

(No Model.)

W. RABICH.

FASTENING FOR THE TIPS OF BILLIARD CUES.

No. 406,852.

Patented July 9, 1889.

Fig. 1.

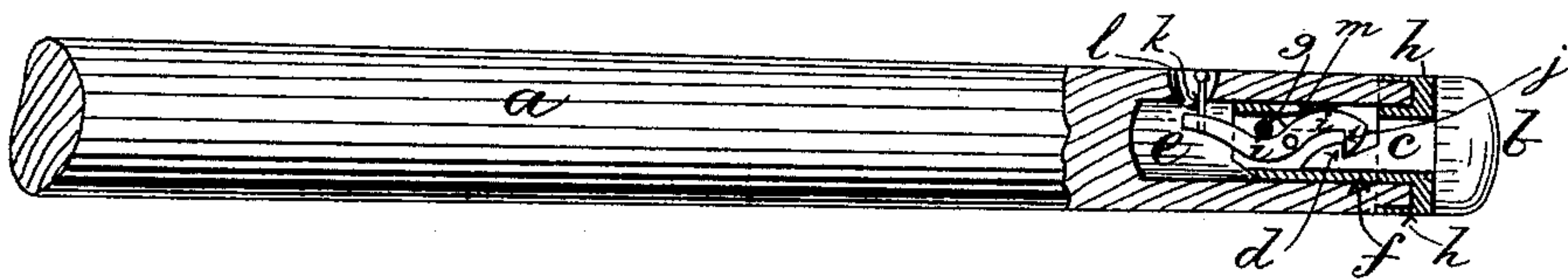


Fig. 2.

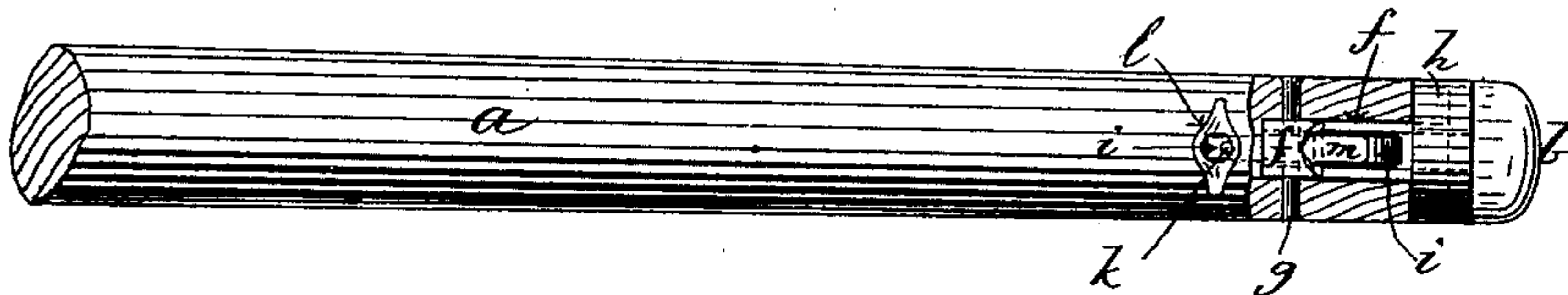


Fig. 3.

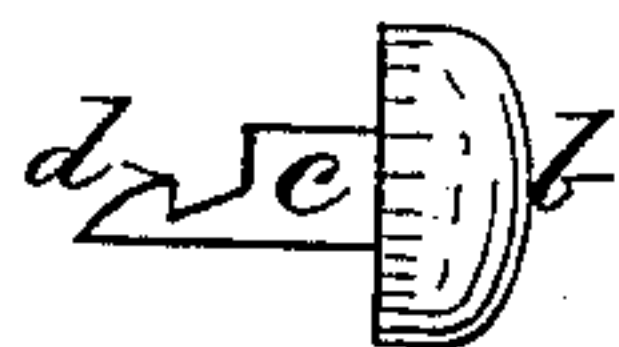
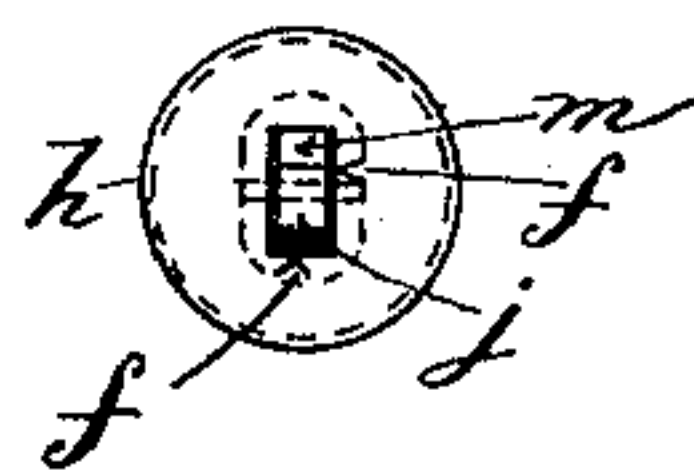


Fig. 4.



WITNESSES
S. L. Schwader.
Wm. Byrne

INVENTOR
William Rabich
Paul Bakewell

UNITED STATES PATENT OFFICE.

WILLIAM RABICH, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO
HERMAN H. LIEMKE, OF SAME PLACE.

FASTENING FOR THE TIPS OF BILLIARD-CUES.

SPECIFICATION forming part of Letters Patent No. 406,852, dated July 9, 1889.

Application filed October 5, 1888. Serial No. 287,294. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM RABICH, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented a certain new and useful Improved Fastening for the Tips of Billiard-Cues, of which the following is a full, clear, and exact description.

My invention relates to improved means of fastening billiard-cue tips, which, according to the present mode of fastening them to the ends of the cues, frequently come off the latter and cannot be replaced without great trouble and delay.

Now my invention has for its object to enable a billiard-cue tip when worn or otherwise injured to be removed from the cue and a fresh tip fastened thereon with ease and rapidity; and it consists in a hooked shank attached to the back of the tip and inserted within a recess in the end of the billiard-cue and provided with a trigger-lever and spring by which the hooked shank of the tip on being inserted within the recess is caught and thereby holds the tip firmly in its proper position against the end of the cue.

On the accompanying drawings, Figure 1 represents a longitudinal sectional elevation taken centrally through my improved tip-fastening; and Fig. 2, a longitudinal elevation of the fastening taken at right angles to Fig. 1 with the cue broken away thereat; Fig. 3, a side elevation detached of the tip with its shank; and Fig. 4, an end view of the cue with the tip removed, like letters of reference denoting like parts in all the figures.

a represents the end of a billiard-cue, to which the tip *b* is to be fastened. On the back of the tip *b* is fixed a stem or shank *c*, which terminates in a hook *d*. Within a recess *e*, formed endwise in the end of the cue *a*, is preferably inserted a rectangular or other suitably-shaped tube *f*, which is fixed in position by a pin *g*, passing through it and the cue *a*, or in any other convenient manner. The outer end of the tube *f* is in the form of a circular cap *h*, the rim of which fits over

the end of the cue *a* and is flush circumferentially therewith, as shown.

Within the tube *f*, between two of its sides, is fulcrumed a trigger-lever *i*, one arm of which extends toward the outer end of the tube *f* and terminates in a hook *j*, while its other arm is directed backward beyond the inner end of the tube *f*, where it is provided with a pin *k*, which projects outward from the lever *i* through a hole *l* in the circumference of the cue *a*.

Fastened at one end to the inside of the tube *f* is a spring *m*, the free end of which bears against the edge of the outer arm of the lever *i* and normally tends to force the same with its hook *j* toward the side of the tube *f* opposite to the spring *m*.

On inserting the shank *c* of the tip *b* within the tube *f*, the curved back or nose of the hook *d* strikes the corresponding part of the hook *j* of the lever *i*, and constrains the latter radially on its fulcrum against the tension of the spring *m*, until the hook *d* passes the hook *j* and the back of the tip *b* is hard against the end of the cue *a*, when the hook *j* is forced by the spring *m* into engagement with the hook *d*, and thereby holds the shank *c* and tip *b* firmly in position to the end of the cue *a*.

When it is desired to remove the tip *b* from the cue *a*, the pressure of the finger upon the outer end of the pin *k* pushes down the inner arm of the trigger-lever *i* against the spring *m*, and thereby releases the hook *j* from the hook *d* of the shank *c*, and so enables the latter to be withdrawn and the tip *b* removed from the cue *a*, when a fresh tip of similar construction can be fastened to the cue in like manner.

I claim—

1. In a billiard-cue, the combination of trigger-lever *i*, inserted in recess *e* at the end of the billiard-cue and fulcrumed therein, said lever *i* having hook *j* and pin *k* projecting through hole *l*, spring *m*, and tip *b*, having shank *c* and hook *d*, the whole combined and operating substantially as described.

2. In a billiard-cue, the combination of a trigger-lever *i*, inserted in recess *e* at the end of the billiard-cue and fulcrumed therein, said lever *i* having hook *j* and pin *k* projecting through hole *l*, spring *m*, tube *f*, fixed in recess *e* and having cap *h*, and tip *b*, having shank *c* and hook *d*, the whole combined and operating substantially as described.

In testimony whereof I affix my signature in presence of two witnesses this 29th day of 10 September, 1888.

WILLIAM RABICH.

Witnesses:

S. L. SCHRADEP,
WM. BYRNE.