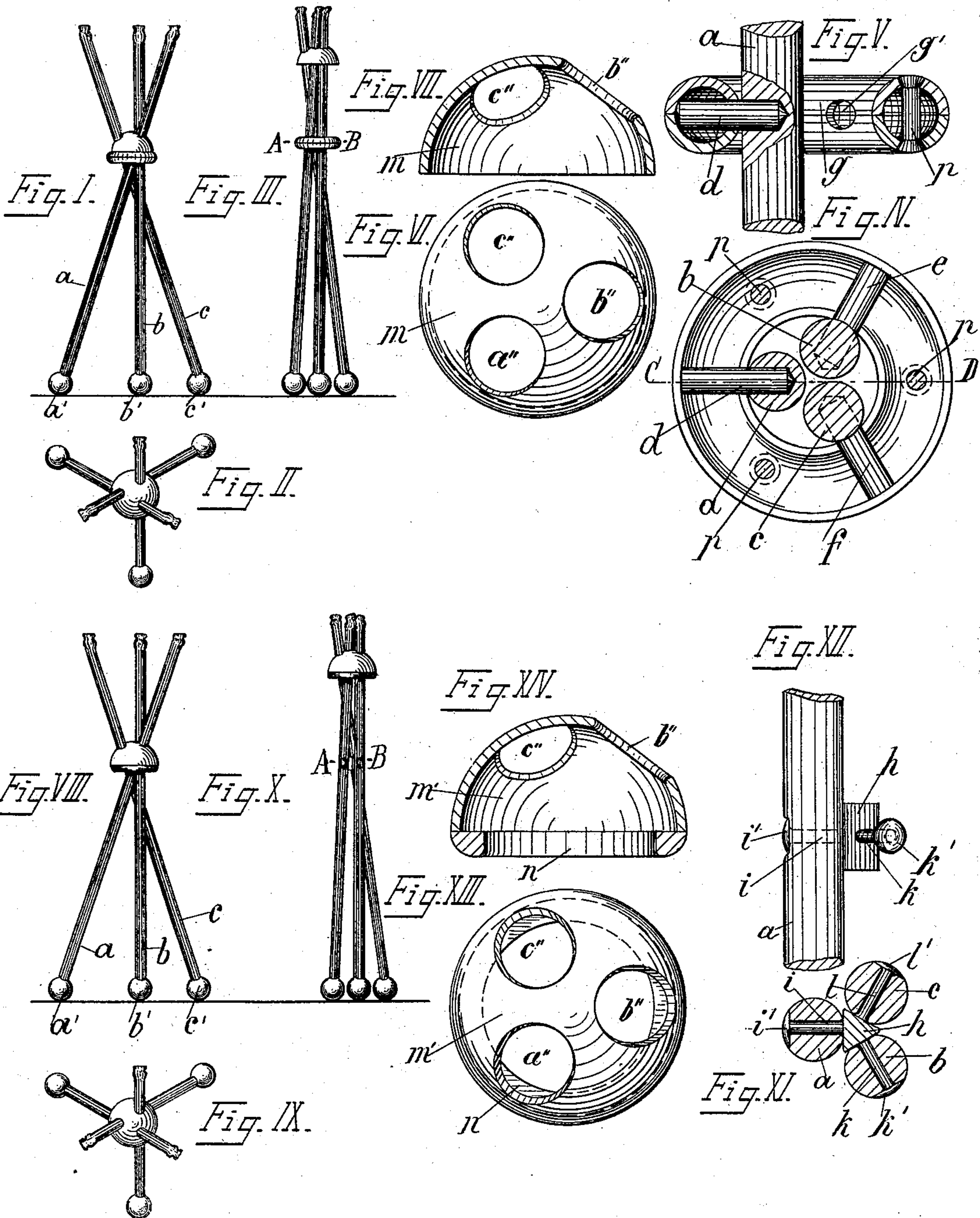


(No Model.)

G. W. VOELTZKOW:  
FOLDING STAND, &c.

No. 509,005.

Patented Nov. 21, 1893.



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# UNITED STATES PATENT OFFICE.

GEORG WILHELM VOELTZKOW, OF BERLIN, GERMANY.

## FOLDING STAND, &c.

SPECIFICATION forming part of Letters Patent No. 509,005, dated November 21, 1893.

Application filed December 19, 1891. Serial No. 415,598. (No model.) Patented in Germany November 11, 1885, No. 33,584, and in France November 23, 1891, No. 217,613.

*To all whom it may concern:*

Be it known that I, GEORG WILHELM VOELTZKOW, of Berlin, in the Kingdom of Prussia and German Empire, have invented  
5 a new and useful Portable and Folding Stand or Support, (for which I have obtained a patent in Germany, No. 33,584, dated November 11, 1885, and in France, No. 217,613, dated November 23, 1891,) of which the following is  
10 a specification, reference being had therein to the accompanying drawings.

This invention relates to an improved portable and folding stand or support adapted for commercial and domestic purposes and capable of being folded into a very small compass  
15 for traveling or for storing, for which reason and because of its lightness, it is very suitable for artists, surveyors, photographers and others.

20 My invention consists in features of novel construction hereinafter described and claimed.

The accompanying drawings illustrate in what manner my invention may be carried  
25 into effect, and will be referred to hereinafter.

In each of the figures similar parts are indicated by similar letters of reference.

30 The arrangements and methods of construction illustrated by the drawings are of the most simple character, but it will be understood that by the addition of suitable ornamental devices and additions a highly artistic or luxurious result may be obtained if desired.

35 Figure I represents an elevation of the stand or support when opened out; Fig. II a plan of the open stand; Fig. III an elevation of the stand in the closed condition; Fig. IV a transverse section along the line  
40 A—B Fig. III; Fig. V a partial section through the details represented by Fig. IV along the line C—D; Fig. VI a plan of the slide; Fig. VII a vertical section of the slide; Figs. VIII, IX and X a modified construction of the arrangement shown by Figs. I, II, and III; Fig.  
45 XI a horizontal section through the line A—B Fig. X; Fig. XII an elevation of part of one of the legs of the support or stand illustrated by Fig. X; Figs. XIII and XIV a plan and  
50 section respectively of a modified form of the slide shown by Figs. VI and VII.

In the drawings, the stands or supports are shown as having three legs only, but if desired, a larger number may be employed with  
equally satisfactory results. Each of the rod- 55 shaped legs *a b c* are straight and may have balls *a' b' c'* at their lower ends, or instead of the balls, spikes, cross-pieces or feet. At about two-thirds of the height of the legs they are provided with radial pivots *d e f* 60 which are fitted thereon perpendicular to the axes of the legs. A ring *g* formed of two half rings of semi-circular cross section, stamped out of suitable sheet metal, secured together by the rivets *p*, has three holes *g'* 65 formed in its inner diameter for the reception of the pivots *d e f*, the holes being large enough to allow the pivots to fit loosely. This ring is arranged around the carrying legs *a b c* with their pivots in the holes, as indicated 70 by Fig. IV. The inner diameter of the ring *g* is somewhat more than twice the diameter of one of the legs, so that it does not tightly embrace or inclose the legs but allows them a certain amount of play. Above the ring *g* on 75 the legs, there is arranged a slide *m* capable of being moved up and down on the legs. This slide is hemispherical in shape and is provided with the holes *a'' b'' c''* in its crown the diameter of each of which is proportion- 80 ate to that of each of the legs, but it is desirable that they should fit upon the legs with a small amount of grip so that they shall be moved up and down only by a slight effort, or with a little friction. The movement of 85 this slide upward or downward upon the legs effects the adjustment of the legs and secures them either in the open position (Fig. I) or in the closed position (Fig. III.) If the slide is moved into its highest position as shown in 90 Fig. III the legs will have been caused to move upon their pivots *d e f* until they have been gathered almost into parallel positions as indicated by the figure and in this position the apparatus is adapted to be stored or carried 95 from place to place. If on the contrary, the slide is moved toward the ring *g* in which the legs are pivoted, this movement causes the legs to assume inclined positions as shown in Fig. I, and in this position they are ready for 100 use.

The angle of inclination of the legs in their



opened position depends upon the vertical height of the hemispherical slide and upon the distance of the centers of the holes  $a''$   $b''$   $c''$ . In its lowest position the ring serves  
5 to secure the legs  $a b c$  in their open position.

The slide may be strengthened if desired, by means of the internal stiffening ring or collar  $n$ , Fig. XIV.

Figs. VIII to XII inclusive represent a modified form of construction of the device for  
10 connecting and pivoting the legs. A prismatic or wedge-like piece  $a$  carries the pivots  $i k l$  which are firmly secured to it. These pivots pass through holes suitably formed in  
15 the legs  $a b c$ , the holes being a little larger than the diameters of the pivots, and at their outer ends they are slightly countersunk so as to allow sufficient play for the riveted heads  $i' k' l'$  of the pivots  $i k l$ . The action  
20 of this modified arrangement is precisely the same as that hereinbefore described for the apparatus represented by Figs. I, II and III. The upper ends of the legs may be provided with screw hooks, bayonet connections or  
25 other suitable devices to suit the purpose for which they are intended, these fittings serving for connecting the stand to the object which is intended to be supported by it, such for example as a telescope, a camera, a seat,  
30 a table, or signaling apparatus.

The legs instead of being rod-like as illustrated, may be formed of strips, tubes, angle or T-pieces, of wood, metal or other suitable material and of any desired and convenient  
35 section and shape.

The ring  $g$  and the slide  $m$  also may be constructed of any desirable and suitable material and may have any convenient shape

other than that described. The alternative methods of connecting and pivoting the legs  
40 which are herein described, it will be obvious, do not exhaust the modification, and it is desired to be understood that they may be replaced by other modifications which will act in a similar manner.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination with the straight legs having radial pivots between their ends; of the hemispherical slide  $m$  adapted to slide on  
50 the legs above the pivots, having holes in its crown, the diameter of each of which is proportionate to that of each of the legs; the legs being opened and closed by moving the slide on the legs between their upper ends and the  
55 pivots; substantially as described.

2. The combination of the straight legs, the ring  $g$  consisting of two half rings of a semi-circular cross section having pivot-holes  $g'$ , rivets  $p$  by which the half rings are secured together, the radial pivots  $d, e, f$  secured to the legs and fitting loosely in the holes, and the hemispherical slide  $m$  adapted to slide on the legs above the ring, having holes in its crown, the diameter of each of which is proportionate to that of each of the legs, the legs  
60 being opened and closed by moving the slide on the legs between their upper ends and the ring; substantially as described.

In witness whereof I have hereunto set my  
70 hand in presence of two witnesses.

GEORG WILHELM VOELTZKOW.

Witnesses:

W. HAUPT,

W. H. EDWARDS.