F. H. TRIMBLE.

FRICTION JOINT.

APPLICATION FILED MAY 1, 1916.

1,208,861. Patented Dec. 19, 1916.

Fig. 1.

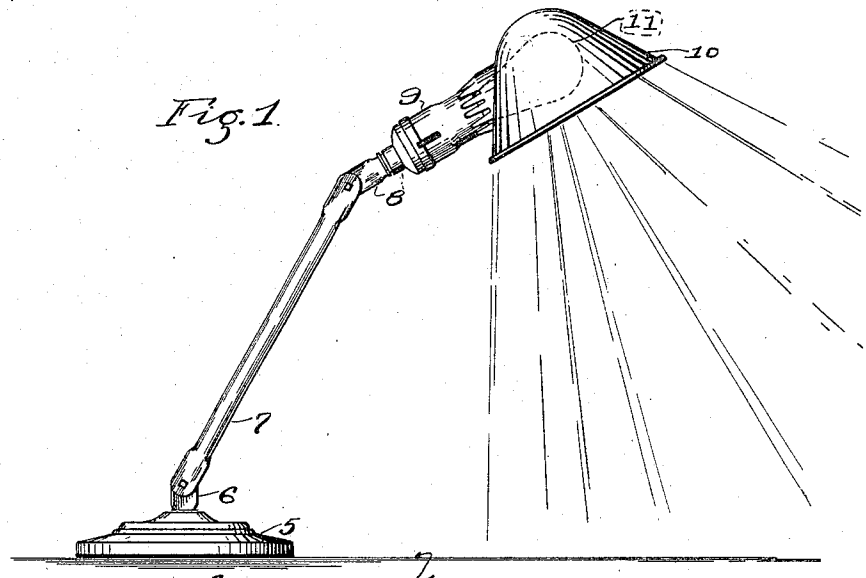


Fig. 2.

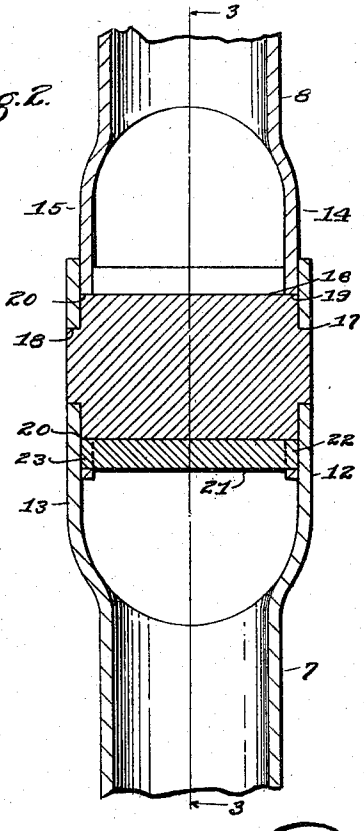
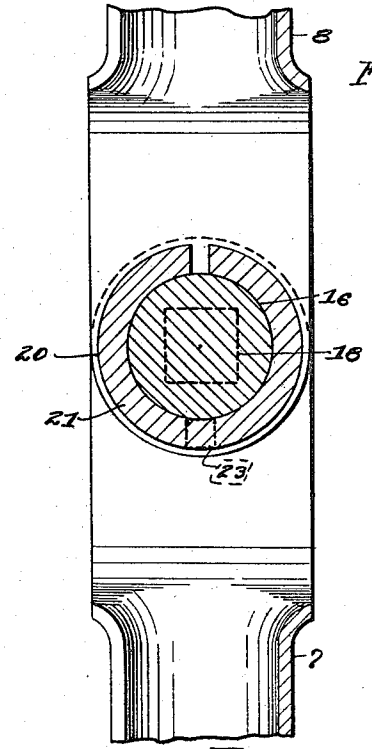


Fig. 3.



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UNITED STATES PATENT OFFICE.

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FRICTION-JOINT.

1,208,861. Specification of Letters Patent. Patented Dec. 19, 1916.

Application filed May 1, 1916. Serial No. 94,658.

To all whom it may concern:

Be it known that I, FRANK H. TRIMBLE, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Friction-Joints, of which the following is a specification.

This invention relates to friction joints, and pertains particularly to joints suitable for use with electric lamp stands which are adapted to support a lamp in any desired position.

It is an object of this invention to provide a friction joint which is simple in structure, durable and easily manipulated.

It is a further object of my invention to provide an adjustable lamp stand with a joint which requires no manipulation thereof to effect clamping of the same in any selected position.

I have illustrated an embodiment of my invention in the accompanying drawing, in which:

Figure 1 is a side elevation of an electric lamp stand with my invention applied thereto. Fig. 2 is a longitudinal section through the joint between two sections of the stand. Fig. 3 is a section as seen on the line 3—3 of Fig. 2.

The lamp stand shown in Fig. 1, is particularly adapted to be placed upon a table or other flat surface and the lamp disposed to direct the light rays upon an object such as a book or work which may be placed upon the table. A flat surface such as a table top is denoted by 4. Resting upon this is the base 5 of the lamp stand which is preferably of disk form, and a heavy casting so that the weight of the base will prevent tipping of the stand and maintain it in any given position. A section 6 is pivotally attached to the base for movement about a vertical axis. The section 6 is forked at its end and secured to the forked end of an intermediate section 7. Secured to the upper end of section 7 is a section 8 which carries a lamp socket 9. Secured to the socket 9 is a reflector 10. The electric lamp 11 is disposed in the socket and within the reflector 10. The pivotal connection of sections 6, 7 and 8 permit the lamp to be adjusted vertically while the pivotal connection between the section 6 and the base 5 permits adjustment of the lamp horizontally.

My invention resides particularly in the joints between sections 6 and 7 and sections 7 and 8. These joints are similar in structure and one will be described. Section 7 is of tubular form, preferably constructed by rolling or stamping so that a split tube is formed within which may be disposed the lamp cord. The ends of the section 7 are forked providing arms 12 and 13. Section 8 is tubular in form providing a conduit for the lamp cord and has a forked end with arms 14 and 15. The arms 14 and 15 are arranged to be disposed between arms 12 and 13 as particularly shown in Fig. 2.

A cylindrical pintle 16 has reduced ends 17 and 18 which are square and disposed in corresponding apertures in the arms 12 and 13, thereby preventing rotation of the pintle. The pintle bridges the space between arms 12 and 13, the ends being flush against the inner surfaces of the arms 12 and 13. The arms 14 and 15 of the fork on section 8 are provided with cylindrical apertures 19 and 20 in which is disposed the pintle 16 so that section 8 is pivotally mounted with respect to section 7.

A split bushing 21 of spring steel or other similar material encompasses the pintle 16 and bridges the space between arms 14 and 15. The bushing 21 is provided at its ends with square tongues 22 and 23 which are disposed in corresponding apertures in the arms 14 and 15, thereby preventing the bushing from rotating with respect to the section 8. The bushing 21 firmly grips the pintle 16 so that frictional resistance is offered to the movement of sections 7 and 8 with respect to one another. The friction is sufficient to maintain the sections in any adjusted position.

It is obvious that the structure above described provides a friction joint which because of the large surface subject to frictional resistance will not wear quickly. The structure is simple and strong and easily assembled. No manipulation of the joint clamping means is required.

What I claim is:

1. In an adjustable lamp stand, the combination of sections each having forked ends, the arms of one fork disposed between the arms of the other fork, a pintle bridging the outer arms and secured thereto against rotation, and a split spring bushing encom-

passing and frictionally engaging the pintle, said bushing secured to the inner arms against rotation.

2. In an adjustable lamp stand, the combination of sections each having forked ends, the arms of one fork disposed between the arms of the other fork, a pintle bridging the outer arms and secured thereto against rotation, and a split spring bushing encompassing and frictionally engaging the pintle, said bushing extending between the inner arms and having tongues fixed in apertures in the inner arms to prevent rotation.

3. In an adjustable lamp stand, the combination of sections each having forked ends, the arms of one fork disposed between the arms of the other fork, a cylindrical pintle having reduced polygonal ends, said ends disposed in corresponding apertures in the outer arm, and a split spring bushing encompassing and frictionally engaging the pintle, said bushing extending between the inner arms and having tongues fixed in apertures in the inner arms to prevent rotation.

4. In an adjustable lamp stand, the combination of sections each having forked ends, the arms of one fork disposed between the ends of the other fork, a cylindrical pintle having reduced polygonal ends, said ends disposed in corresponding apertures in the outer arms, cylindrical apertures in the inner arms in which said pintle is disposed, and a split spring bushing encompassing and frictionally engaging the pintle, said bushing extending between the inner arms and having tongues fixed in apertures in the inner arms to prevent rotation.

In witness that I claim the foregoing I have hereunto subscribed my name this 15th day of April, 1916.

FRANK H. TRIMBLE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."