

J. G. Breslin.

Spark Arrester & Consumer.

N<sup>o</sup> 89,848.

Patented May 11, 1869.

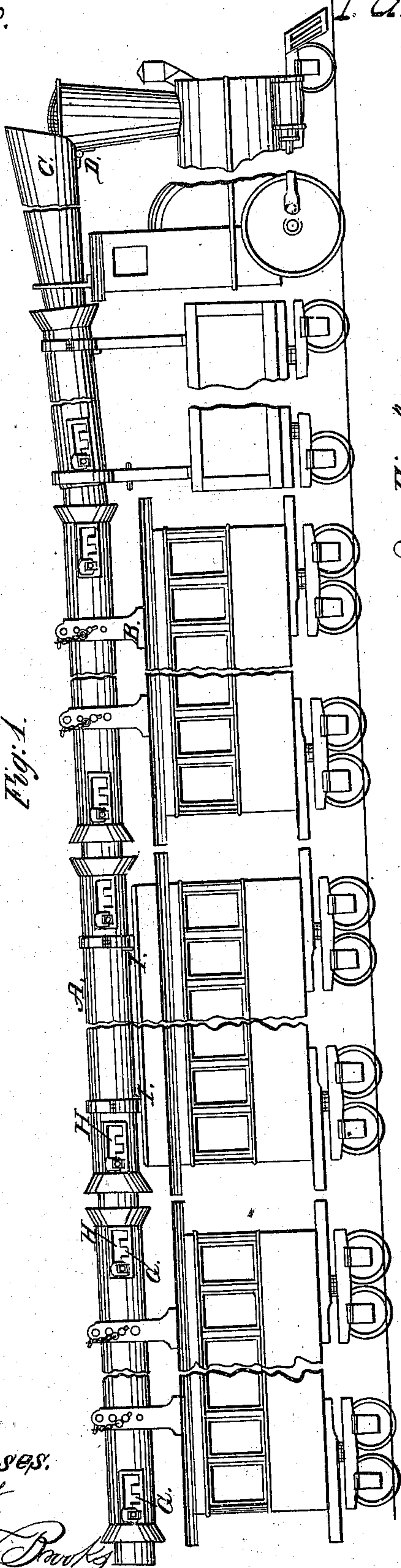


Fig. 1.

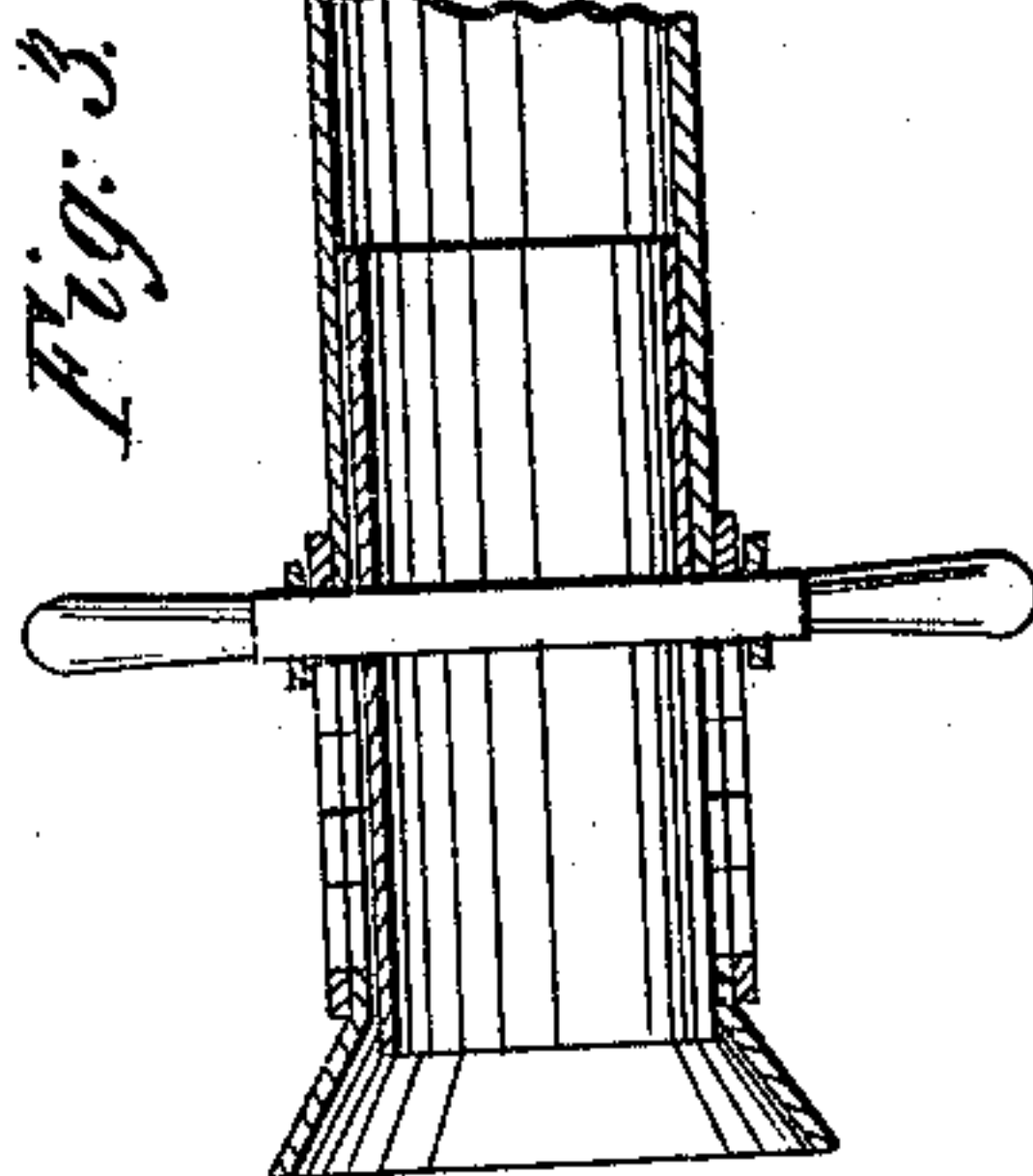


Fig. 3.

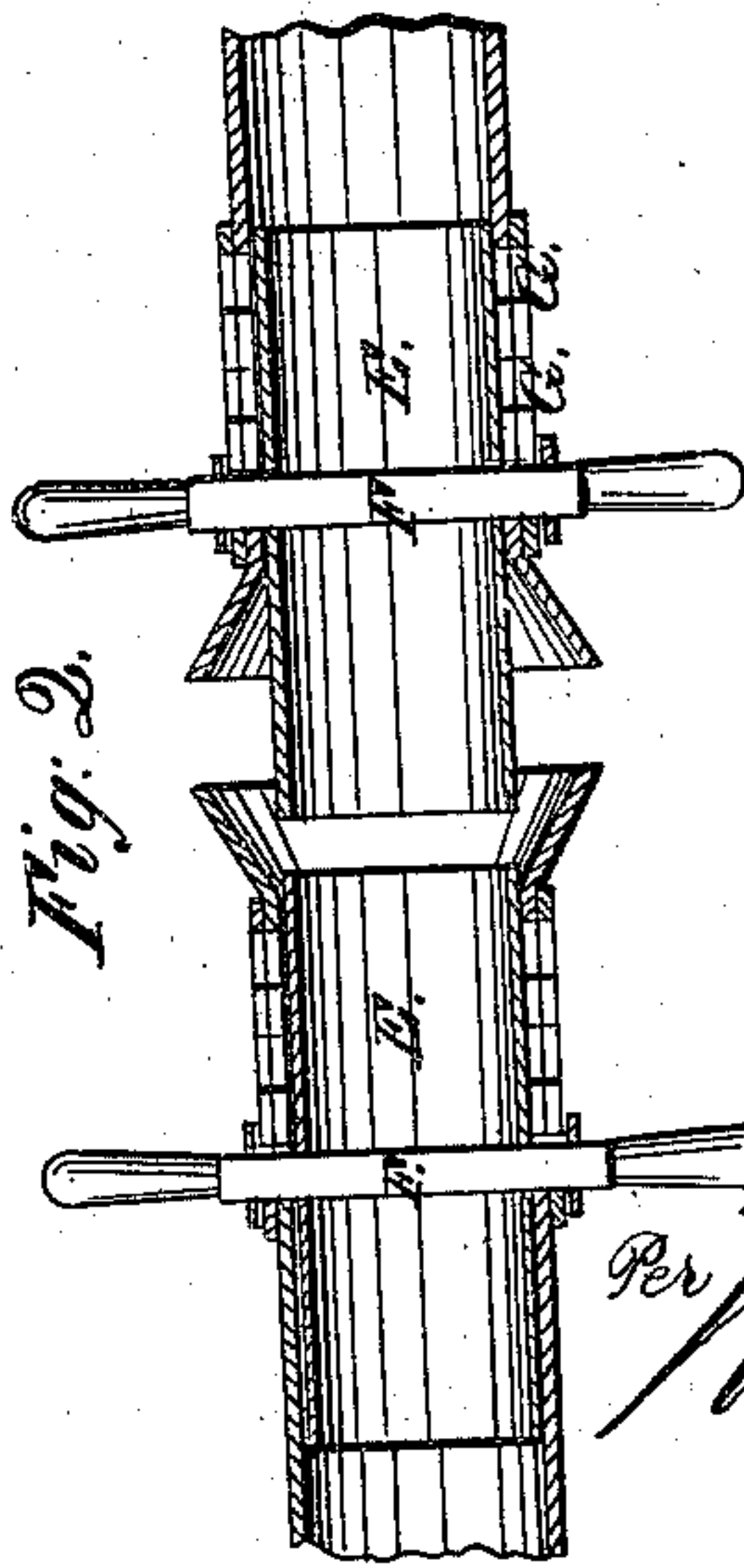


Fig. 2.

Witnesses:  
E. Wolff  
John H. Parker

Inventor.

J. G. Breslin.

Per *M. M. H.*  
attys.



# UNITED STATES PATENT OFFICE.

JOHN G. BRESLIN, OF LANCASTER, OHIO.

## IMPROVEMENT IN SPARK-CONVEYING DEVICE.

Specification forming part of Letters Patent No. 89,848, dated May 11, 1869.

*To all whom it may concern:*

Be it known that I, JOHN G. BRESLIN, of Lancaster, in the county of Fairfield and State of Ohio, have invented a new and Improved Smoke-Discharging Apparatus for Locomotives; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to improvements in smoke-discharging apparatus for locomotives, having for its object to provide an arrangement for discharging the smoke at the rear of the train to prevent it from passing with the air into the cars, and to extinguish the sparks or prevent their falling upon or in the cars.

Figure 1 represents an elevation of a train provided with my improvement; and Figs. 2 and 3 represent detail views of the pipe for discharging the smoke.

Similar letters of reference indicate corresponding parts.

I propose to employ a large sectional discharge-pipe for receiving the smoke from the smoke-stack, and carrying it along the top of the cars to the rear of the train for discharging it behind the said train. To accomplish this purpose I propose to make the said pipe in sections, preferably of the same length, or nearly, as the cars, having funnels at both ends, and supported on such cars as are not of the greatest height, in adjustable supports, as represented at B, whereby they may be supported high enough to form connections properly irrespectively of the height of the cars to be formed into a train.

The section on the tender should be provided with supports rising high enough to maintain it on a level with the sections upon the tops of the cars.

To form the connections between the several sections, I propose to insert at each end the short sections E, capable of sliding to and fro, and provide the holding-bars F, passing

through the said sections E and resting in notches G in the lower walls of the slots H, in the large sections, for moving the bars F to and from the ends. These short sections E are thereby adapted to fill up the gaps between the large sections as much as possible, and should be so placed that when the cars, which are usually connected, loosely approach each other, the ends will meet, but not strike so as to become injured, the point of meeting of the ends of the said short sections being as far within the funnel of the rear large section as may be, and admit of the lateral vibrations due to the swinging motion of the cars. By this arrangement the train may be made up with either ends of the cars foremost, requiring only a slight adjustment of the short sections E to arrange them correctly, as above described.

I prefer to arrange the ends of the large sections slightly short of the ends of the roofs of the cars, whereby the drip gathering in and falling from the funnels will be discharged on the roofs, instead, as would otherwise be the case, between the cars.

When the tubes are to be placed upon the highest or double-decked cars they may be rigidly fastened thereto, as represented at I, by any suitable means.

It is believed that this plan will not only carry off the smoke and cinder, but will also act as a spark-extinguisher, especially where the train is of considerable length, as most, if not all the sparks, will become extinguished before arriving at the end.

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

The combination of the bell-mouthed sections of the continuous discharge-pipe and the short adjustable connecting-sections E, substantially as described.

JOHN G. BRESLIN.

Witnesses:

M. A. DAUGHERTY,  
CHAS. L. ZAHM.