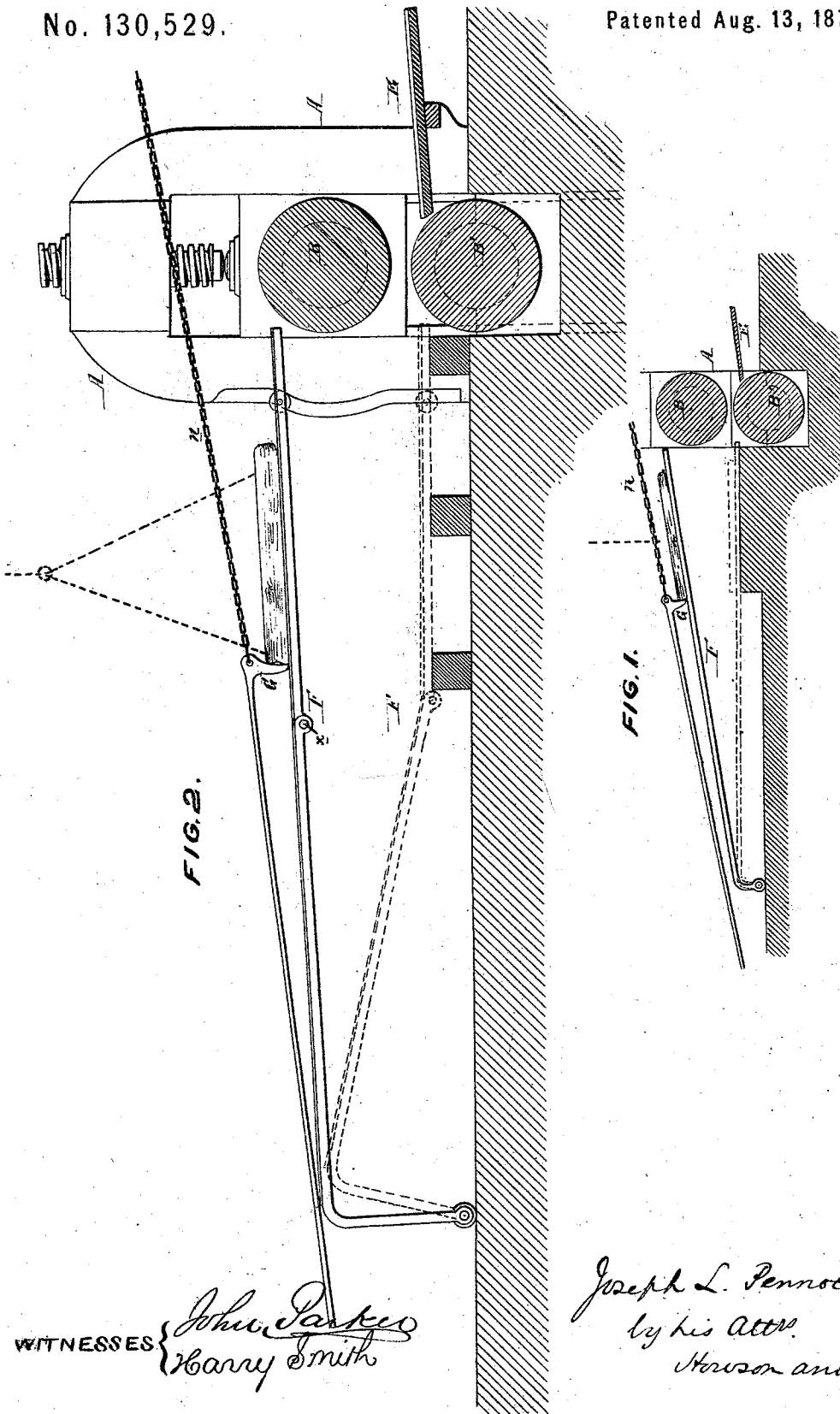


J. L. PENNOCK.

Improvement in Appliances for Rolling-Mills.

No. 130,529.

Patented Aug. 13, 1872.



WITNESSES

*John Parker*  
*Harry Smith*

*Joseph L. Pennock*  
*by his Attor.*  
*Houson and Son.*

# UNITED STATES PATENT OFFICE.

JOSEPH L. PENNOCK, OF COATESVILLE, PENNSYLVANIA.

## IMPROVEMENT IN APPLIANCES FOR ROLLING-MILLS.

Specification forming part of Letters Patent No. 130,529, dated August 13, 1872.

Specification describing Improvement in Appliances for Rolling-Mills, invented by JOSEPH L. PENNOCK, of Coatesville, Chester county, Pennsylvania.

My invention consists of certain mechanism too fully explained hereafter to need preliminary description, for facilitating the return of a partly-rolled plate after it has passed between the rolls to the front of the same prior to a second passage between the said rolls, the mechanism effecting a great saving of time and labor, especially in rolling heavy plates.

Figure 1 is a diagram illustrating my invention, and Fig. 2 a vertical section of part of a rolling-mill with my improvement arranged in a manner which I prefer to adopt.

It has been a common practice to arrange at the rear of rolls an apron which can be lowered to receive the iron as it passes from between the rolls and elevated so as to guide the iron over the top of the upper roll and return it to the front platform prior to another pass.

My invention, which I will now proceed to describe, has for its object the saving of much of the time and labor which the ordinary practice of manipulating the iron on the platform demanded.

In Fig. 1, A represents one of the housings; B and B', the upper and lower rolls, and E an inclined platform for receiving the heated pile and presenting it to the rolls. At the rear of the rolls is the apron F, which, by suitable raising and lowering devices, may be made to assume the two positions shown by plain and dotted lines in Fig. 1. With this apron, which is *per se* substantially the same as aprons heretofore used in connection with rolls, I combine a drag-hook, G, connected, by a chain, *n*, to any suitable hauling mechanism which may be connected to the housings of the rolls or secured to any adjacent fixed objects where it can be driven from a line-shaft, the hauling mechanism, however, being of such a character as to be under the control of an attendant who can stop and start it at pleasure. After the platform, with its partly-rolled plate has been elevated to the position shown by plain lines, the drag-hook is adjusted to the rear of the partially-rolled plate and the hauling-gear

set in motion, when the plate will be dragged over the top of the upper roll and will fall on to the front platform. Although the apron may be made in one piece, as shown in Fig. 1, and described above, I prefer, for reasons which will be obvious, to make it in two pieces, hinged together at *x*, as shown in Fig. 2, the front portion when depressed for receiving the iron from the rolls resting on supports, as shown, and the two portions of the apron when elevated assuming the position shown by plain lines prior to the dragging of the partly-rolled plate over the top roll. Projecting from the rear of and forming part of the drag-hook is a lever or handle, by the aid of which an attendant can direct to the right or to the left, as circumstances may require, the iron as it is drawn toward the rolls. The apron F may be constructed in different ways; but I prefer to make it of a series of strong longitudinal bars of wrought iron, strengthened by suitable transverse bars, the apron, however, being in all cases so made as to permit the free movement of the drag-hook. Many different appliances may be used for raising and lowering the apron and for hauling and releasing the drag-hook; but in all cases it is preferable for these appliances to be actuated by power instead of by hand, as heretofore, the power being placed under such control of an attendant that raising, lowering, and hauling can be accomplished at will.

I claim as my invention—

1. An apron placed at the rear of rolls and admitting of being elevated and lowered, as described, in combination with a drag-hook or its equivalent, connected by chain to any suitable hoisting mechanism.

2. The said apron made in two parts, hinged together as set forth, and having the rear part supported on rollers, as specified.

3. The drag-hook having at the rear an arm or lever, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH L. PENNOCK.

Witnesses:

WM. A. STEEL,  
JOHN K. RUPERTUS.