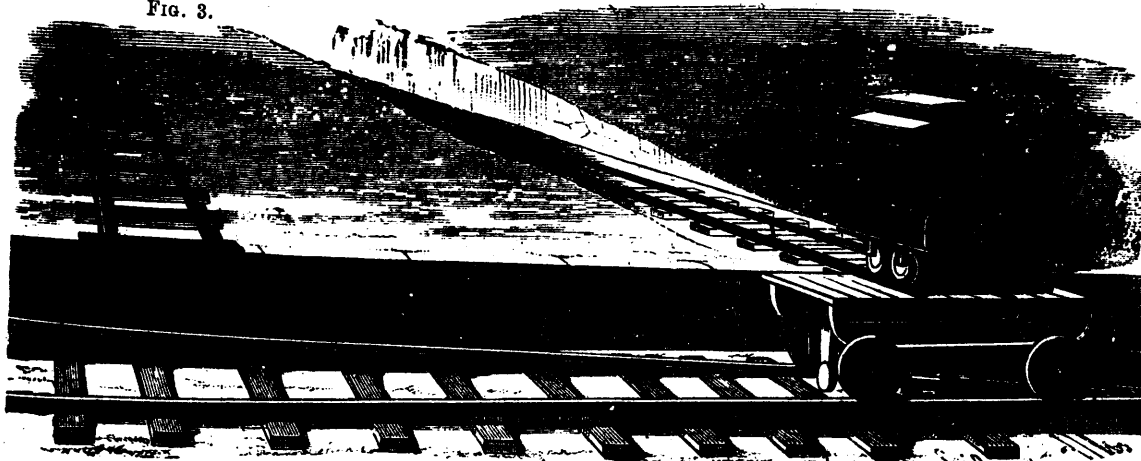


FIG. 3.



The return way, which is on the side of the mountain, terminates in the second tower. The cars descend vertically only in the first two towers, which contain two compartments, one for hoisting the car and one for lowering it.

At La Raillière the inclination of the car is reversed, and the car is transferred to the return track by means of a platform supported on wheels and provided with rails. The car on arriving from Caunterets rolls upon the platform. The latter moves by its own gravity on rails slightly inclined in opposite directions (see

Fig. 3), so that when the rails of the platform join the return track their inclination will have been reversed, and the car will, of its own gravity, return to the second tower. The movement of the transferring car is controlled by a hydraulic piston. The gradient of the railway to La Raillière is 0.005125 per meter, and of the return road 0.043961 per meter.

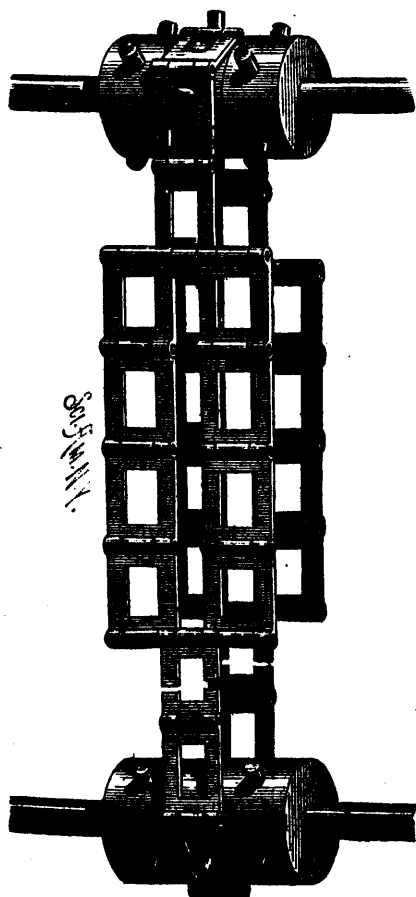
The department engineers prefer this plan to all others. The question of construction will be taken up at the next session of the Chambers.—*Scientific American*.

NEW MECHANICAL MOVEMENT.

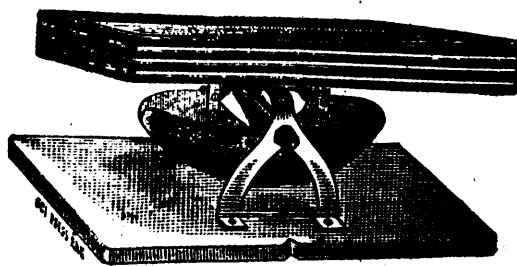
The engraving represents a novel mechanical movement for converting a continuous rotary motion into an intermittent rotary motion. The driving shaft carries a triple sprocket wheel, which is keyed on or otherwise fastened, and the driven shaft has three sprocket wheels, two of which are secured to it, while the third is movable on the shaft. The endless chain which connects the chain wheels of the two shafts is made of three separate sections—a median section alternating with two outer sections arranged parallel to each other and separated by a space equal to the width of the openings in the narrower section. This chain thus formed, as will be noticed, is double for a portion of its length, while the remainder is single.

When the driving shaft is revolved the chain is carried forward at a regular rate of speed. When the single portion of the chain comes into contact with the loose central sprocket wheel on the driven shaft, only the loose wheel is revolved, the shaft remaining stationary; but when the double portion of the chain engages the outer wheels, which are fixed on the driven shaft, the shaft is revolved until the double portion of the chain has passed over it, when it rests until engaged by another double portion. By means of this ingenious contrivance the driven shaft may be rotated either regularly or irregularly according to the relative proportion of double and single chain. This movement should find a ready application in textile machinery, and in fact in all classes of machines where intermittent rotary motion is employed.

This invention was recently patented by Mr. William P. Drew, of Preston, Minn.



DREW'S MECHANICAL MOVEMENT.



HUSTON'S PATENT SHIP'S BERTH.

(SEE PRECEDING PAGE.)