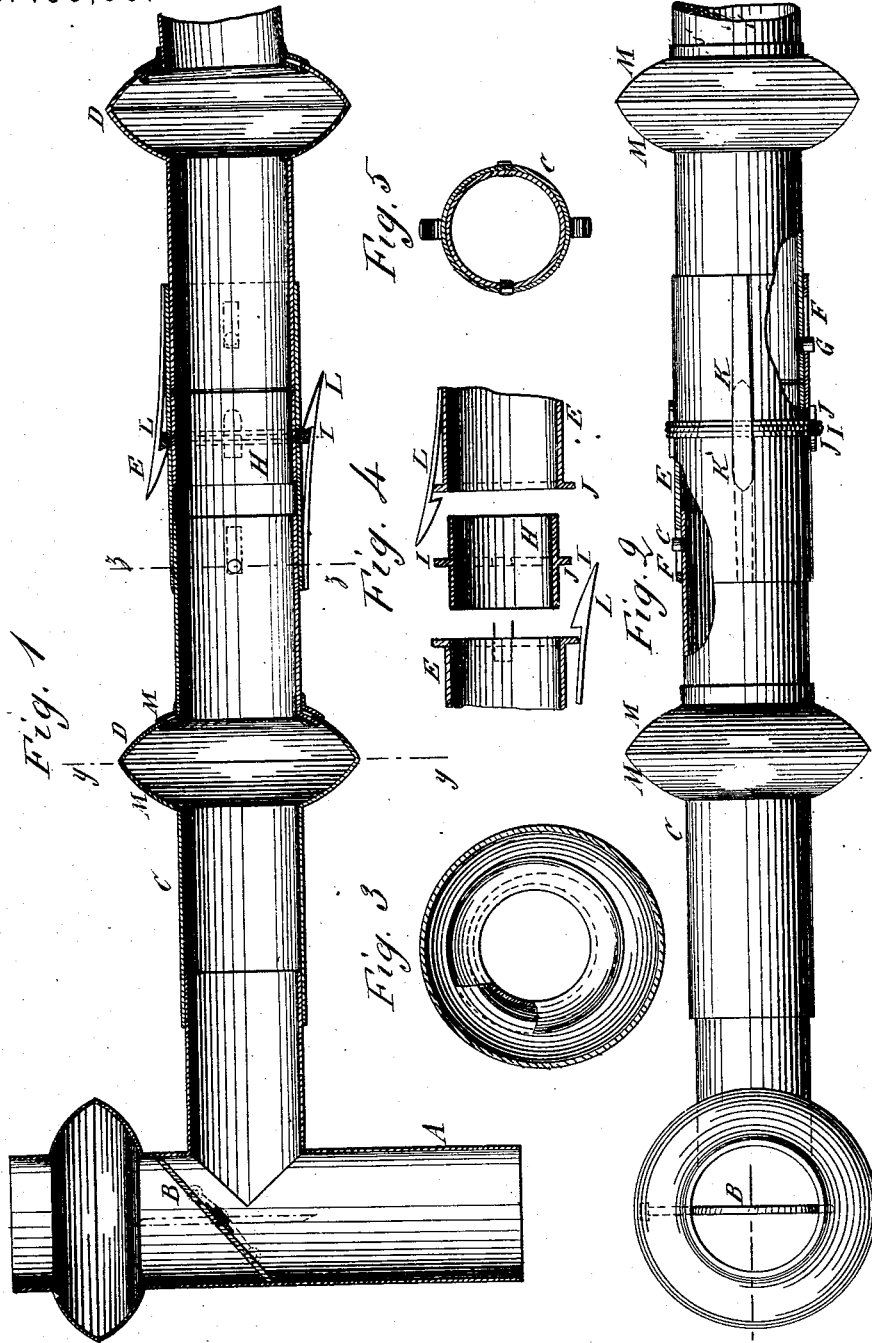


D. L. BRANCHER & J. L. RING.
Smoke and Cinder Conductor.

No. 160,301.

Patented March 2, 1875.



WITNESSES:

C. Nevada
A. J. Terry

BY

INVENTORS:

D. L. Brancher
J. L. Ring

ATTORNEYS.

UNITED STATES PATENT OFFICE.

DANIEL L. BRANCHER, OF LINCOLN, AND JACOB L. RING, OF MOUNT PULASKI, ILLINOIS.

IMPROVEMENT IN SMOKE AND CINDER CONDUCTORS.

Specification forming part of Letters Patent No. **160,301**, dated March 2, 1875; application filed December 28, 1874.

To all whom it may concern:

Be it known that we, DANIEL L. BRANCHER, of Lincoln, in the county of Logan and State of Illinois, and JACOB L. RING, of Mount Pulaski, in the county of Logan and State of Illinois, have invented a new and useful Improvement in Smoke and Cinder Conductors, of which the following is a specification:

The invention will first be fully described, and then pointed out in the claim.

In the accompanying drawing, Figure 1 is a longitudinal section of Fig. 2, taken on the line *x x*. Fig. 2 is a side view of the conductor, with parts broken away to show the construction of the slide. Fig. 3 is a cross-section of Fig. 1 on the line *y y*. Fig. 4 shows the manner of connecting and holding the sections of the conductor together. Fig. 5 is a cross-section of Fig. 1, taken on the line *z z*.

Similar letters of reference indicate corresponding parts.

A is the smoke-stack. B is a damper therein, which is under the control of the engineer. C is the conductor, made of separate pieces of pipe slipped together, having flanges D and telescopic slides E between the cars to allow the cars to move back and forth. F are slots in the outside pieces, and G are pins or checks to limit the longitudinal motion of the parts. H is a joint-section or thimble, having a flange, I, near its middle, which flange is inclosed by flanges J J on the slotted outer telescopic pieces

K. This joint-section H and flange may be made of rubber or other elastic material to give additional flexibility to the conductor. L L are spring-hooks placed on the outer slotted pieces K in reversed position, which hook over the flanges J J and holds the parts together. This forms the coupling of the conductor and enables the conductor to be pushed back over the projecting roof of the car when not in use. The flexible joints D are made of two concentric spherical sections, *m*, arranged, as seen in the drawing, to accommodate itself to the vertical and lateral motion of the car.

We do not claim, broadly, a conductor for conveying the smoke and cinders from the smoke-stack to the rear of a train of cars, as such conductors have been made before, but we do claim a conductor constructed in the manner described.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

The combination of slides E E, having slots F, pins G, and spring-hooks L with short thimble H, having median flange I, as and for the purpose specified.

DANIEL L. BRANCHER.
JACOB L. RING.

Witnesses:

L. M. SIMS,
W. D. LITTLE.