

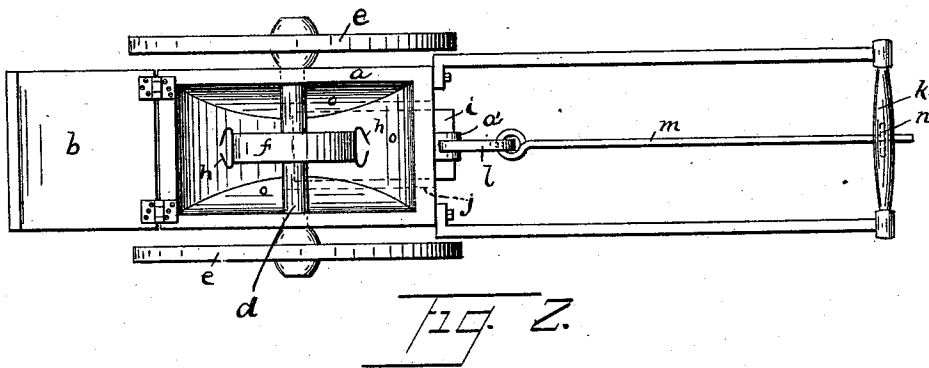
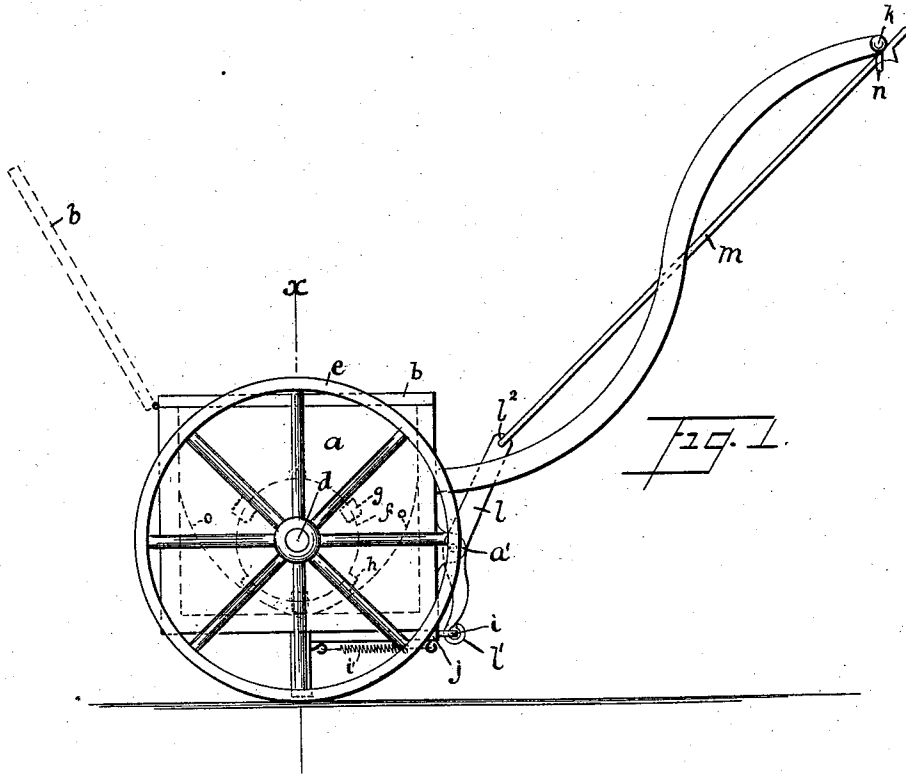
(No Model.)

2 Sheets—Sheet 1.

T. T. LYONS.
LAWN TENNIS MARKER.

No. 536,035.

Patented Mar. 19, 1895.



WITNESSES:

Chas. R. Michel
Louis H. Michel

INVENTOR

THOMAS T. LYONS,
BY Oscar A. Michel & Co., ATT'YS.

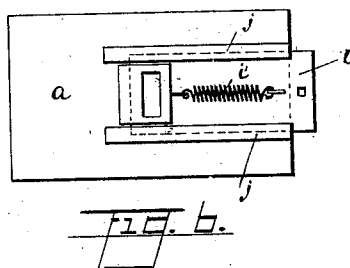
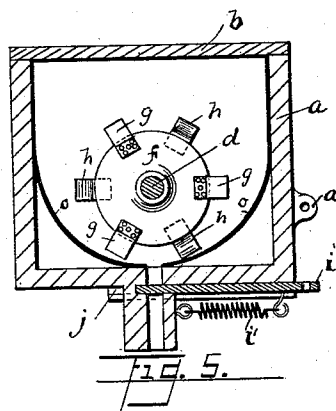
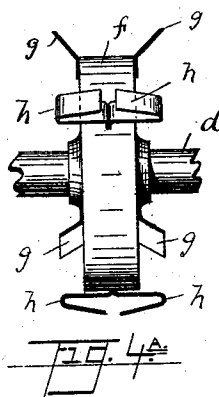
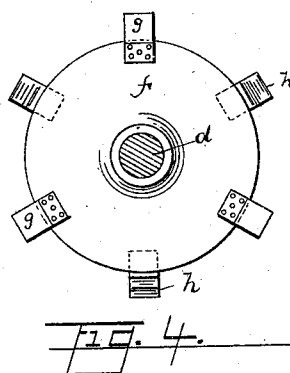
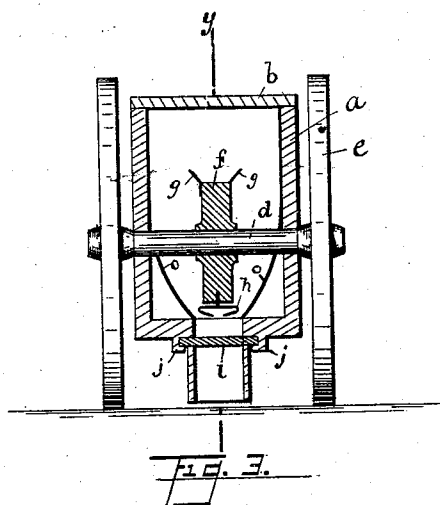
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UNITED STATES PATENT OFFICE.

THOMAS TOLLEN LYONS, OF MONTCLAIR, NEW JERSEY.

LAWN-TENNIS MARKER.

SPECIFICATION forming part of Letters Patent No. 536,035, dated March 19, 1895.

Application filed June 2, 1893. Serial No. 476,322. (No model.)

To all whom it may concern:

Be it known that I, THOMAS TOLLEN LYONS, a citizen of the United States, residing at Montclair, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Lawn-Tennis Markers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to a new and useful improvement in apparatus for marking out lawn tennis boundaries and it consists essentially of a receptacle, for the chalk or pigment, placed upon wheels and having at its bottom a slot or outlet, in combination with a wheel within the receptacle adapted to stir or crush the contents and with a lever controlling the opening or outlet for the chalk or pigment.

It consists also in the various details of construction and combination of parts herein-after described and claimed.

In the drawings Figure 1 is a side elevation of my improved apparatus. Fig. 2 is a plan view of the same with the lid raised to show the interior of the receptacle. Fig. 3 is a central section on line *x* of Fig. 2. Figs. 4 and 4^a are detail views of the inside or spread wheel; and Fig. 5, is a section through line *y*. Fig. 6 is a plan of the bottom, looking up.

In said drawings *a* is the box or receptacle having at its upper end a hinged lid *b* and in its bottom a slot or opening *c*. This receptacle is supported on the axle *d*, passing through the receptacle and the wheels *e*. Within the receptacle and keyed to the shaft *d* is placed the wheel *f* carrying the grinding or crushing strips or projections *g* and *h*. This wheel *f* is placed by preference directly above the slot or opening *c* in the bottom of the receptacle.

Extending from the sides of the slot *c* to the sides of the receptacle *a* are the sheet metal wings or breasts *o* adapted to guide the contents of the receptacle to the slot *c* and at the same time act as breasts upon which lumps of the pigment may be crushed prior to enter-

ing the slot by the arms *g* and *h* of wheel *f*. The forward edges of said arms constitute cutters for dividing the lumps of chalk or pigments while their broad surfaces serve as crushers to reduce the divided lumps to powder.

The slot *c* is opened or closed by means of the slide *i*, working in bearings as at *j*, by means of a lever *l* fulcrumed to the front of the receptacle and extending upward to the handle *k* of the receptacle and having connected to it a rod *N* by which it may be operated.

The arms *g*, may consist of strips of metal bolted to the sides of the wheel *f* and the curved bifurcated arm *h* as illustrated in Fig. 4 are driven into the periphery of said wheel *f*.

In operation chalk or other pigment is placed in the receptacle and the same is wheeled around the lawn in the required direction. The axle *d* carried by the wheels actuates the stirrer wheel *f* and the arms *g* and *h* thereof cut, break and crush the lumps of chalk within the receptacle against the breast *o*. Whenever the chalk is to be dropped upon the lawn the slide *i* controlling the outlet *c* is opened. Said device for controlling and operating the said slide *i* is illustrated in Figs. 1 and 2, and consists essentially of a short lever *l* pivotally secured at *a'* to the receptacle *a*. Said lever *l* is connected at *l'* to said slide *i*, substantially as illustrated, while secure in an eye *l''* in the other end of said lever *l* is a push rod *m*. Said push rod *m* is loosely connected with the upper portion of the handle *k*, where it is held in sliding contact by a suitable holding device *n*, substantially as shown in said Fig. 1. Thus it will be seen that when the rod *m* is pushed forward, said slide *i*, will be operated upon by the action of the fulcrumed lever *l*, and the slot *c* is consequently opened. A suitable spring *i'* causes the return of said slide *i* to close the slot *c* when the rod *m* is released by the person operating the machine.

It is manifest that various modifications of the parts of my invention may be made without departing from the spirit of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a lawn tennis marker the combination

with a receptacle having an opening at its lower part of a rotating wheel located within said receptacle and provided with a series of peripheral arms having cutting edges and
5 crushing faces, and mechanism for rotating the wheel substantially as specified.

2. In a lawn tennis marker, the combination with the receptacle having an opening and movable slide at the bottom, of the wheel lo-
10 cated therein and mounted on the axle of the same, the outwardly and inwardly bent pe-

ripheral arms, and the breast against which they work to cut and crush the lumps of chalk or pigments, substantially as specified.

In testimony that I claim the foregoing I 15
have hereunto set my hand this 4th day of May, 1893.

THOMAS TOLLEN LYONS.

Witnesses:

OSCAR A. MICHEL,
W. C. HELLER.