

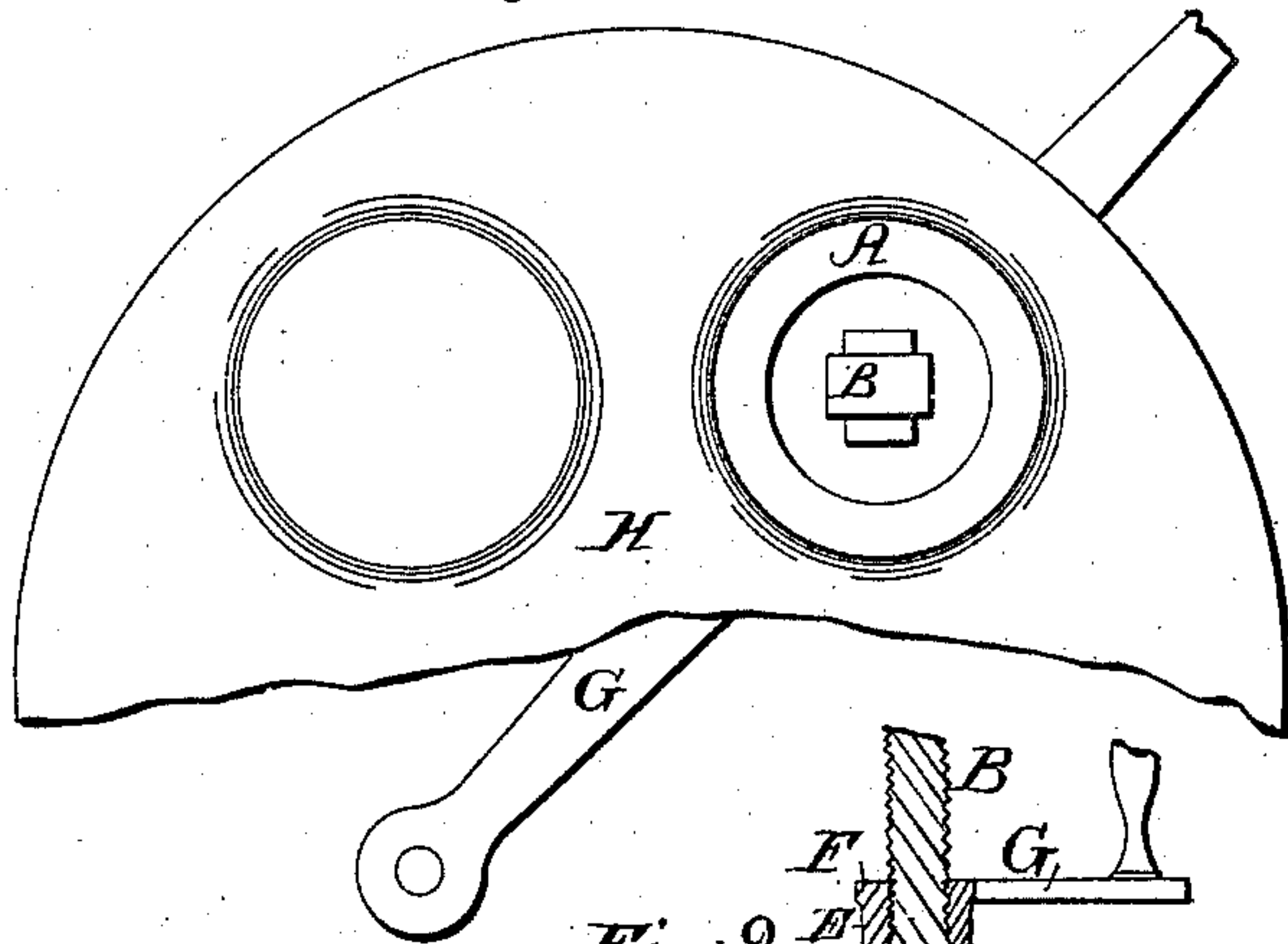
E. Regan.

Flanging Machine.

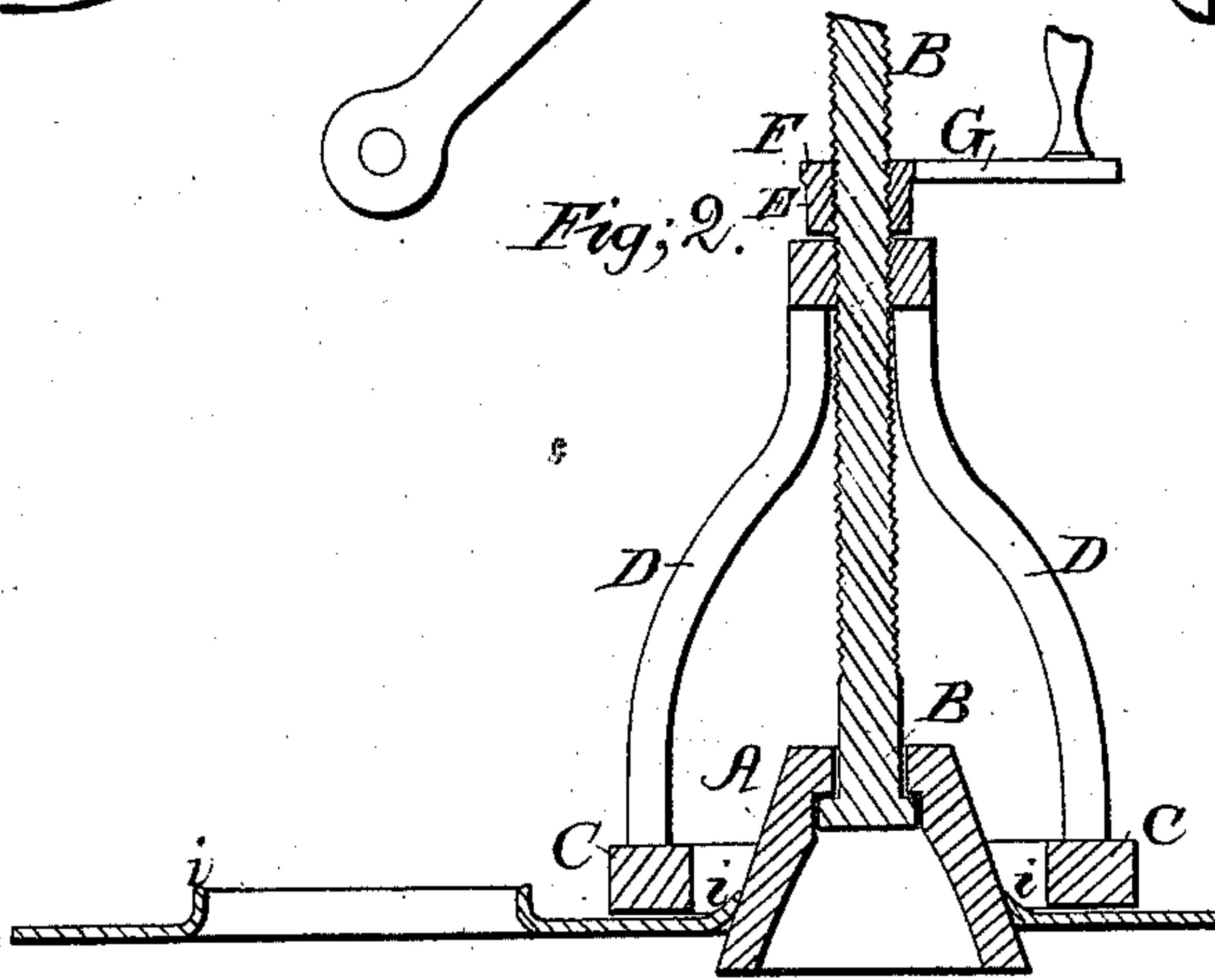
N^o 99,404.

Patented Feb. 8, 1870.

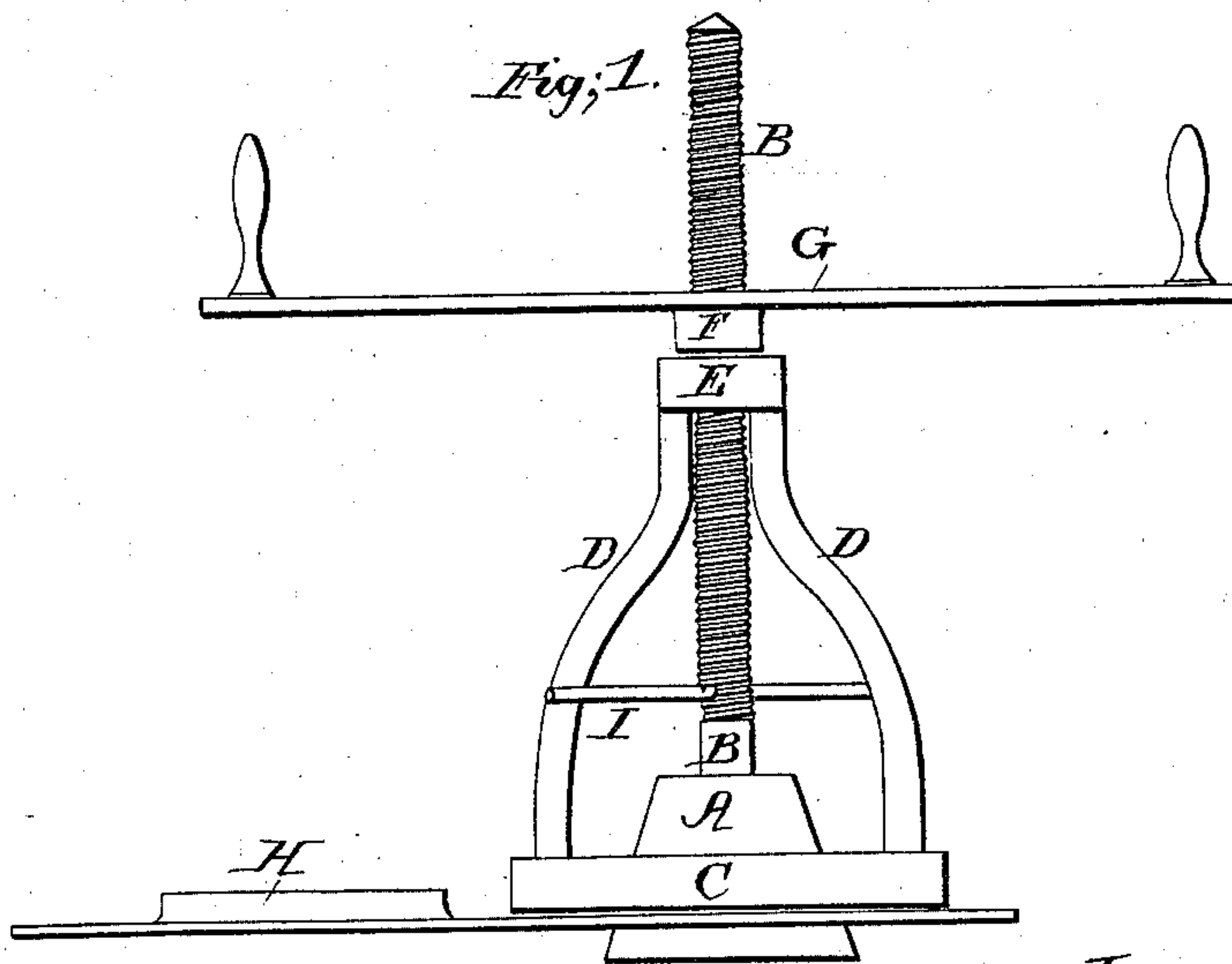
Fig; 3.



Fig; 2.



Fig; 1.



Witnesses;

O. F. Mayhew

H. H. Kuefler.

Inventor;

Edward Regan

United States Patent Office.

EDWARD REGAN, OF INDIANAPOLIS, INDIANA.

Letters Patent No. 99,707, dated February 8, 1870.

IMPROVED FLANGING-APPARATUS.

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

I, EDWARD REGAN, of Indianapolis, county of Marion, and State of Indiana, have a certain Device for Flanging the Flue-Holes in Boiler-Heads, of which the following is a specification.

Nature and Objects of the Invention.

My invention relates to a device by which to turn a flange to the flue-holes in boiler-heads; and

It consists in a cone-shaped die, the base of which is of the size of the external diameter of the flue, combined with the construction and arrangement of a screw, nut, lever, and bracket, by which the die may be readily drawn through the flue-holes, thereby turning out a sufficient flange to which to rivet the flues.

Description of the Accompanying Drawings.

Figure 1 is an edge view of a boiler-head, having the device embodying my invention applied thereto.

Figure 2 is a vertical longitudinal section of the same.

Figure 3 is a view of the inside of the boiler-head, showing the bottom of the cone-shaped die.

General Description.

A is the die, which is a hollow cone-shaped casting, the upper end of which is pierced with a rectangular hole, of proper size and form to receive the rectangular-shaped bottom end of the screw B. The interior of the die has recesses cut at right angles to the rectangular hole in its top end, forming shoulders to receive the projecting ends of the bottom of the screw, when the latter is turned one-quarter around after being inserted in the hole in the top of the die.

The object of constructing and arranging the bottom of the screw and the die in this manner, is to provide for conveniently attaching the die to or disconnecting it from the screw, as required.

The screw B extends upward through a bracket composed of a bottom ring, C, that rests upon the boiler-head, and three or more braces D, upon the top of which is attached a smaller ring, E, as shown, which forms a friction-bearing for the nut F in the middle of lever G.

This flanging-device is used in the following manner:

The boiler-head H having been pierced with suitable holes, and heated to a workable temperature, is laid upon trestles or other supports, and is prevented from being turned in operating the device, by inserting a pin through one of the flue-holes into the support below. The bracket, with the screw hanging therein by the nut F in lever G, is then set over the hole to be flanged, and the die attached to the lower end of the screw from below the boiler-head.

By turning the lever G, the screw C and die B are drawn upward, the die forces up and forms the flange around the hole in the boiler-head, as shown in fig. 2.

When the die is drawn through the hole, the device is free from the head, and the latter may be returned to the fire to be again heated, while in the mean time the screw may be run down preparatory to repeating the operation.

The screw is prevented from turning in the bracket by a pin, I, inserted through the screw and resting against one of the braces D.

The bottom ring C should be substantially made, and its internal diameter of the proper size to form the outside of the flange. Different sizes of the device may be used to suit different size holes, but I prefer to use bushing on the inside of ring C, thereby avoiding the expense of several different implements.

The advantage of this device for flanging the flue-holes in boiler-heads, is that the flange may be more easily and rapidly formed, saving time and labor, and the holes and flanges are formed to a true circle, thereby making it easier to fit in the flues.

Claim.

I claim, as my invention—

The flanging-device, composed of the die A, screw B, bracket C D E, and nut and lever F and G, constructed and arranged and operating substantially as and for the purpose set forth.

EDWARD REGAN.

Witnesses:

DAN. W. KNEFLER,
O. F. MAYHEW.