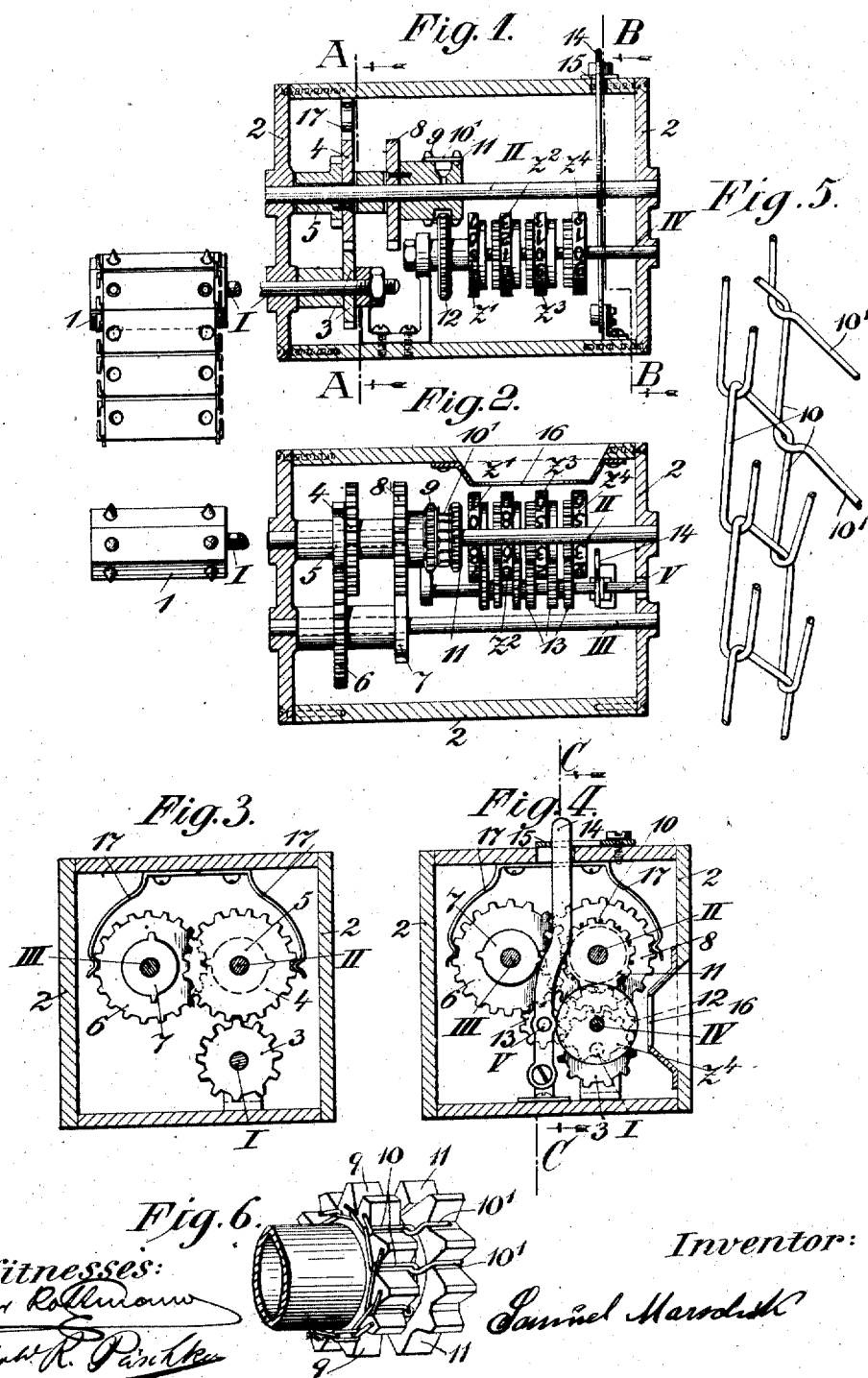


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 WAGE REGISTERING APPARATUS FOR MECHANICAL LOOMS.
 APPLICATION FILED JAN. 27, 1908.

994,416.

Patented June 6, 1911.



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UNITED STATES PATENT OFFICE.

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WAGE-REGISTERING APPARATUS FOR MECHANICAL LOOMS.

994,416.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed January 27, 1908. Serial No. 412,879.

To all whom it may concern:

Be it known that I, SAMUEL MARSCHIK, a subject of the Austro-Hungarian Emperor, and resident of Schmerlinstrasse 37, Brünn, Austria-Hungary, have invented certain new and useful Improvements in Wage-Registering Apparatus for Mechanical Looms, of which the following is a specification.

My invention relates to an improvement in mechanical looms and consists of a counter which is driven by a suitable part of the loom and which automatically registers the weaving wages for a given period (one week for example). By the use of this recording apparatus the calculation of wages and the book keeping relating thereto are done away with, so that errors are avoided, and the shoot-counters used hitherto and the meter-counters for the woven material or the subsequent measurement of the latter becomes unnecessary. The weaving wage is calculated in monetary units per work unit of 1000 wefts for instance.

The improved registering apparatus is driven from the spindle of the pattern-card cylinder as in the ordinary weft-counters; it consists essentially of a transmission system corresponding to the prevailing rate of wages in monetary units which is placed on a spindle making one revolution per work unit of 1000 wefts for instance, said spindle driving a counter so that the wages corresponding to the total work done can always be read off the former.

The accompanying drawings illustrate the invention.

Figure 1 is a sectional side-view through line C—C in Fig. 4 of the apparatus, Fig. 2 is a plan and a horizontal section respectively, Fig. 3 is a vertical section through line A—A in Fig. 1. Fig. 4 is a section through line B—B in Fig. 1. Figs. 5 and 6 are details.

In the drawing I is the spindle of a hexagonal pattern-card cylinder 1 which projects into the casing 2. On this spindle I is fitted the twelve-teeth wheel 3 which engages with the twenty-teeth wheel 4 mounted loosely on the shaft II. The toothed wheel 4, therefore, makes one revolution per 10 wefts when a hexagonal pattern-cylinder is used. The two-teeth wheel 5 is tightly fitted to the toothed wheel 4, the former engaging with the twenty-teeth wheel 6 which is mounted loosely on the spindle III, the latter wheel therefore making one revolution

per 100 wefts. The two-teeth wheel 7 is rigidly connected to the toothed wheel 6 by means of a bush. The toothed wheel 7 engages with the twenty-teeth wheel 8 fixed on the spindle II so that the latter finally makes one revolution per 1000 wefts. A chain wheel 9 is tightly connected to the toothed wheel 8 and carries a chain 10 (Fig. 10). The latter has the same number of links as the number of teeth on the chain wheel 9. The chain-links of this registering- or operating chain 10 (Fig. 9) can be bent laterally so as to form lateral projections 10'. A similar chain-wheel 11 is rigidly connected to the chain wheel 9, the projections 10' engaging with the teeth of the former and being supported by same. In this way a lantern-wheel is formed with any number of points 10' according to the number of projections which are bent aside; this wheel must have as many points 10' as the monetary units contained in the rate of wages per 1000 wefts. With a chain of ten links on a ten-teeth chain-wheel 9 it is, therefore, possible to register wages up to ten monetary units per 1000 wefts and with a chain of twenty links on a twenty-teeth chain-wheel 9, wages up to twenty monetary units per 1000 wefts according to the number of projections 10' bent out. The latter engage with a chain wheel 12 having ten teeth, which is mounted loosely on the spindle IV and which will be turned by as many teeth during one revolution of the operating chain 10, that is per 1000 wefts, as the number of monetary units contained in the wage. This chain wheel 12 is connected to the units figure-wheel z^1 of a counter $z^1, z^2 \dots$ of known construction which does not form part of this invention. The amount indicated by this counter can be read off at any time through a reading-aperture 16 in the casing.

The transmission spindle V (Figs. 2 and 4) which is movably mounted inside the casing 2 carries the gearing 13 for the transfer mechanism of the counter and can be moved by means of the lever 14 turnably arranged in the casing, so that the gearing 13 is thrown out of engagement with the counter and the figure-wheels z^1, z^2 of the latter can be brought back to zero in the usual manner. In order to maintain the transmission spindle V in its working position the lever 14 is kept in the normal position by a hook 15 or other suitable

means. In order to avoid any accidental further operation of the apparatus, braking springs 17 are provided which engage with the teeth of the wheels 4 and 6, but are arranged in such a way as to allow the apparatus to work in the reverse direction when the pattern-cylinder is reversed, as required for the removal and inspection of the weft etc., for instance.

10 What I claim as my invention and desire to secure by Letters Patent, is:—

1. A wage registering apparatus for mechanical looms comprising the combination of the casing, a spindle turnably placed in the said casing and driven from a suitable rotating part of the loom so that it makes one revolution per work unit, a tooth-wheel fixed on the said spindle, a chain placed around the said tooth-wheel, the links of this chain corresponding in number to the number of teeth of the said tooth-wheel, lateral projections on the links of the said chain, the number of these projections corresponding to the rate of wages in monetary units, a spindle fixed in the said casing, a tooth-wheel turnably arranged on the last said spindle, and engaging with the said lateral projections, a counter of any desired construction, also turnably mounted on the said spindle, the units figure-wheel of the said counter being connected with the last said tooth-wheel, substantially as described and for the purpose set forth.

2. A wage registering apparatus for mechanical looms comprising the combination 35 of a casing, a spindle turnably placed in the said casing and driven from a suitable rotating part of the loom so that it makes one revolution per work unit, a tooth-wheel fixed on the said spindle, a chain placed around 40 the said tooth-wheel, the links of this chain corresponding in number to the number of teeth of the said tooth-wheel, projections on the links of the said chain and adapted to be turned laterally, a second tooth wheel 45 connected to the last said tooth wheel and adapted for supporting the said laterally turned projections, a spindle fixed in the said casing, a tooth wheel turnably arranged on the last said spindle and engaging with 50 the said laterally turned projections, a counter of any desired construction also turnably mounted on the said spindle, the units figure-wheel of the said counter being connected with the last said tooth-wheel, 55 substantially as described and for the purpose set forth.

In testimony whereof I have hereunto signed my name this 13th day of January 1908, in the presence of two subscribing witnesses. 60

SAMUEL MARSCHIK.

Witnesses:

ADALBERT MILLER,
HEINRICH MARSCHIK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."