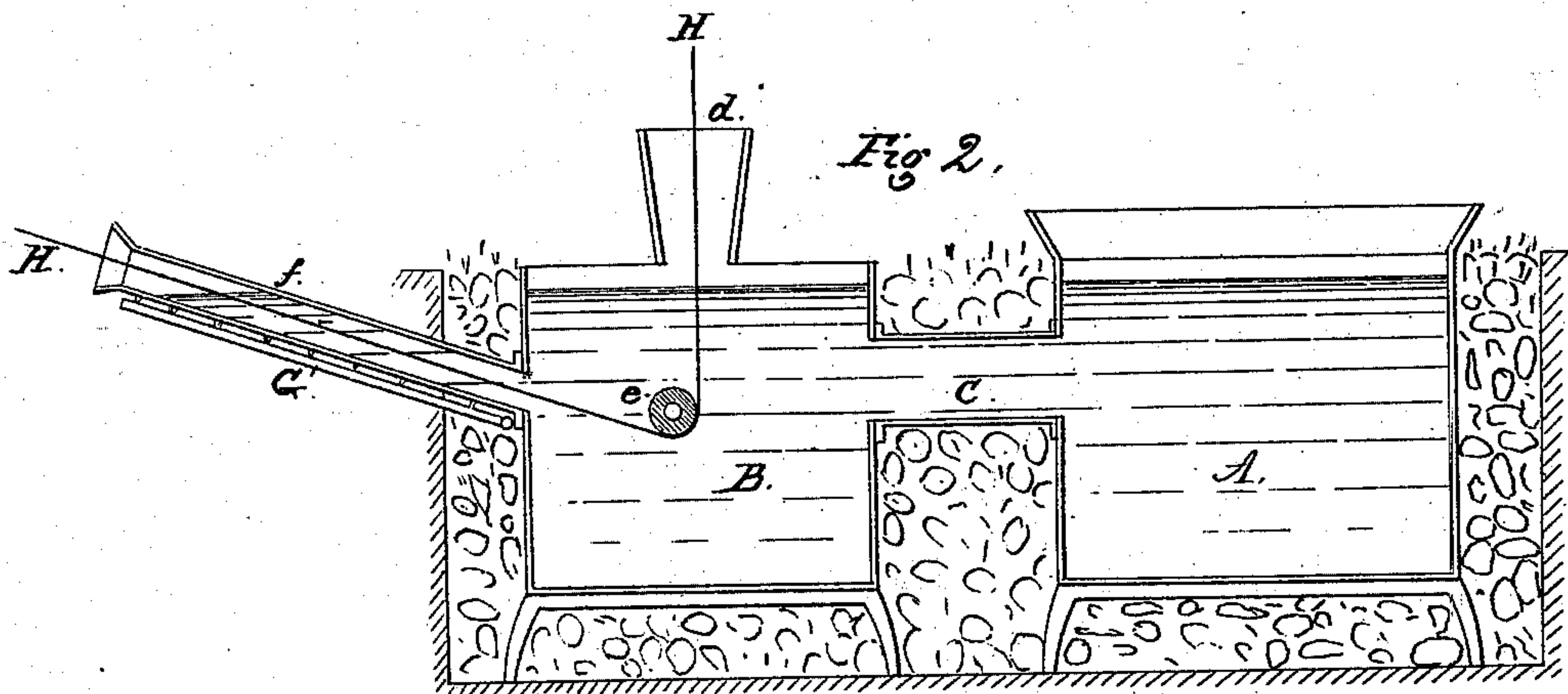
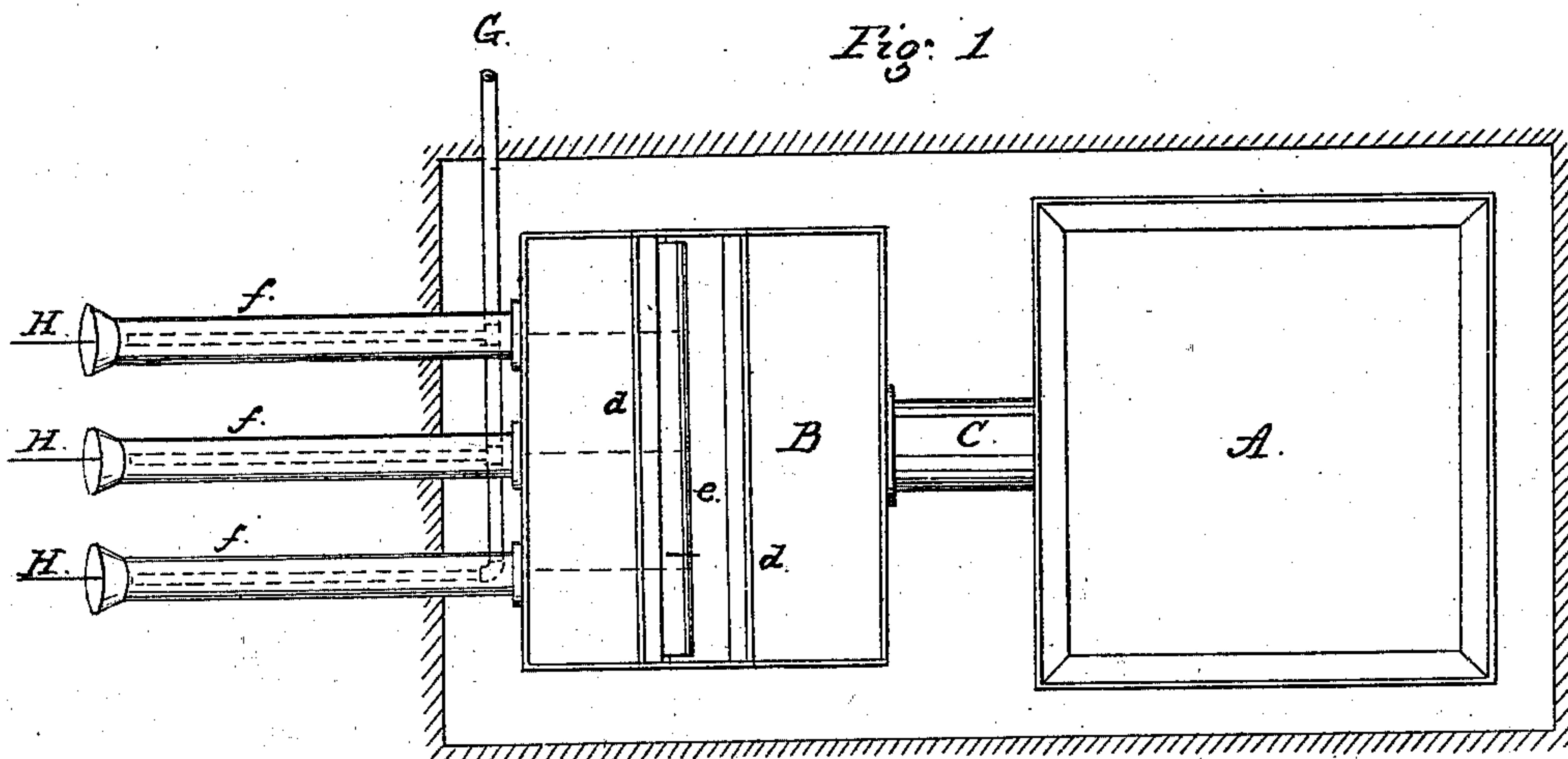


(No Model.)

H. CULL.
APPLIANCE FOR GALVANIZING.

No. 269,022.

Patented Dec. 12, 1882.



Witnesses:
Alex. Peck
John Cox

Inventor:
Henry Cull

UNITED STATES PATENT OFFICE.

HENRY CULL, OF JOHNSTOWN, PENNSYLVANIA.

APPLIANCE FOR GALVANIZING.

SPECIFICATION forming part of Letters Patent No. 269,022, dated December 12, 1882.

Application filed September 14, 1881. (No model.)

To all whom it may concern:

Be it known that I, HENRY CULL, a citizen of the United States, residing at Johnstown, in the county of Cambria and State of Pennsylvania, have invented new and useful Improvements in Galvanizing, of which the following is a specification.

My invention relates to improvements in apparatus for galvanizing or coating with metal fence and other wires.

The object of my invention is to purify metal to be used for galvanizing, and to keep it at or near an even temperature while the process of galvanizing is going on; also, to overcome the necessity of holding so large an amount of metal in a melted state, and to apply it to the wires as soon as possible after melting to prevent it turning to dross; and, further, to prevent the deleterious effect of the atmosphere by excluding it from a great part of the surface of the melted metal. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the entire machine, and Fig. 2 a vertical section of the same.

Similar letters refer to similar parts.

A is a melting-pan; B, a receptacle into which the melted metal flows through conduit C, which connects the vessels. This conduit is placed at or near the top for the purpose of draining the purified metal into receptacle B after the heavy impurities have settled.

It being necessary to pass wire some distance through melted metal before it will take on a coat of galvanizing, I have arranged a tube, *f*, or a series of tubes may be supplied, attached to and opening into receptacle B. These tubes are to be kept hot, which is easily done with coal, coke, or wood, as they present a large amount of heating-surface; but for fine work I have attached a pipe, G, perforated at proper intervals, for the supply of gas or liquid fuel, its flow being regulated with an ordinary valve to produce the proper degree of heat. Tubes *f* obviate the necessity of holding so large a body of metal in a liquid state as is necessary in the old-style pan, thereby economizing in space, fuel, waste of material by explosions caused by drawing wet wire into hot metal, and in preventing so much metal turning to dross by applying it to the wire before the change takes place.

Box *d* is to contain material for wiping off and keeping back any excess of material that may adhere to the wires. *e* is a sinker to keep wire H in proper position.

In operation, pan A is to be heated and supplied with metal for galvanizing until the melted metal shall have flowed into and nearly filled receptacle B, which must be kept hot also. The wire, after being properly treated with acid, is passed through pipe *f*, under sinker *e*, and up through box *d* to an apparatus for coiling, which gives the wire a steady and continuous motion through the metal. As the metal in pipe *f* and receptacle B is being gradually taken up by the wire more is gradually flowing in from pan A, which must be supplied from time to time as it runs low. By this arrangement the addition of cold metal has so little effect upon the temperature of the metal at the point where it is applied to the wire that the coating is at all times more light, even, and smooth than by any other process by me known.

I consider my invention and introduction of pipes or tubes as holders of melted metal through which articles to be galvanized are passed of special importance.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A galvanizing apparatus having the melting-pan for the metal connected with a receptacle by a conduit to draw off the pure metal for the bath, and having a pipe or series of pipes communicating with the bath-receptacle and inclined slightly from a horizontal plane to extend the bath, and a sinker arranged in the said receptacle, substantially as shown and described.

2. The combination, with the bath-receptacle having a sinker therein, and the inclined pipes communicating with the receptacle, as described, of the perforated gas-pipes arranged longitudinally underneath the inclined bath-pipes, substantially as shown and described.

HENRY CULL.

Witnesses:

JOHN COX,
ALEX. REEKE.