

# UNITED STATES PATENT OFFICE.

VINCENT B. HUBBELL, OF NEW YORK, N. Y.

## BILLIARD-CLOTH.

SPECIFICATION forming part of Letters Patent No. 780,186, dated January 17, 1905.

Application filed November 25, 1904. Serial No. 234,291.

*To all whom it may concern:*

Be it known that I, VINCENT B. HUBBELL, a citizen of the United States, residing at New York, borough of Manhattan, county and State of New York, have made a new and useful In-  
vention in Billiard-Cloths, of which the follow-  
ing is a specification.

My invention is directed particularly to an improvement on a novel billiard-cloth disclosed in a prior application filed by me in the United States Patent Office on the 17th day of August, 1904, and bearing Serial No. 221,043; and it has for its objects, first, to provide a cloth which possesses greater wearing life than do existing types of such cloths now in general use or does the before-mentioned improved cloth disclosed in my prior application; second, to provide a cloth which offers less resistance to the balls, and hence permits of greater velocity for given cue impacts than do existing well-known cloths; third, to provide a cloth which will not soil by what is known as "spotting" of the top or wearing surface, heretofore supposed to be attributable to the presence of the chalk used by the players in chalking their cue-tips; fourth, to provide a cloth which will be very much less expensive than either the well-known costly woolen cloths now in public use or than is the silk-surfaced cloth disclosed in my prior application above referred to.

I have discovered that it is not the presence of chalk which causes a fine-surfaced billiard-cloth to "spot," as it is called, but that said spots are due to the friction of the balls when caused to rotate at great velocities while standing relatively still upon the table, as is always the case when what is known as "draw" and "massé" shots are executed.

A regulation ivory billiard-ball is about two and three-eighths inches in diameter and weighs approximately seven and one-half ounces. If such a ball be subjected to a sudden draw from the cue of a player, it is given, first, motion directly away from the cue-tip by the impact of the cue at a point below the horizontal equator of the ball; second, it stops suddenly and spins continuously in one direction upon one spot. This weight and velocity

are such as to generate heat sufficient to discolor well-known cloths, and an actual examination with a magnifying-glass will reveal the fact that the fiber at such point assumes the original white appearance the cloth had before being subjected to the process of dyeing, thus actually spotting the cloth. With my improved cloth having a silk wearing-face and disclosed in the before-mentioned application this spotting is much more noticeable than with existing woolen cloths and led to the discovery above noted. It was with a view, therefore, of overcoming this objectionable feature, and thereby increasing the wearing life of a billiard-cloth, that my present improvement was devised. To this end I utilize what is known in the art of the cloth industry as a "mercerized" cloth, in which preferably one face—the top or wearing face, upon which the balls roll—is made of mercerized fibrous material, preferably cotton. I have found that most excellent results are obtained with a cloth in which the under or table face is of untreated cotton, such as is ordinarily used in making cotton cloths, and the top or wearing face of mercerized cotton. I have discovered that such a cloth presents to the balls practically as smooth a rolling-surface as does a silk-like faced cloth, like that disclosed in my prior application, with the additional advantages of greater strength and wearing endurance and at materially less cost.

I do not limit myself to the use of a cloth mercerized on one face only, although I prefer that the under or table face shall be of untreated cotton. Nor do I limit my improvement to mercerized cotton, as any of the fibrous substances known to be useful in the art of cloth-making and capable of being mercerized may be used and combined in any preferred way, my discovery being generically devoted to the use of mercerized cloth upon billiard-tables and with the very desirable results above stated.

I make no generic claim herein to a billiard-cloth having a top or wearing face with a fine or silk-like nap, as such constitutes the subject-matter of my more generic application bearing Serial No. 221,043, above referred to; but

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

1. A billiard-cloth having a top or wearing face of mercerized fibrous material.
- 5 2. A billiard-cloth having a top or wearing face of mercerized fibrous material and an under or table face of non-mercerized material.
3. A billiard-cloth having a top or wearing face of mercerized cotton.
- 10 4. A billiard-cloth having a top or wearing

face of mercerized cotton and an under or table face of non-mercerized cotton.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

VINCENT B. HUBBELL.

Witnesses:

C. J. KINTNER,  
M. F. KEATING.