(No Model.)

D. B. OLIVER.

APPLIANCE FOR ROLLING MILLS.

No. 384,332. Patented June 12, 1888.

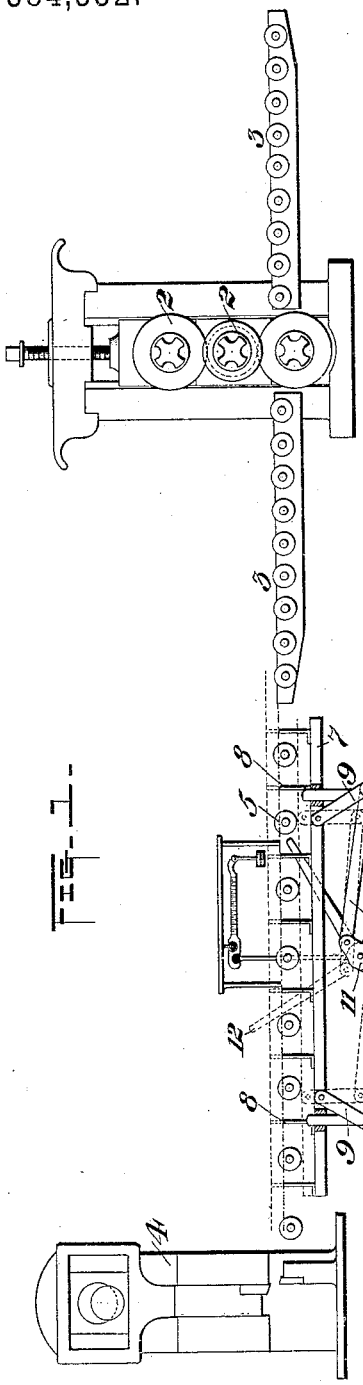

FIG. 1.

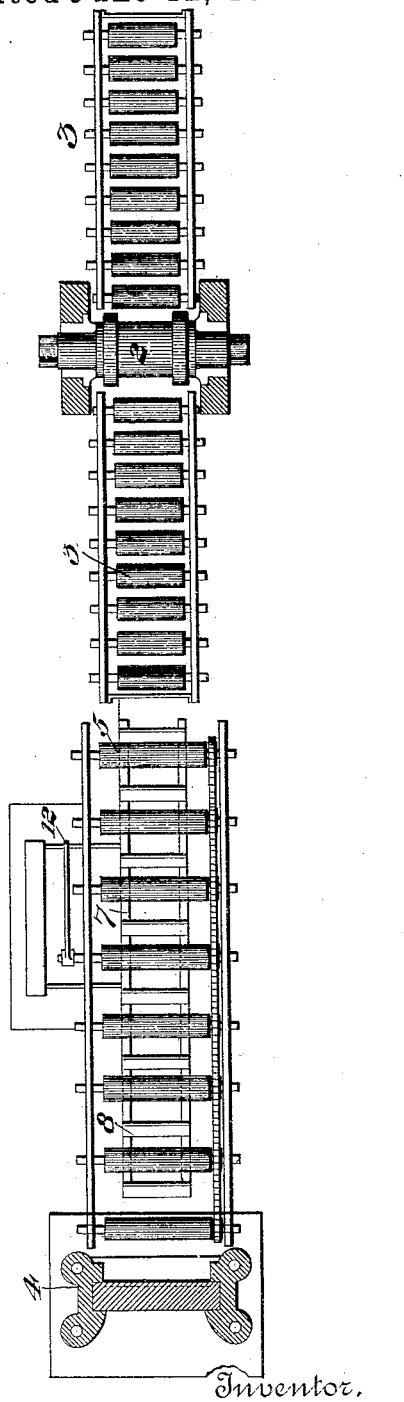

FIG. 2.

Witnesses.
N. B. Conover
H. L. Gill,

Inventor.
David B. Oliver.
by W. Baxendell & Sons.
his Attorneys.

UNITED STATES PATENT OFFICE.

DAVID B. OLIVER, OF ALLEGHENY CITY, PENNSYLVANIA.

APPLIANCE FOR ROLLING-MILLS.

SPECIFICATION forming part of Letters Patent No. 384,332, dated June 12, 1888.

Application filed April 25, 1888. Serial No. 271,788. (No model.)

To all whom it may concern:

Be it known that I, DAVID B. OLIVER, of Allegheny City, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Appliances for Rolling-Mills; and I do hereby declare the following to be a full, clear, and exact description thereof.

In the practice of rolling metal slabs, &c., it has been the custom, after the slab has been rolled, to lift it and place it upon the platform of scales, and after weighing it to take it to the shears, where its rough edges are trimmed off. The work of weighing is laborious, and requires the constant attention of several men to handle the heavy slabs of iron.

The purpose of my invention is to dispense with the necessity for this labor, and to provide means to enable the iron to be weighed and conveyed from the scales to the shears without any handling. To effect this I provide a series of driven conveying-rollers, which form a table leading from the feed-table of the rolls to the shears, and under this table I arrange the platform of scales and make the platform vertically movable between the rollers of the table, so that when the metal piece is brought by the rollers over the scales the platform may be raised to support the metal. After the metal has thus been weighed, the platform of the scales is lowered below the level of the conveying-table, and by driving the rollers the metal is carried onto the shears.

I will describe my improvement with reference to the accompanying drawings, in which—

Figure 1 is a side view of a set of rolls, their feed-tables, the conveying-table, the scales, and the shears. Fig. 2 is a plan view thereof.

Like symbols of reference indicate like parts in each.

In the drawings, 2 are the rolls. 3 are the feed-tables, which are provided with the usual driven rollers, and 4 are the shears, which are of any suitable construction. Between the shears and the end of the feed-table is a series of horizontal driven conveying-rollers, 5, whose axes are geared together by sprockets or pinions in the usual way. Beneath the rollers 5 is the beam 6 of scales, which is provided with a platform, 7, having upright bars or plates 8, which are arranged between the rollers. The platform 7 is connected with the beam 6 by means of toggle-levers 9, which are connected by pitmen 10 to a double lever, 11, which has a hand-lever, 12, extending up above the level of the mill-floor. When the lever 12 is in the position shown in full lines, the arms 8 of the scale-platform are below the level of the rollers, and are not in a position to interfere with the free passage of the metal thereon. If, now, the lever be moved to the position shown in dotted lines, its effect is to straighten the toggles 9 and to raise the arms 8, so as to elevate from the rollers any metal slab which may be resting thereon. This transfers the weight of the metal slab from the rollers to the scales.

The operation is as follows: After the metal has been rolled by the rolls 2, it is carried by the driven rollers of the feed-table onto the driven rollers 5, and these rollers are then stopped, so that the metal shall rest thereon directly above the platform of the scales. The lever 12 is then raised, so that the metal shall be lifted by the platform of the scales, and when its weight has been ascertained the lever is reversed, so as to deposit the metal again upon the rollers, and when these are started the metal is carried to the shears.

The advantages of this improvement will be appreciated by those skilled in the art. The work of placing the metal on the scales is done altogether by mechanical means, and may be performed very rapidly. I am thus enabled to cheapen the cost of production of the iron by reason of the saving of wages of the men who were formerly employed to do this work.

My invention is susceptible of many modifications, such as will suggest themselves to those skilled in the art. For example, instead of having the platform of the scales movable to cause the metal to rest thereon, the conveying-table above the scales may be made movable downwardly to effect the same result.

I claim as my invention—

1. An improvement in appliances for mills, which consists of the combination of the following elements: a series of driven conveying-rollers and scales having their platform arranged beneath the rollers, one of said elements

being movable to cause the metal to rest upon the platform, substantially as and for the purposes described.

2. As an improvement in appliances for rolls, the combination, with the rolls and the shears, of the following elements, viz: a series of driven conveying-rollers leading from the rolls to the shears, and scales whose platform is situate beneath the conveying-rollers, one of said elements being movable to cause the metal to rest upon the platform, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 5th day of April, A. D. 1888.

DAVID B. OLIVER.

Witnesses:

THOMAS W. BAKEWELL,

W. B. CORWIN.