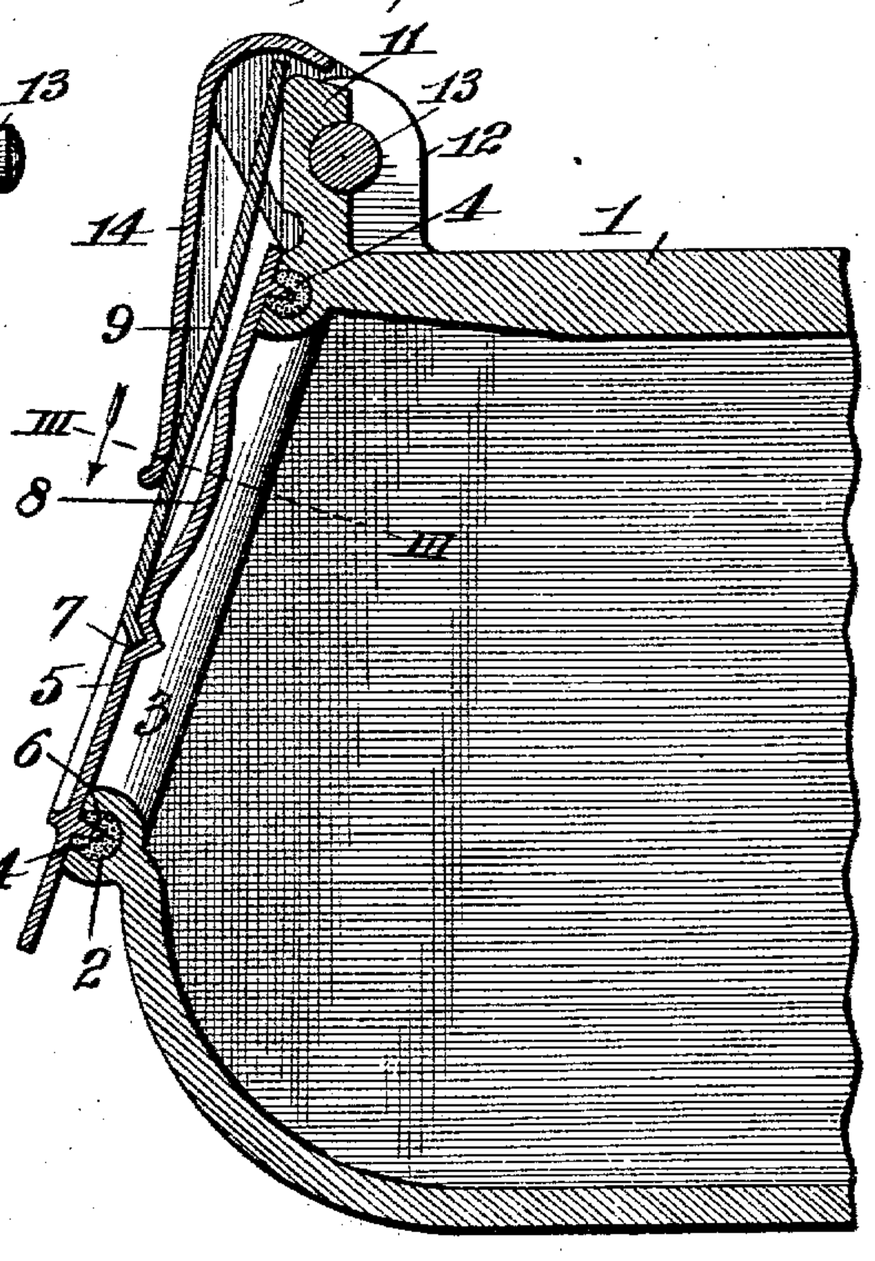


Fig. III.

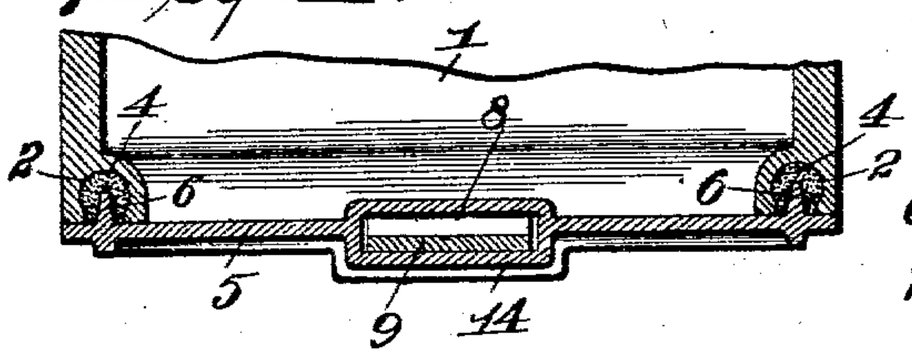


Fig. IV.

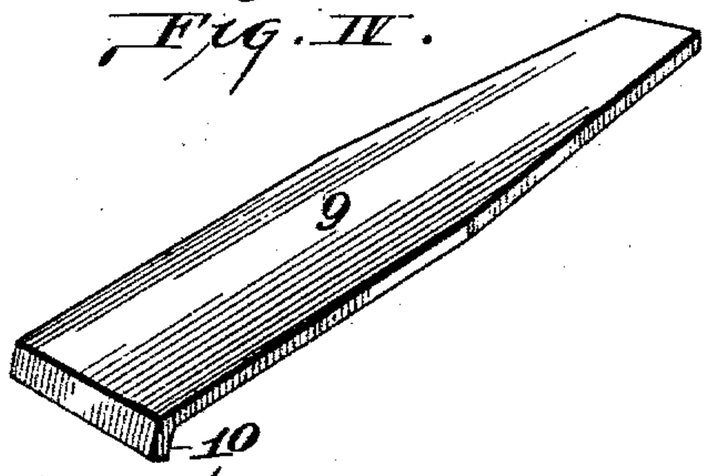


Fig. V.

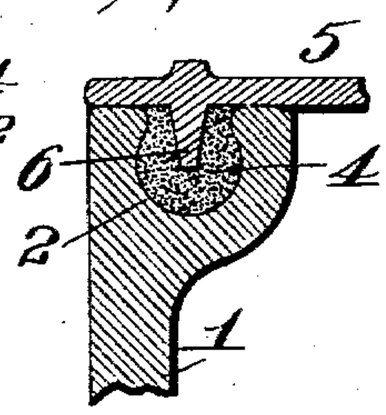


Fig. VI.

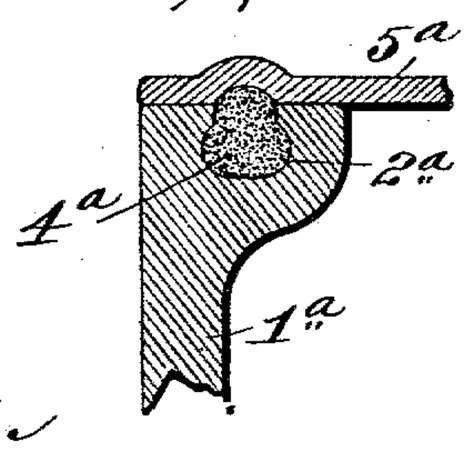
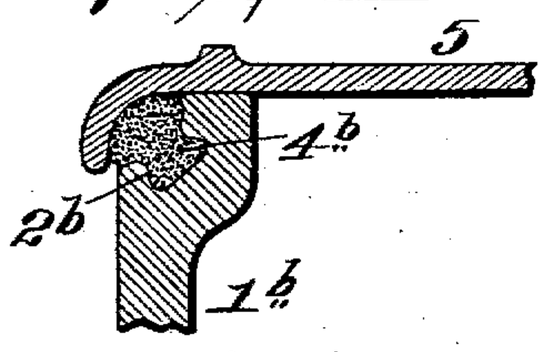


Fig. VII.



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UNITED STATES PATENT OFFICE.

GEORGE G. FLOYD, OF ST. LOUIS, MISSOURI.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 720,796, dated February 17, 1903.

Application filed May 19, 1902. Serial No. 108,047. (No model.)

To all whom it may concern:

Be it known that I, GEORGE G. FLOYD, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Car-Axle Boxes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to car-axle boxes provided with a medium through which a seat for the cover of the box may be produced that will provide, without the use of a packing, for a close joint between the axle-box at its mouth and the cover that closes said mouth.

The invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a front elevation of my axle-box. Fig. II is a vertical section taken on line II II, Fig. I. Fig. III is a horizontal section taken on line III III, Fig. II. Fig. IV is a perspective view of the cover-holding spring. Fig. V is an enlarged section of fragments of one of the side walls of the axle-box at its mouth and the cover applied thereto. Figs. VI and VII are sections similar to Fig. V, showing modifications.

1 designates an axle-box that may in the main be of any common form, but which is provided at its mouth with a groove 2, that extends continuously around the mouth of the box in an enlargement 3. In said groove I place a body 4 of self-hardening substance, preferably what is known to the trade as "steel" or "iron" cement.

5 designates the cover that is utilized to close the mouth of the axle-box and is provided with a rib or bead 6, that extends continuously on the inner face of the cover 5 in lines corresponding to the contour of the groove 2 in the axle-box, so that said rib will enter said groove to seat in the body 4 of self-hardening substance therein. On the application of the cover to the axle-box the rib 6 is embedded in the body of self-hardening substance, as seen in Figs. II, III, and V, and the inner face of the cover being pressed against the self-hardening substance produces a seat for the cover that will correspond exactly to the contour of the inner face of the cover. In this way and without any packing I avoid the presence of gaps or crevices between the axle-box and the cover, which frequently exist in constructions where the contact is metal to metal, owing to the unevenness of the contacting surfaces. After the original impression is made by the cover 5 in applying it to the mouth of the axle-box the body 5 hardens naturally, with the result that the impression produced is retained permanently to receive the cover, as in the first instance, in a manner to provide a close joint between the mouth of the axle-box and the cover to the exclusion of dust or dirt that would in the existence of an open joint enter said box.

In the cover 5 is a groove that provides a shoulder 7, and above said shoulder is a depression 8.

9 is a spring having a lip 10 extending at an angle from its lower end and adapted to seat on the shoulder 7. The upper end of the spring rests against a flange 11, projecting vertically from the top of the axle-box.

12 designates ears on top of the box 1, in which the hinge-bolt 13 of the cover 5 is positioned.

14 designates a housing projecting outwardly from the cover 5 and adapted to receive the spring 9. The spring 9 is applied to the cover by introducing its straight end beneath the lower open end of the housing 14, which introduction is permitted by the depression 8 in the cover, and the spring is then moved upwardly until its upper end rests against the flange 11 and the lip 10 at its lower end rests upon the shoulder 7. It will be seen that by this construction the spring 9 exerts pressure to hold the cover to its seat by reason of the bearing of its upper end against the flange 11, its lipped end against the cover, and the bearing contact between it and the lower end of the housing, as seen in Fig. I, so that the cover is held securely to the mouth of the axle-box without the need of any fastening appliance.

In Fig. VI, I have shown a modification wherein the self-hardening body 4^a, contained by the groove 2^a in the wall of the axle-box, extends beyond the edge of the axle-box wall to receive the cover 5^a, which is grooved to fit the extended portion of the self-hardening substance that is shaped to fit the configura-

tion of said groove on the application of the cover while the self-hardening substance is in a plastic state.

In Fig. VII, I have shown a modification wherein a groove 2^b is provided in the outer corners of the edges of the axle-box, the groove being dovetailed to hold the self-hardening substance 4^b therein. The cover 5^b in this modification is curved at its edges to fit over the body of self-hardening substance.

I claim as my invention—

1. An axle-box having a hinged cover, a body of self-hardening plastic substance provided with an impression of a portion of one of said parts, and means on the other of said parts for holding the self-hardening material.

2. The combination with the axle-box provided with a groove at its mouth, and its hinged cover provided with a rib, of a body of self-hardening plastic material fitted in the groove to form a close joint between the two parts and adapted to receive the rib of the cover.

GEO. G. FLOYD.

In presence of—
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