

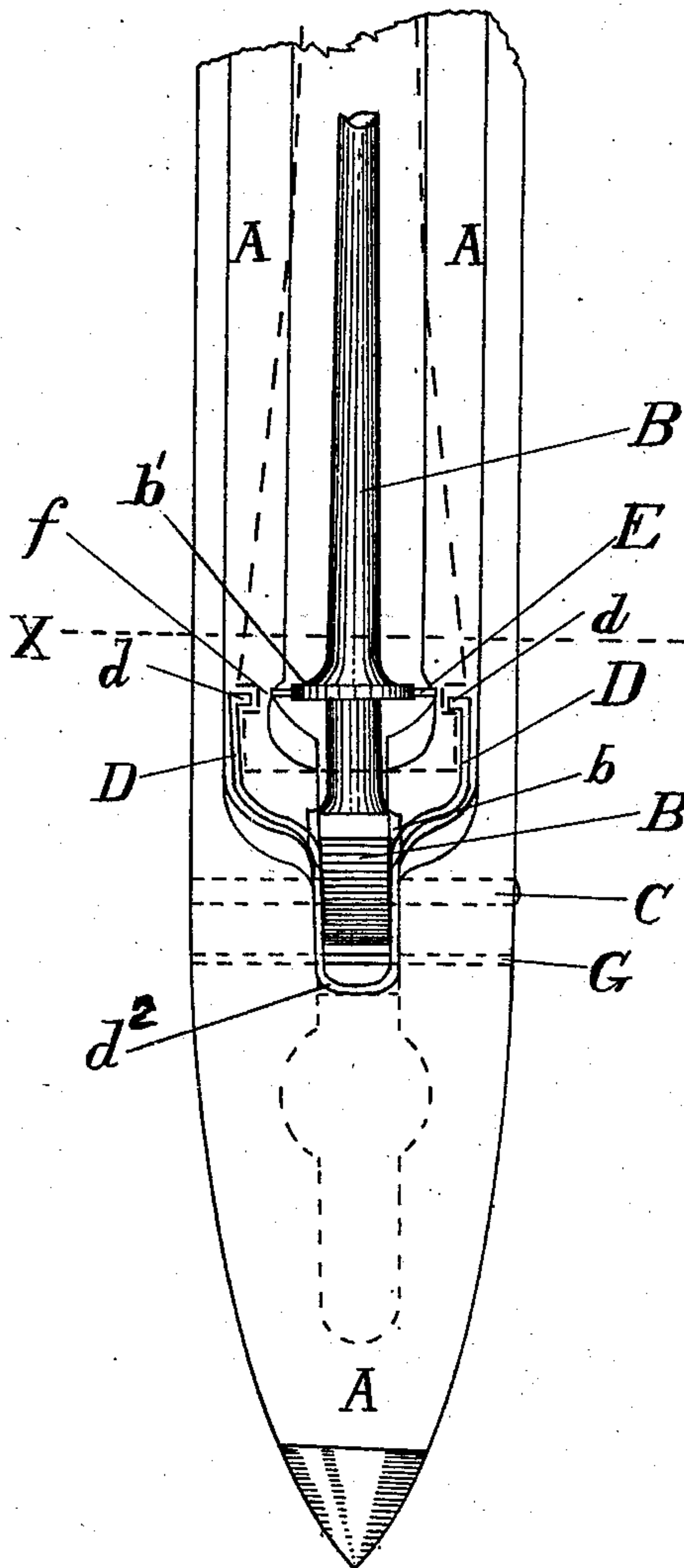
No. 859,991.

PATENTED JULY 16, 1907.

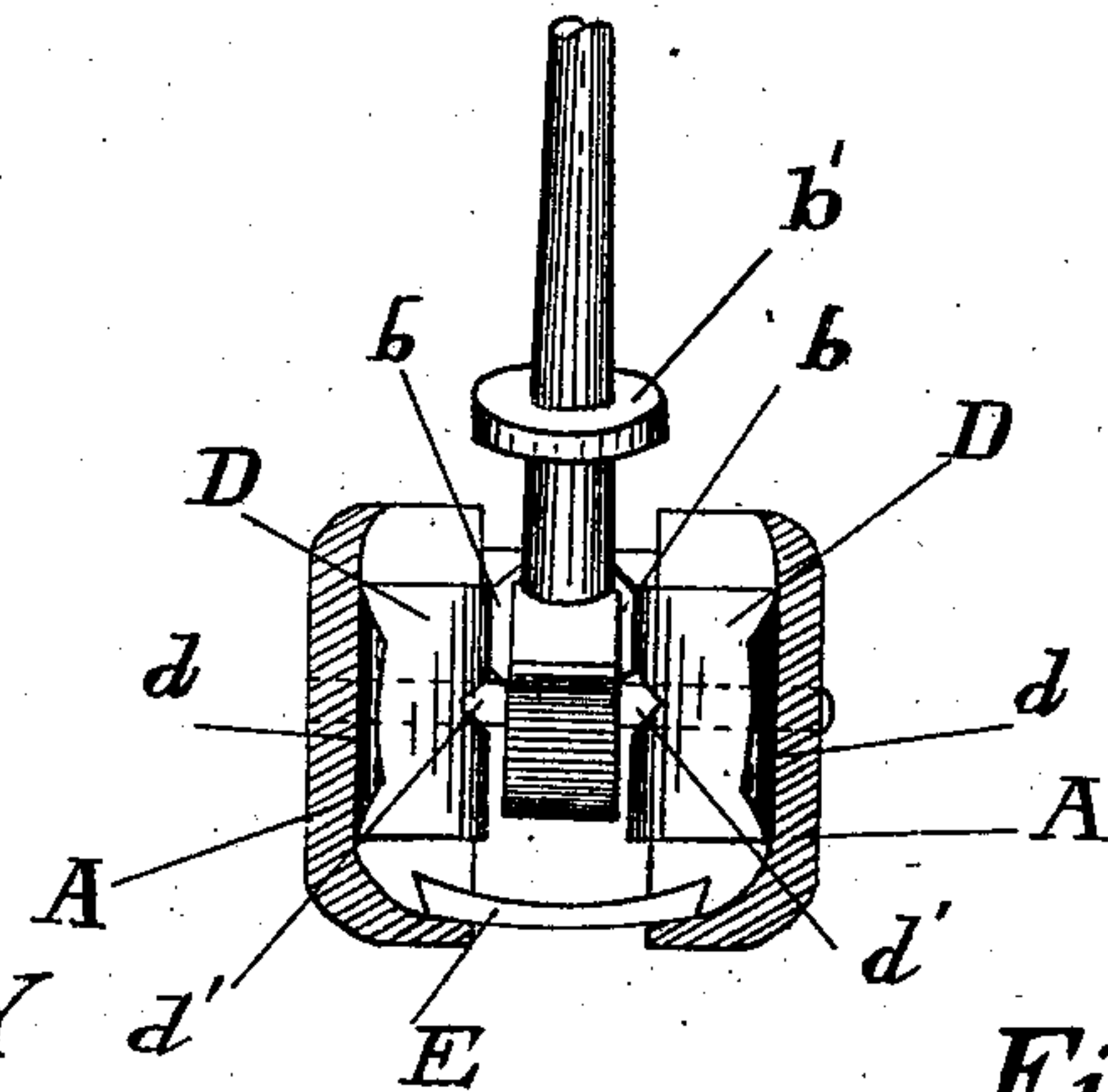
C. J. SULLIVAN.

LOOM SHUTTLE.

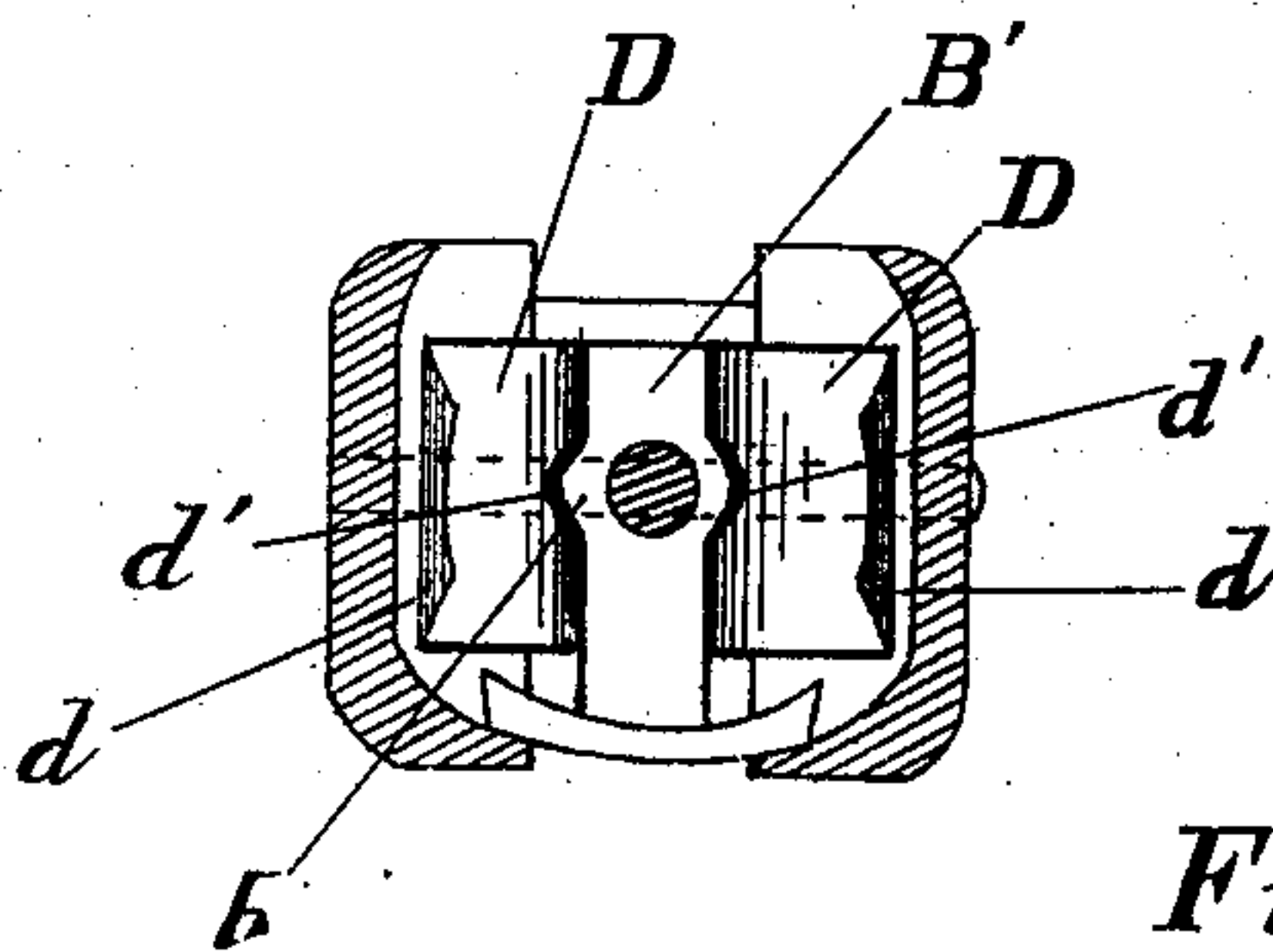
APPLICATION FILED AUG. 14, 1905.



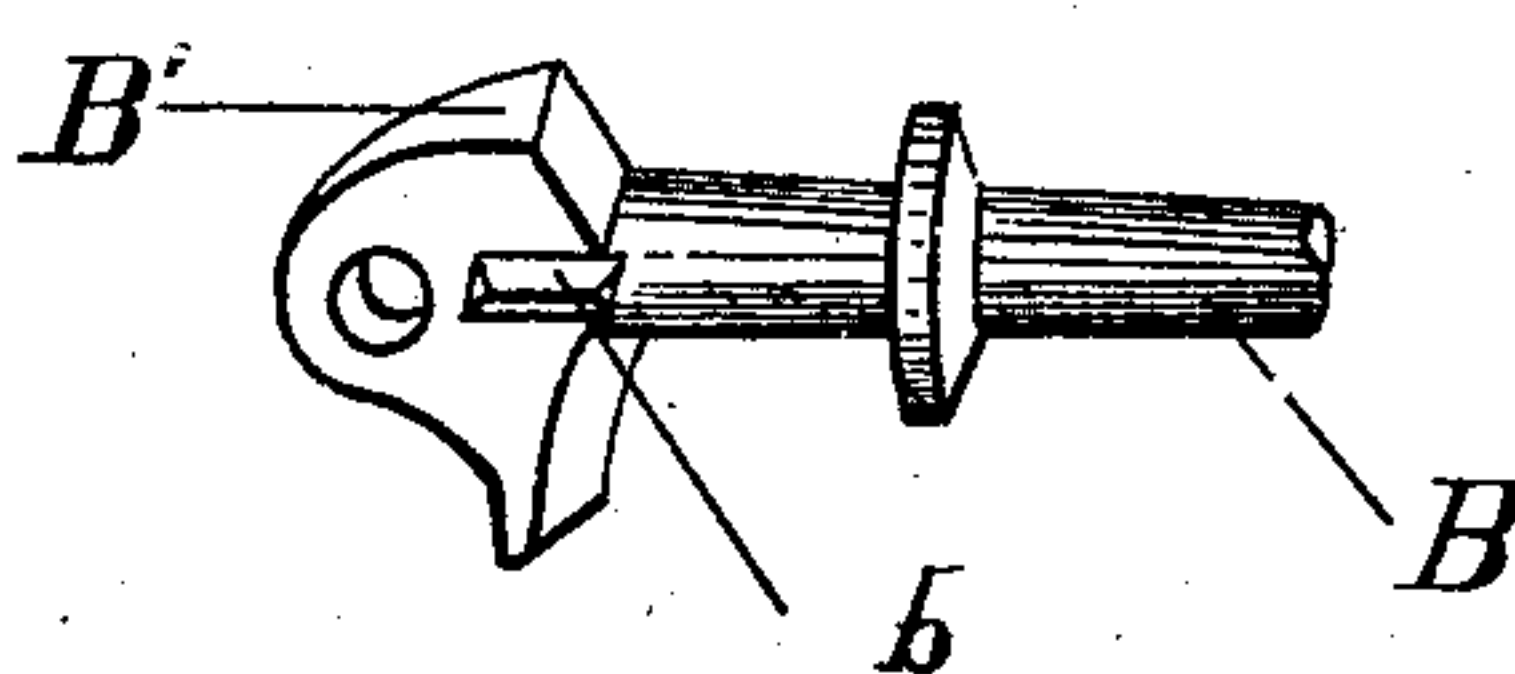
*Fig. 1*



*Fig. 2*



*Fig. 3*



*Fig. 4*

**WITNESSES:**

WITNESSES:  
Isaac Dayton.  
George E. Shaw.

Cornelius J. Sullivan INVENTOR

BY

BY  
James M. Morton.

**ATTORNEY**

# UNITED STATES PATENT OFFICE.

CORNELIUS J. SULLIVAN, OF FALL RIVER, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO  
HERBERT H. MARBLE, OF SOMERSET, MASSACHUSETTS.

## LOOM-SHUTTLE.

No. 859,991.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed August 14, 1905. Serial No. 274,031.

To all whom it may concern:

Be it known that I, CORNELIUS J. SULLIVAN, a citizen of the United States of America, and a resident of Fall River, in the county of Bristol and Commonwealth

of Massachusetts, have invented an Improvement in Loom-Shuttles, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts in the different figures and in the description.

This invention relates to shuttles of the kind ordinarily used in weaving looms, having a spindle which is pivoted in the shuttle so that it can be turned up to allow the bobbin to be placed thereon.

My invention consists in the novel means adopted for holding the bobbin firmly when the shuttle is in operation.

In the accompanying drawings Figure 1 represents a top view of one end of the shuttle, showing my invention applied thereto. Fig. 2 is a sectional view on line X Y, showing the spindle turned up ready to receive the bobbin. Fig. 3 is a section on line X Y showing the spindle turned down into the shuttle. The enlargement *b'* on the spindle has been disregarded in this figure for the sake of greater clearness. Fig. 4 is an isometric view of the head of the spindle showing one of the lugs which operate the bobbin retaining springs.

A is the wooden portion of the shuttle.

B is the spindle on which the bobbin is carried, the bobbin being shown in dotted lines in Fig. 1.

B' is the spindle head having on each side a wedge-shaped projecting lug *b*.

*b'* is a circular enlargement on the spindle B. The spindle B turns on the pin C.

D D are spring-catches with in-bent ends *d d* which when the spindle is turned into the shuttle grasp the circular recess *f* at the base of the bobbin, and hold the bobbin firmly. The heel *d'* of said spring-catches is firmly fastened to the body of the shuttle by the pins C and G.

E is a flat piece of metal with an in-bent end which engages the bottom of the circular recess *f* on the bobbin when the spindle and bobbin are turned into the shuttle, and assists D D in holding the bobbin firmly against the shocks caused by the motion of the shuttle.

On the head B', of the spindle B, are two projecting lugs *b b*. The head of the spindle is embraced by the heel of the spring-catches D D in which are recesses *d' d'* into which the lugs *b b* fit when the spindle is turned into the shuttle, thereby allowing *d d* to close on and grasp the bobbin.

When the spindle is turned up, the lugs *b b* are pulled out of the recesses *d' d'* against the unrecessed portions of the spring catches D D thereby forcing D D apart and releasing the hold of *d d* on the bobbin.

In the form of shuttle commonly used, E is depended upon solely to hold the bobbin firmly against the shocks caused by the abrupt motion of the shuttle. If the base of the bobbin is broken or chipped off E will fail to hold the bobbin firmly, and the bobbin will become loose in the shuttle. My device affords a hold on each side of the bobbin in addition to that given by E, and thereby prevents much more certainly any motion of the bobbin in the shuttle and enables bobbins to be used after the base has become so broken that they are not firmly held by E.

Having thus described my said invention, I claim:

1. In a loom-shuttle, a spindle turning on a pivot, bobbin-catches mounted on the body of the shuttle, and means actuated by the spindle to release said catches when the spindle is turned up.

2. In a loom-shuttle, a spindle pivoted through its head, and bobbin-catches adapted to spring towards the spindle, the heel of said catches engaging the spindle head, the spindle-head and the engaging catches being provided with corresponding projections and recesses which engage when the spindle is turned into the shuttle, and which are disengaged when the spindle is turned up.

3. In a loom-shuttle, a spindle pivoted through its head, and spring bobbin catches mounted in the shuttle, the heel of said catches embracing the spindle head, the sides of the spindle head being provided with projections which force apart said bobbin-catches when the spindle is turned up, and the heel of said catches being provided with recesses which receive said projections on the spindle head, thereby allowing the bobbin catches to spring together when the spindle is turned into the shuttle.

CORNELIUS J. SULLIVAN.

Witnesses:

J. M. MORTON, Jr.,  
GEORGE E. SHAW.