

(No Model.)

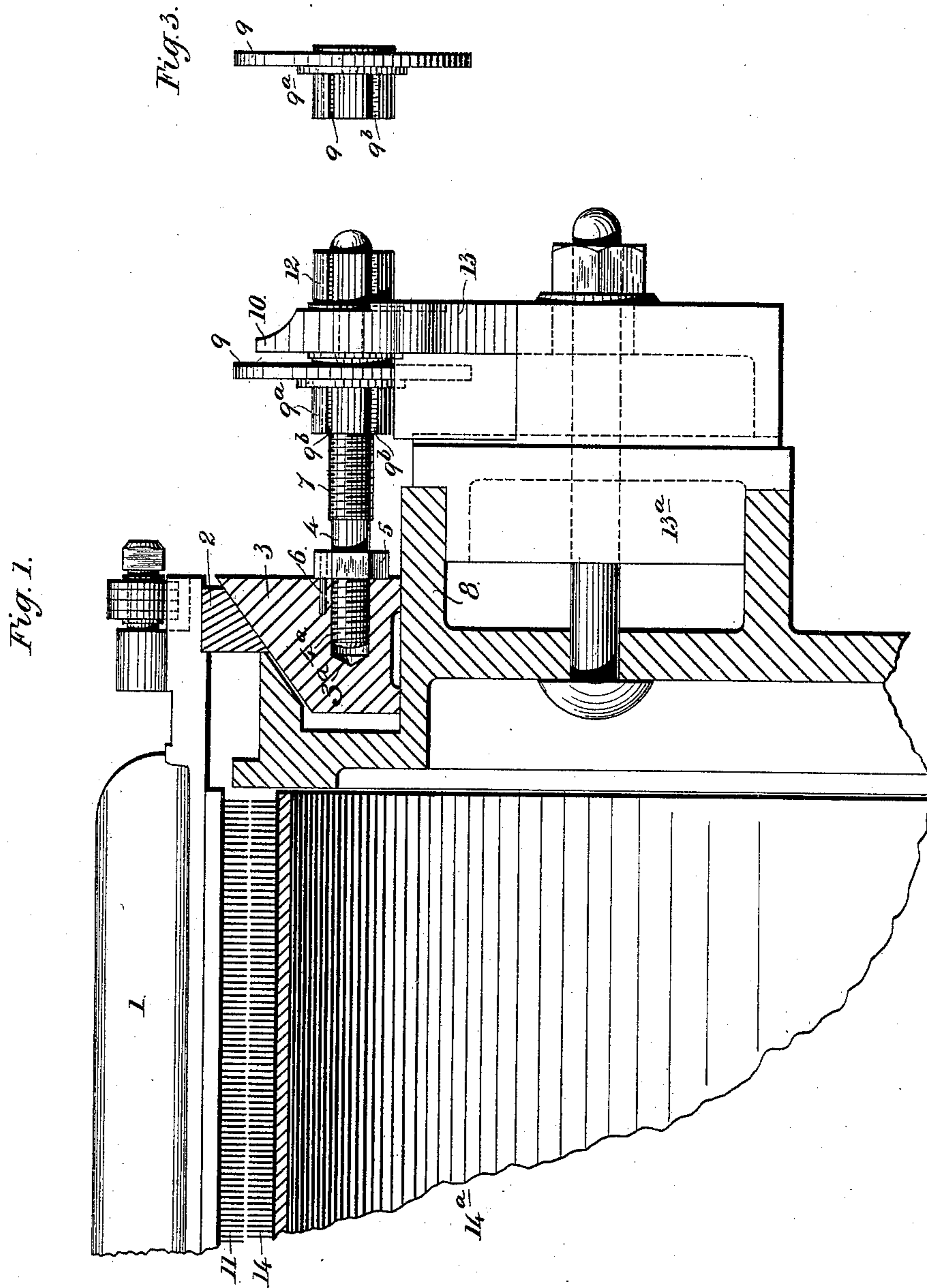
2 Sheets—Sheet 1.

E. TWEEDALE.

DEVICE FOR ADJUSTING CARD FLATS.

No. 405,625.

Patented June 18, 1889.



Witnesses.
L. E. Middleton
J. L. Middleton

Inventors.
Edmund Tweedale
by Ellis Spear
Atty.

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2 Sheets—Sheet 2.

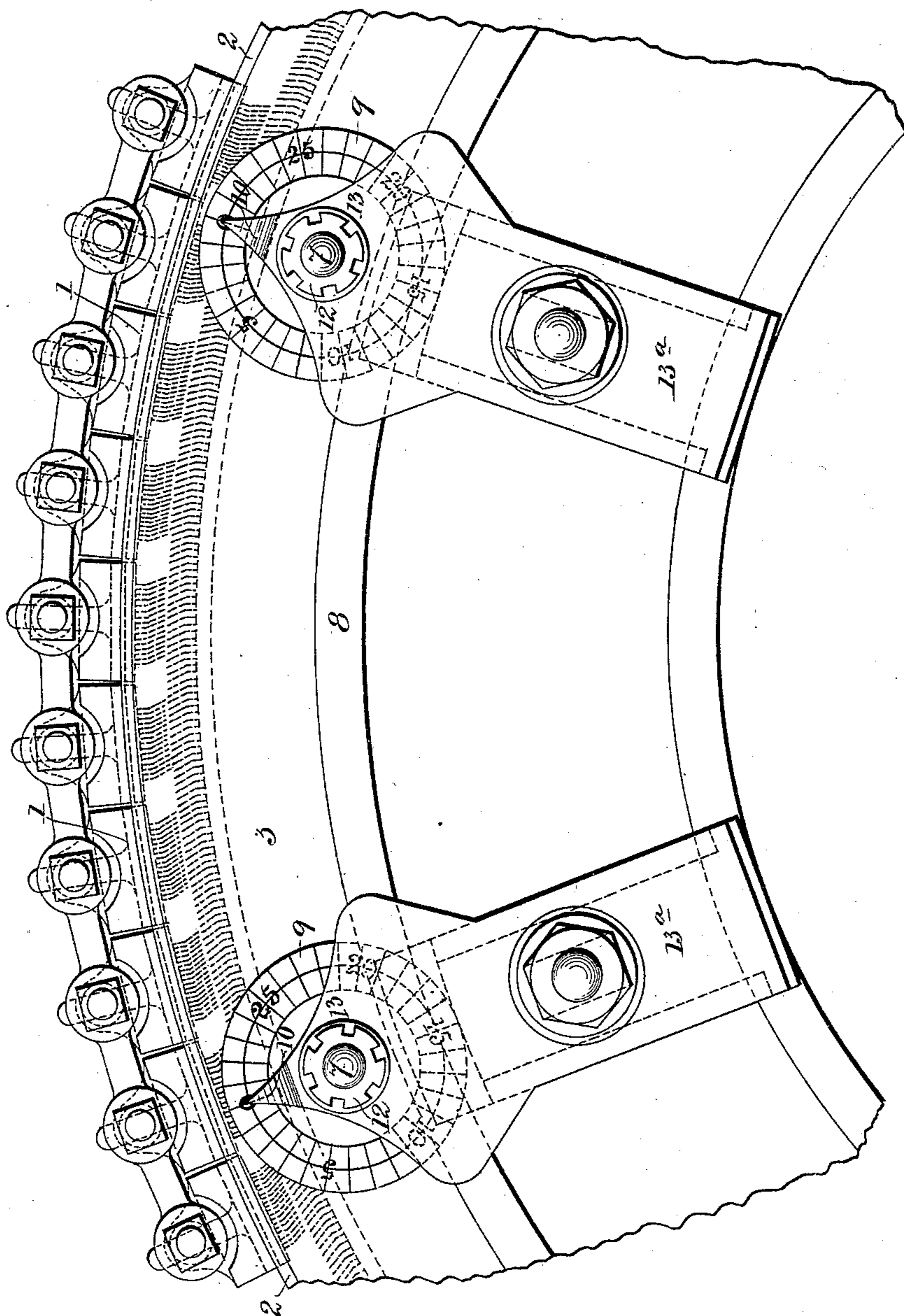
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Fig. 2.



Witnesses.

J. E. Middleton

F. L. Middleton

Inventors.

Edmund Tweedale

by Eli Spear
Atty.

UNITED STATES PATENT OFFICE.

EDMUND TWEEDALE, OF ACCRINGTON, COUNTY OF LANCASTER, ENGLAND,
ASSIGNOR TO JOHN BULLOUGH, OF SAME PLACE.

DEVICE FOR ADJUSTING CARD-FLATS.

SPECIFICATION forming part of Letters Patent No. 405,625, dated June 18, 1889.

Application filed May 28, 1888. Serial No. 275,371. (No model.) Patented in England September 28, 1885, No. 11,514.

To all whom it may concern:

Be it known that I, EDMUND TWEEDALE, a subject of Her Majesty the Queen of Great Britain, residing at Accrington, in the county of Lancaster, England, have invented a new and useful Improvement in Devices for Adjusting Card-Flats, (for which I have obtained a patent in Great Britain, No. 11,514, bearing date September 28, 1885,) of which the following is a specification.

My improvement relates to that class of carding-engines in which the card-flats travel upon flexible rings on the "bends" or side frame of the machine, such rings being movable and adjustable upon inclined angular supports, as described in the specification of United States Letters Patent No. 372,038, dated the 25th day of October, 1887.

The present invention consists in the adaptation of an index appliance to the screws operating such angular supports, for the purpose of accurately adjusting the cards on the flats in relation to the cards on the cylinder.

To clearly explain the nature of my invention reference is made to the accompanying drawings, in which—

Figure 1 is an elevation, partly in section, of a part of a carding-cylinder and card-flat, and showing the adjusting apparatus with my improvement applied thereto; and Fig. 2 is a front elevation showing a portion of the carding-cylinder, some of the card-flats, and two of the dials and pointers. Fig. 3 is a view of the index-dial detached.

At 1 is shown the card-flat, its end resting upon the flexible ring 2, which is carried by the angled or inclined surface of the radius "cone 3." In this cone a screw-threaded opening 3^a is formed to receive the screw-threaded end 4^a of a rod 4. A jam-nut 5 serves to hold the screw-rod 4 securely in place and prevent rotary movement. The nut is held in turn by a locking-pin 6. The front end of the rod 4 is provided with a fine screw-thread throughout its extent, as at 7. This threaded portion 7 carries a combined nut and dial-plate 9^a 9, the former having grooves

9^b therein for the holding tool or spanner. The screw 7 passes through the projection or bearing-piece 13, forming part of the bracket 13^a, which, as shown, is bolted to the end frame or bends of the machine. The upper part of this projection 13 terminates in an index-pointer 10. The extreme end of the screw 7 is held by a nut 12 on the outside of the part 13, this nut having similar grooves to the nut 9^a.

When it is desired to adjust the card-flats 1, the nut 12 is loosened and the combined nut 9^a and dial 9 are turned, when, as the rod 4 is unable to revolve, it moves longitudinally and the cone 3 will be moved inward over the surface 8 of the bends or side frame, thus raising the flexible ring 2 and increasing the distance between the teeth 11 of the card-flat 1 and the teeth 14 of the cylinder 14^a. When the desired adjustment is attained, the nut 12 is screwed down again to prevent any movement of the parts. To work the cone in the other direction and so lower the ring 2 and flats, the nut 9^a and dial 9 are slackened or run back on the thread 7, and the nut 12 is tightened against the bearing-piece 13. After either of these regulations has taken place the number on the dial which is opposite the pointer 10 is noted, and the other dials around the cylinder are set to bring the corresponding number opposite their index-pointers, all being subsequently firmly secured by the nuts 12.

In place of using the simple numerals 5, 10, 15, 20, and 25 on the dials, as shown, they may, it will be evident, be numbered or lettered to indicate, when opposite the pointers 10, the fractions of an inch which separate the teeth on the cylinder and flats.

What I claim, and desire to secure by Letters Patent, is—

1. In combination with the card-flat, the flexible ring 2 and the cone 3, an operating-rod for said cone having a threaded end adapted to the threaded opening in the cone, the jam-nut 5 and locking-pin 6 for holding the rod against rotary movement, the bear-

ing 13 for the rod, the movable dial having the nut 9^a, and the nut 12, substantially as described.

2. In combination with the card-flat, flexible ring 2 and cone 3, the longitudinally-movable rod, said rod being threaded, the movable dial having the nut 9^a on said rod, the bearing 13, and the nut 12, substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

EDMUND TWEEDALE.

Witnesses:

ARTHUR C. HALL,
ALBERT E. HALL.