(No Model.) 2 Sheets—Sheet 1.

C. J. LANGENBACH.

ALARM SPEED INDICATOR.

No. 275,222. Patented Apr. 3, 1883.

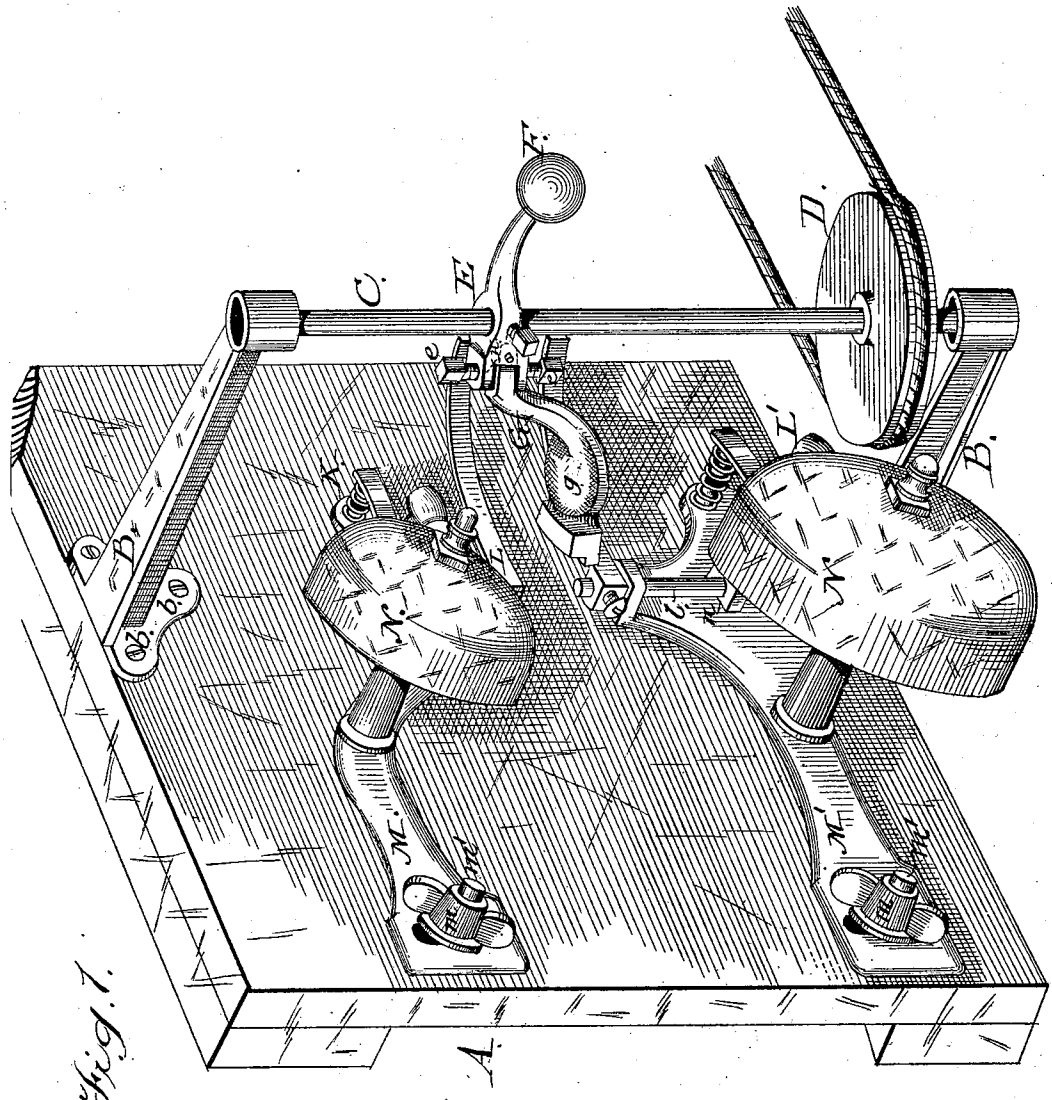


Fig. 1.

Witnesses;

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H. B. Applewhaite.

Inventor;

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N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

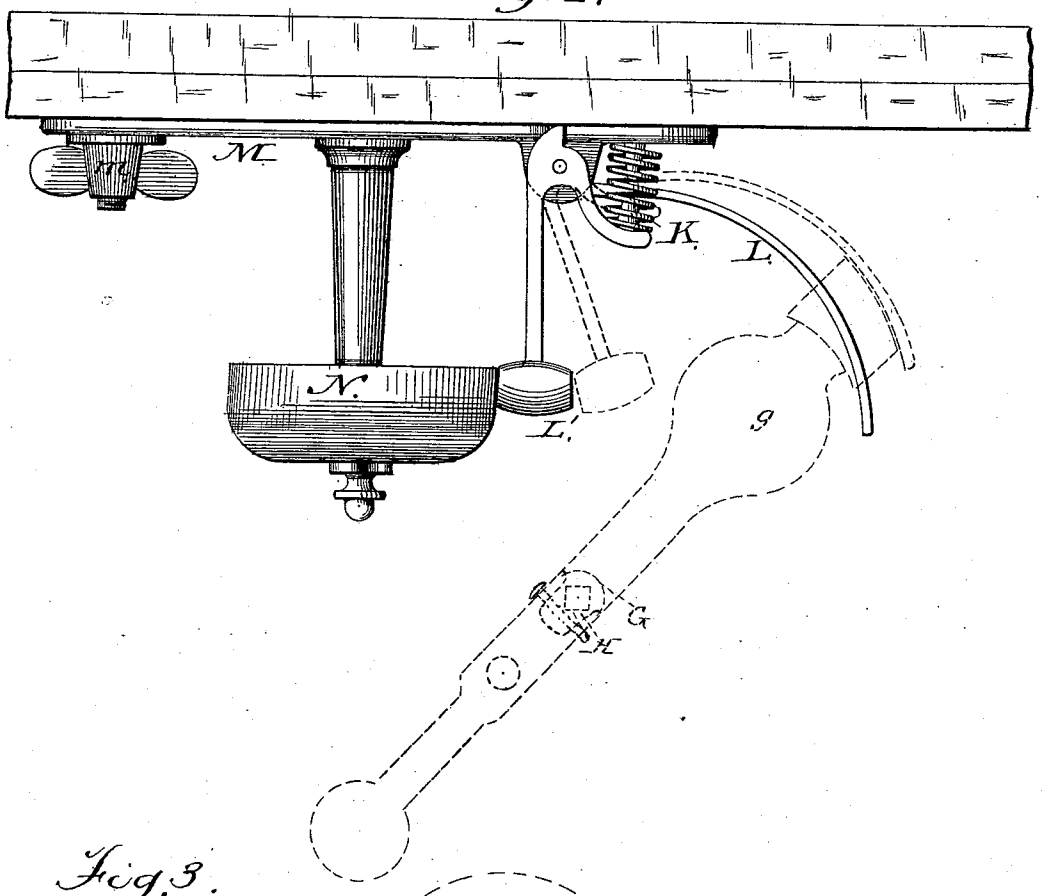
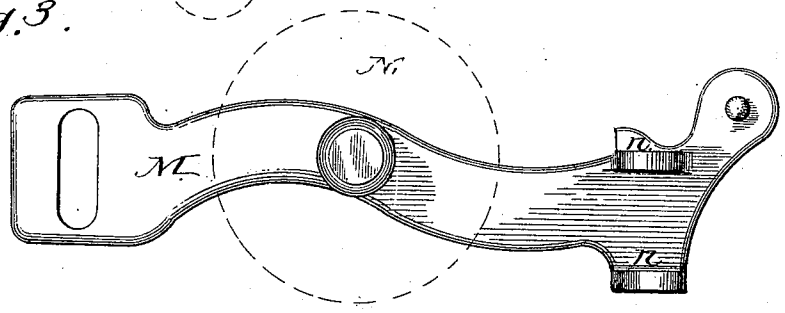


Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES J. LANGENBACH, OF DORCHESTER, IOWA.

ALARM SPEED-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 275,222, dated April 3, 1883.

Application filed September 7, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. LANGENBACH, of Dorchester, in the county of Allamakee and State of Iowa, have invented a new and useful Improvement in Alarm Speed-Indicators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of an alarm-indicator with my improvements attached. Fig. 2 is a plan view of one of the alarm-gongs with the operative mechanism. Fig. 3 is a plan view of one of the adjustable plates.

The object of my invention is to provide an alarm-indicator to indicate fast or slow motion by two different sounds; and it consists of certain details of construction and combination of devices, as hereinafter described and claimed, and is an improvement on my Patent No. 261,732, issued to me July 25, 1882.

To enable others skilled in the art to make and use my invention, I will proceed to describe the exact manner in which I have carried it out.

In the drawings, A represents a board or the base of the indicator.

B B are two arms, secured to the board by the screws *b* or any other convenient means. These arms furnish bearings in their outer ends for the vertical shaft C, the lower arm being provided with a step-bearing, so that the shaft C can be removed when desired. The shaft is driven by the pulley D, connected by means of a belt with the driving-power.

On the vertical shaft C is attached the adjustable block E, on one end of which is secured a ball, F. The opposite end is recessed to receive the pivoted arm G, horizontally pivoted and carrying the ball *g*. Above and below the slotted end of the block E, I secure the plate H, which furnishes bearings for the adjusting-screws *e*, which loosely pass through the plate, and by which the fall and rise of the arm G are determined and controlled. As the shaft C is revolved the ball *g* is raised by centrifugal force, and the degree of rise or fall depends upon the velocity at which the shaft is moved, thus acting like the ordinary steam-governor.

Thus far I have described only my invention as it is shown, described, and claimed in my Patent No. 261,723, and in which I claimed two steel springs, on the ends of which were bell-metal plates, against one of which the ball *g* was caused to strike as the speed would increase or diminish. Experience proved this combination of devices to be objectionable, as the ball, when it struck one of the sounding-plates, would jump and interfere with the other. To overcome this difficulty is the object of my present invention.

On the base of the indicator I secure the two adjustable plates M M′ by means of the thumb-screws *m* and the bolts *m′*, working through the slots in the castings. By this means these plates may be adjusted from or toward each other at pleasure. On each of these plates I secure a gong, N, the two gongs differing in tones. Through the ears *n n*, cast upon the plates, I pass the journal *l*, and on one end of this journal is fitted the adjustable curved lever L and on the opposite end a spring-hammer, L′. When the curved lever L is thrown back, the journal *l* carries back the spring-hammer at the same time and compresses the spring K, and when the lever is released the spring rebounds and throws the hammer L against the gong N, thus giving an alarm.

The operation of my alarm speed-indicator is as follows: When the indicator is in position, the desired speed is determined, and the levers L adjusted so as to allow the ball *g* to pass freely between them. If the speed should slacken too much, the ball *g* would necessarily revolve on a lower plane and come in contact with the lower lever, L, and throw it back, and this would also throw back the spring-hammer L′. As soon as the ball *g* has passed the lever it is released, when the spring K throws the hammer forward against the gong, giving the alarm. If the speed should increase beyond a desired velocity, the ball *g* would be thrown up until it would come in contact with the upper lever, L, when this lever would be

forced back and a signal be given on the upper gong. The tones of the two gongs being widely different, the person in charge can readily tell whether the speed is too high or too low.

Having thus explained my invention, what I claim as new, and desire to secure by Letters Patent, is—

In an alarm-indicator, the revolving spindle C, swinging arm G, and revolving ball *g*, in combination with the levers L, hammers L′, and gongs N, all constructed and arranged to operate substantially as and for the purpose set forth.

CHARLES J. LANGENBACH.

Witnesses:
C. C. BANFILL,
S. W. HERSEY.