

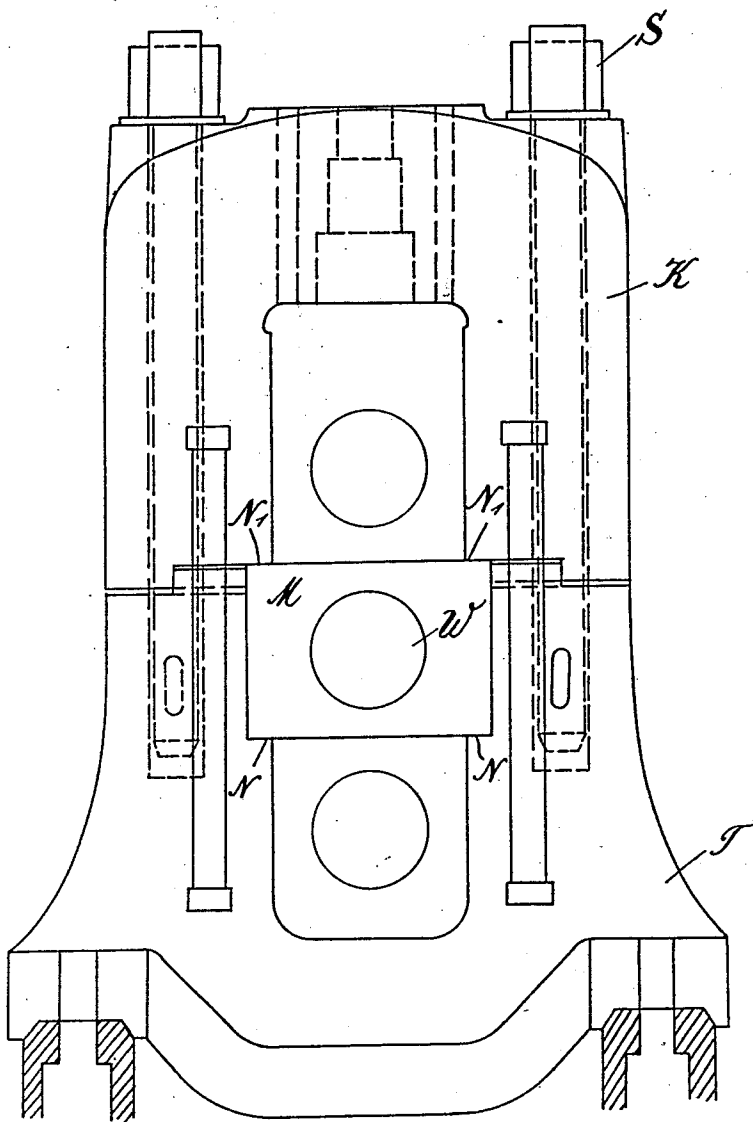
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MEANS FOR SUPPORTING THE ROLLS OF ROLLING MILLS

Filed April 13, 1923



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MEANS FOR SUPPORTING THE ROLLS OF ROLLING MILLS.

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To all whom it may concern:

Be it known that I, RICHARD HEIN, a citizen of the Czechoslovakian Republic, residing at Witkowitz, Czechoslovakia, Palackýstrasse 48^a, have invented certain new and useful Improvements in Means for Supporting the Rolls of Rolling Mills, of which the following is a specification.

This invention relates to rolling mills of the kind, in which the rolls are journaled in housings or bearings adapted to be mounted in the lateral standards of the rolling mill, and in particular to the means for supporting the housings of the middle roll in three high mills, although the invention is also applicable to rolling machines of other types. In the following specification the invention shall be described in connection with a three high mill, but the embodiment shown and described is to be understood as an example only.

In the three high mills hitherto known the supporting members of the middle roll are commonly constructed and mounted in the following manner.

The middle roll is journaled in bearings mounted to rest upon and be supported by inwardly extending lateral projections of the standards. In order to prevent the said roll and its supporting members from being lifted towards the upper roll during the rolling operations the bearing and supporting members are retained in position by means of two bars or ribs provided in the head or top portion of the standards and projecting towards the bottom. It has also been suggested heretofore to secure the bearing and supporting members in place by means of wedges.

All of the above mentioned securing means are complicated and fail to always ensure an equal or uniform support at both ends of the roll.

The main object of this invention is to remedy these defects. With this purpose in view the head or top portion of the standards is provided with projections or shoulders cooperating with the inwardly extending lateral projections of the stationary lower part of the standards to rigidly hold the bearing and supporting members of the middle roll between the thus provided upper and lower projections or shoulders.

The detachable head or top portion of the standard is connected to the stationary lower part thereof with the roll properly mounted

therein by means of screws and nuts in the usual manner.

In the accompanying drawing an embodiment of the invention is illustrated by way of example. The illustration however does not show the whole of the rolling mill, but is an end view thereof only, partly in section and broken off, to not show more, for clearness sake, than is required to fully understand the invention.

In the drawing the stationary part T of the standards is of usual construction that is to say, provided with projections N for the bearings M of the middle roll W to rest thereupon. The removable head or top portion K of the standard is provided with downward facing shoulders or projections N¹ rigidly connected or cast integrally therewith, said shoulders N¹ being shaped and adapted to engage and rest upon the upper face of the housing M and to thus cooperate with the projections N to firmly hold the housing M in place. To this end the two parts T and K of the standard which in all other respects may be of any known or suitable construction are connected with each other in the customary manner by means of the screws and nuts S.

A noticeable advantage of this new arrangement resides in the fact that any supplemental structures for holding and fixing the bearing and supporting members of the middle roll in place can be dispensed with. Further the invention is particularly adapted for use in rolling mills having closed housings or housings constructed in one piece, which as is known do not require to be adjusted from time to time to compensate for wear, but need only to be kept in place.

While I have described a specific construction of the means employed for carrying my invention into effect it is obvious that it can be modified without departing from the spirit of my invention. In reducing my invention to practice I find that the form referred to herein as a preferred embodiment is the most efficient, but realizing that certain conditions will necessarily vary in concurrence with the adoption of my arrangement. I desire to emphasize the fact, that various minor changes in the details of construction and in the proportions of the parts shown may be resorted to, when required without sacrificing any of the advantages of my invention as defined in the appended claims.

What I claim is:

1. Roll supporting arrangement in rolling mills comprising a standard composed of a lower part having shoulders for a roll bearing and supporting member to rest upon and an upper part having shoulders for securing the said supporting member in place substantially as described.
2. Roll supporting arrangement in a rolling mill having three superposed rolls comprising a standard having shoulders in its lower part for the bearing and supporting member of the middle roll to rest upon, and shoulders provided to cooperate with the first stated shoulders for securing the said supporting member in place substantially as described.
3. A roll supporting standard in a three

rolls-rolling mill comprising a lower stationary part T, a detachable head or top part K supporting shoulders N in the said lower part for the bearing and supporting member M of the middle roll to rest upon, corresponding shoulders N' in the said top part to cooperate with the former for firmly holding the said bearing and supporting member in place and connecting means, such as screws and nuts for rigidly uniting the two parts of the standards with the bearings and supporting member immovably enclosed therebetween substantially as described.

In testimony whereof I have signed my name to this specification this 16th day of March 1923.

RICHARD HEIN.