

(No Model.)

2 Sheets—Sheet 1.

P. SCHRADER.
WIRE ROLLING APPARATUS.

No. 529,200.

Patented Nov. 13, 1894.

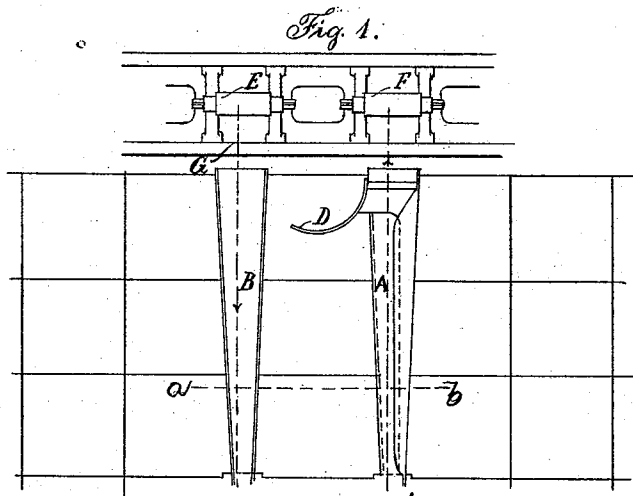


Fig. 2.



Fig. 3.

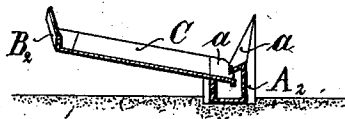


Fig. 4.



Fig. 5.



Fig. 6.

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2 Sheets—Sheet 2.

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Fig. 7.

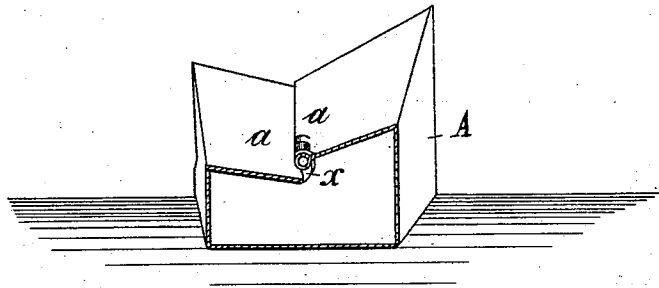
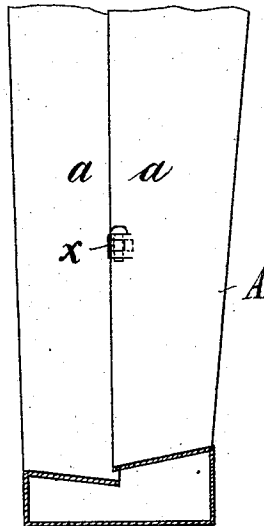


Fig. 8.



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UNITED STATES PATENT OFFICE.

PAUL SCHRADER, OF WITTEN, GERMANY.

WIRE-ROLLING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 529,200, dated November 13, 1894.

Application filed January 15, 1894. Serial No. 496,941. (No model.)

To all whom it may concern:

Be it known that I, PAUL SCHRADER, a subject of the German Emperor, and a resident of Ruhrstrasse 79, Witten-on-the-Ruhr, Germany, have invented Improvements in or Connected with Wire-Rolling Apparatus, of which the following is a specification.

My invention relates to wire guards or guides for use in connection with wire rolling apparatus.

In the operation of rolling wire, the wire often coils itself up with more or less violence, the consequence of which is that the workman at the rolls is liable to be injured. The guard plates and guard-hooks which have hitherto been made use of in wire rolling works do not effectually prevent this.

The object of my invention is to provide protection for the workman and for this purpose I employ a guard in the vicinity of the rolls, practically at right angles to the rolls and straight which guard is in the form of a box-like guide, the top of which consists of two flap-like leaves converging inward, one of which overhangs the other, an opening being left between them in such a way that the length of wire can easily enter the guard or guide but is prevented from flying out of the same.

In the accompanying drawings, Figure 1 is a plan of two pairs of rolls with a guide and my improved guard. Fig. 2 is a cross section on the line *a, b*, Fig. 1, through the guide and guards; and Figs. 3 to 6 inclusive are similar views illustrating various modifications of the guide and guard and the way in which they are connected. Figs. 7 and 8 are views illustrating a guard provided with a wire-retaining catch hereinafter described.

The wire *G* as it passes through the rolls *E*, Fig. 1, is seized by the workman who stands in front of the guard-plate *D*, thrown into a loop behind the guard-plate and passed through the second pair of rolls *F*. As this happens the length of wire slides on to the leaves *a* of the guard *A*, Figs. 1 and 2, passes through the opening between them into the guard and continues to pass along in the same until the rear end of the length of wire has passed through the pair of rolls *F*. The wire runs from the pair of rolls *E* through the guide-

groove *B*, passes in a semi-circle from the direction *E B* to the reverse direction *A F* and through the guard to the roll *F*. This arrangement of straight boxes, with guard leaves keeps all except the bend of the loop behind the rolls within the grooves whether this loop be long or short.

In Figs. 1 and 2 the guide *B* is shown separate from the guard *A*.

In Fig. 3 the guard *A* is connected with the guide by means of a horizontal or inclined plate *C*.

Figs. 3, 4, 5 and 6 illustrate various appropriate forms of cross section which the guards and guides may have, *A' A² A³ A⁴* indicating the guards and *B' B² B³ B⁴* the guides in the respective figures.

It is obvious that the guard *A'* can be used with any of the guides *B' B² B³ B⁴*, or any other form of guard with any form of guide, which latter under certain circumstances may even be dispensed with altogether.

Instead of arranging the upper flap on the right hand and the lower flap on the left hand as shown, the upper one may be on the left hand and the lower one on the right hand.

In Figs. 7 and 8 I have shown the guard provided with a catch *X* hinged to the upper flap *a* of the guard *A*, which catch bears against the edge of the lower flap as soon as the wire has passed through the opening between the flaps into the guard thereby confining the wire in the guard with absolute certainty.

Instead of a single catch, several catches can obviously be made use of at suitable points along the upper flap *a*.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. A guard for use in connection with wire-rolling apparatus the said guard consisting of two straight overhanging flap-like leaves practically at right angles to the rolls with an opening between the said leaves, the two leaves converging inward to guide the wire thrown onto them, through the opening into the guard, substantially as and for the purposes set forth.

2. A guard for use in connection with wire

rolling apparatus, in which two flap-like
leaves overhang one another, an opening be-
ing left between them for the admission of the
wire, and the upper flap or leaf being pro-
5 vided with one or more catches for the pur-
pose set forth.

In testimony whereof I have signed my

name to this specification in the presence of
two subscribing witnesses.

PAUL SCHRADER.

Witnesses:

ALBERT KLINGHAMMER,
CHRISTIAN SONNENSCHNEIN.