

No. 789,989.

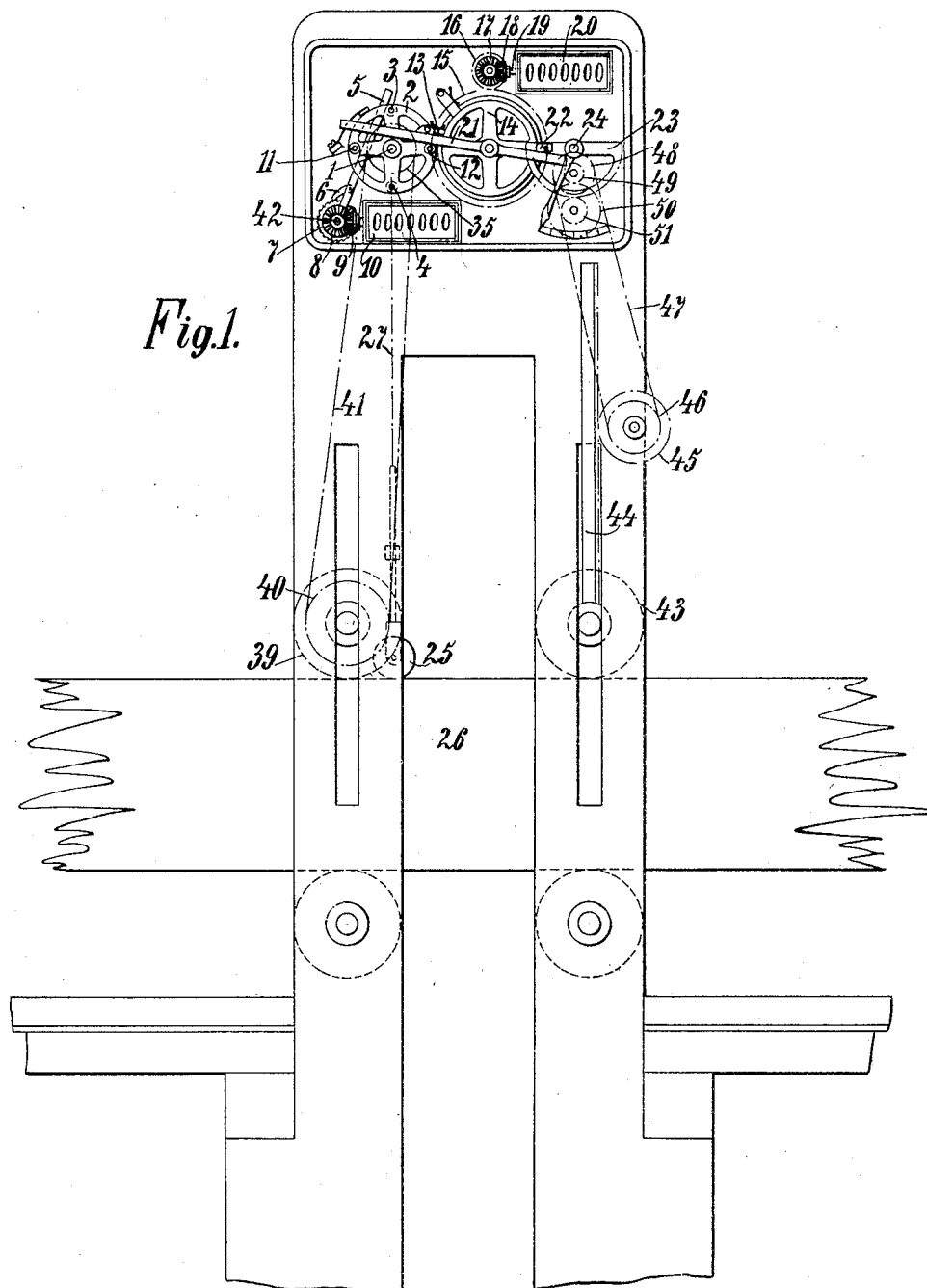
PATENTED MAY 16, 1905.

F. MEYER.

AUTOMATIC ENGAGING AND DISENGAGING MECHANISM FOR NUMERATORS
FOR SAWING MACHINES.

APPLICATION FILED NOV. 11, 1904.

2 SHEETS—SHEET 1.



Witnesses.

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Inventor

Franz Meyer
by *B. Singer* Att'y.

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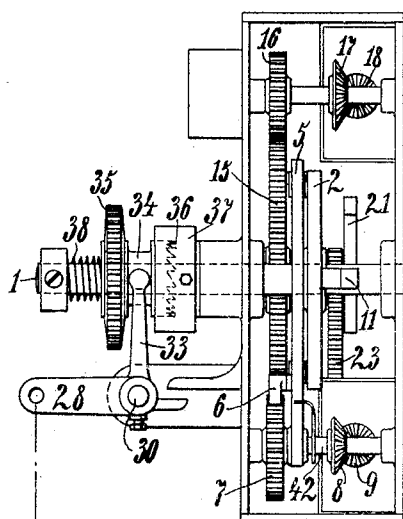


Fig. 3.

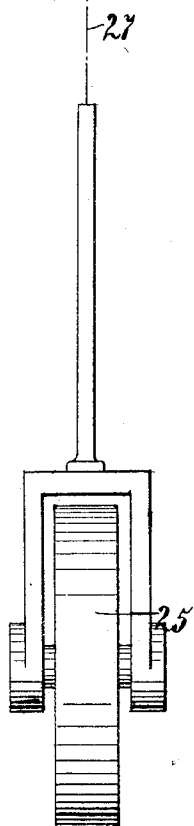
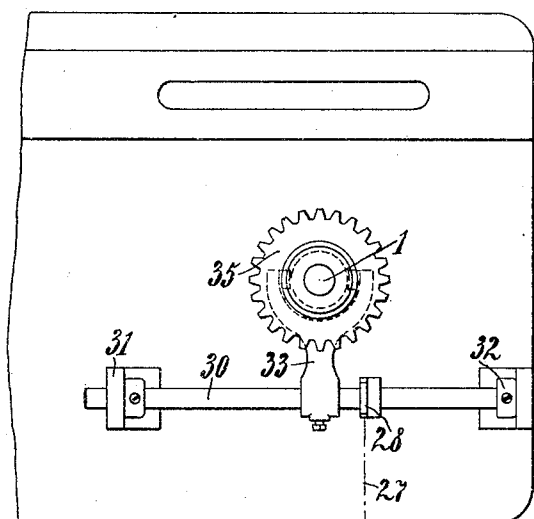


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

FRANZ MEYER, OF GLAUCHAU, GERMANY.

AUTOMATIC ENGAGING AND DISENGAGING MECHANISM FOR NUMERATORS FOR SAWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 789,989, dated May 16, 1905.

Application filed November 11, 1904. Serial No. 232,332.

To all whom it may concern:

Be it known that I, FRANZ MEYER, a subject of the German Emperor, residing at Glauchau, in the Kingdom of Saxony and Empire of Germany, have invented certain new and useful Improvements in Means for Automatically Engaging and Disengaging Sawing-Machine Numerators, of which the following is a specification.

This invention relates to mechanism for automatically engaging numerators in sawing-machines destined to determine the cubic contents and also the length of round timber as soon as the latter reaches the saws of the mill and to mechanism for automatically disengaging such numerators when the log leaves the mill. This engagement and disengagement is effected by means of a shaft fixed to two lever-arms, which latter are connected to a coupling member removable on the main shaft of the numerating device acted upon by a spring and also are connected with a weighted roller in such a manner that the latter on the log entering the mill is lifted by said log. In consequence thereof the shaft referred to above is freed from the weight of said roller and the coupling member displaced by the spring acting on it, thus coupling the main shaft of the numerator with a chain-wheel arranged on said main shaft and connected to one of the transport-rollers of the mill. However, on the removal of the round timber from the mill the weighted roller sinks down, thereby causing the shaft to rotate and the coupling member to be removed contrary to the tension of the spring, and thus disengaging the coupling previously effected.

In the annexed drawings the improved device is represented. Figure 1 is a front view of the numerator attached to the frame of the mill; Fig. 2, a back view of the numerator; and Fig. 3, a side view thereof, more particularly showing the disengaging mechanism.

1 is the main shaft of the numerator, rotated by the transport-roller 39, Fig. 1, by means of the chain-wheel 40, chain 41, and chain-wheel 35, Fig. 3, said transport-roller 39 being rotated by the round timber 26 traversing the mill. Thus the longitudinal displacement of the round timber is transmitted to the shaft

1. To the latter the wheel 2 is fixed, which on its rotation with the main shaft 1 by means of the pins 3 4 oscillates the lever 5, loosely fixed to the shaft 42, provided with a pawl 6. Thus the rotation of the main shaft is transmitted to the ratchet-wheel 7, the bevel-wheels 8 9, and to the numerator 10, measuring the length of the round timber, the shaft 19 of the numerator 20 being rotated by means of the pins 11 12, lever 21, pawl 13, ratchet-wheel 14, pinions 15 16, and the bevel-wheels 17 18.

As the drop of the lever 21 is regulated by the position of the cheek or stop 22 of the segment 23, pivoted at 24, and as this position may be regulated by the actual diameter of the round timber—as, for instance, by the second transport-roller 43, which is arranged to be displaced in height by suitable means—to wit, the rack 44, pinion 45, wheel 46, chain 47, chain-wheel 48, pinions 49 50 51—the numerator 20 actually measures the cubic contents of the round timber.

Now for the purpose of disengaging or setting the numerators 10 20 out of operation as soon as the log has traversed the mill, the weighted roller 25 is connected to a lever 28 by means of a chain 27, cord, or the like. This lever 28 is fixed to the shaft 30, pivoted at 31 32 to the frame of the numerating device. Also fixed to said shaft 30 is a lever 33, at its end arranged as a fork and engaging the groove of the coupling member 34, forming the hub of the chain-wheel 35. The chain-wheel 35 is displaceable on the shaft 1 and is able to rotate freely on the latter as long as the teeth 36 of the hub are not in engagement with the corresponding grooves of the part 37, keyed to the shaft 1.

The operation of the device is as follows: When the round timber 26 reaches the saws of the mill, the weighted roller 25 is lifted by the round timber and slides upon the latter. In consequence thereof the lever 28 and the shaft 30 are discharged, this in turn causing the spring 38 to force the chain-wheel 35 with its hub against the part 37, so that the pointed teeth 36 engage the corresponding gaps of said part. Consequently the coupling between the wheel 35, which, as stated above, is ro-

tated by the transport-roller 39 through the medium of suitable mechanism, and the shaft 1 is effected—*i. e.*, wheel 35 is also rotated, so that the two numerators 10 and 20 are operated by the shaft 1 in the manner described above. Now as soon as the round timber 26 has traversed the mill the roller 25 is not carried by the round timber any more, but, moreover, sinks down and draws the lever 28 downward. In consequence thereof shaft 30, Fig. 3, and also the lever 35 are turned in a direction contrary to that of the hands of a watch, chain-wheel 35, together with its hub, moved to the left contrary to the tension of the spring 38, and consequently the coupling between the wheel 35 and the shaft 1 disengaged.

Having now fully described my invention, I declare that what I claim is—

1. In mechanism for automatically engaging and disengaging numerators in sawing-machines the combination of a shaft 30 and a two-armed lever 28, 33 pivoted on said shaft, a weighted roller 25 connected to one of the said lever-arms 28, a coupling member 34 regulated by a spring 38 arranged on the main shaft 1 of the numerating device connected to said second lever-arm 33 and adapted to be displaced on said main shaft 1 on the round log entering and leaving the mill respectively, substantially as set forth.

2. In mechanism for automatically engaging and disengaging numerators in sawing-machines the combination of a shaft 30 and a two-armed lever 28, 33 pivoted on said shaft, a weighted roller 25 connected to one of the said arms 28, of a coupling member 34 and a chain-wheel 35 regulated by a spring 38 arranged on the main shaft 1 of the numerating device adapted to be displaced on said main shaft 1, said main shaft 1 adapted to be coupled with said chain-wheel 35 on the round timber entering the mill and adapted to be disengaged therewith on the round timber leaving the mill, substantially as set forth.

3. In mechanism for automatically engaging and disengaging numerators in sawing-machines the combination of a shaft 30 and a two-armed lever 28, 33 pivoted on said shaft, a weighted roller 25 connected to one of the said arms 28, a chain-wheel 35 displaceably arranged on the main shaft 1 of the numerating device regulated by a spring 38, a coupling member 34 integral with said chain-wheel 35 adapted to engage a corresponding coupling member 37 keyed to the main shaft 1 on the round timber entering the mill and said coupling members adapted to disengage on the round timber leaving the mill, substantially as set forth.

4. In mechanism for automatically engaging and disengaging numerators in sawing-machines the combination of a shaft 30 and an angle-lever 28, 33 pivoted on said shaft, a weighted roller 25 connected to one of the said lever-arms 28, a chain-wheel 35 displaceably arranged on the main shaft 1 of the numerating device regulated by a spring 38 and connected to one of the transport-rollers of the mill, a coupling member 34 integral with said chain-wheel 35 adapted to engage a corresponding coupling member 37 keyed to the main shaft 1 on the round timber entering the mill and said coupling members adapted to disengage on the round timber leaving the mill, substantially as set forth.

5. In a mechanism for automatically engaging and disengaging numerators of sawing-machines, the combination of a main shaft, a numerating device driven thereby, a clutch mechanism mounted on said main shaft, whereby said numerating device may be thrown into and out of operation, and a weighted roller serving by its engagement and disengagement with the material being sawed to throw said clutch into and out of mesh.

6. In a mechanism for automatically engaging and disengaging numerators of sawing-machines, the combination of a main shaft, a numerating device, means for operating said numerator, clutch mechanism for said operating means whereby said numerator may be thrown into and out of operation, and means serving by its engagement and disengagement with the lumber being sawed to throw said clutch mechanism into and out of mesh.

7. In a mechanism for automatically engaging and disengaging numerators of sawing-machines, the combination of a numerator, and means serving by its engagement and disengagement with the material being sawed to throw said numerator into and out of operation.

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

FRANZ MEYER.

Witnesses:

G. MENZEL,
FR. WEINECK.