J. B. RHODES.

ROUTE INDICATOR.

APPLICATION FILED JULY 6, 1909.

951,966.

Patented Mar. 15, 1910.

2 SHEETS—SHEET 1.

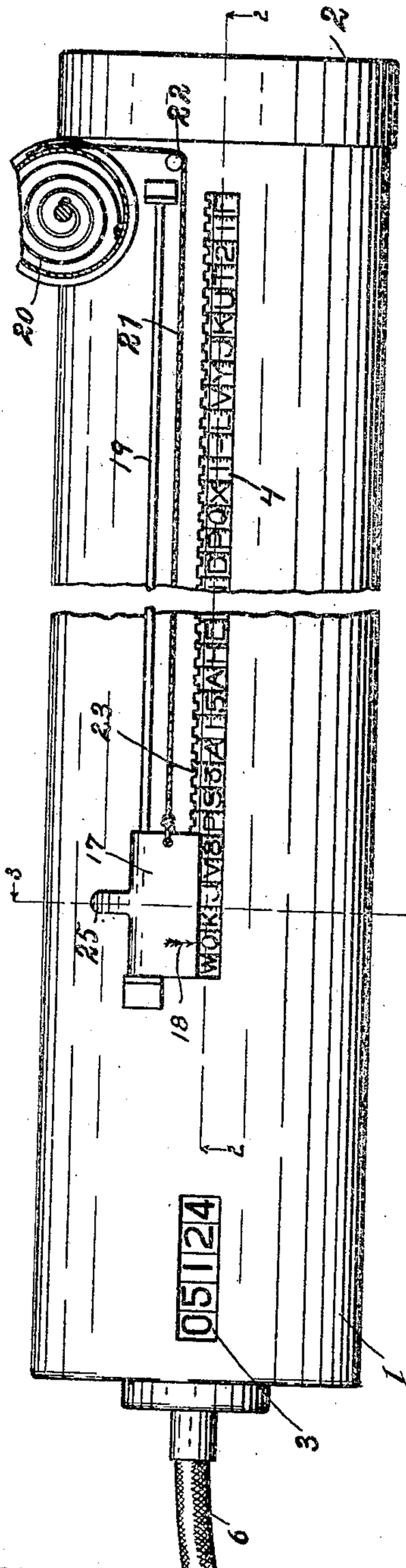

Fig. 1.

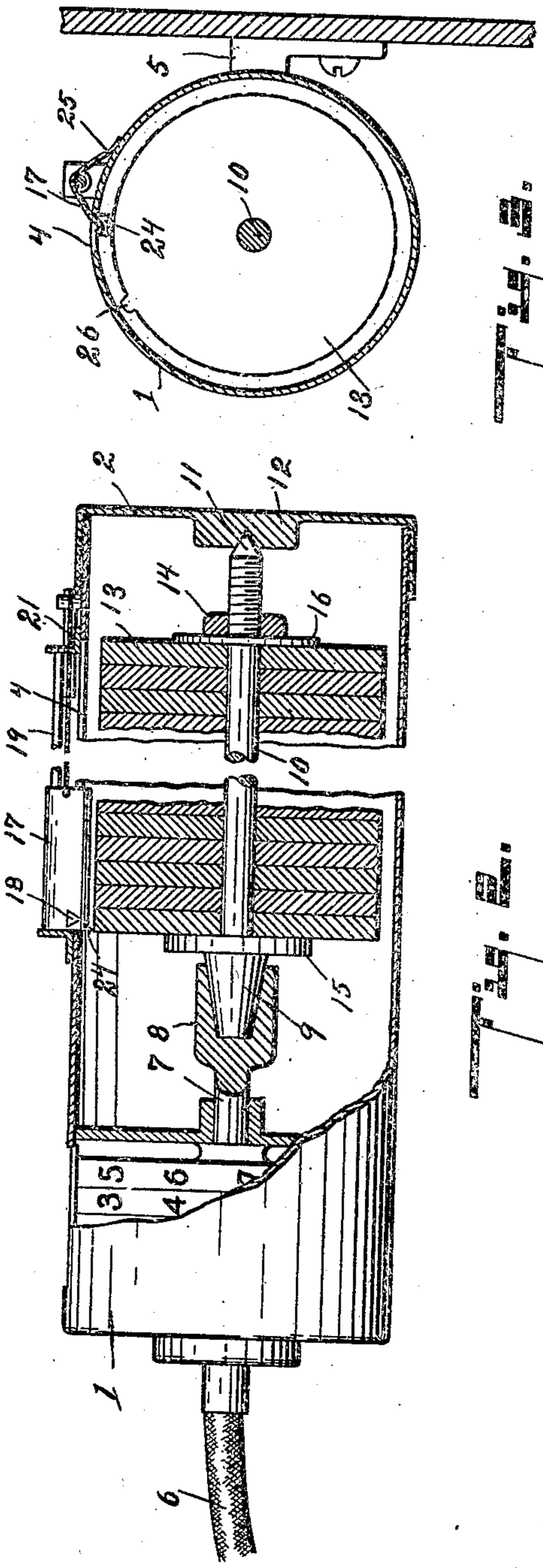

Fig. 2.

Fig. 3.

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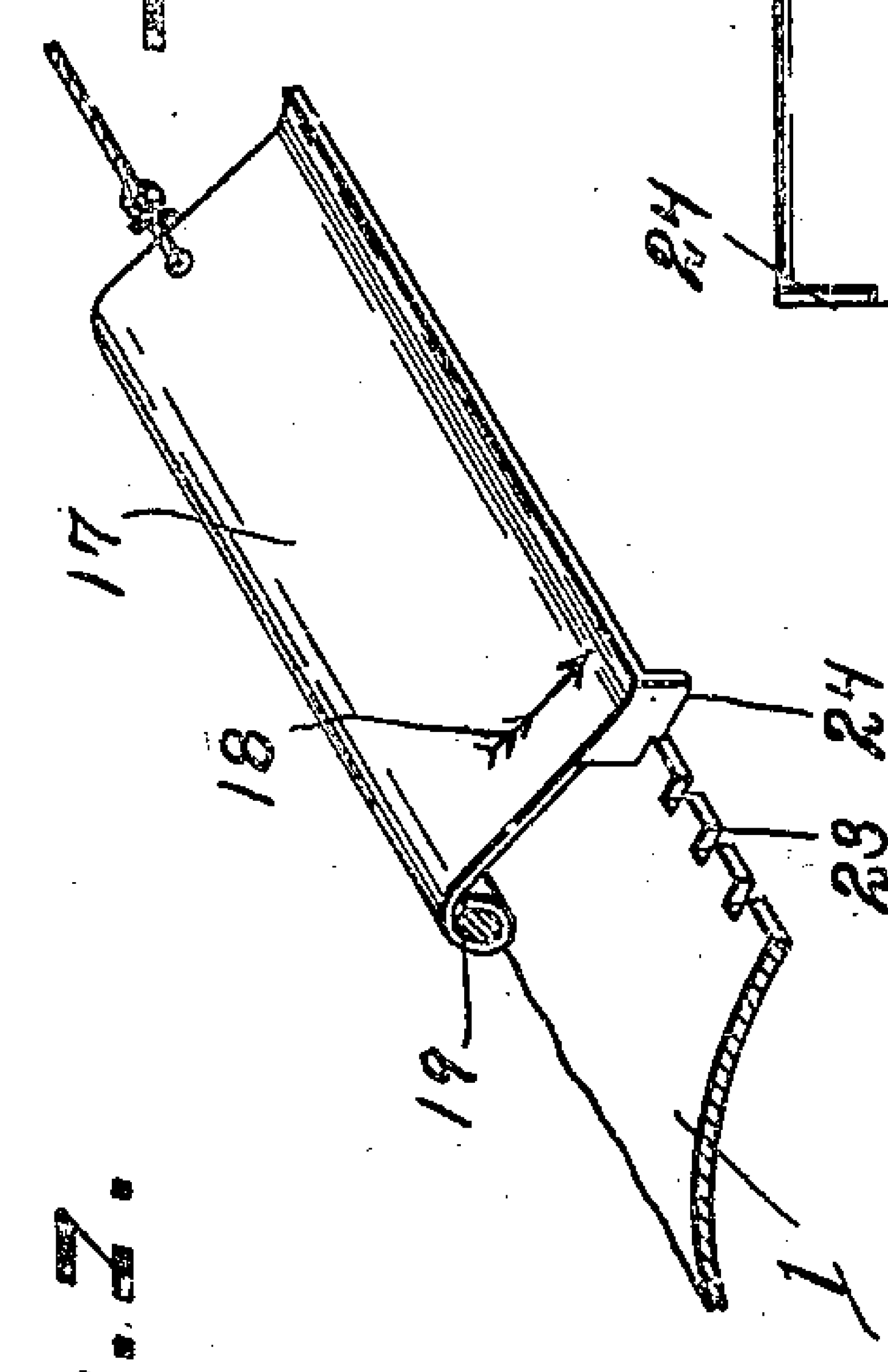
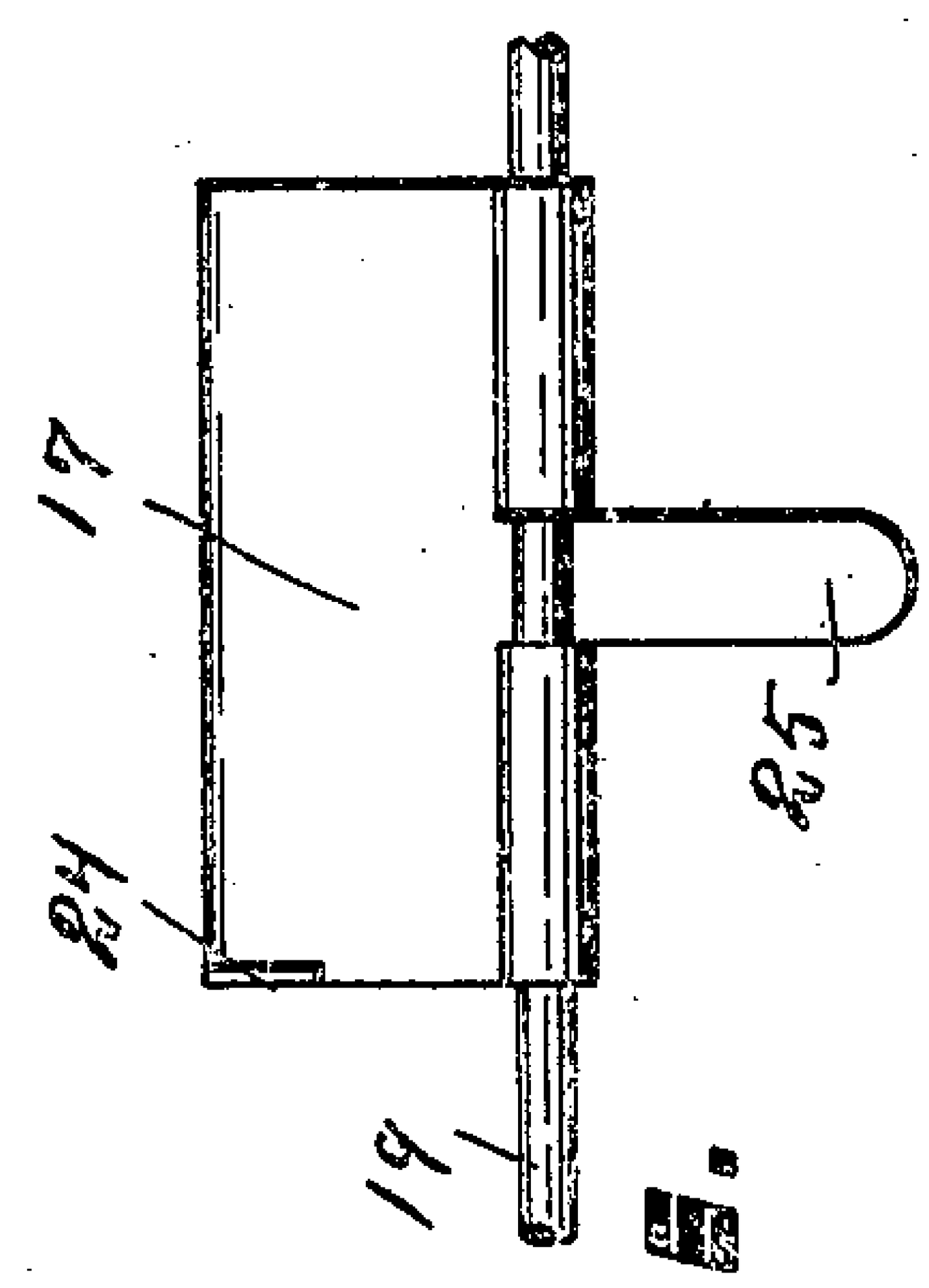
2 SHEETS—SHEET 2.

Fig. 5.





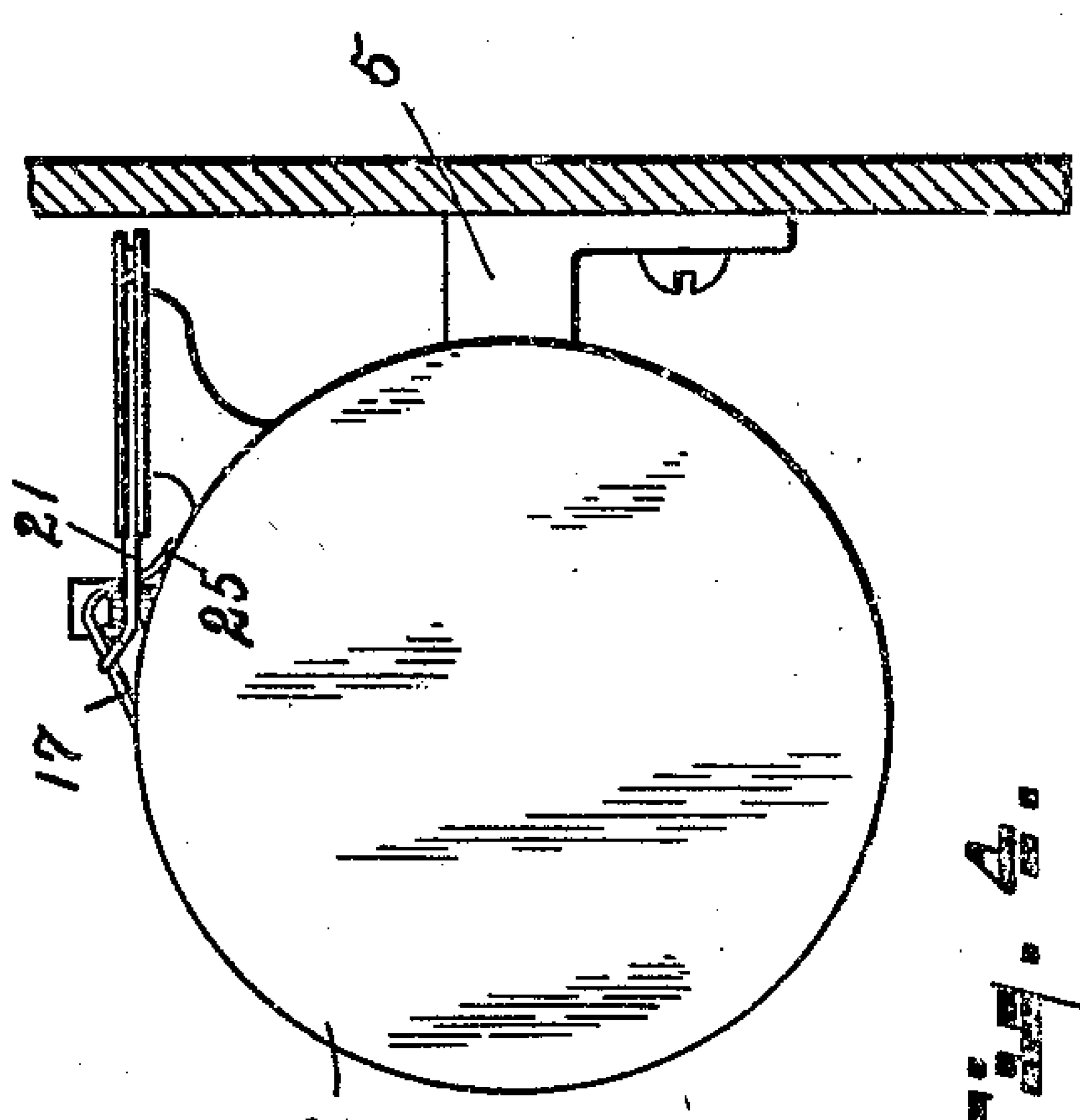
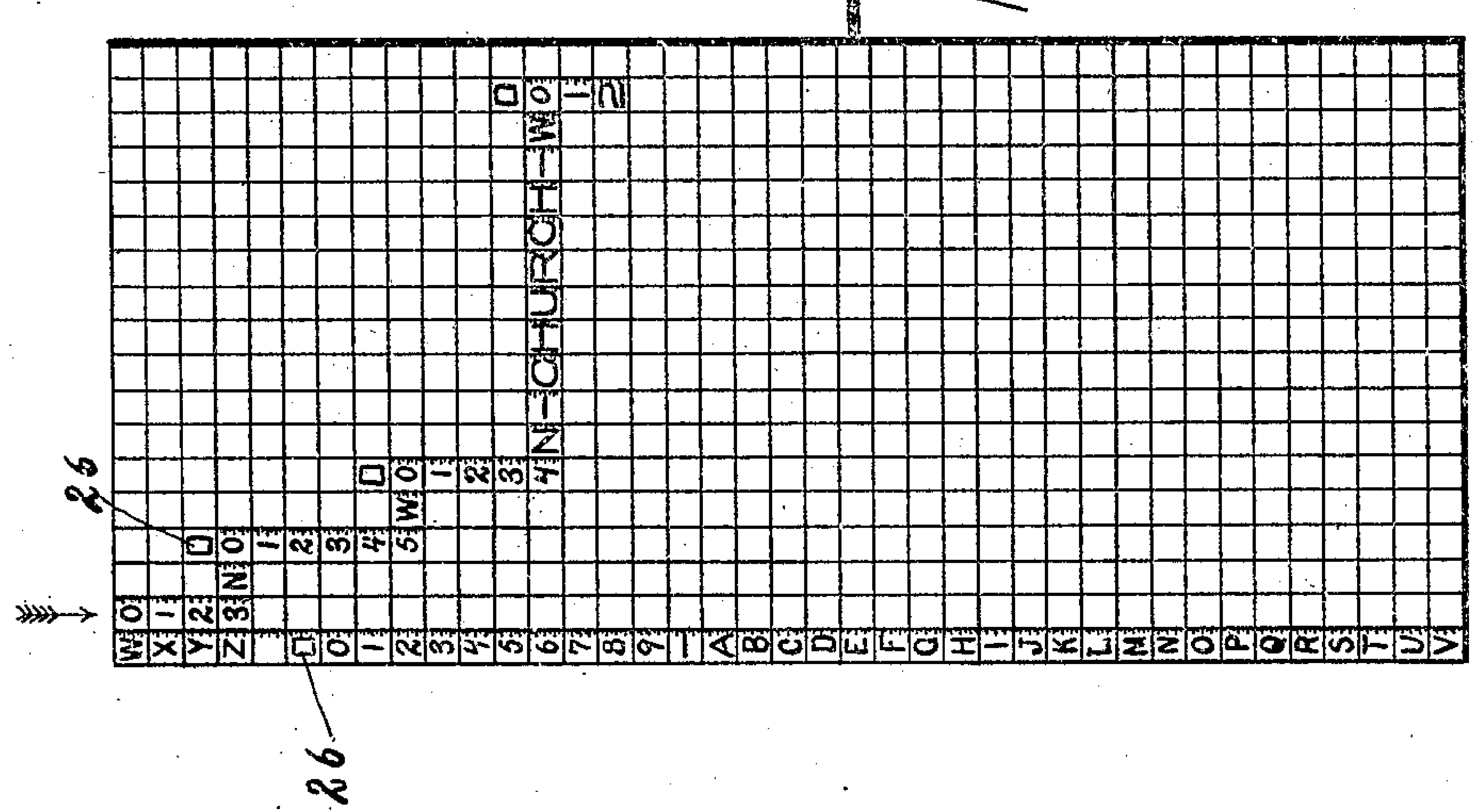


Fig. 4.

Fig. 6.

Fig. 7.



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UNITED STATES PATENT OFFICE.

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ROUTE-INDICATOR.

951,966. Specification of Letters Patent. Patented Mar. 15, 1910.

Application filed July 6, 1909. Serial No. 506,128.

To all whom it may concern:

Be it known that I, JAY B. RHODES, a citizen of the United States, residing at Kalamazoo, Michigan, have invented certain new and useful Improvements in Route-Indicators, of which the following is a specification.

This invention relates to improvements in route indicators.

The main objects of this invention are, first, to provide an improved combination odometer and guide device or route indicator. Second, to provide an improved guide device or route indicator for use in vehicles by which a route to a given place or places may be readily laid out, and the directions displayed as the trip progresses.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The structure described constitutes one effective embodiment of the invention. Other embodiments would be readily devised by those skilled in the art.

The invention is clearly defined and pointed out in the claims.

A structure constituting an effective and preferred embodiment of the features of my invention is clearly illustrated in the accompanying drawing, forming a part of this specification, in which:

Figure 1 is a plan view of a structure embodying the features of my invention. Fig. 2 is a detail view, partially in longitudinal section, on a line corresponding to line 2—2 of Fig. 1. Fig. 3 is a transverse section on a line corresponding to line 3—3 of Fig. 1. Fig. 4 is an end view, looking from the right of Fig. 1. Fig. 5 is a detail perspective of the index. Fig. 6 is an inverted plan of the index and its support. Fig. 7 is a diagrammatic view, showing the manner of laying out a route.

In the drawings, similar reference characters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawing, the casing 1 is preferably cylindrical in form, and is provided with a removable end 2, the removable end being preferably threaded upon the casing so as to be adjusted thereon. The casing is provided with suitable windows 3 and 4, the window 3 being for displaying the odometer number wheels, and the window 4 for the route and direction indicia. The casing is supported by a suitable bracket, as 5, see Fig. 3.

The odometer, the details of which are not here illustrated, is arranged within the casing at one end, the same being provided with a suitable driving shaft, as the flexible shaft 6. The odometer shaft 7 is provided with a coupling member 8, preferably having a conical socket therein to receive the tapered coupling member 9 of the indicia shaft 10. The outer end of the indicia shaft is preferably provided with a pivot bearing 11 to engage the bearing 12 carried by the removable end 2, so that by adjusting the removable end of the casing, the indicia shaft is clamped into driving engagement with the odometer shaft. This coupling admits of the easy removal of the indicia shaft, and its indicia members, it only being necessary to remove the removable end 2, which forms an adjustable support for the bearing 12. The odometer shaft 7 is connected to be driven with the unit odometer wheel. The details of the odometer are not illustrated, as they form no part of the present invention.

The indicia members 13 are preferably in the form of disks, having letters and numerals, or other suitable direction and distance indicia, on their peripheries, see the diagram in Fig. 7, in which a complete indicia of one member is indicated at the left, the indicia of the other members other than those indicating the particular route laid out thereon, being omitted in order that the diagram may be more clear. The mile section indicia members are preferably subdivided, as illustrated. The indicia members 13 are adjustably mounted on the shaft 10, so that different routes or courses may be laid out by adjusting the indicia members on the shaft. The indicia members are preferably secured in their adjusted positions by a clamping nut 14, a fixed collar 15 being provided at the inner end of the shaft and an adjustable washer or collar at its outer end, the nut being threaded on the outside of the adjustable collar so that

after the indicia members are adjusted in position, they may be clamped in place by means of the nut.

In practice, it is intended that a plurality of shafts and indicia members shall be provided so that a series of routes or directions may be laid out and inserted in the casing, as required. I also preferably provide an index which designates in the window the particular indicia to which the attention should be directed. This preferably consists of the index 17, having an indicating arrow 18 thereon. The index 17 is slidably mounted upon the support 19, and is actuated by the spring 20, to which it is connected by the cord 21, the cord being arranged over a guide pulley 22 so that when the index is drawn to its initial position tension is placed upon the spring.

A series of stops 23 is provided for the index, the stops being arranged to correspond with the indicia members, being preferably formed by notching the edge of the window 4, the index member being provided with a downwardly-projecting lug 24 to engage these notches. A spring 25 holds the index member yieldingly in engagement with the stops.

A series of trips are provided for the index member, these preferably being in the form of lugs 26 on the indicia members, each indicia member being preferably provided with a lug. These lugs, as the indicia shaft is revolved, are adapted to engage the index member, lifting the lug 24 from its stops, allowing it to be actuated by its actuating spring. The index is thus automatically actuated to indicate the proper route-designating character or indicia, as the route progresses. In laying out a route, one of these lugs is turned up to the proper place to engage and release the index at the proper time. The route diagrammatically laid out in Fig. 7 would read as follows: west, three miles; north, five miles; west, four miles; and then north to church and finally west, two miles. When the director stands at N–Church, it should be thrown out of operation by loosening the end piece 2, which breaks the driving connection for the indicator to the odometer. When the church is reached, the indicator is again thrown into operation. In the event that the distance to a certain town or place does not correspond exactly with the indicator,—that is, if the distance to a certain point is laid out as four miles when it is four and one-fourth miles, as indicated by the director, the director should be re-set when the turn is made to overcome the discrepancy.

My improved route director provides means for laying out any desired course, or a series of routes or courses. A change of the indicia shaft, with the indicia properly set thereon, can be quickly made, as required, so that a number of routes may be laid out at a convenient time.

I have illustrated and described my improvements in detail in a form which is simple in structure and convenient to manipulate. I am, however, aware that it is capable of very great variations in structural details without departing from my invention, and I desire to be understood as claiming the same specifically, as illustrated, as well as broadly.

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

1. The combination with a casing having a removable end threaded thereon; an odometer arranged within said casing; an odometer shaft having a shaft coupling member at its inner end; an indicia shaft having a pivot bearing at its outer end and a coupling member at its inner end adapted to engage said coupling member of said outer shaft; a bearing for the outer end of said indicia shaft carried by said removable end piece of said casing whereby said end piece may be adjusted to clamp said coupling member into driving engagement; a plurality of indicia members having distance and direction indicia on their peripheries adjustably arranged on said indicia shaft whereby different combinations of distance and direction indicia may be provided to indicate courses or routes; and means for securing said indicia members in their adjusted positions.

2. The combination with a casing having a removable end threaded thereon; an odometer arranged within said casing; an odometer shaft having a shaft coupling member at its inner end; an indicia shaft having a pivot bearing at its outer end and a coupling member at its inner end adapted to engage said coupling member of said odometer shaft; a bearing for the outer end of said indicia shaft carried by said removable end piece of said casing whereby said end piece may be adjusted to clamp said coupling member into driving engagement; and a plurality of indicia members having distance and direction indicia on their peripheries adjustably arranged on said indicia shaft whereby different combinations of distance and direction indicia may be provided to indicate courses or routes.

3. The combination with a casing; an odometer arranged within said casing; an odometer shaft having a shaft coupling member at its inner end; an indicia shaft having a coupling member at its inner end to engage said coupling member of said odometer shaft; an adjustably supported bearing for the outer end of said indicia shaft; a plurality of indicia members having distance and direction indicia on their

peripheries adjustably arranged on said indicia shaft whereby different combinations of distance and direction indicia may be provided to indicate courses or routes; and means for securing said indicia members in their adjusted positions.

4. The combination with a casing; an odometer arranged within said casing; an odometer shaft having a shaft coupling member at its inner end; an indicia shaft having a coupling member at its inner end to engage said coupling member of said odometer shaft; an adjustably supported bearing for the outer end of said indicia shaft; and a plurality of indicia members having distance and direction indicia on their peripheries adjustably arranged on said indicia shaft, whereby different combinations of distance and direction indicia may be provided to indicate courses or routes.

5. The combination with a casing; an odometer arranged within said casing; an odometer shaft having a tapered shaft coupling member at its inner end; an indicia shaft having a tapered coupling member at its inner end to engage said coupling member of said odometer shaft; an adjustably supported bearing for the outer end of said indicia shaft; and a plurality of indicia members having distance and direction indicia on their peripheries adjustably arranged on said indicia shaft, whereby different combinations of distance and direction indicia may be provided to indicate courses and routes.

6. The combination with a casing; an odometer arranged within said casing; an odometer shaft having a shaft coupling member at its inner end; a removable indicia shaft having a coupling member at its inner end to engage said coupling member of said odometer shaft; and a plurality of indicia members having distance and direction indicia on their peripheries adjustably arranged on said indicia shaft, whereby different combinations of distance and direction indicia may be provided to indicate courses or routes.

7. The combination with an odometer, comprising an odometer shaft; a removable indicia shaft; a coupling for said shafts; a plurality of indicia members having distance and direction indicia on their peripheries adjustably arranged on said indicia shaft, whereby different combinations of distance and direction indicia may be provided to indicate courses or routes; and a clamping nut arranged upon said shaft for securing said indicia members in their adjusted positions.

8. The combination with an odometer, comprising an odometer shaft; a removable indicia shaft; a coupling for said shafts; and a plurality of indicia members having distance and direction indicia on their peripheries adjustably arranged on said indicia shaft, whereby different combinations of distance and direction indicia may be provided. to indicate courses or routes.

9. The combination with an odometer, comprising an odometer shaft; an indicia shaft; a plurality of indicia members having direction and distance indicia thereon, adjustably arranged on said indicia shaft, whereby different combinations of distance and direction indicia may be secured; and disengageable driving connections for said indicia shaft to said odometer.

10. The combination with a casing; an odometer arranged within said casing; a removable indicia shaft; a coupling for said shafts; a plurality of indicia members having distance and direction indicia thereon adjustably arranged on said indicia shaft, whereby different combinations of distance and direction indicia may be provided to indicate courses or routes; an index; a support on which said index is slidably mounted; a spring for shifting said index on said support; a series of stops on said casing, corresponding to said indicia members; a spring for holding said index in engagement with said stops; and a trip lug for said index on each of said indicia members.

11. The combination with an odometer and an indicia shaft having a driving connection with said odometer; a plurality of indicia members having distance thereon, adjustably arranged on said indicia shaft whereby different combinations of distance and direction indicia may be secured; an index; a support on which said index is slidably mounted; a spring for shifting said index on said support; a series of stops corresponding to said indicia members; a spring for holding said index in engagement with said stops; and a trip lug for said index on each of said indicia members.

12. The combination with an odometer and an indicia shaft having a driving connection with said odometer; a plurality of indicia members having distance and direction indicia thereon, adjustably arranged on said indicia shaft whereby different combinations of distance and direction indicia may be secured; an index; actuating means therefor; a series of stops, corresponding to said indicia members; a spring for holding said index in engagement with said stops; and a trip lug for said index on each of said indicia members.

13. The combination with an odometer and an indicia shaft having a driving connection with said odometer; a plurality of indicia members having distance and direction indicia thereon, adjustably arranged on said indicia shaft whereby different combinations of distance and direction indicia may be secured; an index; a support on which

said index is slidably mounted; a spring for shifting said index on said support; a series of stops, corresponding to said indicia members; and a trip lug for said index on each of said indicia members.

14. The combination with an odometer and an indicia shaft having a driving connection with said odometer; a plurality of indicia members having distance and direction indicia thereon, adjustably arranged on said indicia shaft whereby different combinations of distance and direction indicia may be secured; an index; actuating means therefor; a series of stops, corresponding to said indicia members; and a trip lug for said index on each of said indicia members.

15. The combination with an odometer and an indicia shaft having a driving connection with said odometer; a plurality of indicia members having distance and direction indicia thereon, adjustably arranged on said indicia shaft whereby different combinations of distance and direction indicia may be secured; an index; actuating means therefor; a series of stops, corresponding to said indicia members; and a plurality of trips for said index adapted to be adjusted to release said index at predetermined points.

16. The combination with an odometer and an indicia shaft having a driving connection with said odometer; a plurality of indicia members having distance and direction indicia thereon, adjustably arranged on said indicia shaft whereby different combinations of distance and direction indicia may be secured; an index; actuating means therefor; and a plurality of trips for said index adapted to be adjusted to release said index at predetermined points.

17. The combination with an odometer and an indicia shaft having a driving connection with said odometer; a plurality of indicia members having distance and direction indicia thereon, adjustably arranged on said indicia shaft whereby different combinations of distance and direction indicia may be secured; an index; and a plurality of adjustable trips for said index whereby said index is actuated at predetermined points.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

JAY B. RHODES. [L. S.]

Witnesses:
CLORA E. BRADEN,
F. GERTRUDE TALLMAN.