

# Dakin & Butler, Yarn Guide.

No. 86,943.

Patented Feb. 16. 1869.

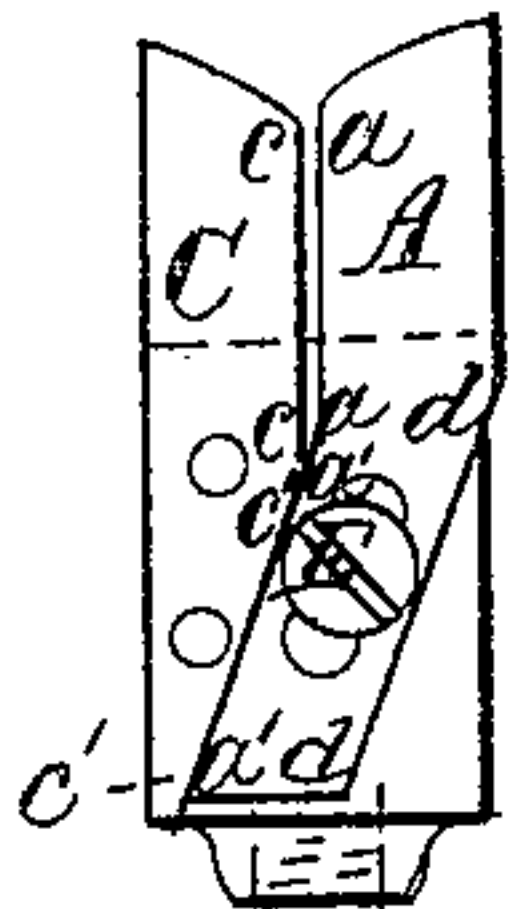


Figure 1.



Figure 3.

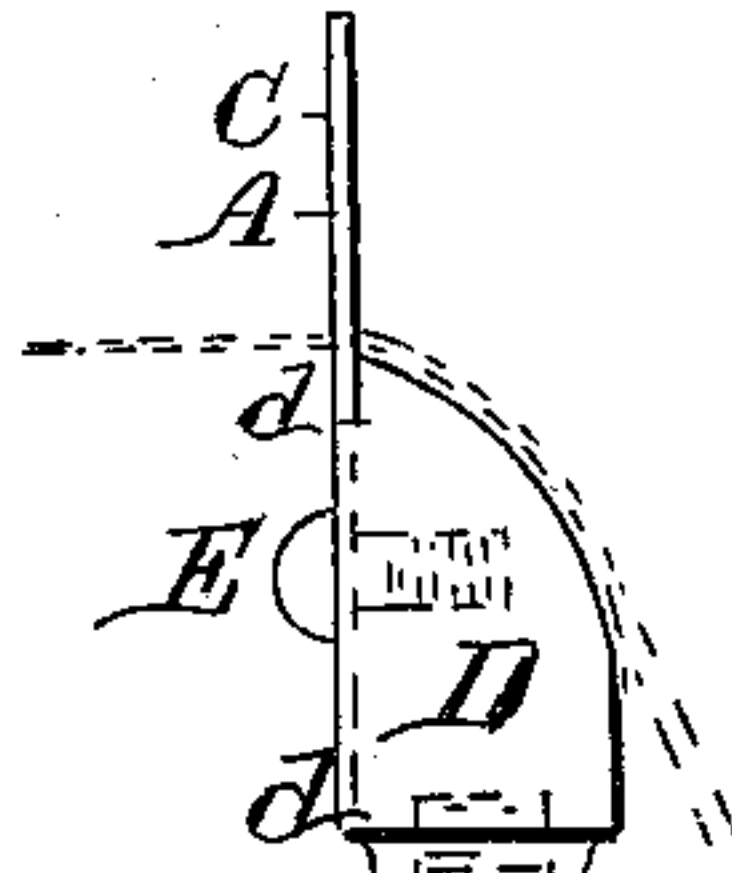


Figure 2.

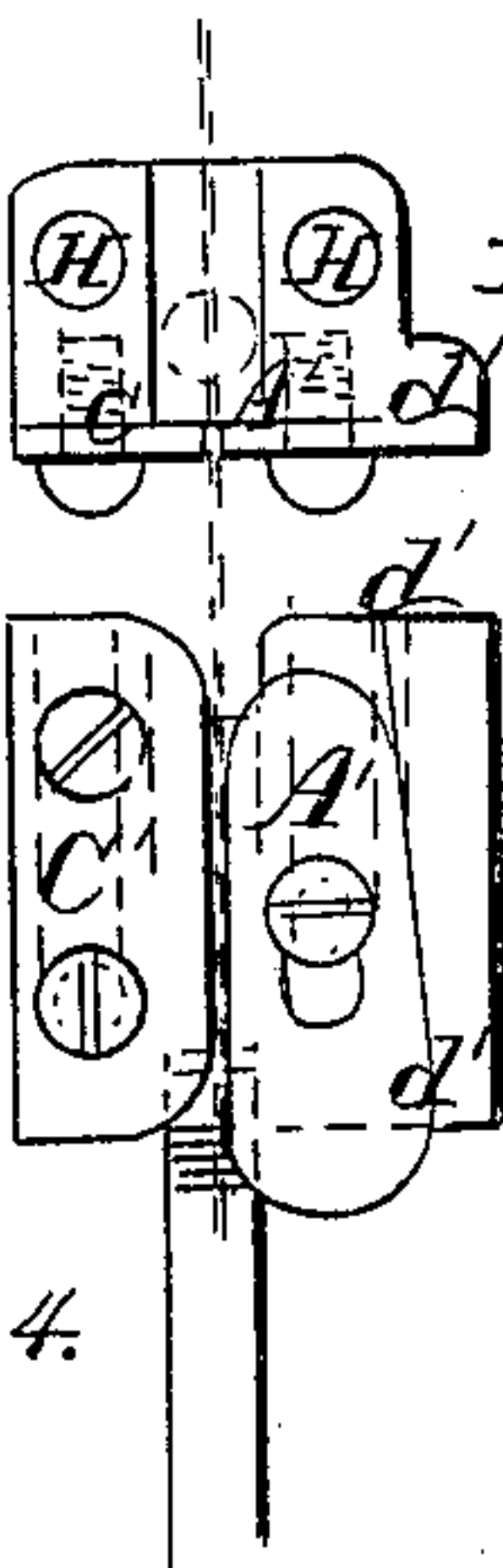


Figure 4.

Figure 6.

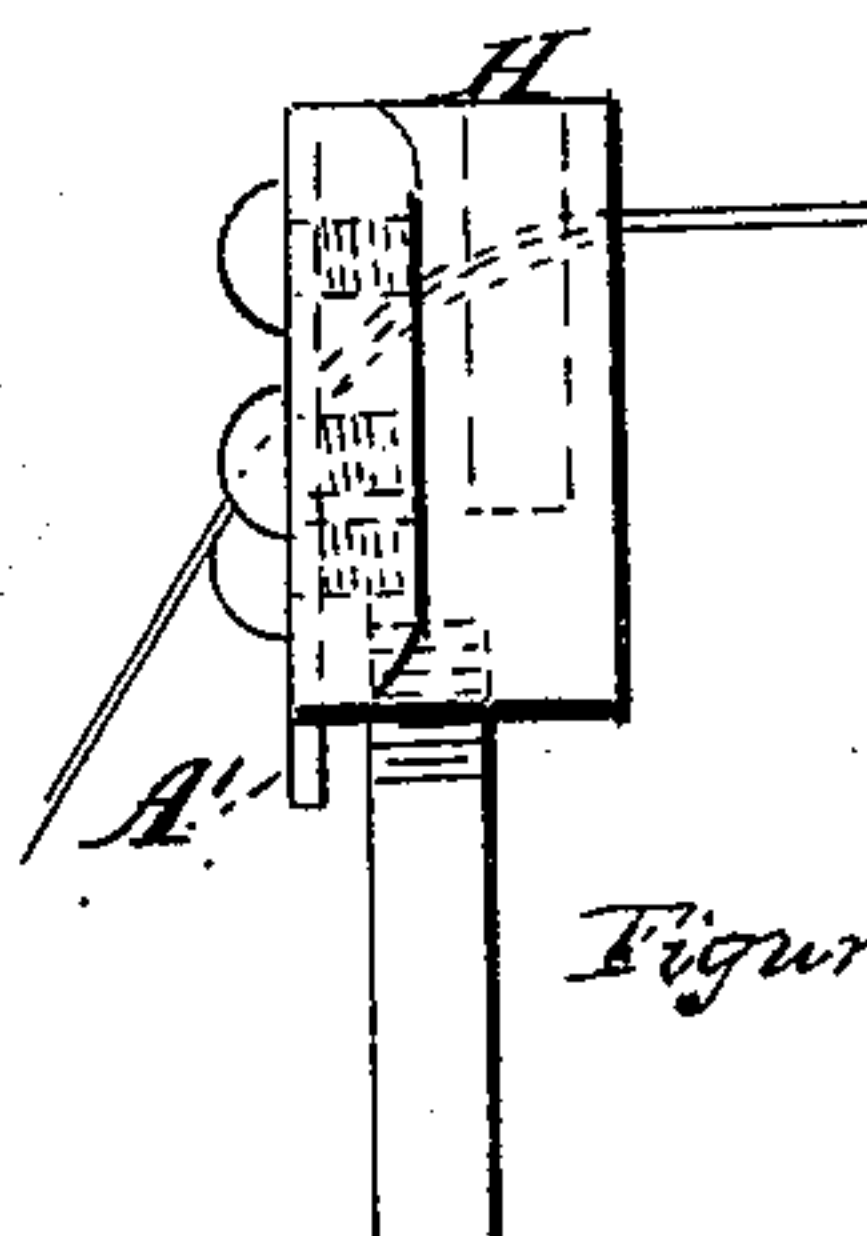


Figure 5.

A. C. Dakin }  
J. D. Butler } Joint Inventors

C. F. M. Parkhurst }  
W. B. Watson } Witnesses

# United States Patent Office.

A. C. DAKIN, OF CLINTON, AND J. D. BUTLER, OF LANCASTER, MASSACHUSETTS.

Letters Patent No. 86,973, dated February 16, 1869; antedated February 6, 1869.

## IMPROVEMENT IN YARN-GUIDE AND CLEARER.

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

To all whom it may concern:

Be it known that we, A. C. DAKIN, of Clinton, and J. D. BUTLER, of Lancaster, both in the county of Worcester, and State of Massachusetts, have invented a new and improved Yarn-Guide and Clearer; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front view;

Figure 2, a side view;

Figure 3, a view of movable plate A, fig. 1, as detached.

Figure 4, a front view of a modified form of the invention;

Figure 5, a side view of the modified form; and

Figure 6, a top view of the modified form.

In the process of manufacture of yarn or thread, it is necessary at certain stages to pass it through a narrow opening, in order to clear it of lumps, or loose fibres, that may be clinging to it. This opening should be of a width corresponding to the size of the yarn. To secure the means of varying this width of opening at pleasure, to correspond with the different sizes of yarn used, in an improved manner, is the object of our invention.

In figs. 1, 2, and 3, B represents the stem of the clearer, which is attached to the traverse rail, or any other part of the spooler, reel, or warper.

The thread passes between the edges *a a* and *c c*, of the plates A and C, as shown by the red lines.

These plates may be of steel, and C is riveted to D, at *c' c'*, while A slides upon D, between the shoulder *d d* and the edge *c' c'*, of C, as shown.

When A is set in the desired position, it is held in place by the screw E, which passes through a slot in it, and is screwed into D.

When E is loosened, and A is slipped up or down between *d d* and *c' c'*, the width of the opening between *a a* and *c c*, is increased or diminished.

It is obvious that the angle between *c c* and *c' c'*, must match that between *a a* and *a' a'*. Now this angle may give so little variation from a straight line, that a certain movement of A, up or down, shall produce a still smaller one of widening or narrowing the space between the plates in which the threads run.

By this arrangement, we are able to adjust, with ease and accuracy, the width of the opening for the thread, because it is exaggerated, and so more easily measured, in the upward or downward movement of A.

It has been customary to have A move in slides at right angles to the edges *a a* and *c c*, in which case it has been necessary to set the movable plate by the width of the opening as directly measured.

It was also inconvenient or undesirable to widen the

clearer so much as should be necessary to make these slides long enough to give the bearing needed to keep the edges of the two plates, between which the thread runs, parallel.

The prominent feature of the invention consists in making the slides, in which the movable plate runs, at an oblique angle with the edges between which the thread runs, instead of at a right angle, as has been common heretofore.

It is not necessary that A should bear upon both edges *c' c'* and *d d*, as one of these would answer if care were taken to keep A against it, when the screw E should be tightened.

The modified form, shown in figs. 4, 5, and 6, will be easily understood.

The yarn is shown as running up from the other side, and the movable plate bears only on the side adjoining *d' d'*. It is symmetrical in its shape, so that when the thread has worn into the one edge, it can be turned over, and the edge, which before ran upon *d' d'*, be used for the yarn to bear against.

The fixed plate C, instead of being riveted on, as in the first arrangement, is screwed on after being set in position to match the inner edge of A'. It can be turned end for end when worn by the thread.

The holes H are for wires, such as have been heretofore used to carry the yarn in between the plates, if it shall not be dropped directly upon these plates.

If desired, *d d*, in figs. 1 and 2, can be run further up, so as to give a longer bearing-edge on the one side.

Both of the guide-plates might be moved, in adjusting the opening between them for the thread, if desired, instead of only one, as shown.

It is clear that there is a great variety of shapes which the invention may take. But without regard to particular details, we include in it the combination of two guide-plates, one or both of which shall have a movement oblique to their edges between which the thread runs.

We have spoken of the invention only as a clearer; it may also serve as a guide for the yarn, as other styles of clearers have.

The invention is not confined to the use of any particular material for the yarn.

We claim the combination of the guide-plates A and C, or their equivalents, adjustable by a movement of one or both, oblique to the edges between which the yarn runs, substantially as and for the purposes described.

A. C. DAKIN.  
J. D. BUTLER.

Witnesses:

C. F. W. PARKHURST,  
H. H. WATERS.