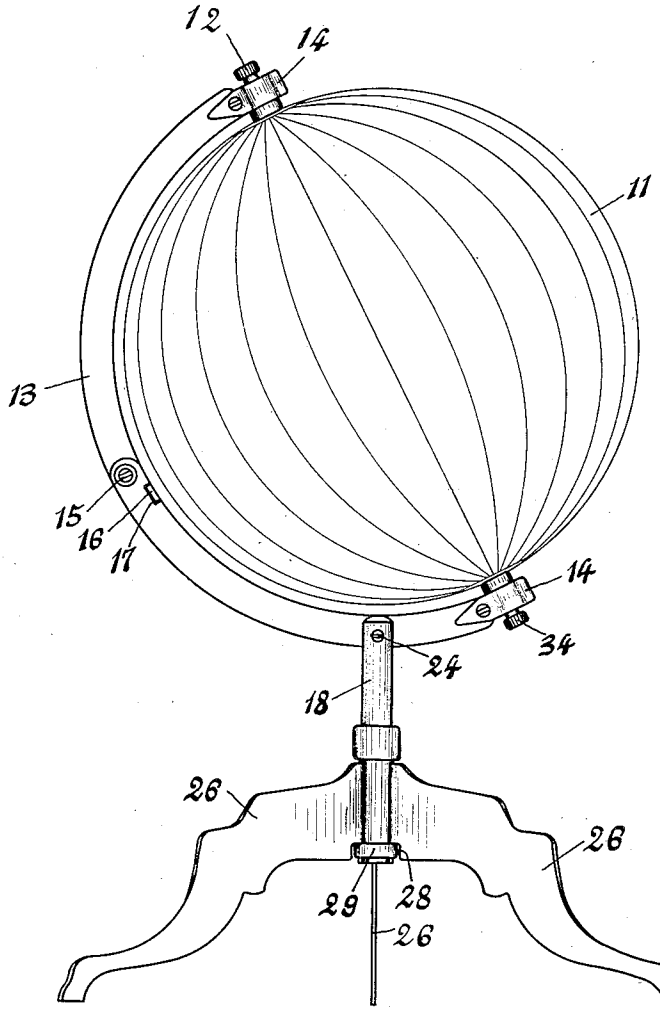
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TERRESTRIAL GLOBE

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Fig. 1



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Sept. 12, 1933. K. OHNO 1,926,787

TERRESTRIAL GLOBE

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Fig. 2

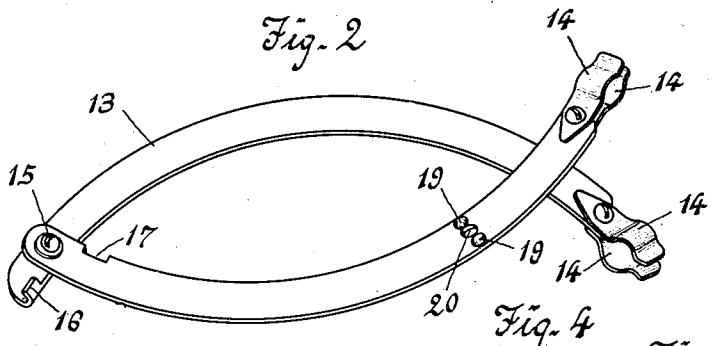


Fig. 3

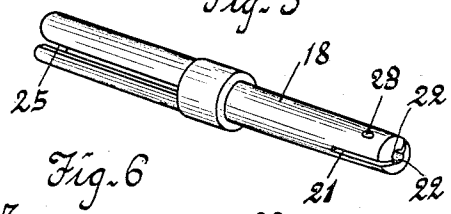


Fig. 4

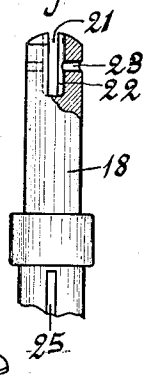


Fig. 5

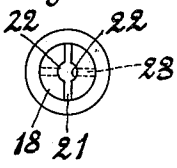


Fig. 6

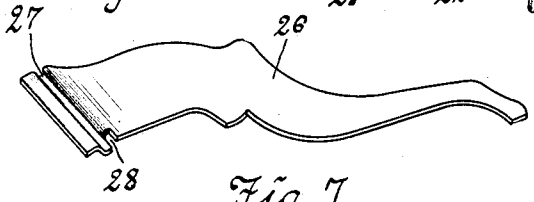


Fig. 7

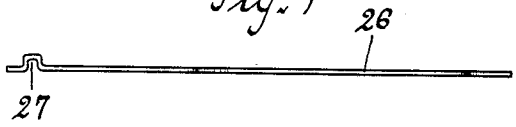


Fig. 8

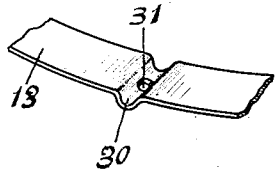


Fig. 10

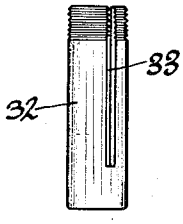
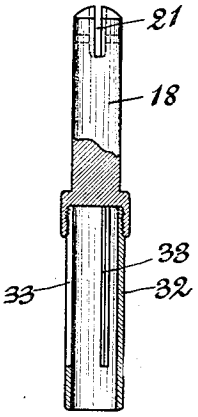


Fig. 9



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UNITED STATES PATENT OFFICE

1,926,787

TERRESTRIAL GLOBE

Kunimitsu Ohno, Shibuya-Machi, Toyotama-Gun, Tokyo-Fu, Japan

Application July 9, 1931. Serial No. 549,760

4 Claims. (Cl. 35—5)

This invention relates to a terrestrial globe.

An object of the invention is to provide a terrestrial globe that can easily be taken apart and re-assembled.

A further object is that of facilitating the transportation of a globe by disassembling it and packing it very compactly.

A further object is that of providing a globe that will not be shaky when assembled, but the parts thereof will be firmly held in position.

Another object of the invention is to provide a terrestrial globe of improved construction wherein the elements of the rack are susceptible of manufacture by machinery thus saving time and reducing production costs.

Other objects of the invention will be brought out in the following description of the invention:

The globe hitherto supplied, being made of wood or other rigid body, having its supporting rack, stem, and stand made into one body, was defective in being heavy, large and bulky, and very inconvenient for transporting. The present invention is characterized by the fact that the globe consists of a sphere made of a spherical envelop which can be inflated and deflated with air, a supporting rack on which the sphere can be removable mounted, and which is so made as to be foldable at the middle, a stem which supports the rack, and a tripod supporting the stem in upright position, all of these enumerated parts being capable of ready assembly into a unitary structure, and being easily disassembled. Accordingly, upon the sphere being removed from the supporting rack, folded up into a proper size after deflation, the supporting rack folded at the middle, the tripod taken off from the stem, and the whole packed up, it becomes very compact and quite portable. Its assembly is quite an easy matter, and the globe can be firmly assembled so as not to be shaky.

The invention will now be described with reference to the attached drawings illustrating one practical embodiment of the invention, in which:

Fig. 1 is an elevation of the globe covered by the present invention;

Figs. 2–7 show the disassembled elements of the globe covered by the present invention;

Fig. 2 is a perspective view of the supporting rack on being folded at the middle;

Fig. 3 is a perspective view of the stem;

Fig. 4 is a partial sectional front view of the upper half of the stem;

Fig. 5 is a plan of the stem;

Fig. 6 is a perspective view of one of the legs;

Fig. 7 is a plan of the leg;

Fig. 8 is a perspective view of a fragmentary part of a modification of the supporting rack;

Fig. 9 is a partial sectional elevation of a modification of the stem;

Fig. 10 is an elevation of an element of the said modified stem shown in Fig. 9.

Referring now to Fig. 1, 11 is the sphere made of a spherical envelop having a map drawn on its surface. On the opposite positions, i. e. on the positions corresponding to the south and the north poles, trunnions 12, 34 are projected, one of which forms an air valve similar in construction to an air valve of an ordinary air-pillow, etc. The trunnions 12, 34 are resiliently inserted and held between the curved, elastic tongues 14, 14 fixed onto both ends of the rack 13 embracing its end, so that the sphere 11 is held rotatably in its position. To mount the sphere on the rack, the trunnions are first applied between the ends of the tongues, 14, 14, being pushed with force so as to open the tongue overcoming their elasticity, thereby to enter the trunnions between the tongues up to the curves where they are resiliently held. To remove the envelop, the trunnions are oppositely pulled to open the tongues thereby to release the trunnions.

The rack 13 consists of two arcuate or bowed strips about a quarter of a circumference in length, being pressed out of a metallic plate, and foldably joined at the axis 15. At the inside edge of an extension of one of the bowed strips, a projection 16 is provided, while a slot 17 is provided on the other bowed strip. The projection 16 and slot 17 are positioned upon the respective bowed strips so as to come into engagement with each other (see Fig. 1) when the strips are extended or unfolded by swinging them relatively to each other about the axis 15. When thus extended the two strips unite to form a semi-circular globe-supporting rack and the projection or lug 16 cooperates with the slot 17 to maintain the rack firmly in its globe-supporting position. Further, by dismounting the rack and folding it as shown in Fig. 2, it can be made very compact.

Referring now to the manner of mounting the rack 13 upon the stem 18, two projections or lugs 19 are provided on one of the bowed strips forming the globe-supporting rack, and an opening 20 is provided between these projections. At the upper end of the stem 18 there is a longitudinal groove 21 proportioned for closely receiving the bowed strip having the lugs 19. Upon the opposite surfaces of this groove or slot are longitudinally extending grooves or seats 22,

large enough to receive the projections 19. An opening 23 is formed in the stem 18 at right angles to and in alignment with the slot 21. To assemble the rack upon the supporting stem 18, the rack is inserted into the slot 21 with the lugs 19 aligned with the seats 22. In this manner the engaging parts cooperate to support the rack firmly in globe-supporting position, the lugs 19 cooperating with the seats 22 to prevent undue movement of the supporting rack. However, in order to assure the firm support of the rack in position, a set screw 24 is passed through the holes 20, 23 which are aligned with each other. When thus assembled the rack would be firmly held in position even if the set screw 24 should become loosened or removed in use.

The lower half of the stem 18 is made in a tubular form, and a slit 25 is formed in the middle of the tube. The leg 26 is made by pressing it out of a metallic plate; its inner end is bent so as to form a groove 27, along which groove and from the lower side a cut 28 is formed. To attach the leg 26 to the stem, the bottom of the groove 27 is fitted up into the slit 25, and the ring 29 is fixedly applied onto the lower end of the stem, when that part along the slit of the tube-wall becomes engaged with the groove 27, while the ring 29 is fitted into the cut or seat 28 of the leg, whereby both the lower end of the stem and the inner lower corner of the leg are simultaneously tightened up, so that the leg would not come off the stem, nor be shaky. To remove the leg from the stem, the ring is first pulled off and then the stem is lifted. In other words, the leg drops down by itself, thus making the work of disassembling quite an easy one. While the attachment to the stem 18 of but one of the supporting legs 26 has been described in detail, it will be understood that each of the desired number of supporting legs will be attached to the supporting stem in the manner described, the general preferred arrangement being shown in Fig. 1.

In the modified form of globe-supporting rack shown in Fig. 8, a corrugation 30 is formed crosswise by bending the bowed strip, at about the middle of which corrugation is provided an opening 31 for passage of the set screw 24. In other words, compared with the formation of projections 19 of Fig. 2, the manufacture is simplified. Further, in fitting the rack into the longitudinal groove provided at the upper end of the stem, the operation becomes very much easier than in the case of forming projections.

As shown in the modification of Figs. 9 and 10, a stem is made up of two parts, i. e. the upper half of it has a construction similar to that of the aforementioned stem, while the lower half is made in the form of a tube 32, having screw-threaded connection with the upper half, and having a slit 33 for each leg extending downwardly from the threaded connection. To assemble the legs after removing the tube 32, the grooved part 27 of each leg 26 is fitted into the corresponding slit 33. The tube 32 is then screwed into final position into the upper part of the stem 18.

Since certain changes may be made in the above construction and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In a terrestrial globe, in combination, a globe supporting rack including a supporting strip, and a supporting stem provided at its upper end with a longitudinal groove in which said rack is inserted and firmly held, said supporting stem being provided with opposing grooves or seats within said first mentioned groove, and said supporting strip having supporting lugs or projections adapted to enter into said seats when the strip is inserted into said first mentioned groove.

2. In a terrestrial globe, in combination, a globe supporting rack, and a globe supporting stem provided at its upper end with a longitudinal groove in which said rack is inserted and firmly held, said supporting stem being provided with opposing grooves or seats within said first mentioned groove, and said supporting rack having supporting lugs or projections adapted to enter into said seats when the rack is inserted into said first mentioned groove, said supporting rack having an aperture adjacent said projections and said supporting stem also having an aperture positioned for alignment with the first mentioned aperture for the reception of a set screw when the parts are in assembled position.

3. In a globe, in combination, a globe supporting rack including two bowed strips foldably joined together and having a stop device to limit relative movement of the strips opposite to the folding movement thereof, a supporting stem having a grooved rack receiving slot at its upper end, and a lug on one of said rack strips entering the groove of the stem in supporting relation therewith when the strip is seated in said slot.

4. In a terrestrial globe, in combination, a globe supporting rack, and a globe supporting stem provided at its upper end with a longitudinal groove in which said rack is inserted, said supporting stem and rack being provided at said groove with a seat and a complementary engageable supporting lug, said lug being positioned to engage said seat when the supporting rack is inserted into said groove so as to support the rack firmly in position within the groove.

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