

(No Model.)

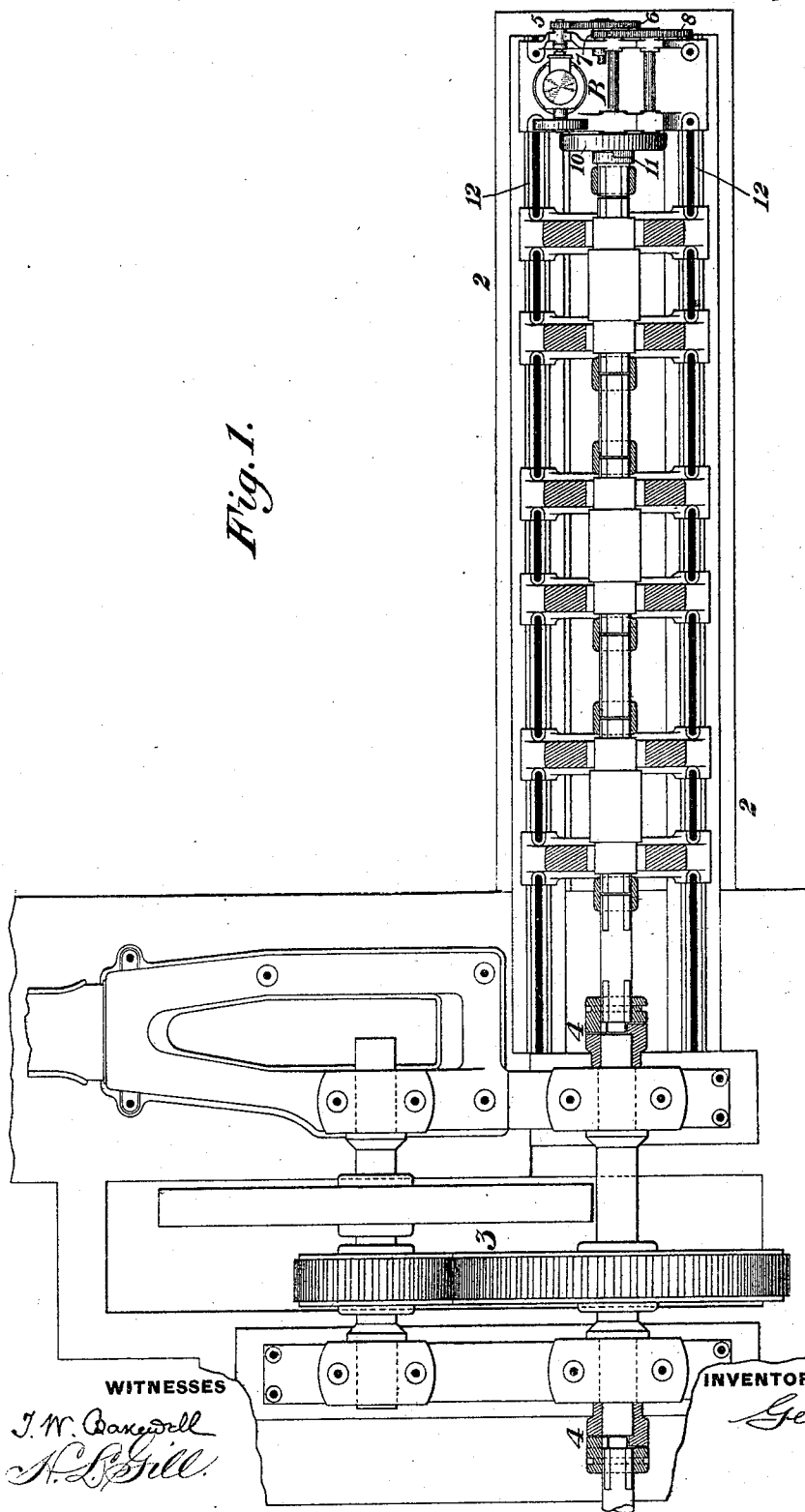
3 Sheets—Sheet 1.

G. MESTA.
APPARATUS FOR DRESSING ROLLS.

No. 497,500.

Patented May 16, 1893.

Fig. 1.



WITNESSES

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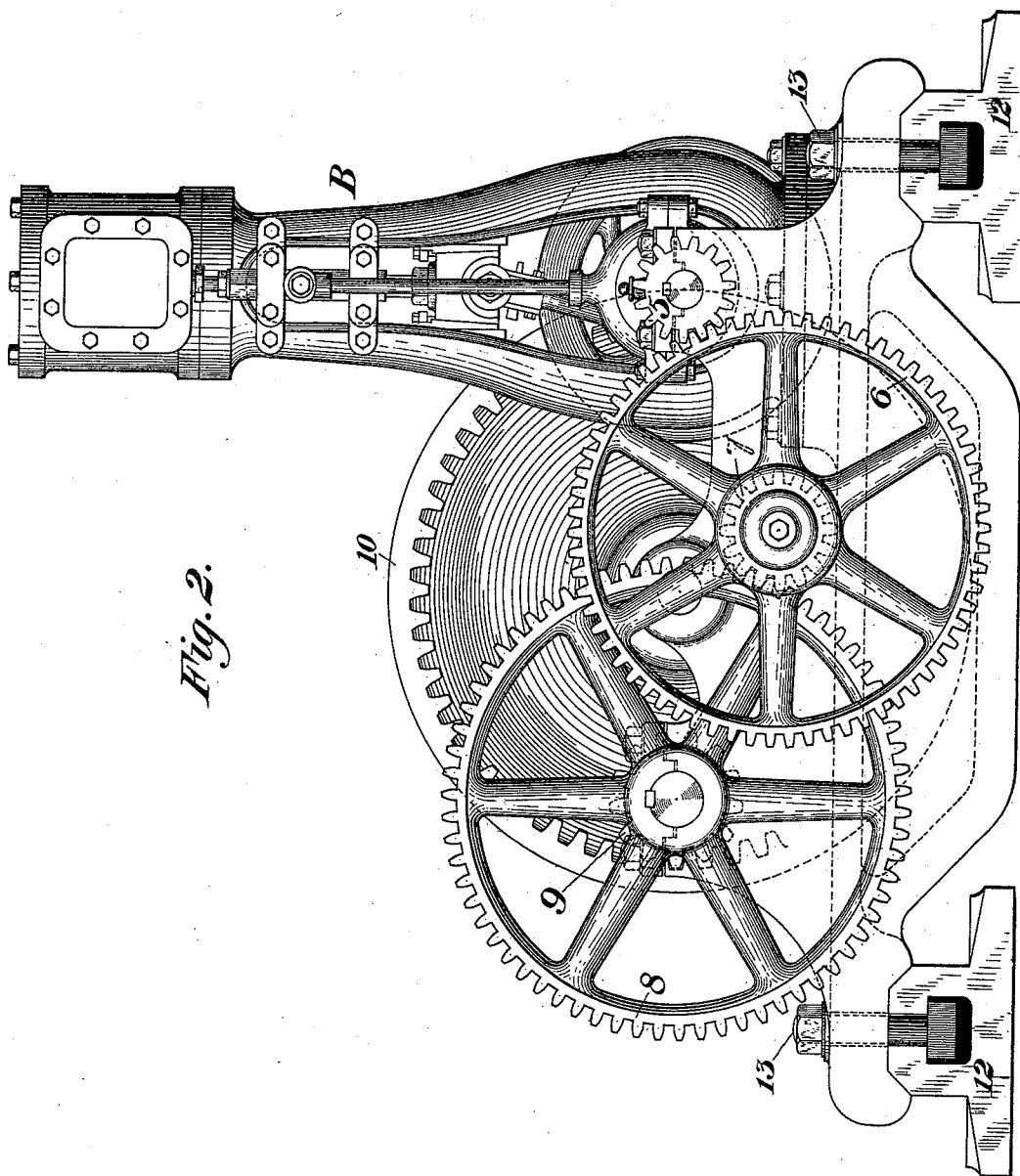


Fig. 2.

WITNESSES

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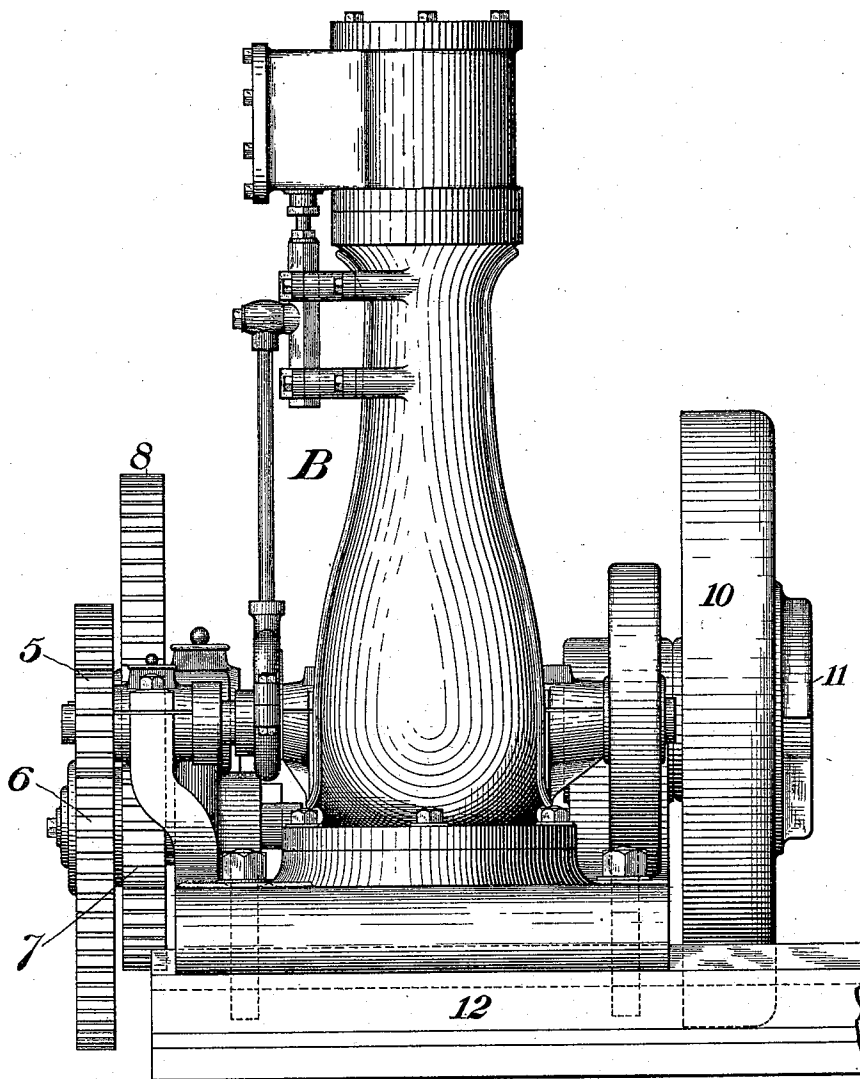
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Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE MESTA, OF PITTSBURG, PENNSYLVANIA.

APPARATUS FOR DRESSING ROLLS.

SPECIFICATION forming part of Letters Patent No. 497,500, dated May 16, 1893.

Application filed October 29, 1892. Serial No. 450,355. (No model.)

To all whom it may concern:

Be it known that I, GEORGE MESTA, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Apparatus for Dressing Rolls, of which the following is a full, clear, and exact description.

I shall describe my improvement with reference to the accompanying drawings, in which—

Figure 1 is a plan view of a part of a rolling-mill plant, provided with my improvement. Fig. 2 shows in end elevation the supplemental engine constituting part of my invention; and Fig. 3 shows the same in side elevation. Figs. 2 and 3 are made on a larger scale than Fig. 1.

In rolling-mill plants, especially those adapted for rolling thin sheet-metal, such as the material used in making tin plate, it is frequently necessary to dress the peripheries of the rolls by means of cutting tools, such as those used in lathes. For this purpose it is necessary that the rolls undergoing the operation of dressing be driven at a low rate of speed, and heretofore it has been common practice to employ the usual main engine for so driving the rolls, operating it very slowly, and generally using a special train of gearing for securing the necessary reduction of speed. The practical difficulty of this mode of operation is that during the dressing of the rolls at one side of the engine all the rolls connected with that engine on both sides must be stopped, and the delay in the operation of the mill thus occasioned is the source of very considerable loss.

The object of my invention is to overcome the difficulties pointed out above, and to this end it consists in provided the rolls with a supplemental driving-engine so geared as to transmit a slow motion, and arranging this engine so that it may be put into gear and disconnected from the rolls as desired.

It also consists in providing the rolls with such supplemental engine when the same is portable and is adapted to be shifted from one side of the rolls to the other.

The advantages of my invention are that by its use I am enabled to turn and dress the rolls of one part of the plant without stopping the operation of the other rolls.

Referring now to the drawings, 2 represents a line of plate rolls and their housings set at one side of a usual driving engine 3, coupled thereto by a crab 4, and provided with usual coupling-boxes and spindles between the housings. I also show, at the left end of Fig. 1, a second crab 4 connecting the engine with another similar line of rolls, not shown. The engine B employed for driving the rolls during the dressing operation is shown in Figs. 2 and 3. It may be of suitable type, having a reciprocating piston, and gearing 5, 6, 7, 8, 9, set in the engine-frame and connecting it with the transmitting wheel 10, which is provided with a crab 11, adapting it to be mechanically connected with the neck of one of the rolls to be driven. The engine is set on its bed so that it can be lifted as a whole and transported from place to place by means of a crane or other suitable lifting and carrying device. When so lifted it is adapted to be set upon the shoes 12 of the roll-housing at the end of the line of rolls, and its bed is so shaped that it may fit on the shoes and may be secured detachably thereto by means of bolts or other securing devices 13.

When it is desired to dress the rolls at either side of the mill, the engine B is set at the end of that line of rolls, on the housing-shoes of the end rolls, as shown in Fig. 1, and is connected by the crab to the neck of the adjacent roll. The driving-engine being then uncoupled from that line of rolls, they may be rotated by the engine B at the required slow-rate of speed without interfering with the operation of the other rolls of the mill, which may be driven by the main roll-driving engine and operated in the usual manner. If it be desired to dress any one or more of the sets of rolls without the others, the other rolls of the same line on the side next the driving-engine may be uncoupled therefrom and the rolls in question driven without operating the whole line. At the end of the roll-dressing operation, the supplemental engine may be uncoupled from the rolls, and may, if desired, be lifted to another part of the mill.

Within the scope of the broad claim of this application it is possible to use, instead of the portable engine on the same frame with the gearing 5, 6, 7, 8, 9, a second engine arranged at any suitable place in the mill, and detach-

ably connected by overhead shafting and belts with the said portable gearing.

I claim as new—

1. In a rolling-mill plant, the combination
5 of the rolls, a main driving-engine, a second engine, and a set of slow-speed gearing detachably connecting the second engine with the rolls; substantially as and for the purposes described.
- 10 2. In a rolling-mill plant, the combination of the rolls, a main driving-engine, and a supplemental engine provided on its frame with slow-speed gearing having a detachable connection enabling it to be coupled with the
15 rolls; substantially as and for the purposes described.

3. In a rolling-mill plant, the combination of the rolls, a main driving-engine, and a supplemental engine provided on its frame with slow-speed gearing having a detachable connection enabling it to be coupled with the
20 rolls, said supplemental engine being portable and having a bed adapted to be fitted detachably to the housing-shoes; substantially as and for the purposes described. 25

In testimony whereof I have hereunto set my hand this 25th day of October, A. D. 1892.

GEO. MESTA.

Witnesses:

T. W. BAKEWELL,
W. B. CORWIN.