

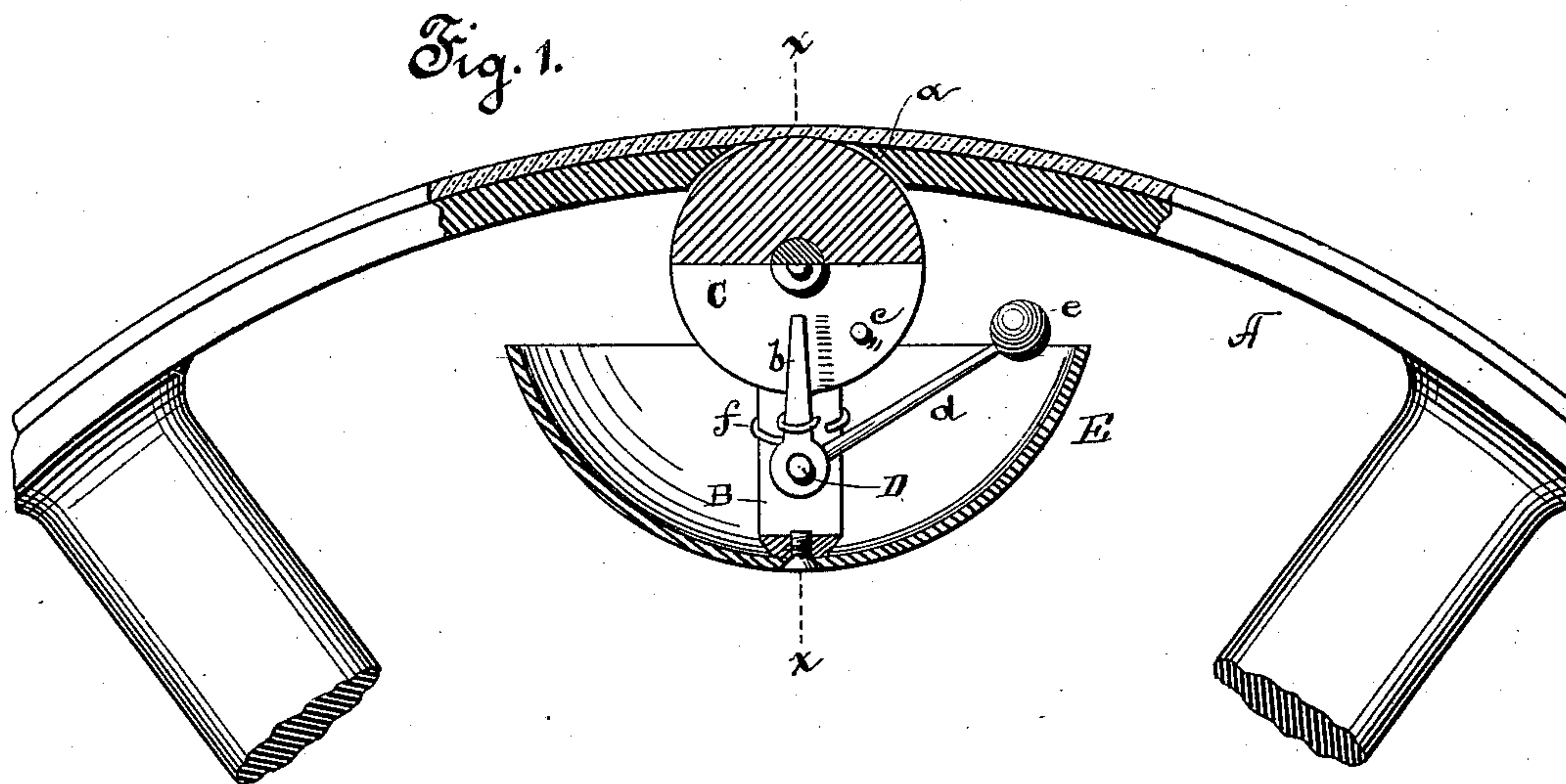
(No Model.)

J. PAFF.

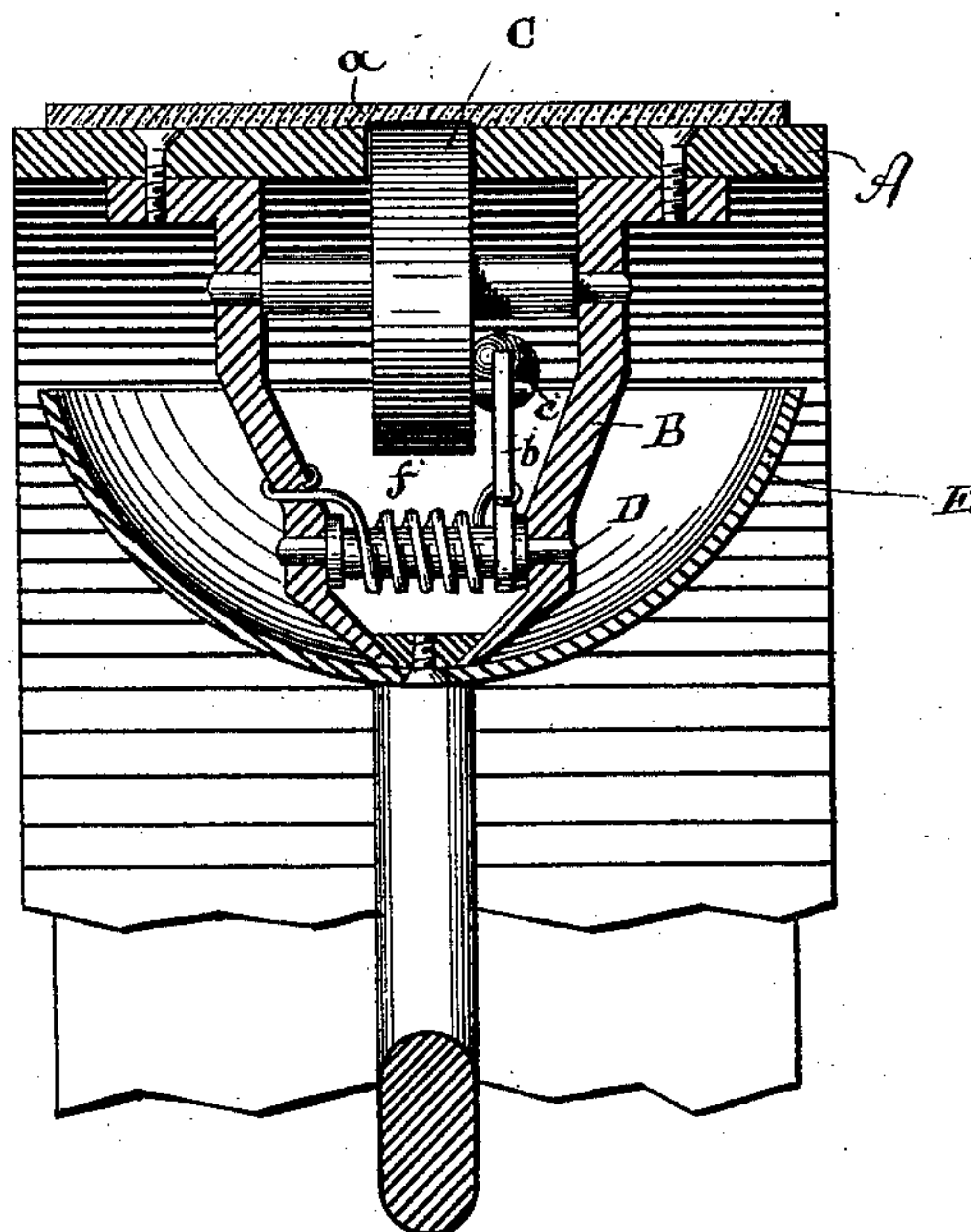
LOOSE BELT ALARM.

No. 359,402.

Patented Mar. 15, 1887.



*Fig. 2.*



WITNESSES:

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*W. Sedgwick*

INVENTOR:

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# UNITED STATES PATENT OFFICE.

JACOB PAFF, OF AMBOY, MINNESOTA.

## LOOSE-BELT ALARM.

SPECIFICATION forming part of Letters Patent No. 359,402, dated March 15, 1887.

Application filed June 17, 1886. Serial No. 205,509. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB PAFF, of Amboy, in the county of Blue Earth and State of Minnesota, have invented a new and Improved  
5 Loose-Belt Alarm, of which the following is a specification, reference being had to the annexed drawings, forming a part, in which—

Figure 1 is a side elevation, partly in section, of my improved loose-belt alarm applied  
10 to a pulley. Fig. 2 is a transverse section taken on line *xx* in Fig. 1.

Similar letters of reference indicate corresponding parts in both figures of the drawings.

The object of my invention is to provide a  
15 simple and efficient alarm for indicating the slipping of a belt audibly.

My invention consists in the construction and arrangement of parts, as will be hereinafter fully described and claimed.

20 To the rim A of a pulley is secured a frame, B, in which is journaled a small friction-wheel, C, which projects through an aperture, *a*, in the rim of the pulley and slightly beyond the face of the pulley, so that it will touch the  
25 belt extending around the pulley. In the frame B, near its inner end, is journaled a small rock-shaft, D, carrying an arm, *b*, which projects into the path of a pin, *c*, inserted in the side of the friction-wheel C. The shaft D also  
30 carries an arm, *d*, having at its free extremity a bell-hammer, *e*. A spring, *f*, surrounds the shaft D, and is attached at one end to the arm *b* and at the other end to the frame B.

To the inner end of the frame B is secured a  
35 gong, E, in position to be struck by the bell-hammer *e*. So long as the belt travels with the rim of the pulley the friction-wheel C remains stationary; but when the belt slips on the rim of the pulley it causes the friction-  
40 wheel C to rotate, bringing the pin *c* into en-

gagement with the arm *b*, thus turning the shaft D so as to raise the hammer *e*, and when the pin *c* passes the end of the arm *b* the spring *f* turns the shaft D, so as to carry the bell-hammer *e* into contact with the rim of the  
45 gong E, sounding the alarm.

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

1. The combination, with a pulley, of a  
50 friction-wheel journaled on the same, with its periphery projecting beyond the periphery of the pulley, and an alarm, also mounted on the pulley and constructed to be operated by the said wheel, substantially as set forth. 55

2. The combination, with a pulley having a slot in its periphery, of a wheel mounted on the pulley and projecting through said slot and having a pin on one side of the wheel, a bell on the pulley adjacent to said wheel, and  
60 a bell-hammer having an arm extending into the path of the said pin.

3. The combination, with a pulley having a slot in its periphery and a frame secured to the rim under the slot, of a wheel journaled  
65 in the frame and provided with a pin on one side, a spring-operated rock-shaft, also journaled in said frame and provided with a bell-hammer operated by the said pin, and a bell secured to said frame, substantially as set forth. 70

4. The combination, with a pulley provided with an aperture, *a*, in the rim thereof, of a loose-belt alarm formed of the friction-wheel C, provided with the pin *c*, the rock-shaft D, arms *b* *d*, spring *f*, gong E, and the supporting-  
75 frame B, substantially as shown and described.

JACOB PAFF.

Witnesses:

H. B. PERRIN,  
W. L. PERRIN.