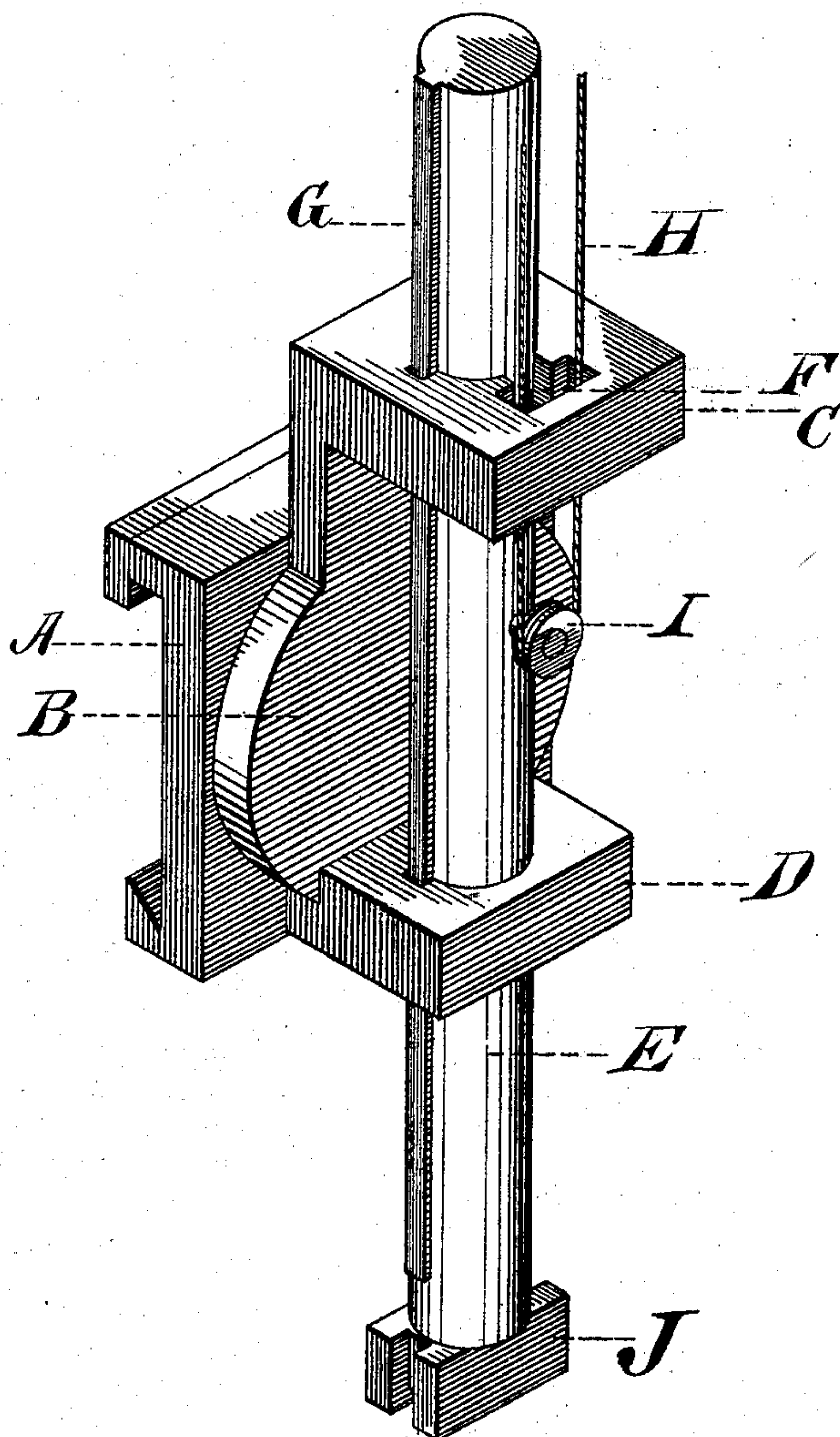


(No Model.)

G. T. REISS.
Boring Mill.

No. 241,719.

Patented May 17, 1881.



WITNESSES:

Thos. R. Woods.
John Loreuz.

George T. Reiss

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UNITED STATES PATENT OFFICE.

GEORGE T. REISS, OF HAMILTON, OHIO.

BORING-MILL.

SPECIFICATION forming part of Letters Patent No. 241,719, dated May 17, 1881.

Application filed March 5, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE T. REISS, of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Boring-Mills, of which the following is a specification.

This invention relates to the arrangement of the tool-bar of a boring-mill in such manner that the point of attachment for the balancing device may have an unimpeded movement without the necessity of increasing the length of the bar or the distance between its bearings.

In the accompanying drawing, A is the saddle of a boring-mill. It is adapted, as usual, to slide upon the cross-rail.

B is the usual swing mounted upon the saddle, and arranged to swing, if desired.

E is the tool-bar, fitted to slide in the swing-bearings C and D and prevented from rotating by the feather G.

J is the tool-holder.

H is the balancing rope or chain, which may have one end fixed to some stationary part of the sliding work or of the machine-framing, while the other end supports a balancing-weight to counterbalance the weight of the bar E. The rope or chain H passes around the sheave I, which is attached to the bar.

If desired, the sheave may be omitted, and the fixed end of the cord or chain may be attached directly to the bar and be balanced by a suitable weight.

The cord or chain is carried over any suitable arrangement of sheaves.

As thus far described the device is precisely as is common in boring-mills.

It is obvious that in this device as thus far described the traverse of the bar E through the swing-bearings will be limited by the distance between those bearings, or, rather, by the dis-

tance which the sheave I can move unobstructedly. Lengthening the bar E will not add to its available traverse. The swing-bearings must be separated if a longer traverse is desired. If the sheave I be located above the bearing C, the traverse will be dependent on the length of the bar; but the bar must have a portion of its length devoted to the attachment of the sheave. Such a location of the sheave is not practicable in many forms of boring-mills.

By means of my improvement I am able to attach the sheave or other device for receiving the balancing-cord at any desired point in the length of the bar, and at the same time to utilize in travel all of the appropriate length of the bar. The bar may have a traverse of four feet, while the distance between the bearings is but two feet. I accomplish this by forming an opening, F, in one of the bearings, so that the sheave or other attachment may pass by the bearing. By means of this construction the sheave may be located at the extreme end of the bar or at any point on its length. The opening may, if requisite, be formed in both bearings, and it is found in practice that its presence does not detract from the function of the bearings, especially when both sides of the opening are connected, as shown.

I claim as my invention—

The combination, with a tool-bar and an attaching device for a chain or rope projecting from the surface of said bar, of a bearing for the bar provided with an opening outward from the surface of the bar, the said opening being adapted to permit the passage of said attaching device, substantially as specified.

GEORGE T. REISS.

Witnesses:

ALEX. GORDON,
JAMES W. SEE.