

R. B. BAKER & C. J. A. DICK.
 DEVICE FOR PREVENTING INCRUSTATION IN STEAM GENERATORS.
 No. 84,671. Patented Dec. 8, 1868.

Fig: 1

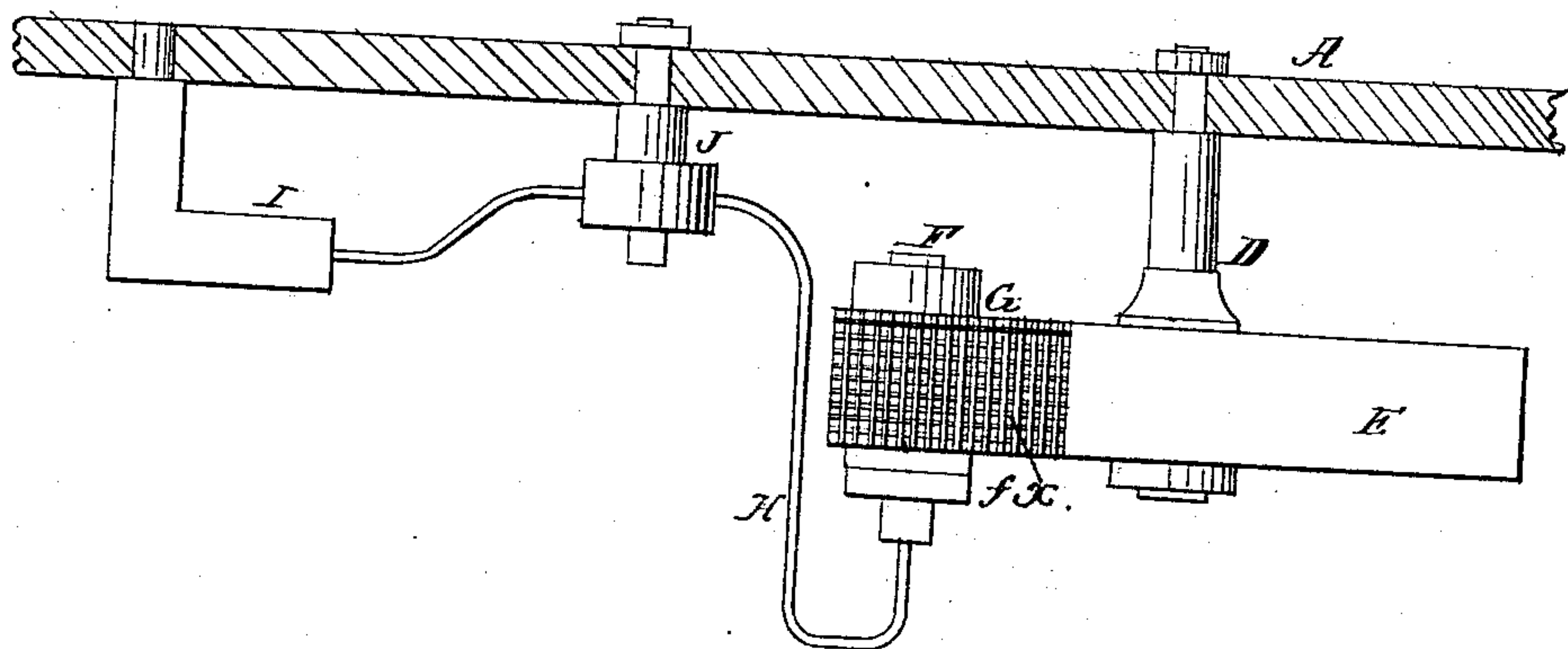
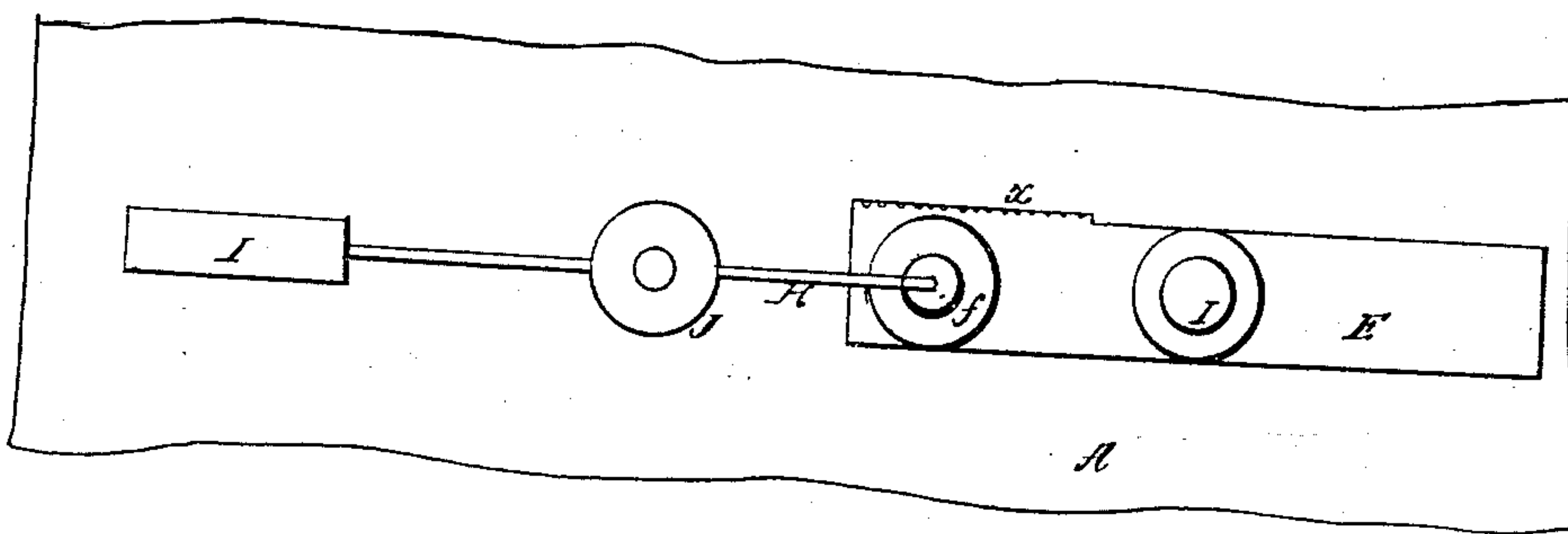


Fig: 2



Witnesses:
Wm. Steele
John Parker

Inventor:
R. B. Baker &
C. J. A. Dick
By their Atty
H. H. Hurd

United States Patent Office.

ROBERT BRECKINRIDGE BAKER AND CHARLES JAMES ADOLPHUS DICK, OF PARIS, FRANCE, ASSIGNORS TO THE AMERICAN ANTI-INCORUSTATION COMPANY.

Letters Patent No. 84,671, dated December 8, 1868.

IMPROVEMENT IN DEVICES FOR PREVENTING INCORUSTATION IN STEAM-GENERATORS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern.

Be it known that we, ROBERT BRECKENRIDGE BAKER, of Philadelphia, Pennsylvania, United States of America, but now residing at Paris, in the Empire of France, and CHARLES JAMES ADOLPHUS DICK, of Offenbach, Grand Duchy of Hesse-Darmstadt, but now residing at Paris, France, have invented certain Apparatus for the Removal and Prevention of Incrustation in Steam-Boilers; and we do hereby declare the following to be a full, clear, and exact description of the same.

Our invention consists of an improvement, fully described hereafter, in the devices for preventing incrustation in and removing it from steam-boilers, for which Letters Patent were granted to A. F. Porter, on the 31st day of October, 1865, and other Letters Patent to George T. Parry's assignee, on the same date; and our invention consists in the substitution of carbonaceous matter for the magnetic points described in the said patents.

In order to enable others to make and apply our invention, we will now proceed to describe the manner of carrying it into effect, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 represents a side view of the apparatus suspended within the boiler, and

Figure 2, an inverted plan view.

A represents part of the shell of the boiler, and *a*, the water-line.

From the shell is suspended a stud, D, to which is secured a block or mass, E, of carbon, care being taken to insulate the carbon.

In order to effect this insulation, a glass or earthenware tube may surround the stud, where it passes through the carbon, and red lead may be added in sufficient quantities to insure perfect insulation.

Through a hole, near one end of the carbon block, passes a stud, F, having a collar, *f*, between which, and the carbon, intervenes a thin washer of platina, soldered to the collar, so as to insure thorough metallic contact.

The stud F is furnished with a nut, G, by screwing which tight, the platina washer is caused to bear tight against the carbon.

One end of a wire, H, is screwed into a projection on the stud F, the opposite end of the stud being screwed into an elbow, I, which is so secured to the

shell A of the boiler, as to be in complete metallic contact therewith.

Although we have shown, in the drawing, the carbon situated in proximity to the point where the wire H is in metallic contact with the shell of the boiler, it should be understood that they are situated apart from each other to an extent commensurate with the length of the boiler, one being near one end, and the other near the other end of the same; hence the wire H, which it is desirable to make as firm as possible, may require one or more supports, J, but these should be of such a character that the wire is insulated from the shell of the boiler.

The carbon or carbonaceous material E may be such as is used in the construction of electrical batteries, as, for example, carbon from the interior of gas-retorts, or other carbonaceous matter having similar electrical properties.

Cross-grooves may be cut in the carbon block near one end, so as to present a number of points, although the natural points of the mass will take up as much electricity as needed.

It will be seen that this invention is closely allied to that for which Letters Patent were granted to A. F. Porter, on the 31st day of October, 1865, and to George T. Parry's assignee on the same day, both of which patents are owned by our assignees, the American Anti-Incrustation Company, of Philadelphia.

In the instruments used by this company, however, magnetic points are employed, in place of which we have substituted the carbon, which we consider superior to the points or magnets, both as regards its permanency, and its effect in removing and preventing incrustation.

We claim as our invention, and desire to secure by Letters Patent—

An insulated mass or block of carbonaceous matter, suspended within a boiler, near one end of the same, but connected by a wire to the shell of the boiler, near the opposite end of the latter, all substantially as set forth.

In testimony whereof, we have signed our names to this specification, in the presence of two subscribing witnesses.

ROBERT BRECKENRIDGE BAKER.
CHARLES JAMES ADOLPHUS DICK.

Witnesses:

J. U. ZUST,
DAVID T. S. FULLER.