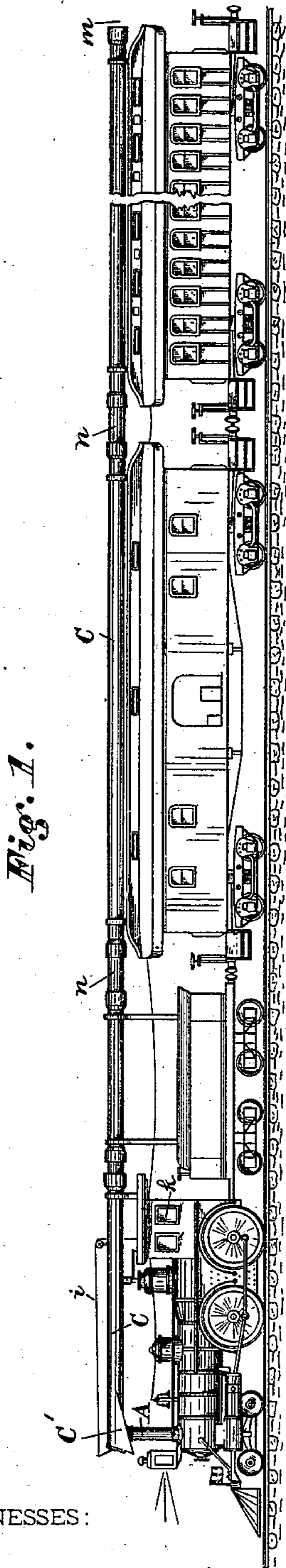


(No Model.)

B. T. LOOMIS.
LOCOMOTIVE SMOKE CONDUIT.

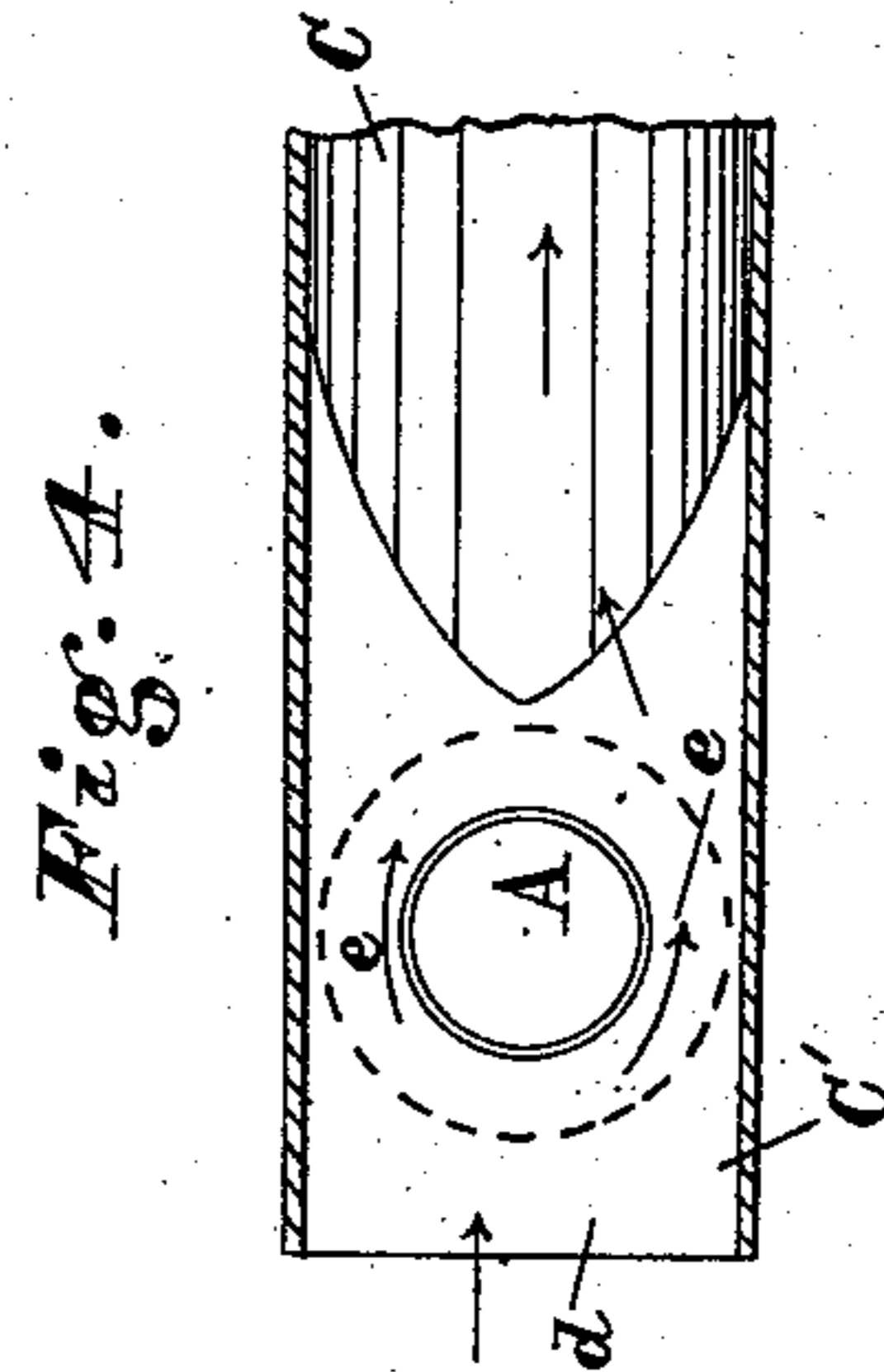
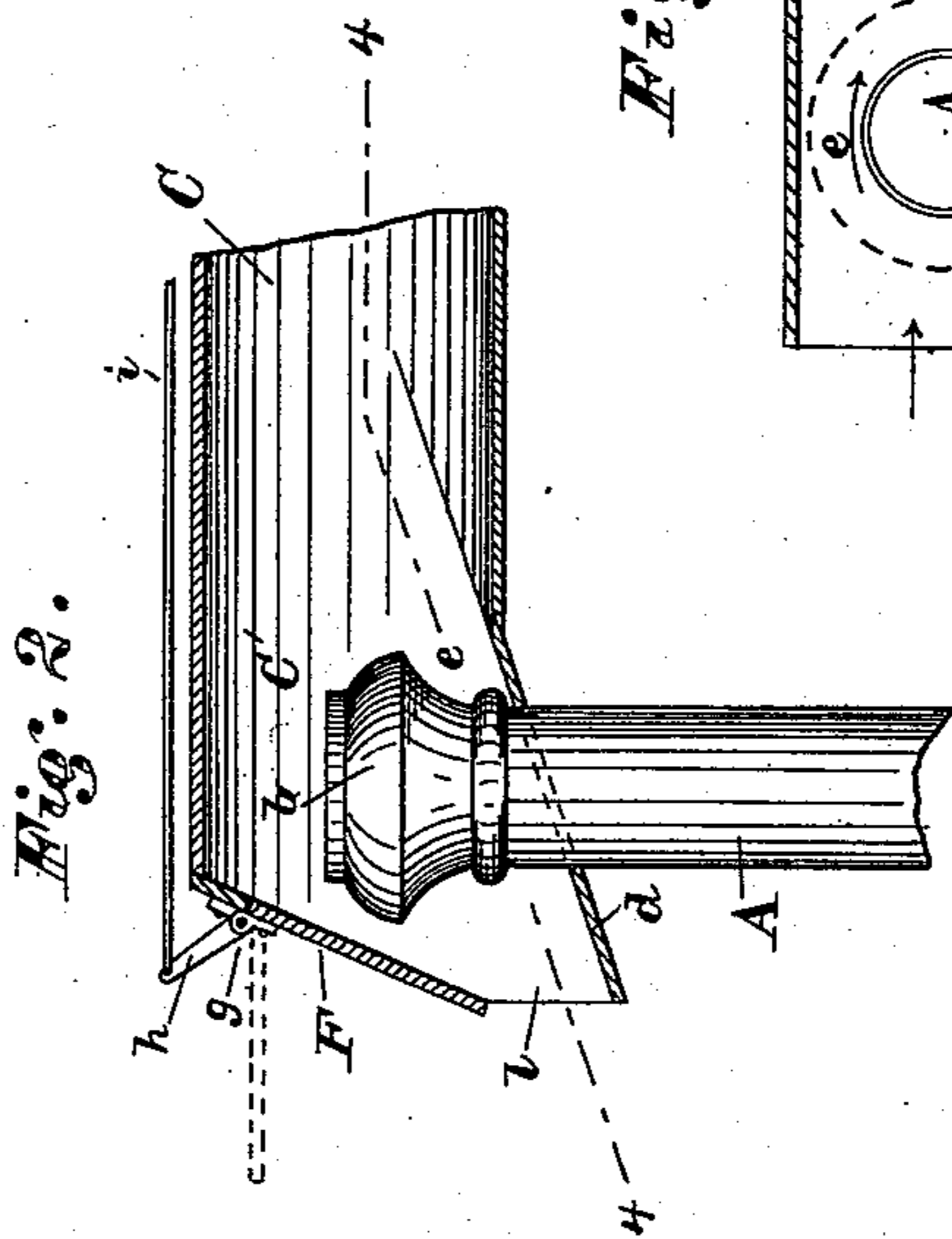
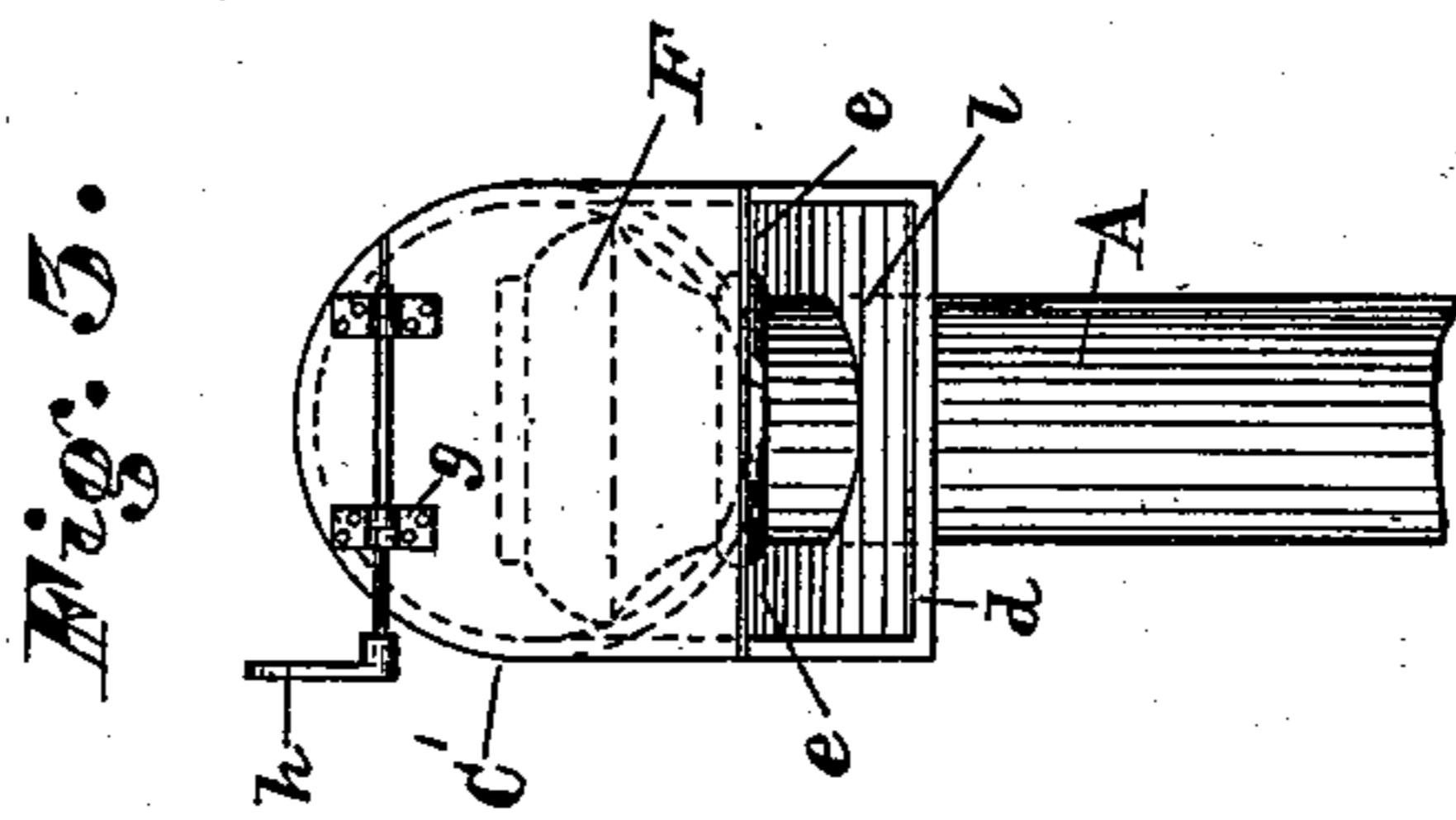
No. 378,014.

Patented Feb. 14, 1888.



WITNESSES:

J. K. E. Diffendaffer.
John E. Morris.



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UNITED STATES PATENT OFFICE.

BENJAMIN T. LOOMIS, OF BALTIMORE, MARYLAND.

LOCOMOTIVE SMOKE-CONDUIT.

SPECIFICATION forming part of Letters Patent No. 378,014, dated February 14, 1888.

Application filed April 25, 1887. Serial No. 235,951. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN T. LOOMIS, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Locomotive Smoke-Conduits, of which the following is a specification.

My invention relates to a smoke-conduit applied to a locomotive smoke-stack for conveying the escaping smoke and steam and the cinders mingled therewith back over the cars of a train.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a locomotive and train of cars with my improvements attached. Fig. 2 is a side view of a smoke-stack and a section of my improved smoke-conduit. Fig. 3 is a front view of the smoke-stack and smoke-conduit. Fig. 4 is a section on the line 4 4.

The locomotive smoke-stack A has its top *b* inclosed in the front end of a conduit, C. The inclosure C' comprises an enlargement over the remaining portions of the conduit. This inclosure or enlarged front end has an inclined bottom, *d*, up through which the smoke-stack A passes. It will thus be seen that the top *b* of the smoke-stack from which the smoke and steam escapes is above the inclosure-bottom *d*, and that within the inclosure at each side of the smoke-stack is an air-passage, *e*. At the front end of the inclosure, and at the upper part thereof, is a valve or damper, F, which is to be down or closed when the locomotive moves forward, but to be raised or open when it moves backward. This damper is attached by hinges *g*, and has an arm, *h*, from which a cord, *i*, leads to the engineer's cab *k*. By this arrangement the engineer can raise or lower the valve at any time. The said valve F closes only the upper part of the front end of the inclosure C', and below it is an inlet, *l*, for air, which is always open.

When the locomotive moves forward, a draft

of air rushes in the inlet *l* and passes upward and around each side passage, *e*, into the smoke-conduit C. By this inward draft of air the smoke issuing from the stack-top *b* is propelled back through the conduit to be discharged at the rear end, *m*.

The conduit is placed and supported upon the tops of the cars, and between the ends of the cars a suitable flexible conduit-coupling, *n*, is provided.

It will be seen that by this device provision is made so that when the train is in motion forward the smoke, steam, and cinders mingled therewith will be conducted from the stack back to a point at the end of the train, and that when the train is moving backward the smoke, &c., may escape at the front.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination, with the vertical smoke-stack of a locomotive, of the conduit inclosing the top of the stack, the said conduit having an inclined bottom and an opening in front, the upper part of which is closed by a valve when the locomotive is running forward, leaving an opening below, the valve being raised when the locomotive is backing to give free egress to the products escaping from the stack, substantially as specified.

2. The combination, with the vertical stack of a locomotive, of a conduit inclosing the top of the same, the said conduit having an inclined bottom extending from below the top of the stack at an angle upward and rearward, an inclined valve partially covering the opening at the front of the inclosure, and mechanism for opening and closing said valve, substantially as specified.

In testimony whereof I affix my signature in the presence of two witnesses.

BENJAMIN T. LOOMIS.

Witnesses:

JOHN E. MORRIS,

JNO. T. MADDOX.