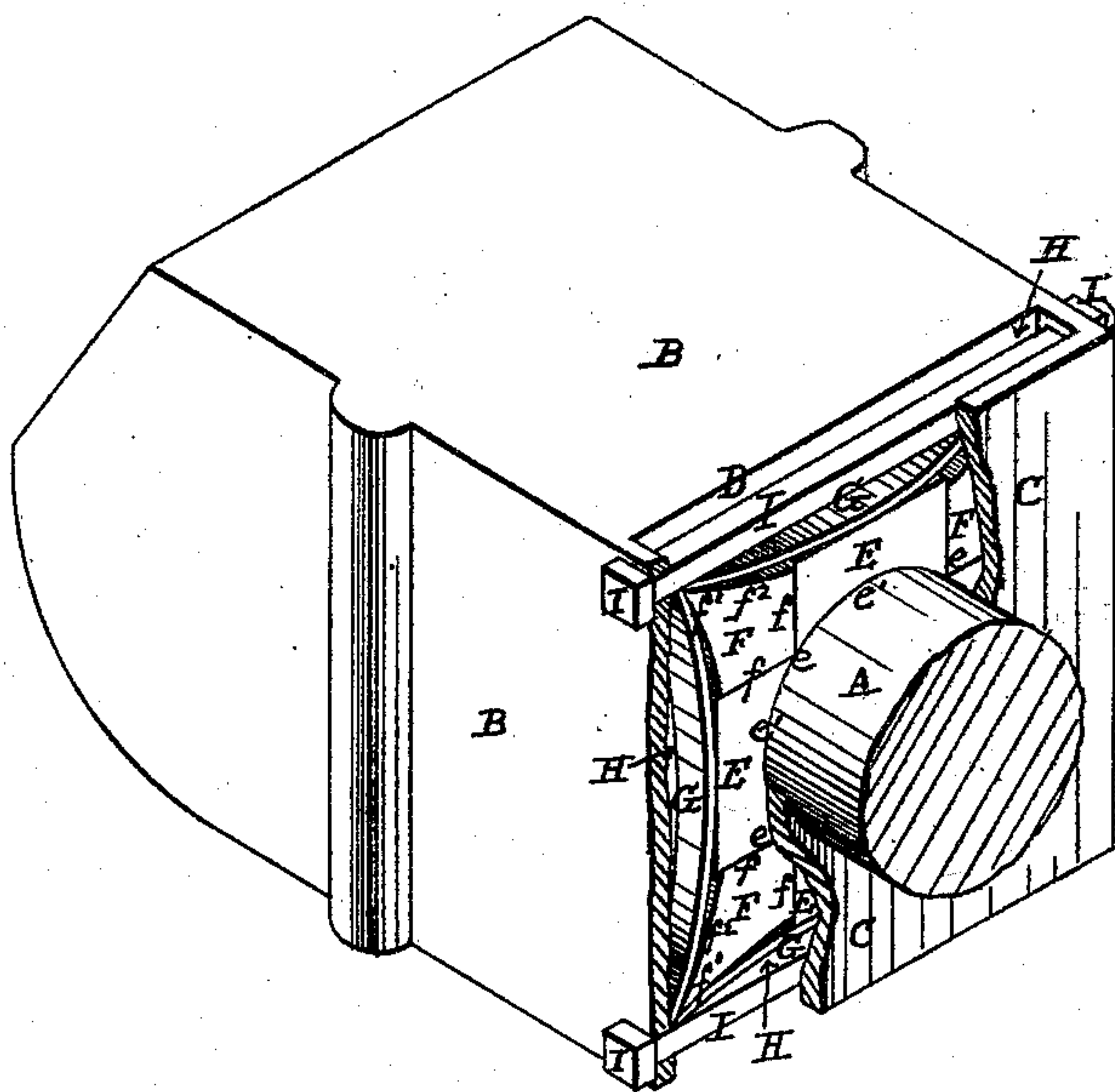


G. W. SHIELDS.

GREASE-BOXES FOR CAR-AXLES.

No. 176,699.

Patented April 25, 1876.



ATTEST:

*Robt Burns*  
*Chas. J. Gooch*

INVENTOR:

*George W. Shields*  
*By Knight Bros.*  
*Attys.*

# UNITED STATES PATENT OFFICE.

GEORGE W. SHIELDS, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-FOURTH HIS RIGHT TO WILLIAM K. McCOMAS, OF SAME PLACE.

## IMPROVEMENT IN GREASE-BOXES FOR CAR-AXLES.

Specification forming part of Letters Patent No. **176,699**, dated April 25, 1876; application filed May 25, 1875.

*To all whom it may concern:*

Be it known that I, GEORGE W. SHIELDS, of St. Louis, St. Louis county, State of Missouri, have invented a certain new and useful Improvement in Grease-Boxes for Car-Axles, of which the following is a specification:

My invention relates to a sectional shield of improved construction for car-axle boxes. My improvement consists, first, of a dust-shield composed of section blocks and springs, said blocks being made with parallel sides, and of aggregate breadth equal to that of the four sides of the largest square containable in the circumference of the axle, and said springs adapted to force the blocks to the axle to compensate for wear. My improvement consists, second, in combining movable corner guide-sections with said blocks and springs.

The accompanying drawing is a perspective view of the grease-box, with part of the back or inner plate broken out to exhibit the shield.

A is the axle, and B the grease-box of the same, that works vertically in the pedestal. The back end of the grease-box is cast with a double wall, C D, forming a recess or shield-chamber open at bottom and top to allow the introduction and removal of the shield. The shield consists of four movable pieces or blocks E E E E, which admit of radial movement between corner guide-blocks F F F F, that are held in fixed position by their bearing at the outside corner and against the blocks E. The blocks or sections E have a breadth from *e* to *e* just sufficient for the inner concave edge *e'*, (which is in contact with the axle,) to extend one-fourth around the circumference of the axle, so that as their inner edges *e'* are worn by the friction of the axle they shall be in contact with the whole circumference of the axle, so as to make a tight joint therewith. This joint is at all times supplied with grease from the interior

of the grease-box, which excludes the dust from the joint or bearing, and prevents it from entering the interior of the grease-box. The blocks E are forced toward the axle by curved springs G G G G, which occupy the sides of the recess H, and whose ends have bearing at the corners of the recess. The convex sides of the springs bear against the outer edges of the blocks E. The top and bottom of the recess H are partially closed by transverse screw-bolts I, which form the fixed bearings of the top and bottom springs G G. The blocks E and F may be of any suitable material—either wood, metal, glass, &c.

It will be seen that the inner corner *f* of the block F is rectangular, so that the edges of these blocks form radial guides for the blocks E. The outer corner *f*<sup>1</sup> of block F is acute, and rests in the corner of the recess H, and between the ends of two springs G. The blocks F are concave at the edges at *f*<sup>2</sup>, to permit the free movement of the springs G in forcing the blocks E toward the axle.

I claim herein as of my invention—

1. The dust-shield composed of section-blocks E E E E and springs G G G G, said blocks being made with parallel sides, and of aggregate breadth equal to that of the four sides of the largest square containable in the circumference of the axle, and said springs adapted to force the blocks to the axle to compensate for wear, substantially as set forth.

2. The movable corner guide-sections F F F F, in combination with the section-blocks E E E E and springs G G G G.

GEORGE W. SHIELDS.

Witnesses:

SAML. KNIGHT,  
ROBERT BURNS.