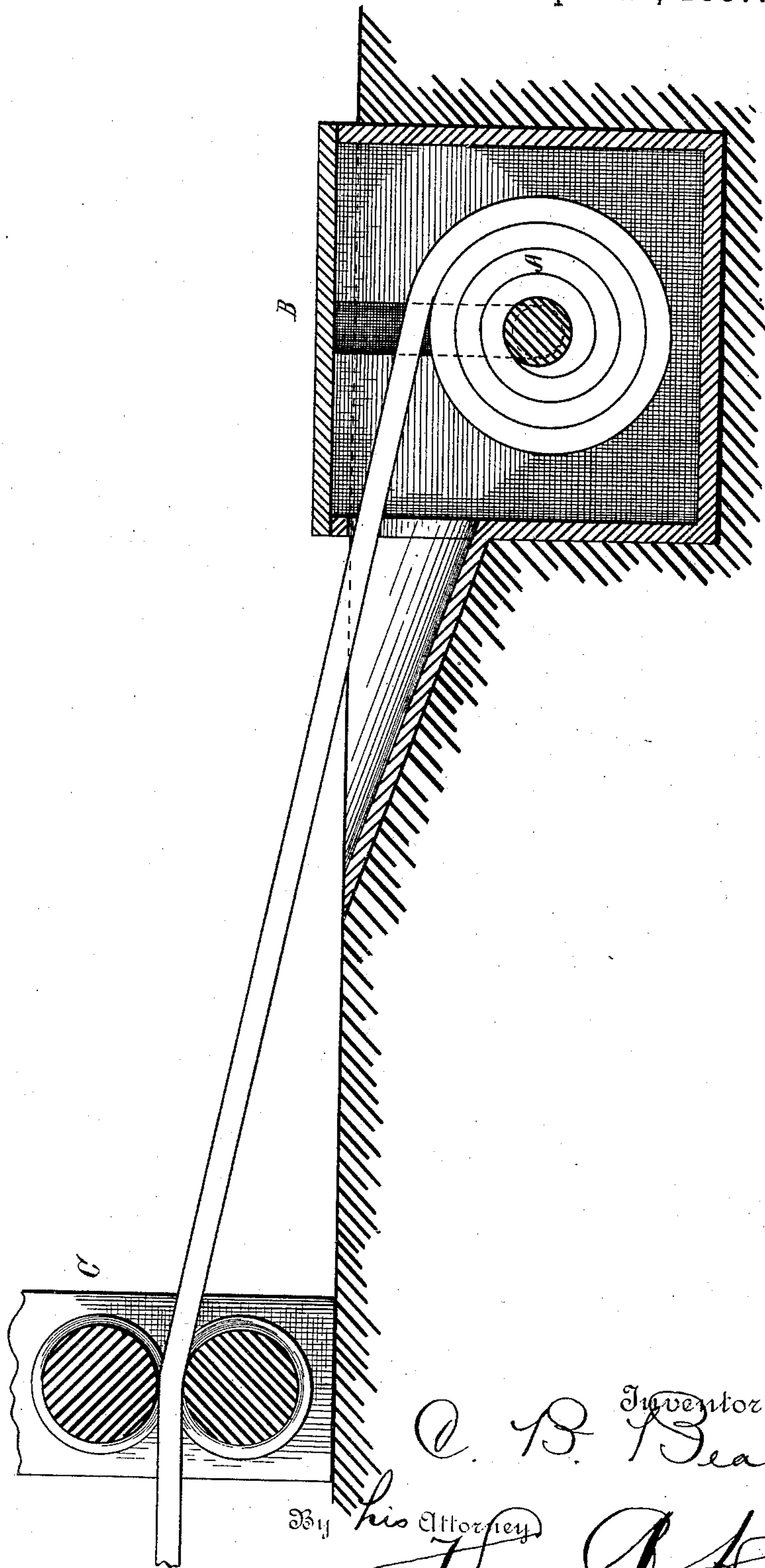


(No Model.)

C. B. BEACH.
ROLLING MILL PLANT.

No. 370,523.

Patented Sept. 27, 1887.



Witnesses
C. B. Wash.
E. J. Climo.

Inventor
C. B. Beach
By his Attorney
Thos. D. Hall

UNITED STATES PATENT OFFICE.

CLIFTON B. BEACH, OF CLEVELAND, OHIO.

ROLLING-MILL PLANT.

SPECIFICATION forming part of Letters Patent No. 370,523, dated September 27, 1887.

Application filed February 18, 1885. Renewed April 6, 1887. Serial No. 233,926. (No model.)

To all whom it may concern:

Be it known that I, CLIFTON B. BEACH, a citizen of the United States, residing at Cleveland, county of Cuyahoga, and State of Ohio, have invented a certain new and useful Improvement in Metal-Rolling, of which the following is a description.

The object of this invention is to provide an intermediate product in the rolling of metal from a heavy to a light form, which may be conveniently cared for during the handling incident to the reheating of the same and further rolling following the reheating, said reheating being necessary to the rolling condition of the metal in the process of reducing such metal from its heavy form to its said final light form.

The invention consists of a coiled billet as a new article in metal-rolling, said coiled billet being a product of metal reduction intermediate of the first subjection of such heavy metal piece to rolling process and the final finish of said metal piece from the rolling process as a merchantable article of light form.

The drawing represents a coiled billet after the same has been reheated and placed in a heat-retaining box and in the operation of being uncoiled as its metal is reduced to rod form.

The metal of the coiled billet A is the product of a prior reduction withdrawn from rolling process and coiled, said coiled billet having been reheated in a suitable furnace, and is here represented as about to have its metal subjected in final reduction to rod or other small sectional form. The heat-retaining box B, in which this coiled billet is placed during said final reduction of its metal, serves to prevent loss of heat by radiation and to maintain the metal of the billet in rolling condition. The stand of rolls C represents the first stand of rolls in a rod-train into which the metal of the coiled billet is to be fed. The latter has been coiled on a powerful reel, and may have

from eight to ten times the amount of metal of an ordinary-sized billet.

When, in the rolling of metal from a heavy form—such as an ingot—to a light sectional form—such as a wire rod—the billet becomes so far cooled as not to be in rolling condition, the billet is coiled on a powerful reel, reheated in a suitable furnace, and then subjected to final reduction. So, too, when in the operation of a rolling-mill plant any one of the upper mills, by reason of breakage or otherwise, is stopped, the lower mills are maintained uninterrupted in operation, the billet product of the latter mills being coiled and stored for future reduction; also when the lower mills in the rolling-mill plant furnish a billet product in excess of what can be cared for in the upper mills, such excess is coiled and stored until such time as the upper mills, by reason of breakage in a mill below or for other cause, can roll it, whereupon said coiled billets are reheated, and then subjected to final reduction. The billet is in this coiled form easily handled, charged in the reheating-furnace, and inclosed in the heat-retaining box.

The combination of the heat-retaining box and stand of rolls shown in this application does not constitute a part of the latter, inasmuch as the same forms the subject-matter of application for United States Patent, Serial No. 233,581, filed by me April 6, 1887, and hence all claim thereon is rested in said other application.

I claim—

As a new article in metal-rolling, a coiled billet, substantially as set forth.

In testimony that I claim the foregoing to be my invention I have hereunto set my hand this 14th day of February, A. D. 1885.

CLIFTON B. BEACH.

Witnesses:

J. G. HALL, Jr.,
THOS. B. HALL.