

No. 677,317.

Patented June 25, 1901.

B. A. MACDONALD.  
INDICATOR.

(Application filed Mar. 8, 1899.)

(No Model.)

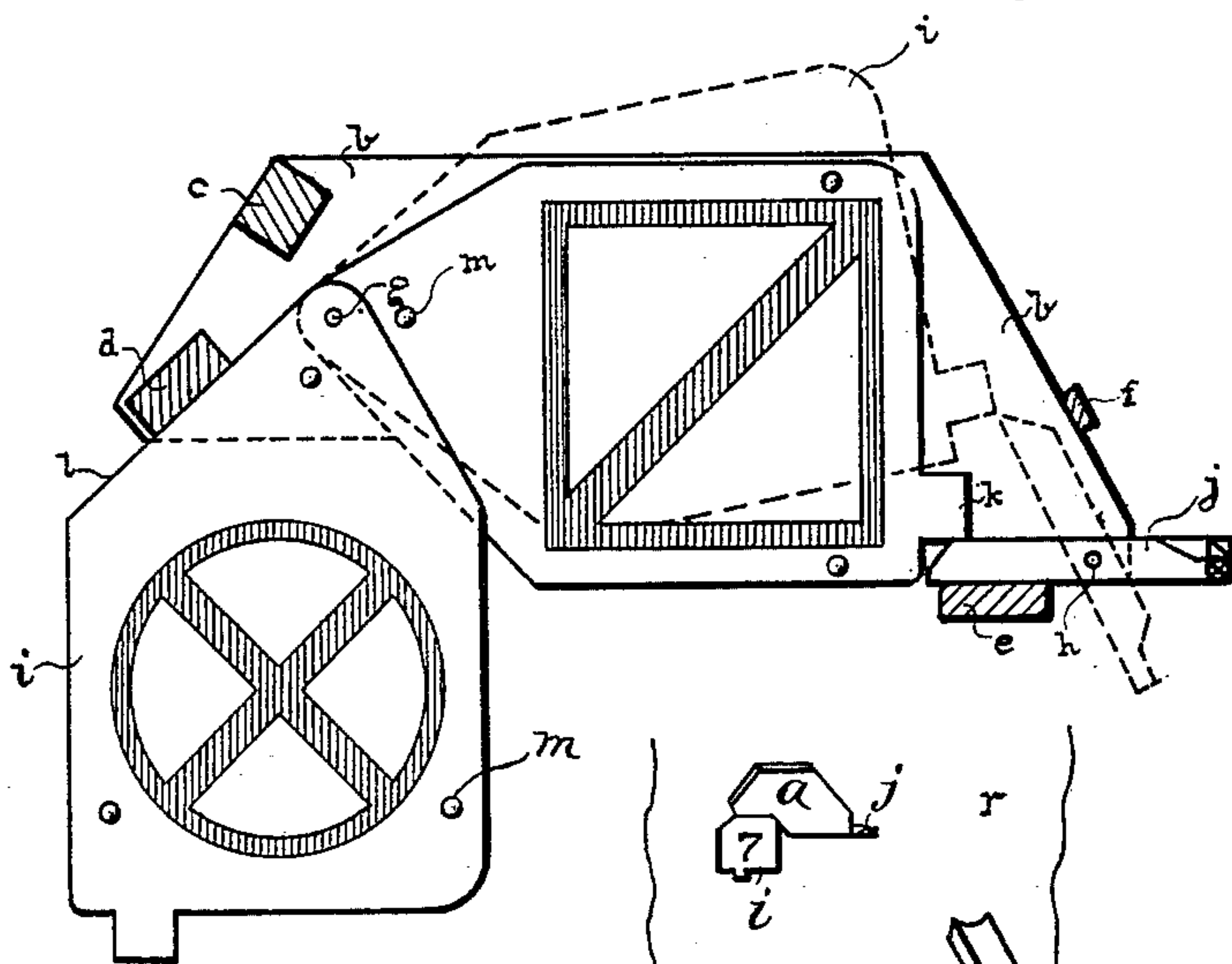
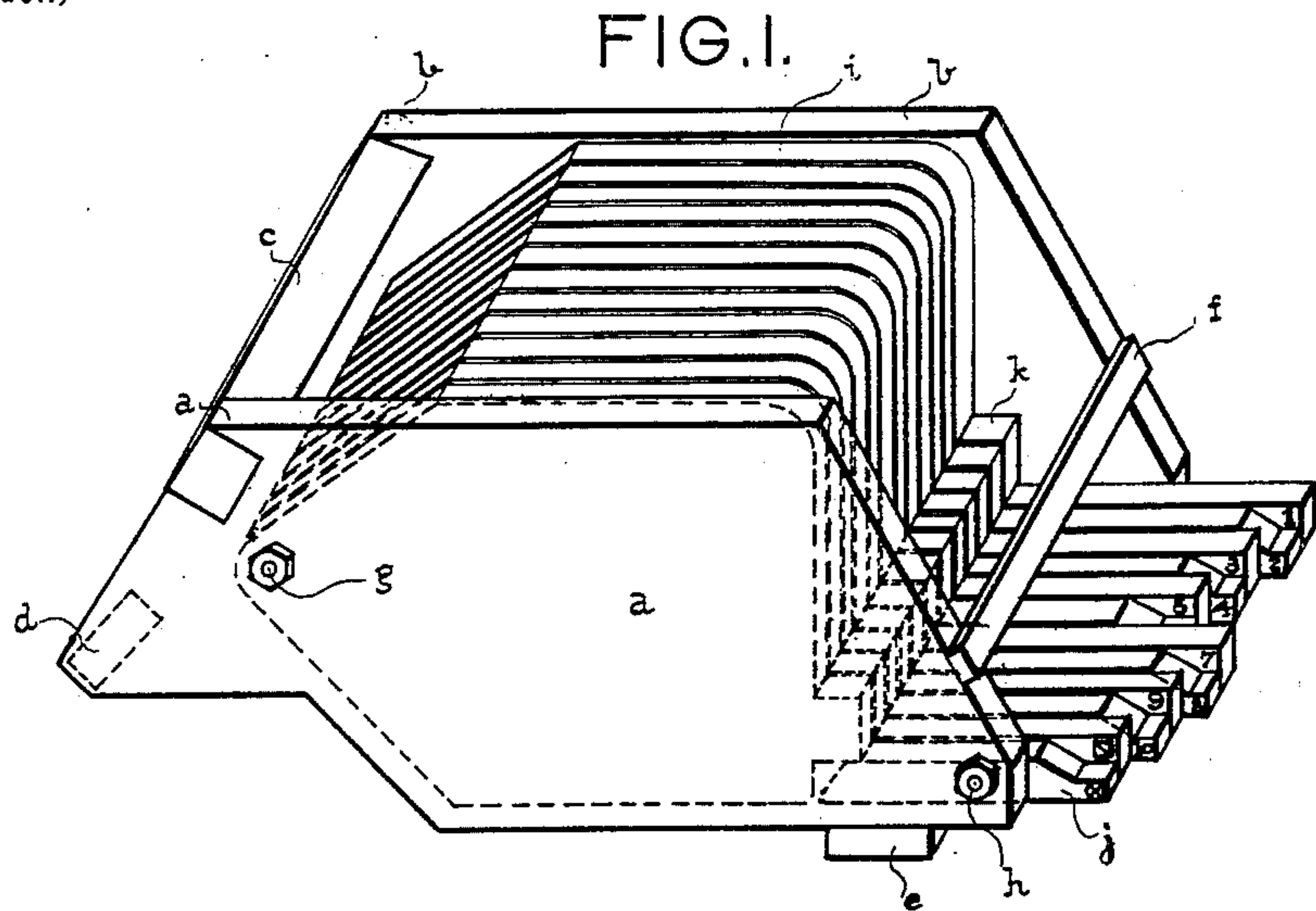
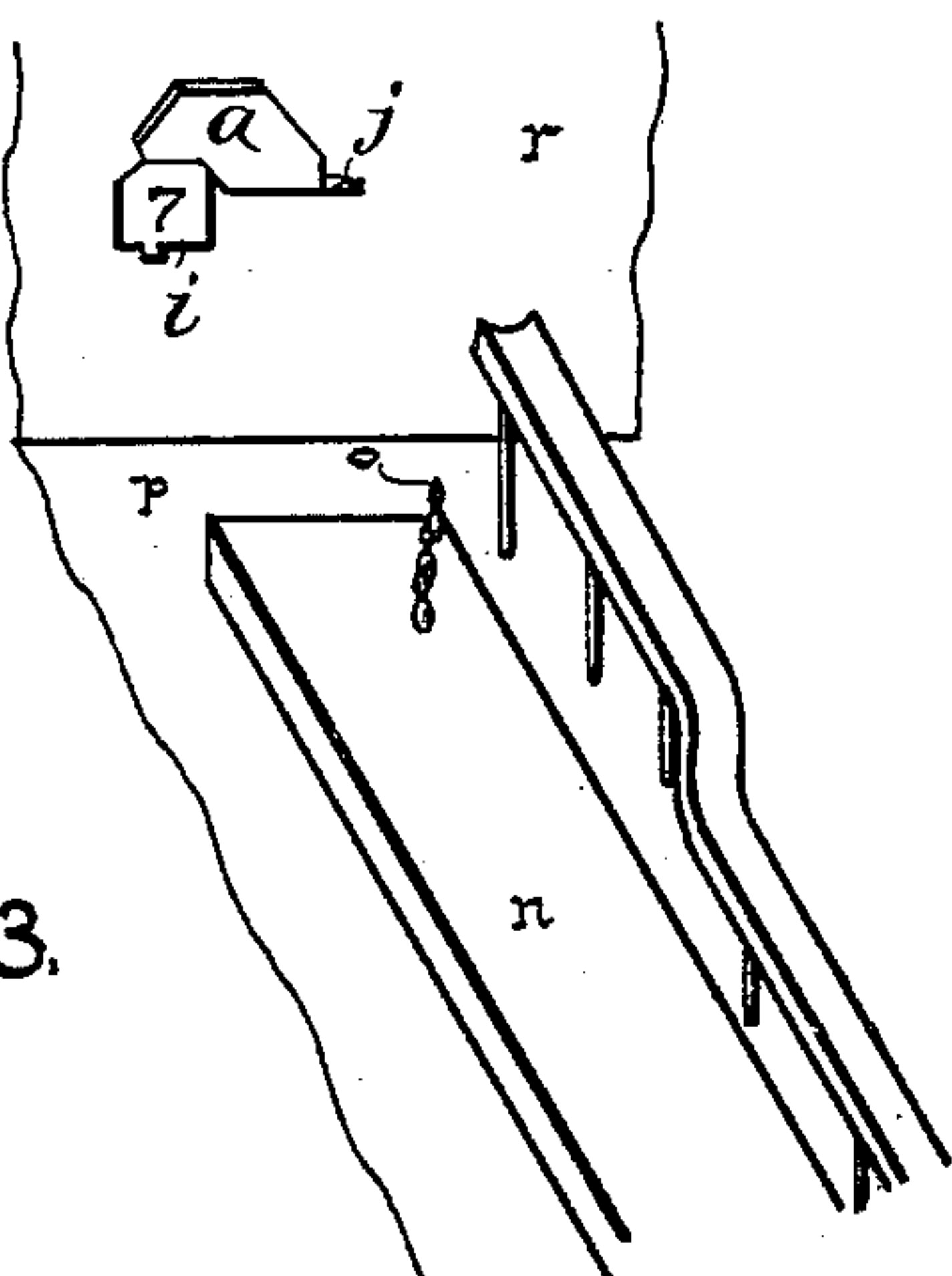


FIG. 3.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

BENJAMIN A. MACDONALD, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF  
TO WILLIAM R. RUMMLER, OF SAME PLACE.

## INDICATOR.

SPECIFICATION forming part of Letters Patent No. 677,317, dated June 25, 1901.

Application filed March 8, 1899. Serial No. 708,195. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN A. MACDONALD, a citizen of the United States of America, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Indicators, of which the following is a specification.

The main object of my invention is to provide a device suitable to be operated by the pin-setter in a bowling game to indicate to the players and scorers the number of pins knocked down by each ball. The indicator may, however, be applied to other purposes which may require the use of other figures or representations upon the faces of the tablets hereinafter described.

It will be understood that it is often difficult to see from the upper end of a bowling-alley the exact number of pins that have been knocked down by a player. Heretofore it has been necessary in case of doubt to call to the pin-setter to get the proper number or to have the pin-setter call all of the numbers. This is inconvenient and annoying to the players, and where a number of alleys are located in the same room such calling is misleading. By the use of my invention such calling is rendered unnecessary.

The operation and the construction of a device in which I put my invention into practice will be understood from the following description, with reference to the accompanying drawings, in which—

Figure 1 is a perspective view of such device. Fig. 2 is a front elevation of same, with the front wall of the casing removed, showing one of the tablets hanging in the proper position to display the figure or sign thereon and showing in dotted lines the position to which such tablet is pushed upwardly to cause same to pass its key before again assuming its covered position in the casing and omitting the keys for the other tablets. Fig. 3 is a perspective view of the lower end or pit of a bowling-alley with my device secured in proper position.

The casing consists of the front wall *a*, the back wall *b*, the cross-pieces *c*, *d*, *e*, and *f*, and the rods *g* and *h*, connecting said walls and forming pivots for the tablets and keys, respectively.

The tablets *i* are twelve in number and are pivotally hung upon the rod *g* between the walls of the casing. The same number of keys *j*, one for each tablet, are pivotally supported on the rod *h* between said walls. Each of the tablets has on its face a number or figure, and the keys are correspondingly marked. The ten rear tablets are thus marked with the figures "1" to "10," respectively, beginning from the rear. The tablet immediately in front of the one marked "10" has a sign thereon denoting a spare, meaning that all of the pins have been knocked down by the first two balls. The front tablet has a sign thereon denoting a strike, meaning that all of the pins have been knocked down by the first ball. The inner ends of the keys normally rest on the cross-piece *e*. The cross-piece *f* serves as a stop to prevent the inner ends of the keys from being raised too high, thus insuring that same will drop back upon the cross-piece *e* from their own weight. The tablets when in the raised or concealed position have their lugs *k* resting upon the inner ends of the keys. When any of the keys is depressed at its outer end, so that the inner end is raised free from the lug *k*, the respective tablet for such key will swing into the lower position. (Shown in Fig. 2.) The tablet denoting a strike may be located either in front of or behind the other tablets.

On the face of each tablet are the projections *m*, which serve to prevent the rubbing off or scratching of the figure or sign on such tablet through contact with the tablet in front of same.

In Fig. 3, *n* represents the bowling-surface of the alley; *o*, the pins; *p*, the pit, and *r* the wall at the rear of the pit. The indicator is preferably hung upon said wall, as shown.

The operation of the device is as follows: When a player makes a strike, the strike-key, being the front one shown, is depressed at its outer or free end by the pin-setter, so that the strike-tablet swings into the lower position. The operator then sets up the pins for the next play, and before the next ball is thrown he pushes the strike-tablet up into the covered position, which may be done by pressing a finger against the edge *l* and pushing same up into the casing slightly above



its normal position, so that the lug *k* passes the inner end of the key. When only part of the pins are knocked down by the first ball, the operator in like manner drops the  
 5 tablet denoting such number of pins. This tablet need not be returned until the pins are reset. If a further number of pins less than all of those standing is knocked down by the  
 10 second ball, the operator drops the tablet denoting the total number knocked down by both balls. This tablet being in front of the other will show such total number. If on the second ball all of the remaining pins are  
 15 knocked down, the operator drops the tablet denoting the spare, which will show in front of the other hanging tablet. The pins are then reset and both tablets returned to the covered position as before.

It will be understood that the parts of the  
 20 device described may be altered and arranged in numerous different ways without departing from the spirit of my invention. I therefore do not confine myself to the particular parts and arrangement shown.

25 What I claim as my invention, and desire to secure by Letters Patent, is—

1. An indicator comprising a supporting-frame; a series of tablets having different figures on their faces, located one behind another, so that the faces of the rear tablets are  
 30 normally covered by the front tablets, and supported in said frame on a common axis extending through said faces from front to rear, whereon said tablets will hang in a depending position; and a series of keys on said  
 35 frame, each key independently engaging one of said tablets to hold the same in a raised position, and adapted to be moved so as to release said tablet and permit the same to  
 40 drop to the depending position.

2. An indicator comprising a supporting-

frame; a series of tablets having different figures on their faces, located one behind another, so that the faces of the rear tablets are  
 45 normally covered by the front tablets, and supported in said frame on a common axis extending through said faces from front to rear whereon said tablets will hang in a depending position; and a series of levers fulcrumed on a horizontal axis in said frame,  
 50 each having an arm projecting into the arc of movement of the lower end of one of said tablets, located in a position above the depending position of said end, and adapted to engage its respective tablet in a raised position  
 55 independently of the other tablets and levers, substantially as described.

3. An indicator comprising a supporting-frame; a series of tablets having different figures on their faces, located one behind another, so that the faces of the rear tablets are  
 60 normally covered by the front tablets, and supported in said frame on a common axis extending through said faces from front to rear, whereon said tablets will hang in a depending position; each of said tablets having  
 65 a lug *k* at its lower end; and a series of levers fulcrumed on a horizontal axis in said frame each having an arm projecting into the arc of movement of one of said lugs *k*, located  
 70 in a position above the depending position of said lug, and adapted to engage said lug and thereby support its tablet in the raised position independently of the other tablets and levers, substantially as described.

75 Signed by me at Chicago this 4th day of March, 1899.

BENJAMIN A. MACDONALD.

Witnesses:

JOHN MOYNAHAN,  
 WM. R. RUMMLER.