No. 802,990. PATENTED OCT. 31, 1905.

F. E. JOSELIN.

BILLIARD CUE TIP.

APPLICATION FILED NOV. 26, 1902.

Fig. 1.

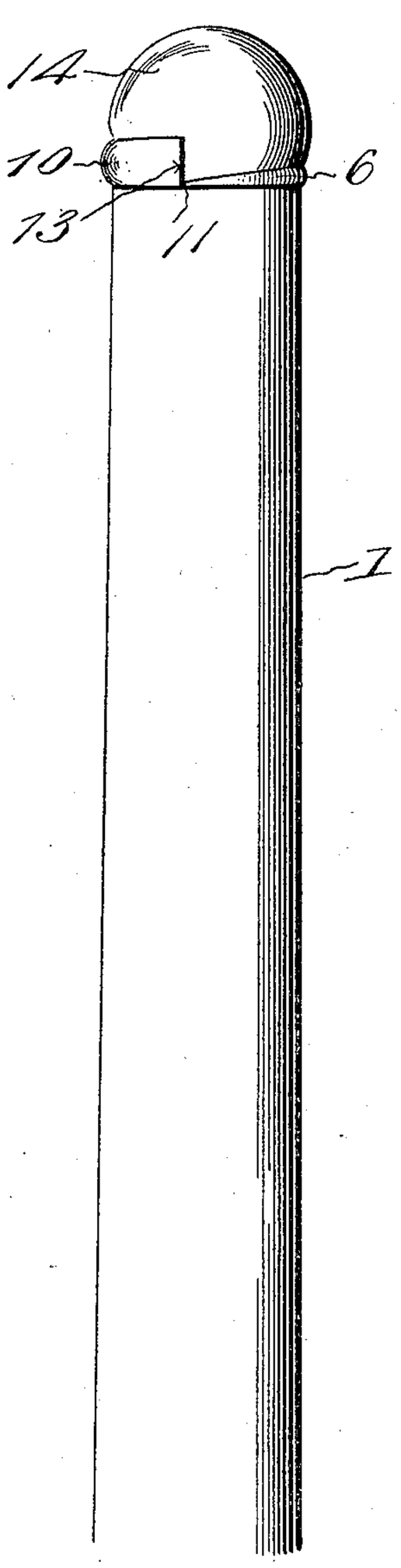


Fig. 2.

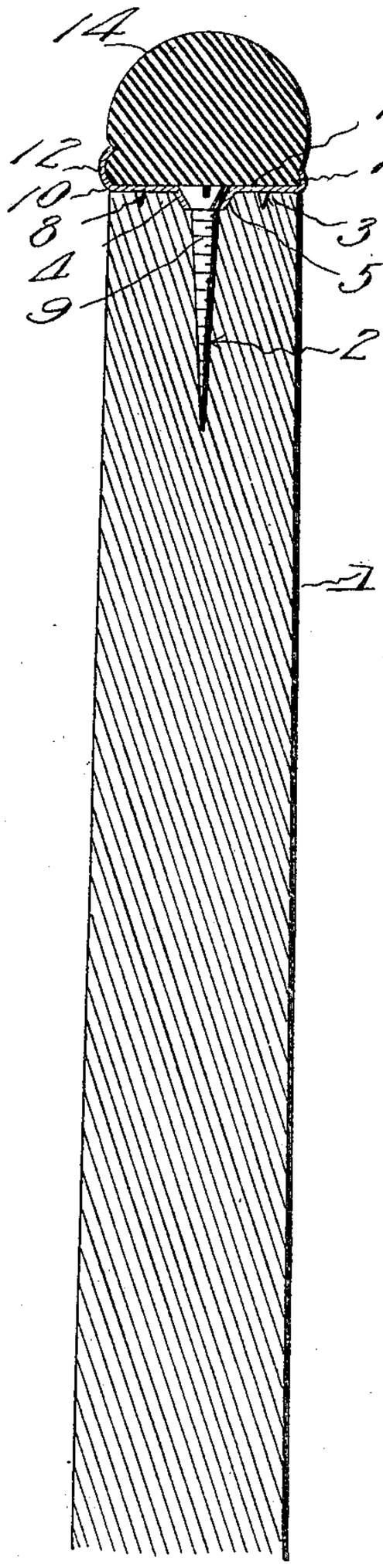
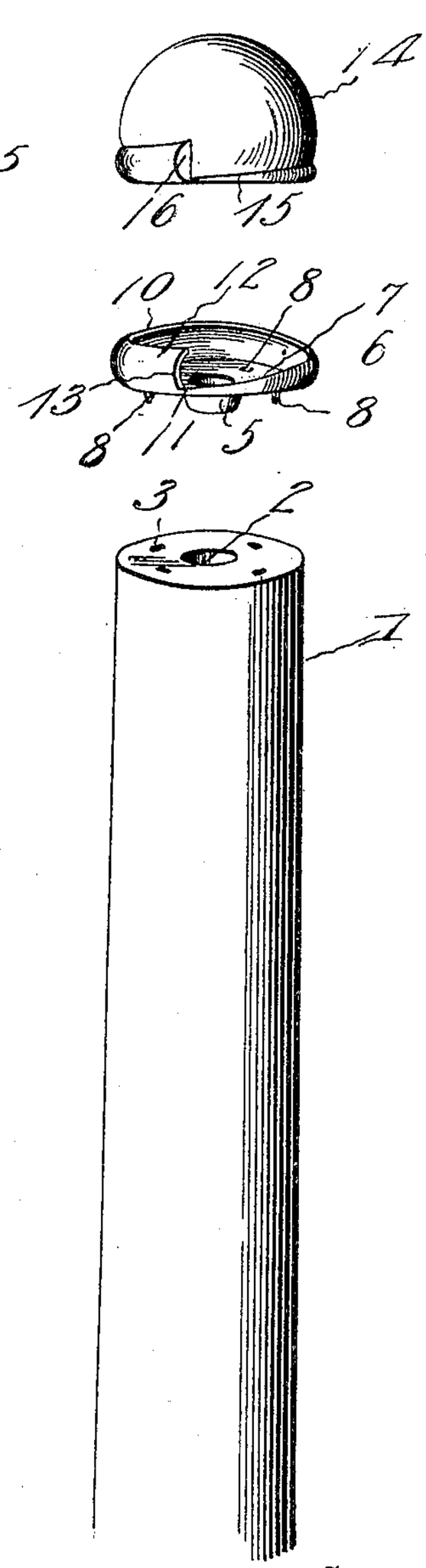


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANK E. JOSELIN, OF TORONTO, CANADA.

BILLIARD-CUE TIP.

No. 802,990. Specification of Letters Patent. Patented Oct. 31, 1905.

Application filed November 26, 1902. Serial No. 132,880½.

To all whom it may concern:

Be it known that I, FRANK E. JOSELIN, residing at Toronto, in the Province of Ontario and Dominion of Canada, have invented new and useful Improvements in Billiard-Cue Tips, of which the following is a specification.

This invention relates to improvements in billiard-cue tips and means for holding the same on billiard-cues; and the purpose of the improvement is to provide simple and effective means for positively holding a tip in applied position on the end of a cue and freely applicable, as well as removable, to adapt the worn tip to be quickly replaced by a new one without the delay incident to replacing worn tips by the methods now commonly practiced.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is an elevation of a portion of a cue, showing the tip and holding means of the same embodying the features of the invention. Fig. 2 is a transverse vertical section through the cue and tip and holding means shown by Fig. 1. Fig. 3 is a perspective view showing a portion of a cue, the tip-socket and tip separated.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

Numeral 1 designates a cue of the usual form having a longitudinal opening 2 in the center of the reduced extremity thereof surrounded by concentric recesses 3. The outer terminal 4 of the opening 2 is enlarged to receive a central seat projection 5 of a socket 6 of approximately circular form and of the same diameter in the main as the reduced end of the cue. The bottom plate 7 of the socket 6 closely bears against the end of the cue and has indentations 8 to fit within the recesses 3 and prevent the socket from rotating on the cue end. The socket is held in connection with the cue by a screw 9, passed centrally through the seat projection 5 into the opening 2 and having its head engaging the said projection, as clearly shown by Fig. 2. The socket 6 is surrounded by a spiral or thread flange 10 of concavo-convex form in cross-section. This flange gradually increases from a minimum vertical width 11 to a maximum vertical width 12, where a straight shoulder 13 is formed.

The tip 14 is constructed of the usual material employed for this purpose and may be spherically shaped, as shown, or slightly flattened at the top, as in ordinary tip structures, but at the base is a convex thread 15, corresponding in shape and dimensions to the inner surface of the flange 10 of the socket 6. The thread 15 gradually increases in thickness from its reduced extremity toward its enlarged terminal. In assembling the tip and socket after the socket has been secured in place on the end of the cue the small portion of the thread 15 is introduced adjacent to the shoulder 13 of the flange 10 and turned toward the left until the flange 10 engages the corresponding portion of thread throughout the circular extent of both engaging devices, and under such arrangement the shoulder 13 will coincide with the enlarged terminal of the thread 15. When the tip is thus applied in the socket, its thread will be frictionally jammed in the flange 10 with a resistance sufficient to overcome any tendency toward accidentally loosening due to use in delivering blow to impel balls. When the tip becomes worn and unfit for further use, it may be removed from the socket by turning it in a direction reverse to that pursued in assembling the socket-tip and a new tip substituted therefor. The socket 6 will be formed of suitable light metal, and the flange 10 will have a slight inherent resiliency to set up a more efficient frictional binding on the thread 15 of the tip.

From the foregoing it will be seen that a very simple and advantageous means for securing a tip to the end of a cue is provided, and the additional expense necessary in producing the socket and constructing a tip as specified as compared with the ordinary form of cue-tip will be found immaterial in view of the expedient means afforded for assembling and disassociating the tip and socket embodying the features of the invention.

Having thus described the invention, what is claimed as new is—

A billiard-cue, a tip-socket attached to one end thereof, said socket being formed of sheet

metal and having a marginal flange of concavo-convex form in cross-section and of gradually and continuously increasing width from a given point throughout the entire circumference of the socket, and a tip having a permanent marginal rib formed thereon to fit within and securely engage the socket-flange, the rib being of a shape to conform to that of the flange and to bind tightly in the socket when the tip is rotated in one direction.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK E. JOSELIN.

Witnesses:

JAMES STEWART,

CHARLES E. MITCHELL.