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GRINDING BODY FOR TUBE AND DRUM MILLS

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Fig. 1.

Fig. 2.

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This invention relates to a grinding body for tube and drum mills. According to my invention the grinding body is so designed that an increased output of the mill will result therefrom at the same time obtaining greatest quantities of finely ground material from the mill. These features are due to a particular construction of said grinding body.

My invention consists essentially therein, that one or more bodies are provided as interior grinding bodies within the outer grinding body, which latter body consists ordinarily of a spiral of spring steel. According to my invention, furthermore, said interior grinding bodies, which may consist of bolts, steel-balls or the like are permanently carried within the outer grinding body, and protected against falling out of the same by properly bending the ends of said spiral of spring steel.

The material to be ground may enter the grinding body at one of its ends and will be subjected to the grinding process by means of the interior grinding bodies during passing through the interior of the outer grinding body. The sizes of the grinding bodies may be chosen as desired, preferably according to the size of the mill and the specific construction of the same as well as according to the nature of the material to be ground. The grinding body according to this invention may be employed for dry as well as for wet mills. The filling or interior grinding bodies according to my invention may be employed irrespective of the fact, whether the mill is provided with a silex or a steel lining.

In the drawing an example of the construction according to my invention is shown, Fig. 1 being a side view of the outer and the interior grinding body and Fig. 2 a longitudinal section through the outer and interior grinding body shown in Fig. 1.

According to the drawing the grinding body is constructed in the manner of a helically wound spring with convolutions adjacent to each other as may be seen from Figs. 1 and 2 of the drawing. The grinding body consists of a helically wound spring with adjacent convolutions, the ends of said spring being properly bent preferably in a direction which is diametrical with respect to said spring for preventing the interior grinding body from falling out of the outer grinding body. The interior grinding body is shown as consisting of a bolt of steel or the like which is provided within the outer grinding body and prevented from falling out of the same by the bent ends of the outer grinding body. According to the drawing there is only one interior grinding body employed, it is evident, however, that also a plurality of such interior grinding bodies may be used for the purpose of my invention.

A grinding body for tube and drum mills consisting of an outer member in the form of a helically wound spring with diametrically or approximately diametrically bent ends, and an interior member, said interior member being prevented from falling out of said outer member by means of said bent ends, substantially as described and for the purpose set forth.

In testimony whereof I affix my signature.

AUGUST BUES.