(No Model.)

B. F. FREELAND.

TIME REGISTER FOR RAILROAD STATIONS.

No. 390,222. Patented Oct. 2, 1888.

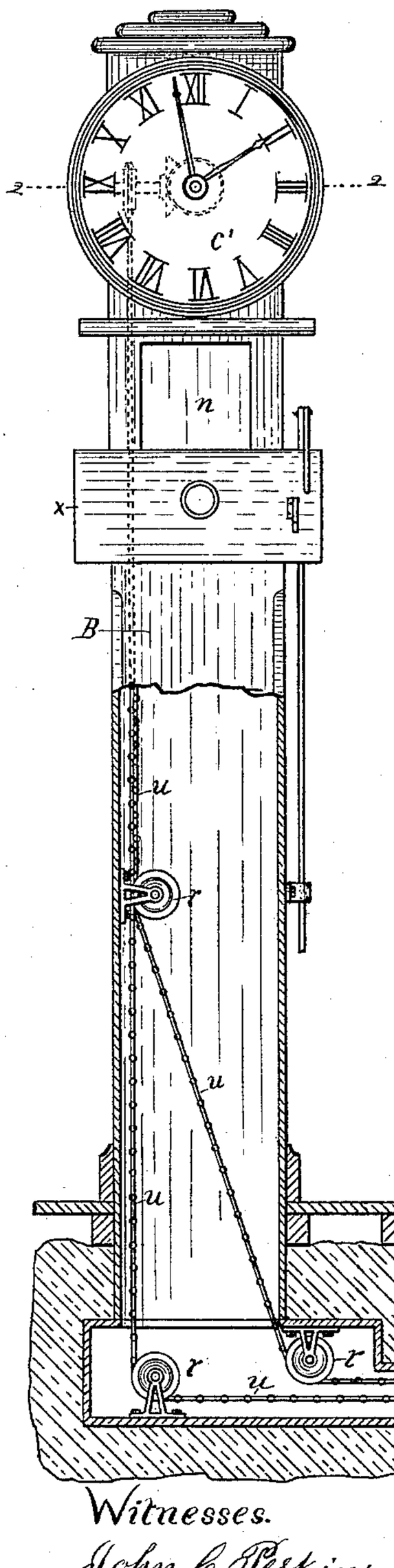


Fig. 1

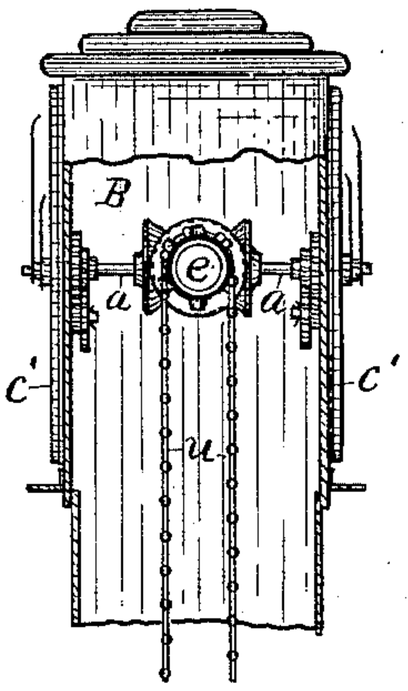


Fig. 2

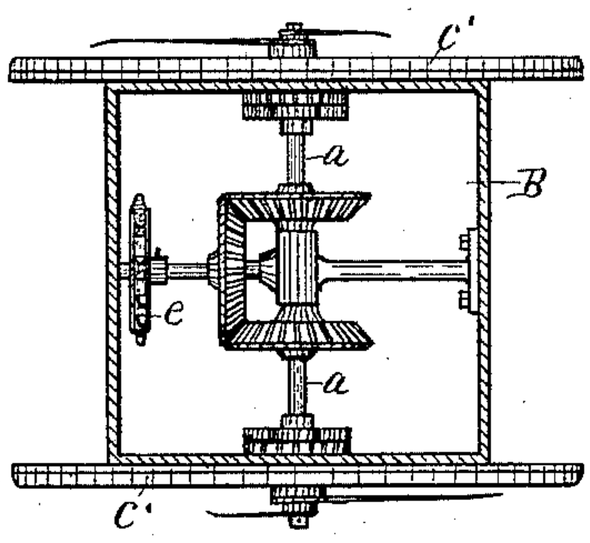
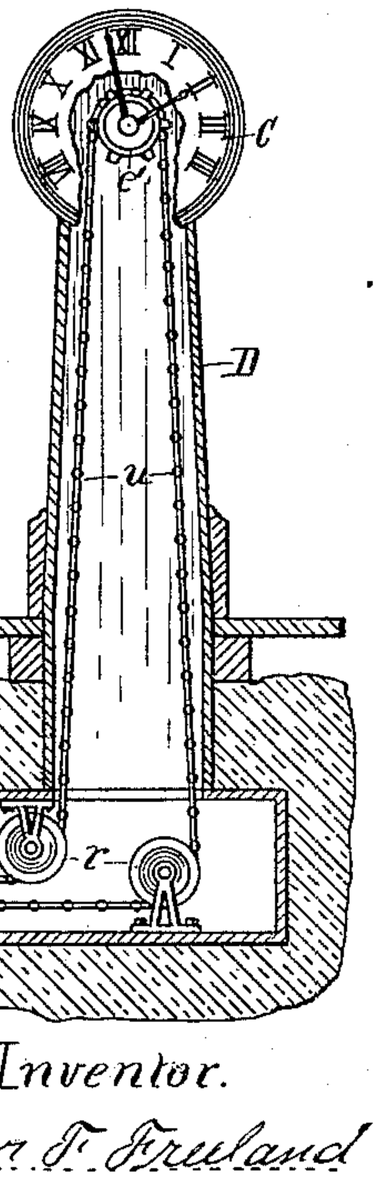


Fig. 3



Witnesses.

John C. Perkins

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UNITED STATES PATENT OFFICE.

BUCKNER F. FREELAND, OF VISTULA, INDIANA.

TIME-REGISTER FOR RAILROAD-STATIONS.

SPECIFICATION forming part of Letters Patent No. 390,222, dated October 2, 1888.

Application filed March 7, 1888. Serial No. 266,478. (No model.)

To all whom it may concern:

Be it known that I, BUCKNER F. FREELAND, a citizen of the United States, residing at Vistula, county of Elkhart, State of Indiana, have invented a new and useful Time-Register for Railroad-Stations, of which the following is a specification.

The leading object of this invention is to construct a dial apparatus by which the time at which an outgoing train left the station can be given to an incoming train by the agent in his office, all substantially as below described and claimed.

In the drawings forming a part of this specification, Figure 1 is a side elevation with parts in section; Fig. 2, a view looking from a point at the left of the upper part of Fig. 1, parts being in section; and Fig. 3 is a cross-section on the dotted line 2 2 in Fig. 1.

Referring to the letters marked on the drawings, B is a light-house tower having windows *n* and signals *x*, as in another pending application of mine filed February 10, 1888, Serial No. 263,625. My present invention may or may not be used in connection with these features, and hence no further reference to invention in said pending application need be made. The tower or hollow post B in the present instance serves to support the dials C′ in an elevated position. There is a dial on two opposite sides, so that one will face up and the other down the track, Fig. 2.

Beneath the ground is a chamber or tunnel, A, leading to the office beneath the floor. The hollow post D, which supports the operator's dial C, communicates with the tunnel A; but so far as the hollow post D is concerned it may be dispensed with, and the dial C can be attached to the wall of the office or to any other suitable support. The axis of the hands of the dial C is provided with a pulley, *e′*, sprocket, or other suitable pulley. It may be stated here that both the dials C and C′ are provided with suitable clock-gearing to cause the short hand to move a distance representing five minutes, while the long hand makes a circuit representing sixty minutes, according to the principle of ordinary clocks, and as this principle is well understood no further description on this point is necessary. The dials may be twenty-four-hour dials instead of twelve, as here shown.

In Fig. 3 the axles *a* of the hands of the dials C′ are gear-connected with a shaft bearing a pulley, *e*. This may be a sprocket, as here shown, or otherwise. As in Fig. 3, the hands of both dials C′ C′ are operated at the same time, and thus both indicate like time; but this is not necessary, as the hands of one dial, C′, may be operated independently of the other, and hence I place no particular importance to the gear arrangement in Fig. 3. Of course where only one dial was caused to register the time each axle *a* would be provided with a pulley, *e*, and the shaft which bears the pulley *e* and the gear-connections of this shaft with the axles *a* would be dispensed with. In this case two belts, *u*, and corresponding dials would be employed, instead of one belt and one dial, C, as here shown. Any suitable belt may be employed, passed over the dial-pulleys *e e′*, and around the guide-pulleys *r r*. When the pulleys *e e′* are sprockets, of course a sprocket-belt, *u*, would be employed, as here shown, and this no doubt is the most desirable plan to follow. By this arrangement, as in Fig. 1, it will readily be seen that whatever time the station-agent fixed on the office-dial C would be communicated to and at once be indicated on the outdoor-dials C′ C′, as instanced on both dials C C′ in Fig. 1 nearly two o'clock, thus showing to any train approaching the station what time the last train passed. Thus the engineer will know the exact time between his train and the train ahead, and be enabled to comply with the rules that trains shall run not nearer than a given distance apart.

The outdoor-dials C′, if preferred, may be attached to the station or other suitable support, and the belt *u* need not necessarily be beneath the ground.

The outdoor-dials are of course transparent and have a light behind, so that the time can be seen at night. The light in my former application, above referred to, will light the dials and the signals when both are employed together.

Having thus described my invention, what I claim as new is—

1. An office-dial and an outdoor-dial, the axis of the hands of the dials being provided with pulleys, and a belt on said pulleys, all combined substantially as set forth.

2. The combination of an office-dial, an out-

door-dial, each dial having an axis bearing hands and sprocket-pulley, and an endless sprocket-belt on said pulleys, substantially as set forth.

3. The combination of an outdoor light-house provided with the transparent dials, an office-dial, the dials having an axis in each provided with hands and a pulley, an underground tunnel leading from the light-house to the station, and an endless belt on said pulleys and passing through the tunnel and guide-pulleys to said belt, substantially as set forth.

4. An outdoor and an indoor dial having hands, said hands having an axis provided with a sprocket-pulley and a sprocket-belt on said pulleys, in combination, whereby the time fixed by the operator on the dial indoors will be registered on the dial outdoors, substantially as set forth.

In testimony of the foregoing I have hereunto subscribed my name in presence of two witnesses.

BUCKNER F. FREELAND.

Witnesses:

W. H. SHELLENBARGER,

LOUIS DENNERT.