H. KNOKE.

GUIDE.

APPLICATION FILED JULY 20, 1910.

1,046,079. Patented Dec. 3, 1912.

Fig. 1

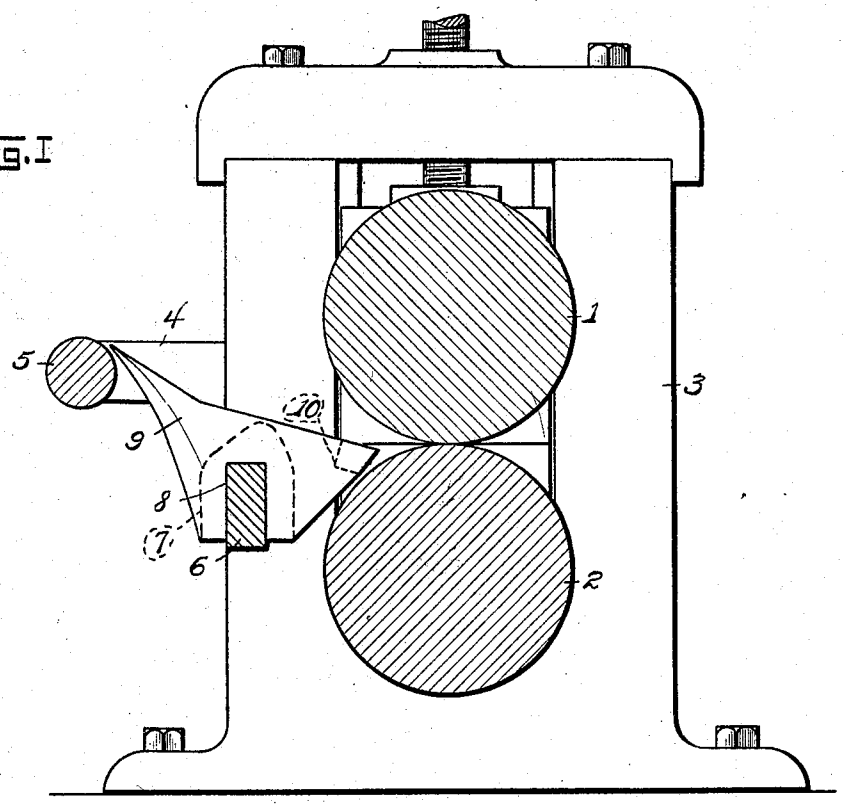


Fig. 2

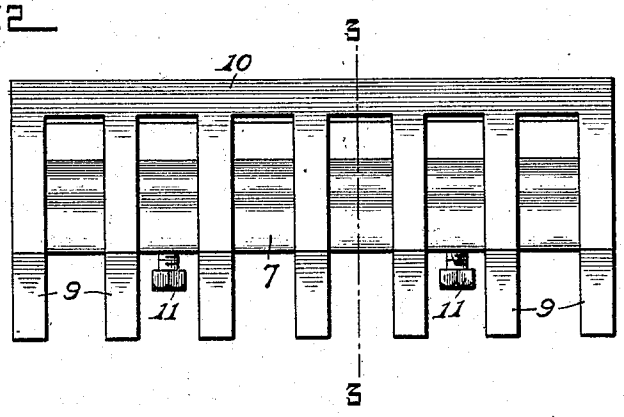
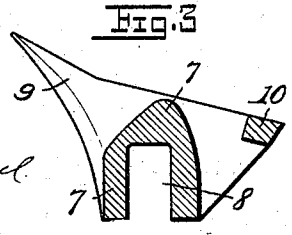


Fig. 3



WITNESSES:

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GUIDE.

1,046,079. Specification of Letters Patent. Patented Dec. 3, 1912.

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To all whom it may concern:

Be it known that I, HERMAN KNOKE, a citizen of the United States of America, and resident of Wheeling, county of Ohio, and State of West Virginia, have invented certain new and useful Improvements in Guides, of which the following is a specification.

This invention relates to a guide for rolling mills, and it consists in the particular construction, arrangement and combination of parts which will hereinafter be fully described.

The primary object of the invention is to provide a guide at the rear side of a set of rolls whereby the plates or sheets passed through said rolls are guided or directed in an upwardly inclined direction over the top of the usual small roller, or "billy," said guide being mounted or supported in such manner that no portion thereof rests upon or contacts with the lower roll of the set.

A further object is to provide a one-piece guide of the character mentioned.

It is the present general practice to mount a plurality of separate and distinct guide members at the rear side of a set of rolls, said members being spaced apart and having their inner ends supported by, or resting upon, the lower roll of the set. Said lower roll thus becomes worn within a short period, shallow grooves being formed therein by frictional contact of said guide members, and, in that condition, said roll is rendered unfit for use.

The chief object of the present invention is to provide a device whereby the objection above noted is wholly obviated.

In describing the invention in detail, reference is herein had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a transverse sectional view of a set of rolls, showing the guide applied thereto; Fig. 2 is a top plan view of said guide; and Fig. 3 is a section on the line 3—3, Fig. 2.

Referring to said drawings, in which like reference-characters designate like parts throughout the several views—1 and 2 respectively indicate the upper and lower rolls of a rolling mill, the same being journaled at their opposite ends in the usual housings 3. Supported at the rear side of the rolls in the usual way, or in any other suitable manner, as by outstanding arms 4 carried by the housings 3, is the usual roller, or "billy" 5.

A rest-bar 6, preferably rectangular in cross-section, has its ends fixed in opposite housings and lies parallel to the rolls in a suitable position for supporting the guide which constitutes the present invention. Said guide consists of a one-piece casting, and it comprises a longitudinal body 7 having a longitudinal channel 8 in its under side adapted for the reception of said rest-bar 6, said channel substantially conforming in size and shape to said rest-bar. A plurality of guide-members 9, integral with the body 7 and located at spaced intervals or distances and extending in a direction transverse to said body, have their inner ends connected by an integral longitudinal bar or member 10. The opposite, or outer ends of said guide-members are substantially horn-shaped, as shown, and extend to a point adjacent to the "billy" 5, as shown. The upper surfaces of said guide-members and that of the member 10 lie flush with each other, and, when the guide is mounted upon the rest-bar, said surfaces are upwardly and rearwardly inclined for directing plates or sheets emerging from between the rolls 1 and 2 over the top of said "billy" 5.

Set-screws 11 are directed through the body 7 into binding engagement with the rest-bar for maintaining the guide rigidly in position. The channel 8 is so disposed in the body 7 that when the guide is properly mounted, the inner edge of the latter is supported slightly below the point of contact of the rolls and in a non-bearing position with relation to—that is, out of contact with—the lower roll 2.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a set of rolls and a billy, of a one-piece sheet-guide associated with said rolls nd occupying a position out of contact therewith, said guide comprising a plurality of connected guide-members having their outer ends upwardly inclined to a point adjacent to said billy.

2. The combination with a set of rolls, and a billy arranged parallel to said rolls, of a one-piece guide comprising a body and a plurality of parallel guide-members ar-

ranged transversely of said body, said guide-members being supported out of engagement with said rolls and having their outer ends upwardly inclined to a point adjacent to the billy.

3. The combination with a set of rolls, a rest-bar, and a billy, the latter located above the level of the lower roll, of a one-piece guide comprising a longitudinal body having a longitudinally directed channel in which said rest-bar is received, and a plurality of integral parallel guide-members disposed transversely of said body, said members being supported by said rest-bar out of engagement with said rolls and having horn-shaped outer ends which are upwardly and rearwardly inclined to a point adjacent to said billy for directing sheets over the top of the latter.

4. In combination with a set of rolls, a rest-bar, and a billy, the latter located above the level of the lower roll, of a guide comprising a plurality of parallel guide members mounted upon said rest-bar and supported by the latter out of engagement with said rolls and having integral horn-shaped outer ends which are upwardly inclined to a point adjacent to the billy.

In testimony whereof I affix my signature in presence of two subscribing witnesses.

HERMAN KNOKE.

Witnesses:

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H. E. DUNLAP.