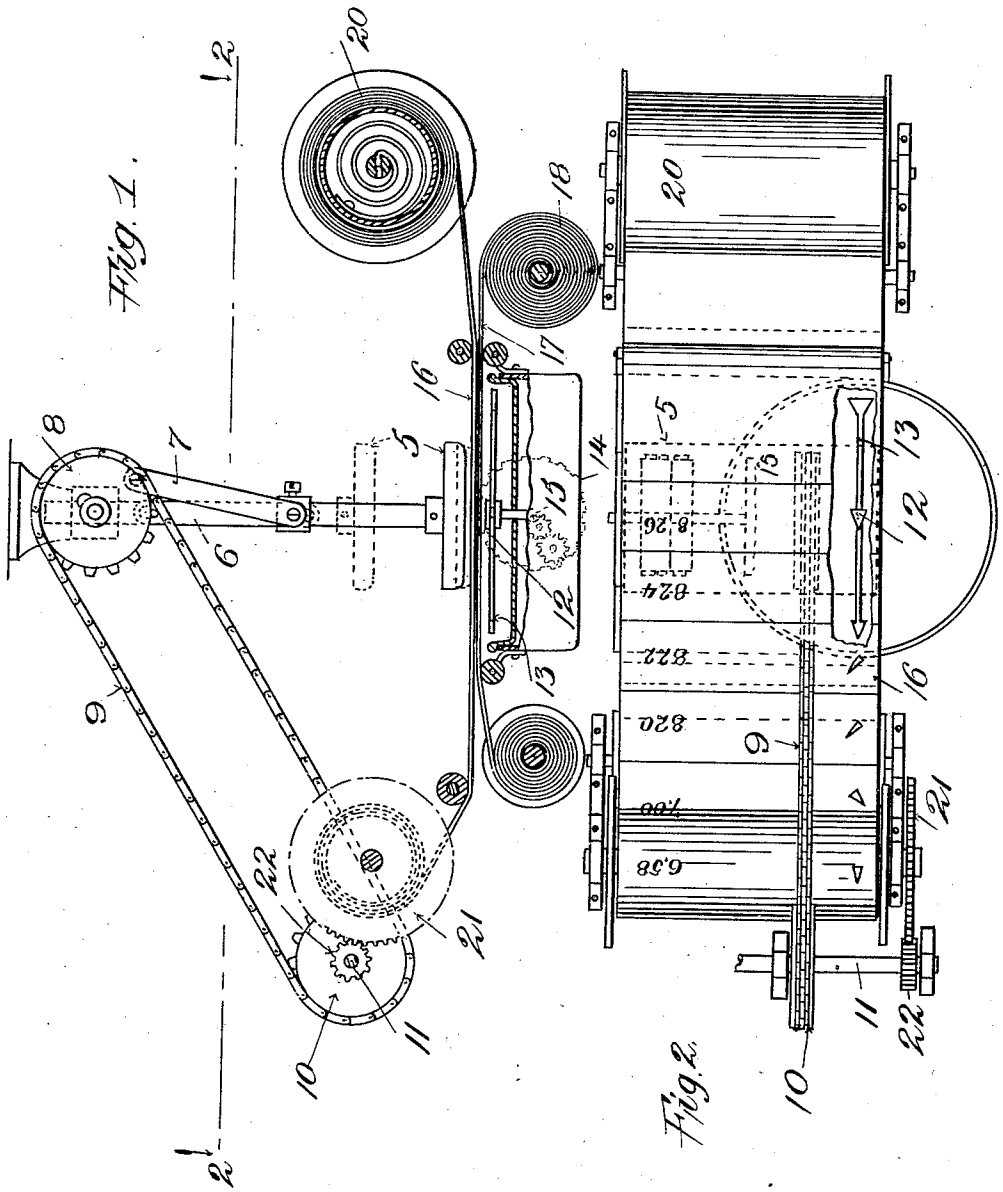
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ROUTE RECORDING INSTRUMENT FOR VEHICLES.

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ROUTE-RECORDING INSTRUMENT FOR VEHICLES.

1,201,631. Specification of Letters Patent. Patented Oct. 17, 1916.

Application filed October 16, 1912. Serial No. 725,983.

To all whom it may concern:

Be it known that I, HAROLD ROWNTREE, a citizen of the United States, residing at Kenilworth, in the county of Cook, State of Illinois, have made a certain new and useful Invention in Route-Recording Instruments for Vehicles, of which the following is a specification.

This invention relates to route recording instruments for vehicles.

The object of the invention is to provide means for recording the direction of travel of vehicles, the time of travel, and the time of stops made by the vehicle.

A further object of the invention is to provide a mechanism which is simple and efficient for recording the essential features necessary for keeping a route and direction record of the operations of an automobile or other vehicle.

Other objects of the invention will appear more fully hereinafter.

The invention consists substantially in the construction, combination, location and relative arrangement of parts, all as will be more fully hereinafter set forth, as shown in the accompanying drawing, and finally pointed out in the appended claims.

Referring to the accompanying drawing, and to the various views and reference signs appearing thereon:

Figure 1 is a view in side elevation, parts broken out and parts in section, of a route recording instrument embodying the principles of my invention. Fig. 2 is a top plan horizontal sectional view on the line 2, 2 Fig. 1, looking in the direction of the arrows, the platen operating means being omitted.

In its essential characteristics, my invention comprises a printing platen coöperating with a pointer which is compass operated, and with a time wheel, or time stamp which is clock operated, together with a record paper and a carbon or ribbon, and operating mechanism therefor, and means for operating the printing platen at stated intervals of distance traveled.

These essential and principal elements or features of my invention may be widely varied in the details of structure and relation and arrangement thereof, without departure from the scope and spirit of my invention as defined in the claims.

In the particular arrangement shown I employ a printing platen indicated at 5, mounted to reciprocate, and to which reciprocations are imparted by suitable connections driven from any convenient part of the automobile, but preferably driven or actuated periodically at stated distances of travel of the machine, for instance, by way of illustration, for every one quarter of a mile traveled by the machine the printing platen 5, effects a printing stroke. A convenient arrangement for accomplishing this is shown wherein the printing platen 5 is mounted to slide upon a vertical support 6, by means of a link 7, connected to the printing platen and actuated by being eccentrically pivoted to the pulley 8 which is driven in any suitable manner, for instance, by means of a chain drive or other form of gearing, indicated at 9, operating over a pulley 10, carried by the shaft 11, the latter receiving rotation from any convenient part of the automobile, preferably the shaft of the speedometer or the tachometer and which, ordinarily, is driven from a front wheel of the machine. The gear relation is preferably so designed that at each quarter mile distance traveled by the machine, the printing platen 5 operates to make a printing stroke. Located in convenient relation with reference to the printing platen there is a pointer indicated at 12, adapted to be carried by a needle 13, preferably a compass needle, so that the pointer 12 forming a printing point with which the platen 5 cooperates, will indicate the direction in which the machine is traveling at the exact time the printing platen 5 effects a printing stroke. Also coöperating with the printing platen is a time stamp or printing wheel indicated at 14 and preferably run by a clock mechanism indicated at 15 so that the printing wheel, or the printing characters on the periphery thereof with which the platen 5 coöperates, are brought into line for printing according to the elapsed time.

Interposed between the printing platen 5, and the pointer 12 and printing wheel 14, is a strip of record paper indicated at 16, and a carbon or copying ribbon indicated at 17. The ink ribbon or carbon 17, is preferably coiled upon the reels 18, 19 and which may be operated in the usual or any suitable or convenient manner, manually or otherwise. The record paper 16, may be mounted in any suitable or well known way, as, for instance, upon a spring actuated wheel, indicated at 20, and reeled therefrom onto a record roll 21, in any suitable or conven-

ient manner. A simple arrangement is shown wherein the record strip is reeled upon the receiving reel 21, by positively driving the latter through gearing connections 22, from the shaft 11. In practice the record strip or sheet 16, may be conveniently ruled, transversely, corresponding in spatial relation in the ruling thereof, to the distance-traveled intervals of operation of the platen 5. Thus, if the platen 5 is operated at each quarter mile of travel, of the machine, then the transverse rulings of the record strip will correspond to quarter mile intervals. Of course if the gearing relation is altered to effect a printing operation for any other desired interval of time, the transverse ruling of the record strip will represent the corresponding distance-traveled interval of operation of the printing platen. Of course the transverse rulings of the record strip may be omitted.

From the foregoing description it will be seen that at each actuation of the printing platen 5, not only will the time interval be recorded on the record strip, but also the direction of travel of the machine at that particular recorded instant of time will also be printed and recorded.

It is obvious that the mechanism may be and preferably is securely locked up to prevent tampering with or alteration of the printed record made.

Suppose the owner of a car suspected that his chauffeur was indulging in joy rides. An investigation of the record made by a route recording instrument embodying the principles of my invention would prove or disprove the fact upon inspection. The record might show for example, that the car had started out the previous night from the garage at ten o'clock and had proceeded due south for two miles, and had then turned west for one half of a mile where it had stopped for fifteen minutes, presumably for a companion, and had then returned east a short distance, evidently to reach a main boulevard, and then headed north at a fifty miles an hour clip, finally stopping for two hours at, judging by the direction, distance and time traveled, a noted resort, and had then returned to the garage. The record strip the next morning would furnish a reasonably accurate map of the route traveled as well as the distance and time occupied, and would furnish the owner of the car a complete record of the car's operation during his absence without his knowledge.

A construction of route recording instrument of the character above referred to is specially adapted for use in connection with automobiles but is available and useful in connection with any form of moving vehicles.

The operation of the apparatus is exceedingly simple. Of course the direction pointer 12, being carried by the compass needle, is actuated by, or will indicate the direction of travel at any instance of time, and at the instant of time of operation of the printing platen. The time wheel 14 is operated by a clock mechanism and consequently it would record the exact instants of time the printing platen 5 is operated. The shaft 11, driven from the front wheel of the automobile or other suitable source, or from the speed indicator, effects the operation of the printing platen at regular distance-traveled intervals, it also operates the record strip mechanism and the ink ribbon or carbon may be operated in the usual way of such devices. It is obvious that the principles of my invention may be carried out in other specific ways, the particular manner shown and above described being illustrative. My invention, therefore, as defined in the claims is not to be confined to the specific illustrative structure shown.

Having now set forth the object and nature of my invention and a construction embodying the principles thereof, what I claim as new and useful and of my own invention, and desire to secure by Letters Patent is:—

1. In a route recording instrument for vehicles, the combination with a compass pointer having a printing member and a time printing wheel, of a printing platen coöperating with both said wheel and member, and means actuated by the movement of the vehicle for operating the printing platen.

2. In a route recording instrument for vehicles, the combination with a compass needle and pointer having a printing member, a clock driven printing wheel, a printing platen coöperating with said member and wheel, and means operated by the movement of the vehicle for operating the printing platen at definite distance-traveled intervals.

3. In a route recording instrument for vehicles, a compass needle operated pointer having a printing member, a clock operated time printing wheel, a platen coöperating with said member and wheel and means operated from a moving part of the vehicle for actuating said printing platen at definite intervals of distance traveled.

4. In a route recording instrument for vehicles, the combination with a compass operated pointer having a printing member, a clock operated printing wheel, a printing platen coöperating with said member and wheel, record strip carrying mechanism positioned to locate the record strip between said platen and said member and wheel, and gearing operated from a driving part of the vehicle for operating the printing platen at definite intervals of distance traveled.

5. In a route recording instrument for moving bodies, means for recording the direction of movement of the body, and means for simultaneously controlling said first mentioned means by a compass and by the movement of the body.

6. In a route recording instrument for moving bodies, means actuated at predetermined successively equal intervals with respect to distance by the movement of the body for recording the direction of such movement.

7. In a route recording instrument for moving bodies, a compass controlled member, and means coöperating therewith and actuated by the movement of the body to record the direction of such movement.

8. In a route recording instrument for moving bodies, a compass controlled member, means coöperating therewith and actuated by the movement of the body to record the direction of such movement, and means to simultaneously record the time of such actuation.

9. In a route recording instrument for moving bodies, a compass controlled member, means coöperating therewith and actuated at predetermined intervals by the movement of the body for recording the direction of such movement, and means to simultaneously record the time of such actuation.

10. In a route recording instrument for moving vehicles, a recording member, time controlled devices for positioning said member, a second recording member, a direction of travel controlled device for positioning said second recording member, a coöperating recording member coöperating with both of said recording members, and means actuated by the movement of the vehicle for operating said coöperating recording member.

11. In a route recording instrument for moving vehicles, a recording member, direction actuated devices for positioning said member, a coöperating recording member, and means actuated by the movement of the vehicle for operating said coöperating recording member.

In testimony whereof I have hereunto set my hand in the presence of the subscribing witnesses, on this 25th day of September A. D., 1912.

HAROLD ROWNTREE.

Witnesses:
W. A. DARBY,
S. E. DARBY.