

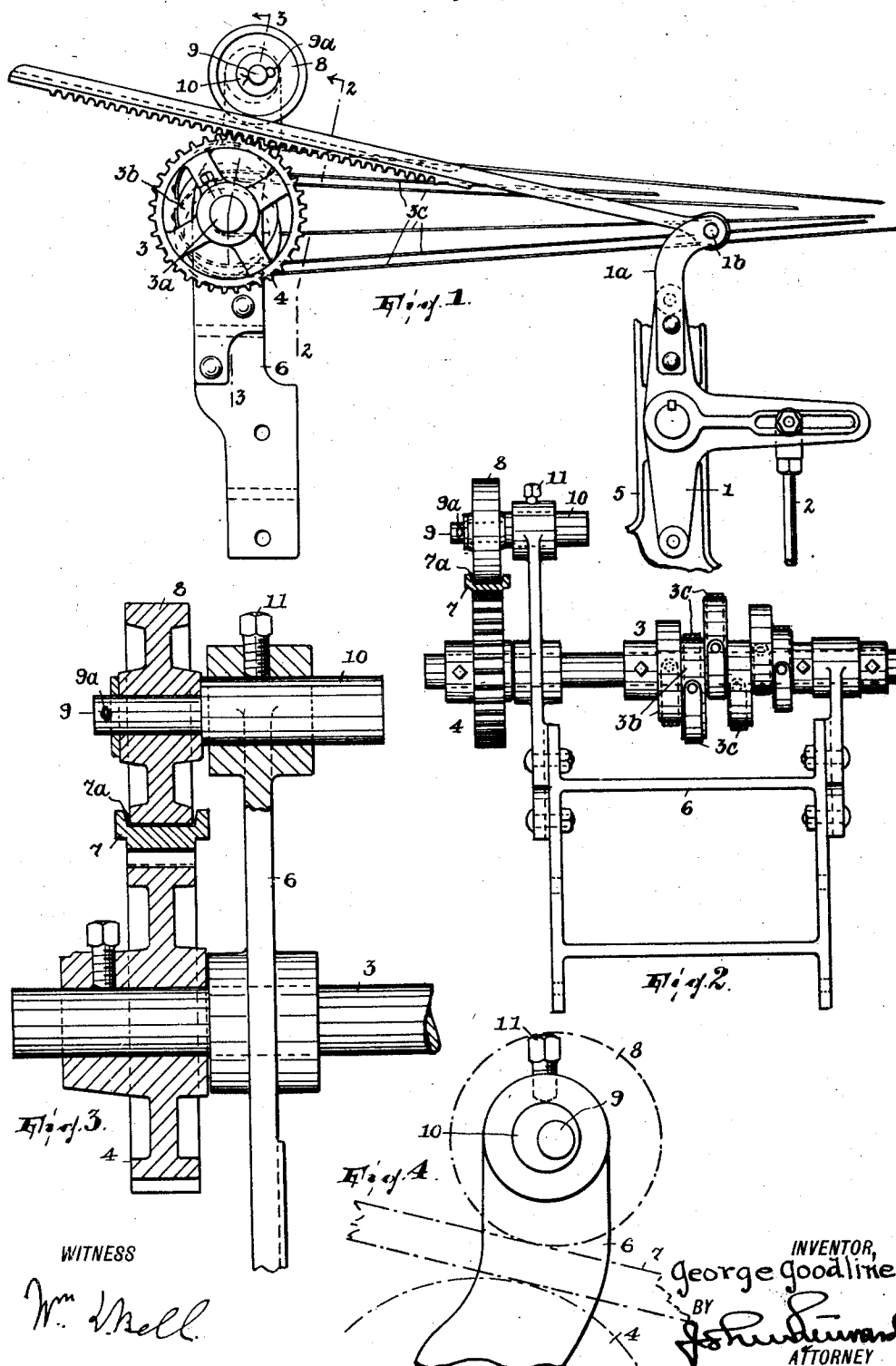
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MOTION TRANSMITTING MECHANISM

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WITNESS

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MOTION-TRANSMITTING MECHANISM.

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This invention relates to motion transmitting mechanism of the class in which oscillating motion is transmitted to an oscillatory member by a reciprocating member in peripheral tractive engagement therewith and reciprocated from any third member, as a rocking member. The invention has been devised with a view to its use particularly in transmitting motion from some rocking member in a loom (as the main lever from which, through pattern-controlled hooks, the jacks in a loom shedding motion are actuated) to the oscillatory actuator-including structure or member set forth in my Patent No. 1,116,814 and it is so herein illustrated and described by way of example. The principal underlying object of the invention is to provide for a simple motion-transmitting connection in a mechanism of the class indicated which may be initially established in mechanically correct condition and readily reestablished in that condition whenever, on account of wear or other disturbing circumstances, the connection ceases to be mechanically correct.

In the drawing,

Fig. 1 is a side elevation of the invention as applied in connection with a loom containing the mentioned lever of a shedding mechanism and the said oscillatory actuator-including structure or member;

Fig. 2 is a sectional view on line 2—2, Fig. 1;

Fig. 3 is a sectional view on line 3—3, Fig. 1; and

Fig. 4 is a side elevation of the support 6 and the shaft part of the keeper means, with the roller of the latter and the wheel 5 shown in broken lines.

A rocking member 1, here the main lever from which, through pattern-controlled hooks, the jacks in a loom shedding mechanism are as well known actuated, is arranged to rock in any suitable support; 2 may be any means for effecting its rocking motion. The oscillatory member 3, here a structure including a shaft 3^a and a set of eccentric actuators 3^b having straps 3^c connected therewith as in my said patent, is arranged to oscillate in any suitable support. In the present case it also includes a wheel 4. The axes of members 1 and 3 are parallel.

Usually the support 5 for the member 1 is a separate frame (for the shedding mechanism) mounted on the loom frame; and usually the support 6 for the member 3 will be a separate frame (see Fig. 2) suitably mounted on the loom frame. But it is not of course material that 5 and 6 be separate parts of the whole supporting structure.

Pivotally connected to the member 1 is a reciprocating member 7 which bears peripherally against the wheel 4; this member affords means for oscillating member 3 from member 1 and in order to obtain the necessary traction for this purpose both this member and the wheel 4 are toothed, making the former a rack. It is not material how the pivotal connection between members 1 and 7 is afforded, but in the present example an extension-piece 1^a is secured to member 1 and has a pin 1^b on which the rack articulates.

In a motion of this kind the member 7 should be maintained in constant contact with the wheel 4 throughout the whole extent of motion in each direction and it should also be kept throughout such motion in each direction against lateral displacement relatively to the wheel at the point of actual engagement therewith, and yet it should be capable of some adjustment relatively to the wheel and laterally thereof so as to make it possible to compensate for perchance otherwise faulty relative positioning in the loom or equivalent machine of the wheel 4 and member 1. Wherefore I provide keeper means constructed as follows.

The keeper proper is here a roller 8. It is journaled on a stud 9 projecting eccentrically from a shaft 10 mounted in the support 6 parallel with the axis of member 3, being confined between the end of the shaft and a cotter pin 9^a. The shaft 10 is revolvably and longitudinally adjustable in the support, the means for holding it fast when so adjusted being a set screw 11. It affords with the keeper proper or roller 8 said keeper means. The roller and rack have a rolling interlock with each other confining them against relative movement laterally, i. e., lengthwise of the axis of the member 3; in the present case this interlock is afforded by grooving one of these parts, as that surface of the rack which is engaged by the roller, as at 7^a, the groove receiving the roller.

In setting up the parts in the first instance the keeper means is rotatively adjusted and also longitudinally adjusted (and there secured by the set screw 11) so as on the one hand to set the rack laterally in proper re-

lation to said wheel, the second-named adjustment of course effecting adjustment of the rack because of its described interlock with roller 8. Thereupon, in operation, the rack reciprocates in constant contact with the wheel and besides it is kept against lateral displacement relatively to the wheel at their point of engagement, so that the motion is as quiet as possible and it proceeds without lost motion of the rack up or down or sidewise and undue wear and tear on the parts is avoided. If for any reason, as by wear, the rack fails to be held in constant contact with the wheel 4 by the keeper means or if the rack for any reason becomes unduly displaced laterally with respect to said wheel and is not operating on the proper part of its periphery crosswise thereof, the keeper can be adjusted in the way already described to correct the fault, i. e., either again to hold the rack without lost motion against the wheel or to set it to the proper extent laterally of the wheel.

Fig. 4 illustrates, when compared with Fig. 1, a necessity for adjustability of the keeper toward and from the member 7. According to the circumstances in different looms the member 7 may stand more or less inclined, requiring varying spacing between parts 4 and 8 in different looms.

My invention would be accomplished, of course, with rotatively adjustable keeper means having an eccentric portion, as 9, devoid of the roller 8; but I prefer to include such roller so as to reduce the friction to the minimum.

Having thus fully described my invention what I claim and desire to secure by Letters Patent is:

1. In combination, supporting means, an oscillatory member journaled therein, means in the supporting means to oscillate said

member including a reciprocating member in tractive peripheral engagement with the first member, and keeper means to hold the reciprocating member bearing against the oscillatory member rotatively adjustable in said supporting means on an axis substantially parallel with that of the oscillatory member and having an eccentric portion to bear against the reciprocating member at a side thereof opposite to the oscillatory member, and said keeper means being also adjustable lengthwise of its axis of rotary adjustment and its said portion and the reciprocating member being interlocked for adjustment together on adjusting said keeper means lengthwise of its said axis.

2. In combination, supporting means, an oscillatory member journaled therein, means in the supporting means to oscillate said member including a reciprocating member in tractive peripheral engagement with the first member, and keeper means to hold the reciprocating member bearing against the oscillatory member including a member rotatively adjustable in said supporting means on an axis substantially parallel with that of the oscillatory member and a roller eccentrically journaled in a fixed plane on the last-named member and arranged to bear against the reciprocating member at a side thereof opposite to the oscillatory member, said reciprocating member having a groove in said side extending lengthwise of its path of reciprocation and receiving said roller and forming therewith an interlock confining the reciprocating member against movement relatively to said roller lengthwise of said axis and said last-named member being also adjustable lengthwise of said axis.

In testimony whereof I affix my signature.

GEORGE GOODLINE.