

J. S. Smith,

Twine Holder.

No. 104,505.

Patented June 21, 1870.

Fig. 1.

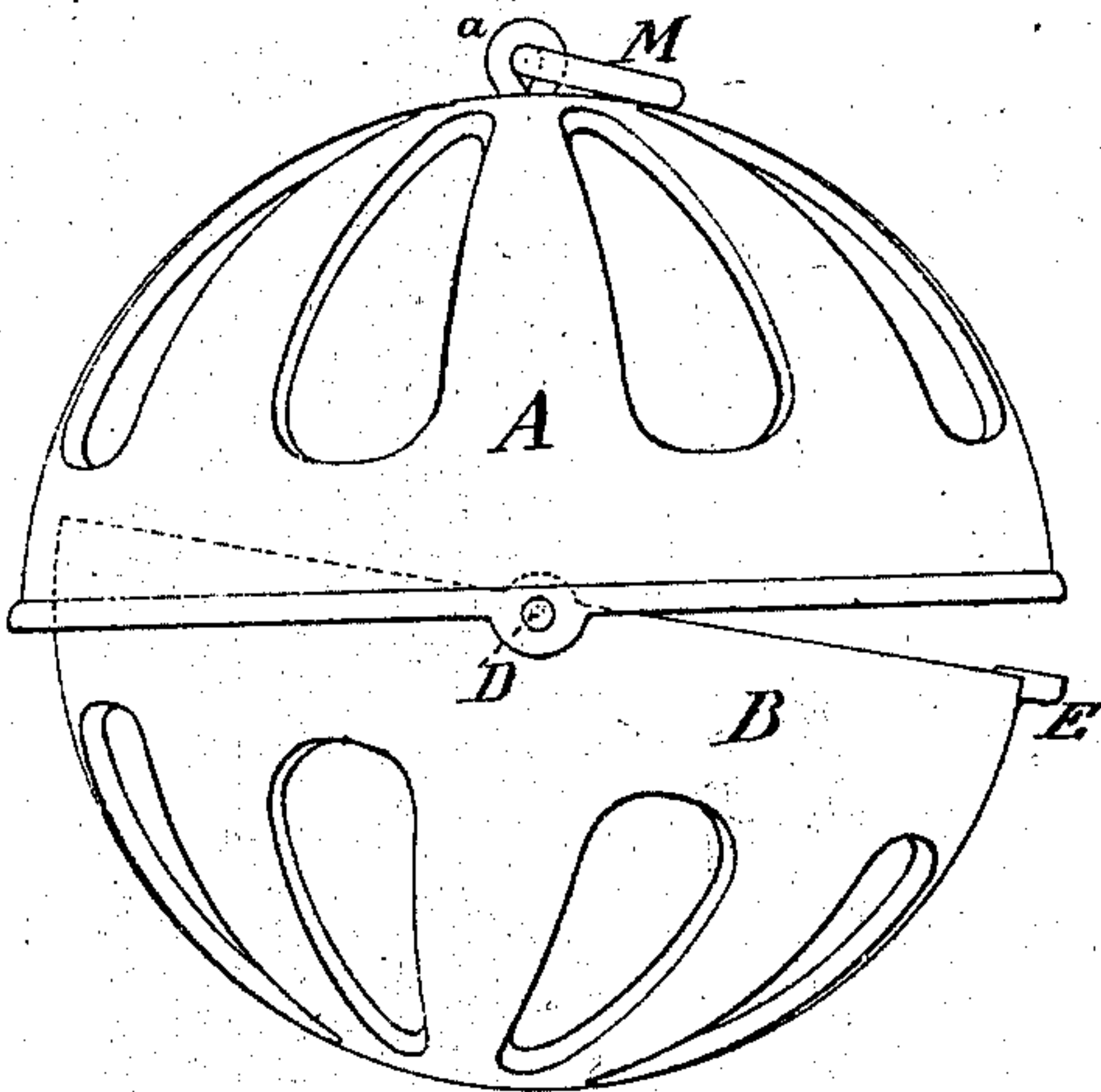


Fig. 3.

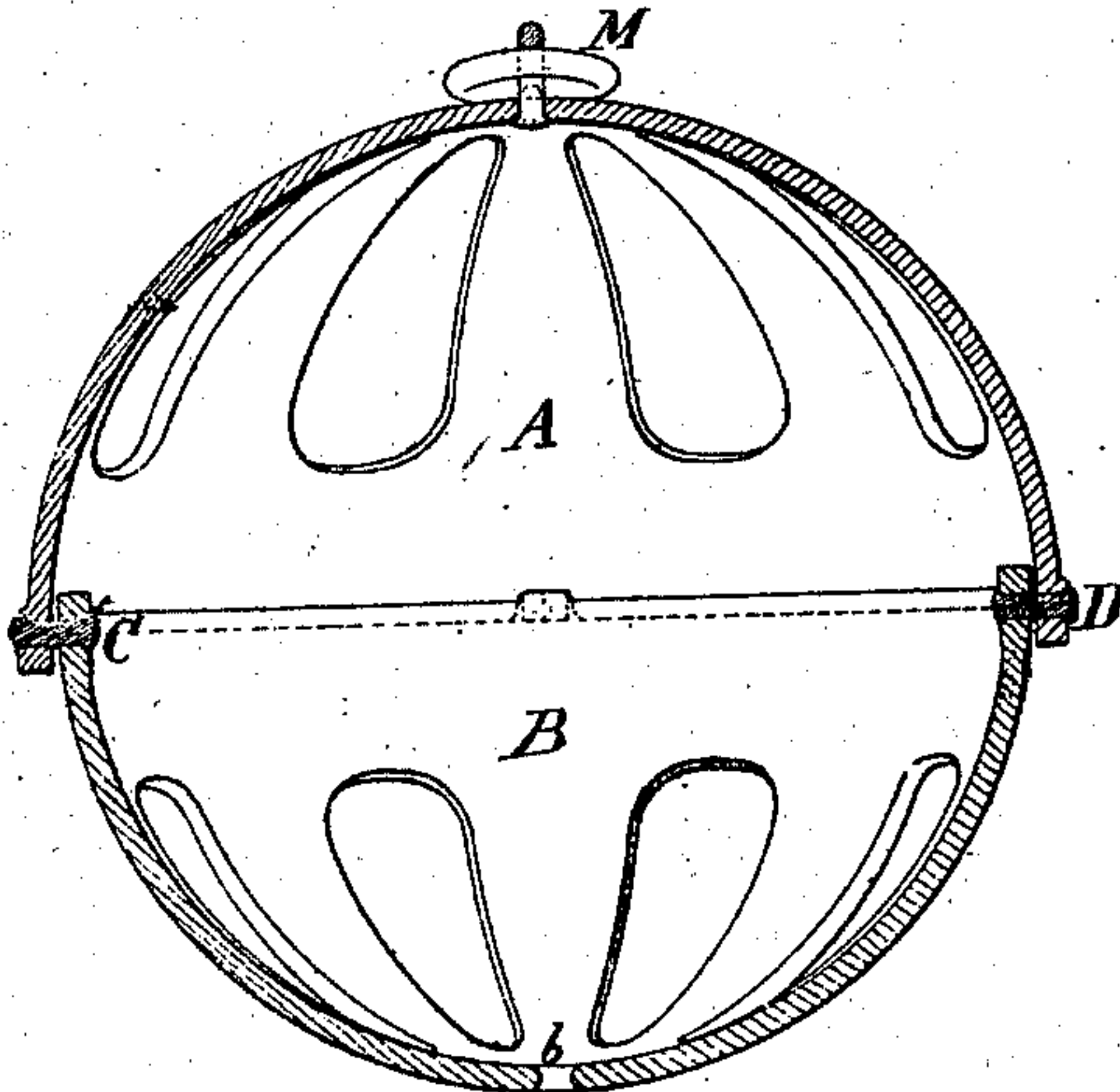


Fig. 2.

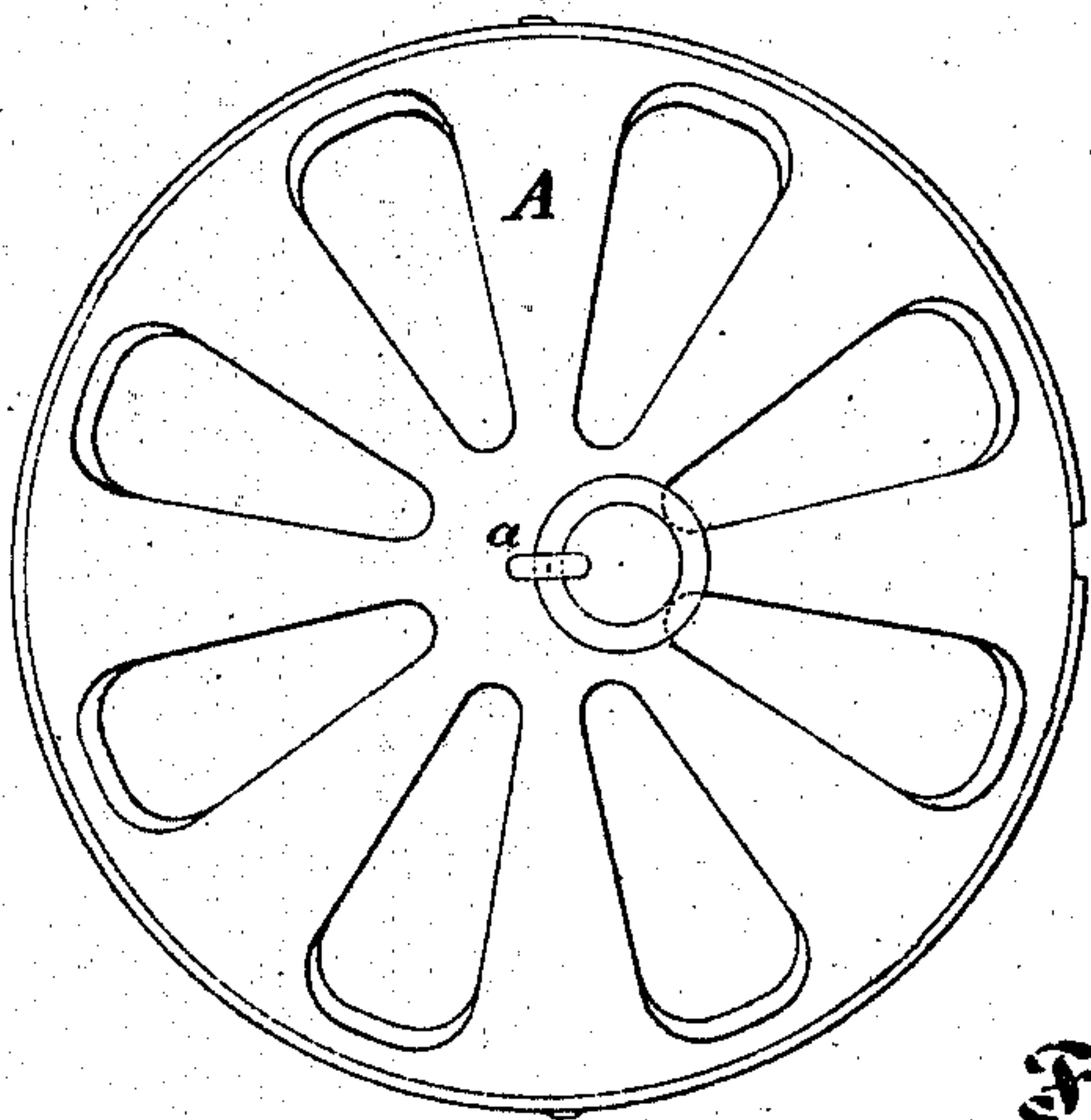


Fig. 5.

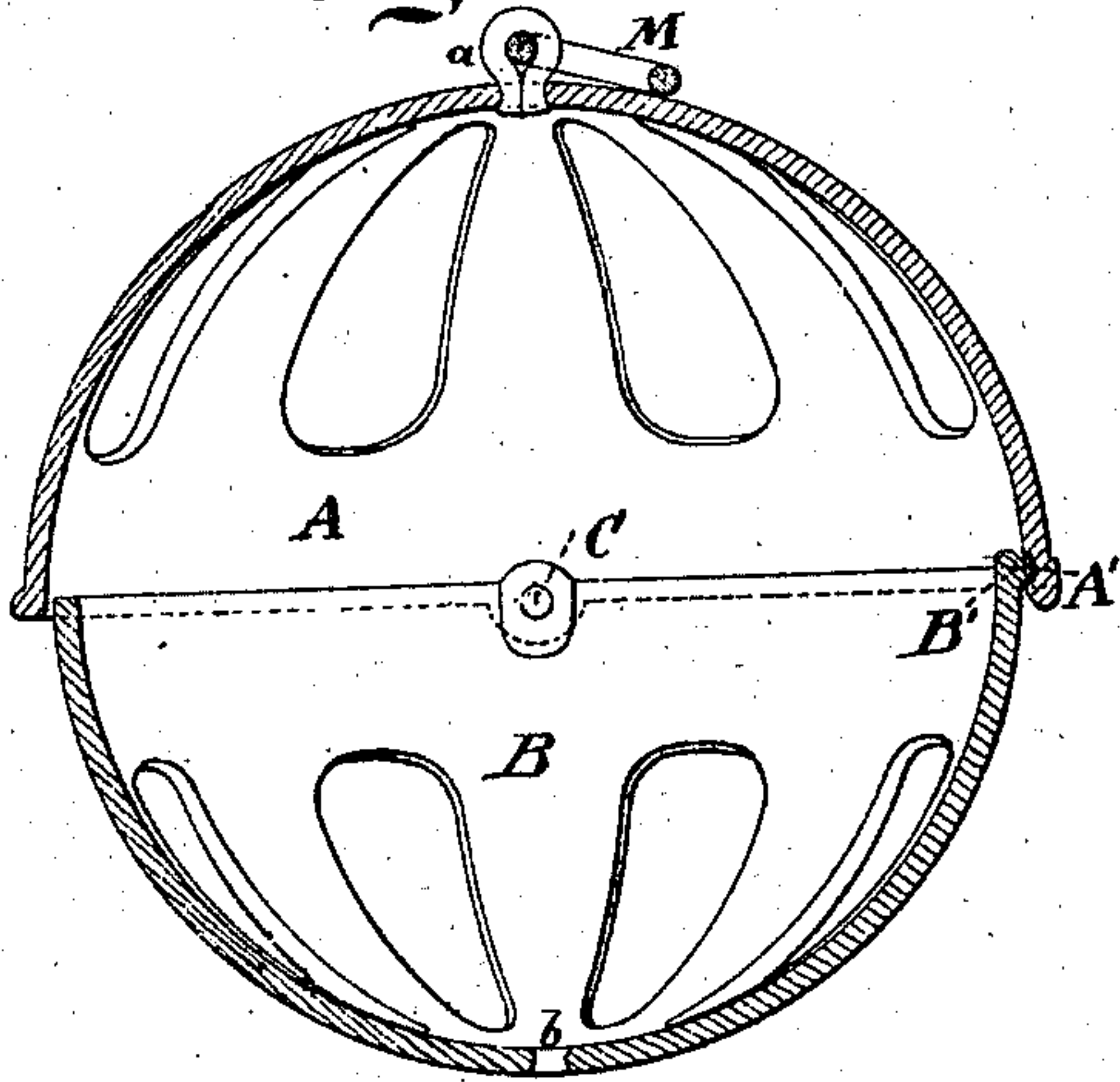
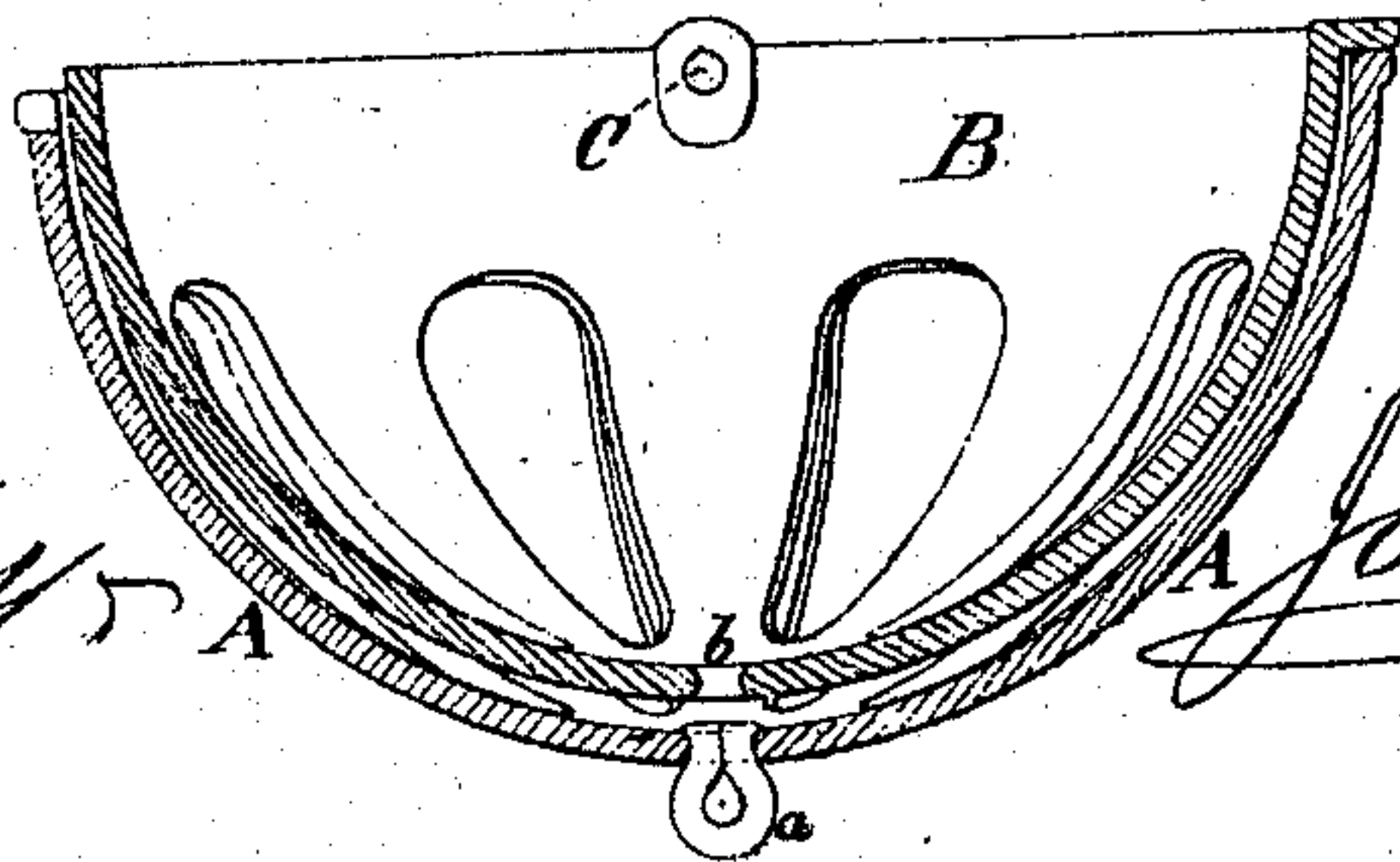


Fig. 4.



Witnesses,

Wm C. Price

H. C. Price

Inventor,

James S. Smith

United States Patent Office.

JAMES SPENCER SMITH, OF MIDDLETOWN, CONNECTICUT.

Letters Patent No. 104,505, dated June 21, 1870.

IMPROVED TWINE-HOLDER.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES SPENCER SMITH, of Middletown, in the county of Middlesex and State of Connecticut, have invented a certain new and improved Twine-Holder; and I do hereby declare that the following is a full and exact description thereof.

My twine-holder is one of that class which is adapted to be suspended from the ceiling in a store or manufactory, and to deliver the twine through a hole from a ball in its interior. It is self-closing. It is packed in a very small compass for transportation, and, having no necessity for locking-latches or other complicated fastenings, is little liable to get out of order, and gives promise of being very durable.

I will proceed to describe what I consider the best means of carrying out my invention.

The accompanying drawing forms a part of this specification.

Figure 1 is a side elevation of the simplest form of my device, in the nearly-closed condition, ready for use.

Figure 2 is a plan view of the larger or upper half of the same.

Figure 3 is a central section through another slightly differing form of the construction.

Figure 5 is a section at right angles to that in fig. 3.

Figure 4 is a section corresponding to fig. 5, but showing the device in its closed condition, ready to receive a fresh ball of twine, or ready to be enveloped in paper and shipped or packed for storage in a small compass.

Similar letters of reference indicate like parts in all the figures.

A is a hemispherical shell, of cast-iron, provided with a little lug, *a*, at the top, by which the whole may be suspended by a cord or the like, as will be obvious.

B is a smaller hemispherical shell, of the same or a different material; and

C and D are rivets uniting the shells A and B, on two opposite sides, by the aid of lugs extending from each of the parts A and B, as represented.

I prefer that the rivets shall hold the adjacent surfaces of the shells A and B tightly together, so as to induce an appreciable friction, but it is important that they be not so stiff as to prevent the parts turning upon each other.

When the shell B is turned into the other, the whole may be packed in a very small compass.

When it is ready for use, and is suspended by the ring M, a ball of cord is placed within the inner shell B, and the shell is turned downward until it assumes the position shown in fig. 1, where the device presents a nearly spherical appearance and the ball of cord is completely inclosed.

The cord is drawn out through a hole, *b*, which, when the device is in use, is at the lowest point in the structure. The end of the cord may be easily rove through the hole *b* when the twine-holder is about half opened.

It will be observed that the gravity of the part B tends to keep the device always in its spherical condition, as shown in fig. 1. No jerking about of the device can throw it much out of this condition. It requires no fastening to hold it always in the closed or nearly-closed position.

Although, as above remarked, the device may be worked very successfully without any locking, and it is always self-closing, under all conditions, I propose, as an additional improvement or feature, to make a slight lock by the aid of the elasticity of the parts.

B' is a projection reaching out from one edge of the part B, and adapted to fit into a recess in the part A when these parts are brought forcibly together. Now, after putting the ball of twine or cord within the apparatus, which I have called a twine-holder, and shutting the parts together with sufficient force, the projection B' enters the recess A', and remains there confined until a considerable force is employed to turn it back. The elasticity of the parts permits a yielding to a sufficient extent to allow the opening and closing in this manner.

When my device is provided with this elastic locking-catch, there is no swinging open of the device as it is jerked about. In the absence of such a locking device it may, and is liable to swing open a little in one direction and the other, but this involves no particular harm.

I have represented the shells A and B as made open-work. They may be variously ornamented in this manner, and the interstices, by allowing a view of the twine or cord in the interior, serve a useful function, in addition to the lightening of the shell. The shells may be struck up in dies from sheet metal, or they may be spun up from soft brass or any material which will bear spinning. They may be molded in *papier maché*, hard rubber, or various other materials, or may be cut in wood, and (either with or without saturating the wood with glue or some other material, to prevent its warping and increase its strength,) may be made to serve a useful purpose.

E, fig. 1, shows a projection on the part B, which serves as a stop to arrest the turning of this part too far in one direction, and allow it to turn only in the other direction. It may strike against a plain portion of the rim of the part B, or it may be allowed to enter a slight recess provided there to receive it. I do not consider it essential to the success of my device.

It will be understood that, in the other form, in which a part, B', on the one part, enters by an elastic yield-

ing into a recess, A', and slightly locks the parts, the elastic action is partaken of by the general mass of the part A or B, or both, and that no separate spring or attachment is necessary.

I claim—

1. The self-shutting twine-holder herein described, having its two parts, A and B, adapted to maintain their proper position by gravity, substantially as and for the purposes herein set forth.

2. In connection with the above, the recess A' in

the hemispherical shell A, and the projection B' on the smaller hemispherical shell B, when the parts are hinged together in a line through their centers C D, and adapted to operate in the manner herein set forth.

In testimony whereof I have hereunto set my name in the presence of two subscribing witnesses.

JAMES S. SMITH.

Witnesses:

WM. C. DEY,

ROBERT ROULSTON.