

UNITED STATES PATENT OFFICE.

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SPARK-CONDUCTOR FOR LOCOMOTIVES.

SPECIFICATION forming part of Letters Patent No. 282,484, dated August 7, 1883.

Application filed May 29, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHESTER C. BAUM, a citizen of the United States, residing at Dover, in the county of Kent and State of Delaware, have invented a new and useful Spark-Conductor for Locomotives, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to spark-conductors for locomotives; and it consists of the improved construction, fully described hereinafter, whereby the danger resulting from the liability of the sparks to ignite various objects in the vicinity of the locomotive is avoided, and the general structure of devices of this character greatly improved and simplified.

In the drawings, Figure 1 is a side elevation illustrating my improvement. Fig. 2 is an enlarged detail view of the portion of the device constituting the flexible coupling-joint.

A represents a smoke-stack communicating at the top with a longitudinal pipe, B, the latter being formed at its front end, *a*, with a flaring mouth or funnel, C. The pipe B has an opening immediately over the junction of the smoke-stack therewith, and said opening is covered by a valve or damper, *c*, hinged to the pipe B at *d*, and is provided with a perforated lug or bracket, *e*, to which an operating-rod, *f*, is attached. This rod *f* extends through a loop, *g*, along the pipe B, to a point where it can be operated by the engineer, and terminates in a loop, *h*, which facilitates its manipulation. The longitudinal pipe B is connected with sections D and D', extending rearwardly over the train. The section D, sliding on the pipe B, is of such length as to extend to the rear of the tender, and is adapted to be readily connected and disconnected. Each section is suitably supported above its respective car by means of suitable braces or other devices. Between the sections D D', arranged above the cars, a flexible coupling, E, is employed, consisting of tapering annular sections *e'*, connected together, and to the pipes D' by means of chains *i i'*, which permit a limited independent play of each section.

G represents a rod extended transversely through the end of the pipe D', and having

its ends bent to form arms *g' g''*, over which the chains *i i'* are hooked, after which the rod G is turned to engage one of the catch-arms, *g'*, with a catch, H, secured to the side of the pipe. These devices for securing the chains *i i'* are arranged in the ends of each pipe-section.

From the foregoing description it will be apparent that when the various pipe-sections are connected together and the train is in motion, a draft will be created through the pipe-sections, thus carrying the sparks and smoke through the said pipe to the rear of the train, thus the annoyance caused by the blowing of the smoke into the car-windows is avoided, and the sparks in passing through the pipe-sections will be extinguished.

It will also be obvious that the flexible couplings and connections E of the sections D' enable the said sections to yield to the lateral movements of the train caused by swaying or turning curves, and at the same time preserve the continuity of the smoke-passage. Moreover, the hooks and fastening devices enable the various sections to be readily connected and disconnected.

When the locomotive is at rest, the engineer operates the rod *f*, so as to lift the damper *c*, thereby permitting the smoke and sparks to escape in the ordinary manner.

I claim—

1. In a spark-conductor, the combination, with the pipe-sections D', arranged relatively above the cars of a railroad-train, of the herein-described flexible connections, consisting of a series of tapering annular sections arranged with the narrow end of each within the wide end of the one next adjoining, and connected together by chains adapted to be detachably secured to the ends of the pipe-sections D', as set forth.

2. The combination, with the smoke-stack of a locomotive, connected at its upper end to a horizontal pipe formed at the front with a flaring mouth, of a pipe-section, D, sliding on the horizontal pipe, and sections D' D', arranged above the respective cars, and couplings E, for connecting the sections D D' D', together, consisting of tapering annular sections *e'*, connected together by chains *i i'*,

adapted to engage with the hooked arms $g' g''$ of the rod G, extending transversely through the pipe-sections D D', and a catch, H, secured to the said sections D D', for receiving
5 and retaining one of the bent arms, g' , of the rod G, to secure the chains and their couplings, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

CHESTER CHARLES BAUM.

Witnesses:

D. W. CAREY,
WM. P. SMITHERS, Jr.