

No. 608,091.

Patented July 26, 1898.

J. H. WELLS, JR. & F. A. WELLS.
SAND DISTRIBUTER FOR LOCOMOTIVES.

(Application filed Feb. 26, 1898.)

(No Model.)

Fig. 1.

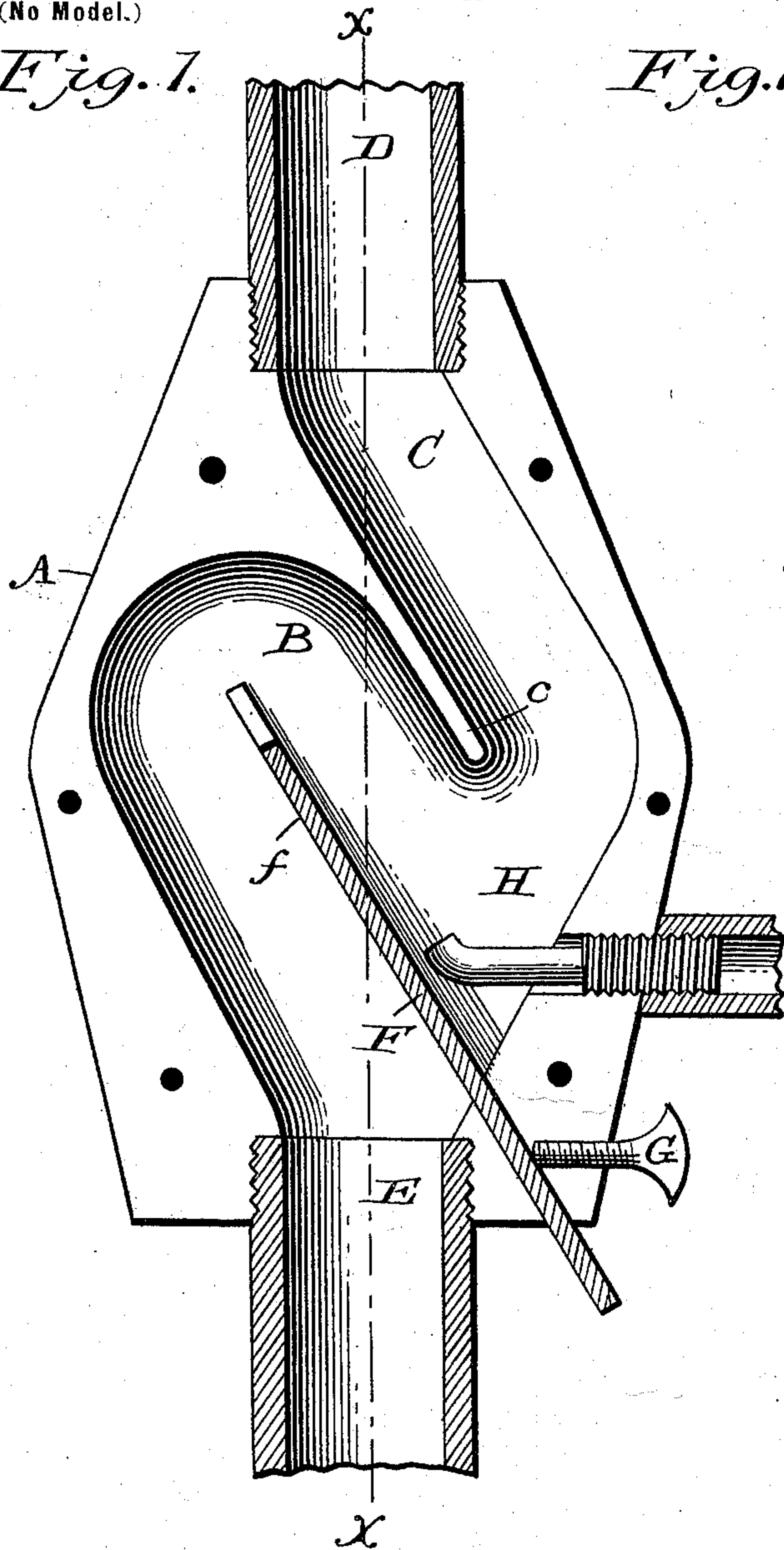
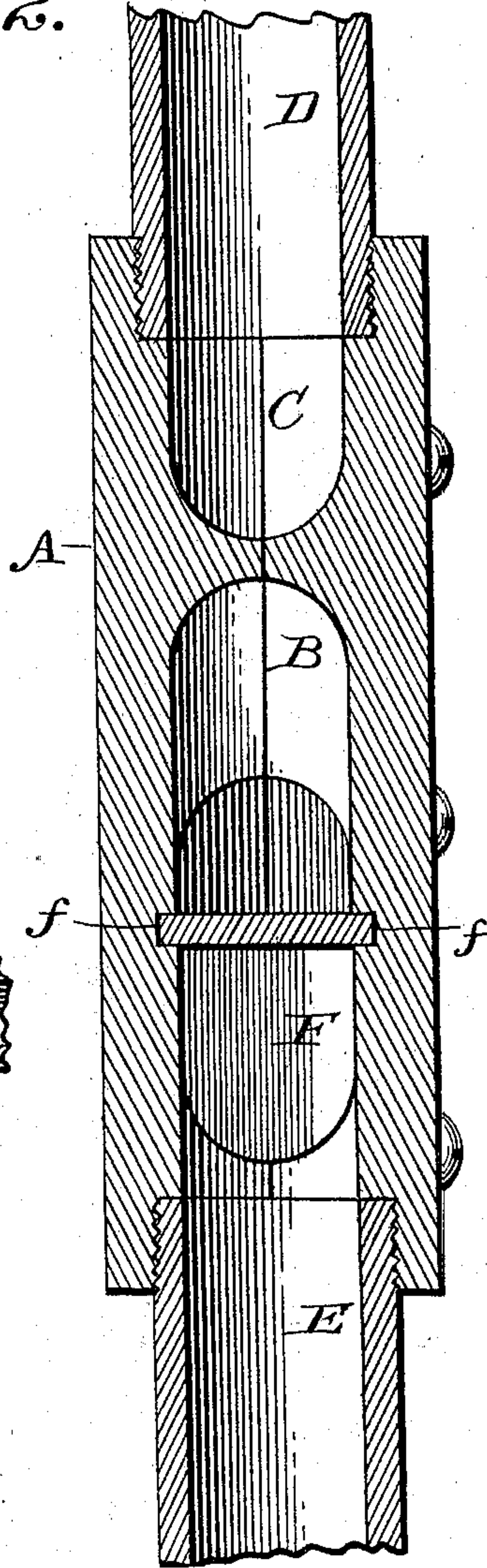


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

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SAND-DISTRIBUTER FOR LOCOMOTIVES.

SPECIFICATION forming part of Letters Patent No. 608,091, dated July 26, 1898.

Application filed February 26, 1898. Serial No. 671,775. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH HENRY WELLS, Jr., and FRANK ARTHUR WELLS, citizens of the United States, and residents of Aurora, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Sand-Distributers for Locomotives; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a vertical section. Fig. 2 is a section on line $x x$, Fig. 1.

This invention has relation to certain new and useful improvements in sand-distributing devices for locomotives and the like and is designed to provide means of this character whereby the sand will be delivered upon the rails underneath the wheels evenly and without unnecessary waste and whereby the quantity of sand so delivered may be adjusted and controlled as may be necessary.

The invention is also designed to provide means of this character which are of simple construction and which are not likely to become clogged or otherwise get out of order and which can be applied or connected to any ordinary sand-box without changing the construction thereof.

With these objects in view the invention consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims.

Referring to the accompanying drawings, the letter A designates a box or casing in which is formed an internal cavity or chamber B. Leading into the said cavity or chamber and communicating with the same at a point below its upper portion is a conduit or passage C, which extends to the top of the box or casing and with which is connected a sand-pipe D, leading to the usual sand box or reservoir (not shown) on the locomotive.

E is a sand-distributing pipe which leads to the rail and which communicates with the bottom portion of the cavity or chamber B.

F is a slide which in its normal position ex-

tends up into and partially across the cavity or chamber B, its upper edge being considerably above the upper wall c of the opening through which the conduit or passage C communicates therewith. This slide works in grooves or guides f in the lateral walls of the said cavity or chamber, and its lower portion extends out through the lower portion of the casing. G is a screw by means of which the said slide may be secured in the desired adjustment. H designates an air-pipe which extends into the said cavity or chamber B at a point near its bottom, but above or behind the said slide. This pipe is designed to be connected with a supply of compressed air on the locomotive. When compressed air is admitted to the chamber or cavity B through this pipe by the manipulation of a suitable valve (not shown) within reach of the engineer, sand is blown out over the upper edge of the slide F and through the distributing-pipe E to the rails immediately under the driver-wheels of the locomotive, while at the same time a downward suction is created in the conduit or passage C and sand-pipe D, whereby a free flow of sand therethrough into the chamber is maintained so long as the air-pressure is on. By adjusting the position of the slide F the quantity of sand which is blown out over its upper edge and distributed upon the rails may be controlled as may be necessary. This slide, in addition to its function as a regulator, also serves to hold back the sand in the cavity or chamber B when the air-pressure is cut off, whereby leaking and dripping of sand is prevented. In case of an emergency when no air-pressure can be obtained the slide may be lowered, so as to cause a direct delivery of sand to the distributing-pipe E.

It will be observed that the device is free from valves and other arrangements of a nature likely to become clogged with sand or otherwise get out of order; also, that its operativeness is not disturbed by the wind, since the air-pressure employed is sufficient to carry the sand onto the rails directly under the driving-wheels.

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

1. A sand-distributing device for locomotives and the like, comprising a box or casing having a cavity or chamber therein, a sand-supply passage or conduit communicating
5 with the said cavity or chamber below the top thereof, an adjustable slide extending into the said cavity or chamber to a point above the mouth of the said passage or conduit, a sand-distributing pipe or conduit leading
10 from the bottom of the said cavity or chamber, and an air-pipe communicating with the said cavity or chamber above or behind the said slide, substantially as specified.

2. In a sand-distributor for locomotives and
15 the like, the combination with a sand-containing chamber, and means for supplying the same with sand, of a slide extending obliquely upwardly into and partially across the said chamber to a point above the point
20 where the sand enters said chamber, and an air-discharge pipe extending into the said

chamber at a point above or behind the lower portion of the said slide, substantially as specified.

3. A sand-distributor for locomotives and
25 the like, having an adjustable slide extending diagonally across its sand-containing chamber in a position to intercept the direct passage of sand through the said chamber to the distributing-pipe, means for securing the
30 adjustment of the said slide, and an air-discharge pipe or nozzle extending into the said chamber above or behind the lower portion of the said slide, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

JOSEPH HENRY WELLS, JR.
FRANK ARTHUR WELLS.

Witnesses:

JAMES H. DE LAMATTER,
WINFRED W. VAN OSDEL.