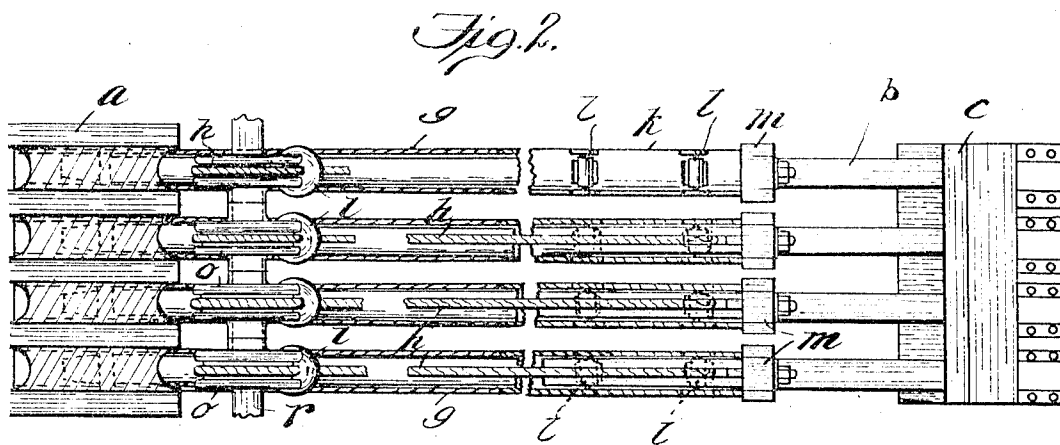
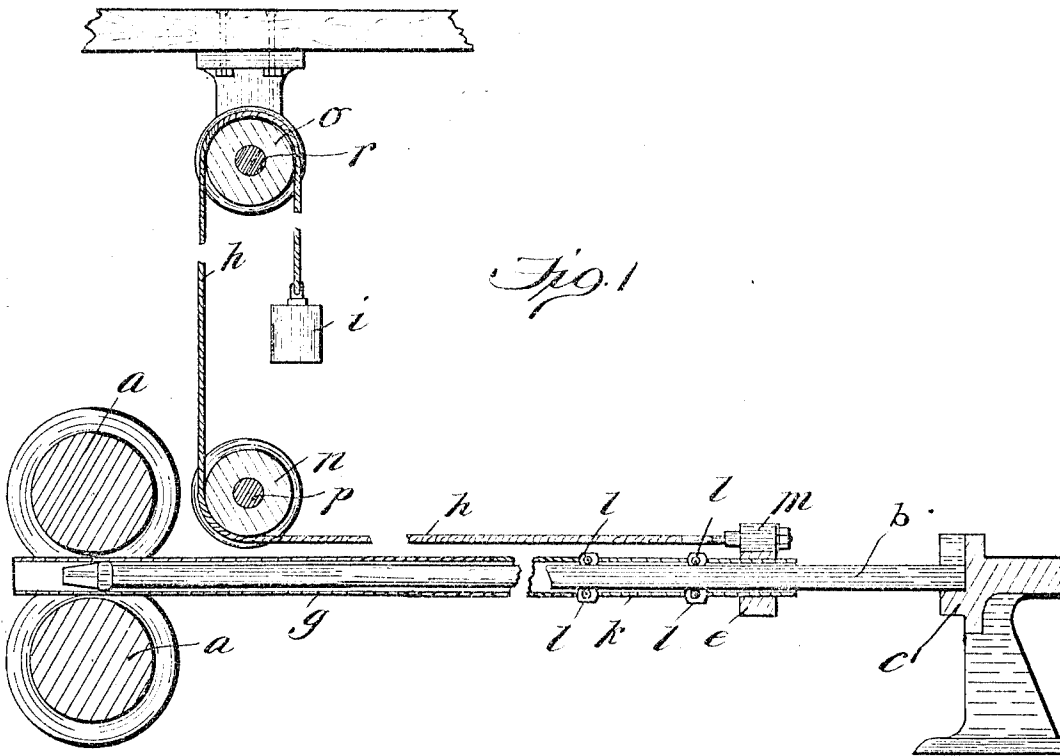


H. STÜTING.
TUBE ROLLING MILL.
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1,040,812.

Patented Oct. 8, 1912.



Witnesses:

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UNITED STATES PATENT OFFICE.

HEINRICH STÜTING, OF WITTEN, GERMANY.

TUBE-ROLLING MILL.

1,040,812.

Specification of Letters Patent.

Patented Oct. 8, 1912.

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To all whom it may concern:

Be it known that I, HEINRICH STÜTING, a subject of the Emperor of Germany, residing at Witten-on-the-Ruhr, Germany, have invented new and useful Improvements in Tube-Rolling Mills, of which the following is a specification.

This invention relates to tube-rolling mills.

Tube-rolling mills have already been suggested wherein the tubes are stripped from the mandrels and from the supporting rods of said mandrels by means of a stripping device, which is pushed forward through the medium of the tubes themselves as the latter are rolled on to said mandrels and which simultaneously raises a weight, the tubes being afterward stripped from the mandrels and mandrel-rods by said weight when the rolls are moved apart on completion of the rolling pass of said tubes.

In the mills of this kind heretofore suggested, a number of tubes have been stripped from their mandrels by means of a common stripper and weight. This arrangement has the disadvantage that when only one or two of the passes of the rolls are being used and thin tubes are being rolled, the force which would be required for stripping 5, 6 or more tubes from their mandrels is applied to one or two only and thus the tubes are liable to be crushed or deformed.

According to the present invention, a separate stripper and weight is provided for each tube, so that undue force is not applied to any one tube, and at the same time only the weights corresponding to the tubes being rolled are raised during the rolling on of said tubes, thereby reducing the amount of power to be supplied by the engine or motor driving the rolls.

In the accompanying drawings:—Figure 1 is a vertical longitudinal section, and Fig. 2 is a plan view, partly in section, of the essential parts of a rolling mill having the present invention applied thereto.

a are the grooved rollers, *b* the mandrel-rods and *c* an abutment for supporting said rods.

On the rods *b* slide stripper-tubes *k*, *k* which engage with the leading ends of the tubes *g*, *g* to be rolled and are of such length that they can pass beyond the plugs or mandrels at the ends of the rods *b*, *b*, thus en-

abling the tubes *g*, *g* to be entirely stripped from said mandrels. The stripper-tubes *k*, *k* are guided to move evenly on the rods *b*, *b* by means of guide-rollers *l* suitably journaled therein and running on said rods. On the other ends of said tubes *k*, *k* are fixed rings *e*, which bear eyes *m* for the attachment of bands *h*, *h* which are passed over guide-rollers *n*, *o*, of which the first *n* turn loosely on a stationary shaft *p* arranged transversely above the mandrel-rods *b*. The guide-rollers *o* are arranged in a similar manner on a shaft *r* supported in any suitable manner, as for example on upper beams.

The operation of my improved mill is as follows:—When tubes *g*, *g* are introduced into the passes, each tube *g* abuts against and pushes in front of it a stripper-tube *k*, so as to lift the corresponding weight *i*. As soon as the tubes have gone through the passes, the rolls *a*, *a* are moved apart. The tubes are therefore no longer subjected to pressure and are consequently stripped from their mandrels by their respective weights *i*, *i* acting through the corresponding bands *h*, *h* and stripper-tubes *k*, *k*. By this means, it is possible that only so many weights are raised as are required for the drawing-back of the corresponding number of simultaneously rolled tubes *g*. Thus if only one tube is rolled, this tube during its passage through the rolls only lifts its own driving weight, and so on.

What I claim is:—

1. The combination, in a tube-rolling mill, of a pair of tube-rolling rolls capable of being moved toward and away from each other, a stationary frame, a plurality of mandrel-rods fixed to said frame, an independent stripper-tube slidable on each of said mandrel-rods, a plurality of flexible tension members each connected at one end to one of said stripper-tubes, weights connected to the other ends of said flexible tension members, respectively, and means for guiding said tension members in such a manner that the stripper-tubes are urged continuously against the leading ends of tubes in process of manufacture advancing on to said mandrel-rods.

2. The combination, in a tube-rolling mill, of a pair of tube-rolling rolls capable of being moved toward and away from each other, a stationary frame, a plurality of

mandrel-rods fixed to said frame, independent-strippers guided to move along said mandrel-rods respectively, weights corresponding in number to said strippers, gearing connecting said weights and said strippers respectively in such a manner that the
5 strippers are urged continuously against the

leading ends of tubes in process of manufacture as said tubes are rolled on to said mandrel-rods.

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