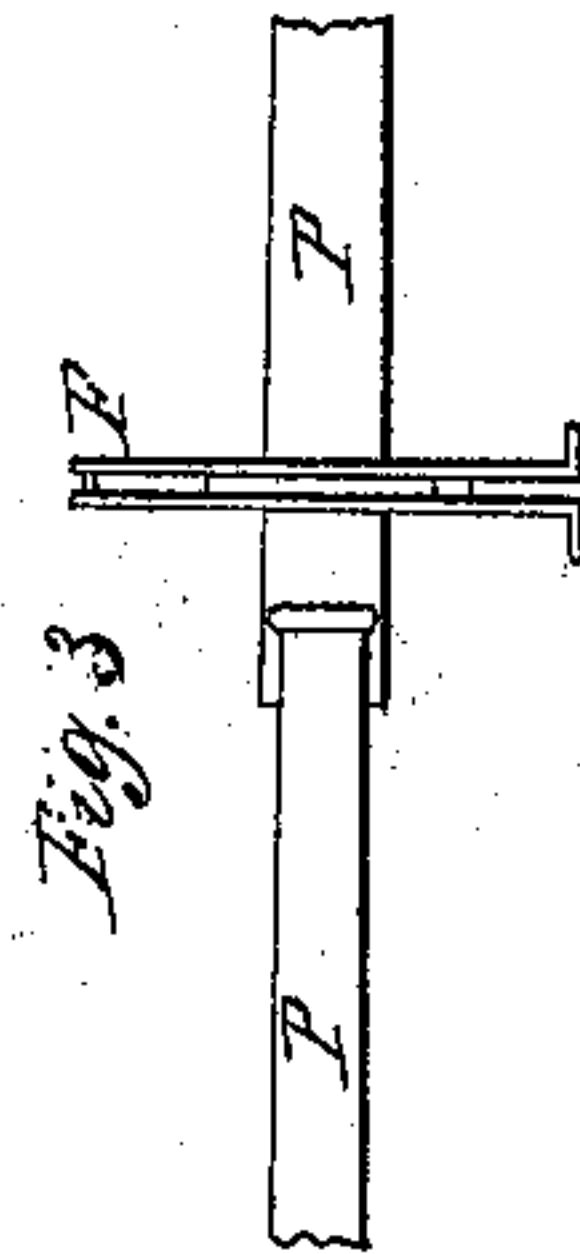
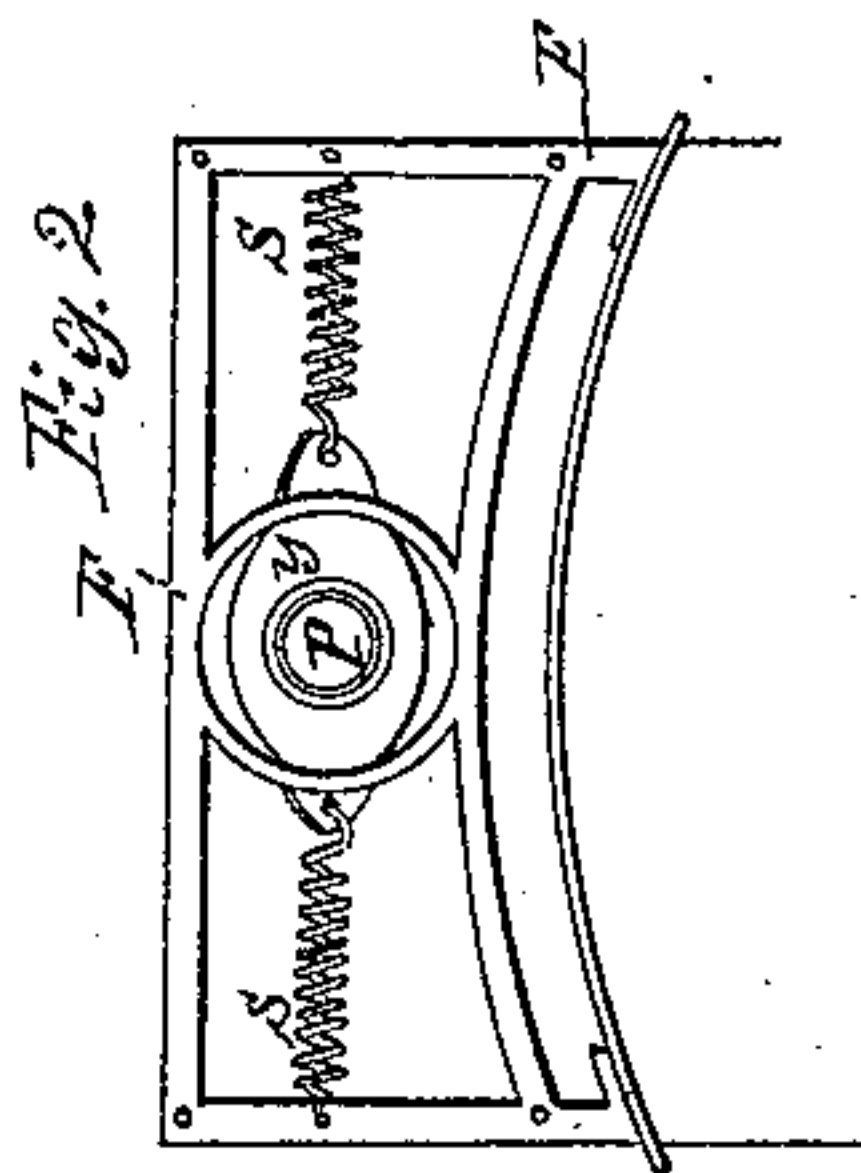
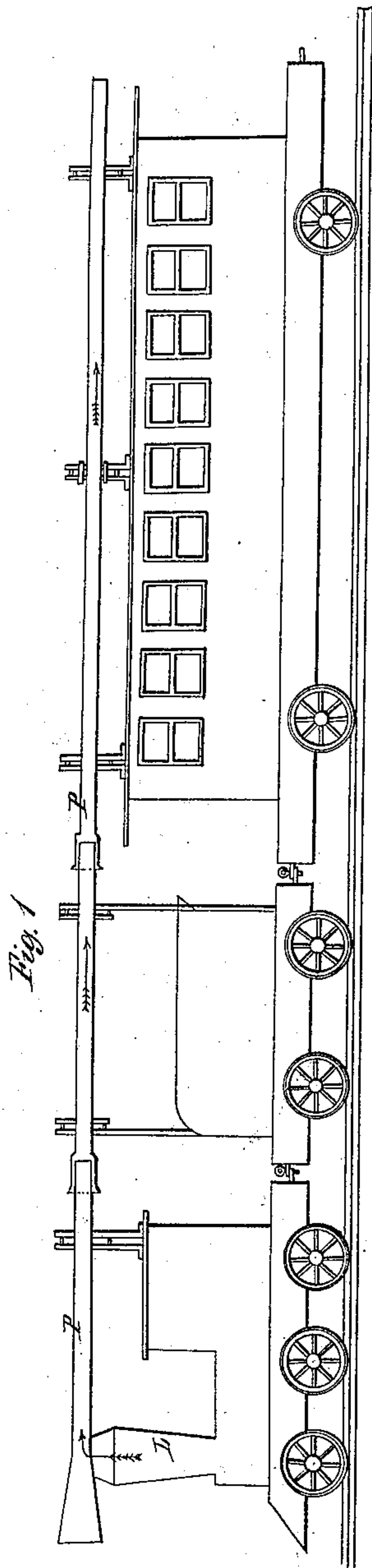


P. C. Guiou,
Spark Conductor.

N^o 14,398.

Patented Mar. 11, 1856.



UNITED STATES PATENT OFFICE.

PETER C. GUION, OF CINCINNATI, OHIO.

SPARK-CONDUCTOR FOR LOCOMOTIVE-TRAINS.

Specification of Letters Patent No. 14,398, dated March 11, 1856.

To all whom it may concern:

Be it known that I, PETER C. GUION, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Apparatus called the "Smoke and Spark Conductor;" and I hereby declare the following to be a full and clear description thereof, reference being had to the drawings herewith presented, which drawings constitute a part of said description.

My invention consists in employing certain means for sustaining the apparatus for conveying the smoke and sparks from the locomotive to the rear end of the train of cars by the local draft created by the motion of the train. See the drawing.

Figure 1 shows the elevation of the car, with the locomotive, (L,) having a section of the conductor or pipe (P,) showing the manner of coupling any number of joints required. It may be observed that the forward end of each joint or section should be a little larger than the rear end so as to allow the rear end to enter it having a bead or flanch raised on the rear end which enters and fills the caliber of the fore end of the adjacent pipe. This is to give space for the bending of the pipe while this flange on the inner pivot fills the outer part and has liberty to slide inward and outward a distance corresponding to the play of the car couplings.

It may be seen at Fig. 3 that there is room forward of the flanch to allow the sections to play and follow any curvature of the road without cramping the pipe.

Fig. 2 shows the method of suspending the pipes by the yoke (Y,) which is an oval plate of metal between two frames (F,) sus-

tained by the spiral springs (S.). These frames are secured to the top of the cars and between each pair of frames is a yoke (Y,) supported by the spiral springs (S, and S,). I prefer to have two or more joints or sections of pipe to each long car and coupling in the middle as shown in Fig. 1. This allows the pipe to bend with more freedom when passing on a curve. The foremost end of the trunk or pipe may have a funnel or bell shaped mouth as at (B,) and the chimney of the locomotive (L,) communicates with its under side, and an opening may be made in the upper side directly over the chimney in order to allow the smoke to escape when the train is at rest.

I do not confine myself to any exact form or dimensions.

I do not claim the smoke pipe or funnel, or frame, or the yoke, or the springs neither of them by themselves.

What I do claim as my invention and desire to secure by Letters Patent is—

The yoke (Y,) with the springs (S, and S,) and the frame (F,) as arranged, so that the pipe shall have free space and liberty to play by the yielding of the springs to accommodate the rocking motion of the cars or the up and down motion without cramping or injuring the pipe, and also to give room for the back and forward motion allowed by the car coupling, for the purpose and in manner as above set forth.

In testimony whereof I hereto subscribe in presence of two witnesses.

PETER C. GUION.

Witnesses:

JOHN L. SMITH,
A. ARNOLD.