

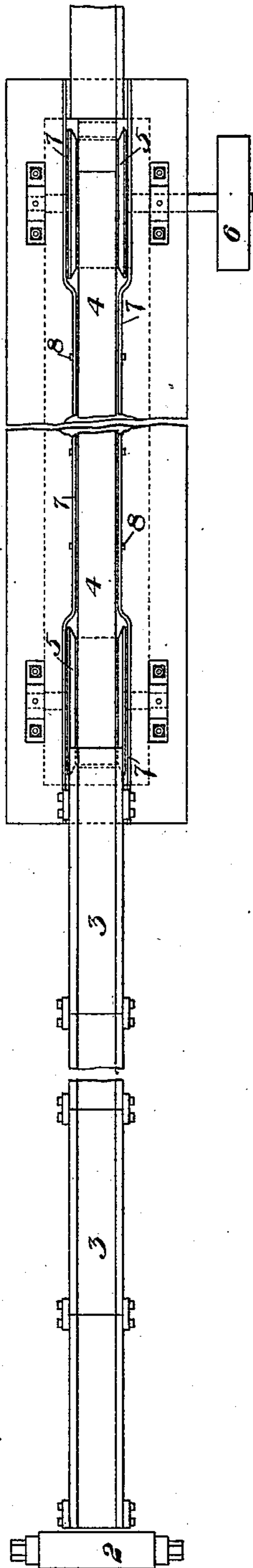
(No Model.)

F. L. CLARK.  
HOOP MILL ATTACHMENT.

No. 525,135.

Patented Aug. 28, 1894.

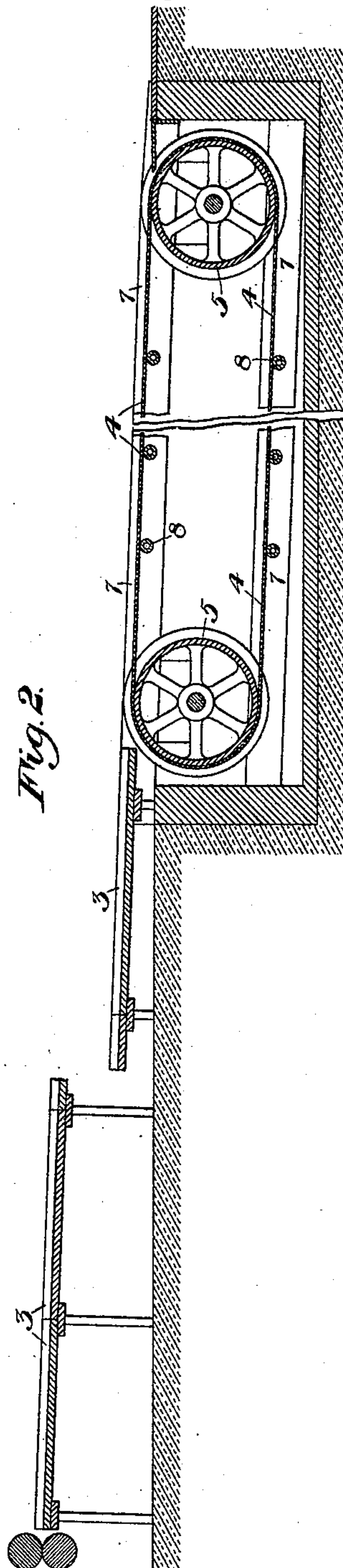
Fig. 1.



WITNESSES.

*H. M. Corwin*  
*W. B. Corwin*

Fig. 2.



INVENTOR.

*Francis L. Clark*  
*by his Attorneys*  
*W. Baxendale & Sons*

# UNITED STATES PATENT OFFICE.

FRANK L. CLARK, OF PITTSBURG, PENNSYLVANIA.

## HOOP-MILL ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 525,135, dated August 28, 1894.

Application filed December 6, 1893. Serial No. 492,934. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK L. CLARK, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Hoop-Mill Attachments, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of a hoop mill having a guide provided with my improved hoop-catcher; and Fig. 2 is a side elevation of the same partly in section.

My invention relates to the class of hoop mills, and is designed to prevent bending and buckling of the metal as it passes along the trough leading from the last pass. To that end it consists in an endless carrier located at some distance from the last pair of rolls and arranged to receive and carry along the hoop metal which passes thereover.

In the drawings, in which similar numerals indicate corresponding parts, 2 represents the final rolls of a hoop-mill having the last pass for the metal, and 3 the trough-shaped guide leading therefrom. At some distance from the rolls, and in the line of the guide, is located the endless metal belt or chain 4 carried upon flanged pulleys 5, one of which is actuated by means of the belt pulley 6 upon its shaft. To prevent the metal from slipping sidewise from the carrier, I provide the side-guards or plates 7 upon the outer side of the upper path of the belt, and to support the belt and prevent its sagging, I use friction rollers 8, which are preferably pivoted in the plates 7.

The operation of the device is apparent. The hot metal as it issues from the rolls moves along in the trough, and as it passes upon the belt is carried along thereby and buckling prevented.

The advantages of the invention will be obvious to those skilled in the art. As the metal issues from the rolls in a long flat strip, the rear portion of the strip nearest the rolls

is often unable to push the forward portion along on account of its heated and somewhat plastic condition and small cross section. The metal therefore often bends, kinks, or buckles, thus injuring a part of the strip. Moreover, the last end portion of the strip as it leaves the rolls is not thrown a sufficient distance to escape the water used upon the rolls, which, falling upon the heated metals, blackens and hardens it, thus injuring the rear end portion. These difficulties are entirely done away with by my improvement, since the carrier positively moves along a portion of the metal strip, the weight of the metal pressing upon the extended surface of the carrier with sufficient force to give it a grip thereon and move the metal along the trough without buckling.

Many variations may be made in the form of the carrier, and its position relatively to the rolls without departure from my invention, since

What I claim, and desire to secure by Letters Patent, is—

1. The combination with the final rolls of a hoop mill, of an inclined trough leading therefrom, and an endless carrier located in said trough at a distance from the rolls and arranged to move along the metal after it is pushed along the trough thereonto by the rolls; substantially as described.

2. The combination with the final rolls of a hoop mill, of an inclined trough leading therefrom, and an endless carrier located in said trough at a distance from the rolls and arranged to move along the metal after it is pushed along the trough thereonto by the rolls, said carrier having supporting friction rollers beneath its upper portion; substantially as described.

In testimony whereof I have hereunto set my hand.

FRANK L. CLARK.

Witnesses:

W. B. CORWIN,  
H. M. CORWIN.