

No. 702,072.

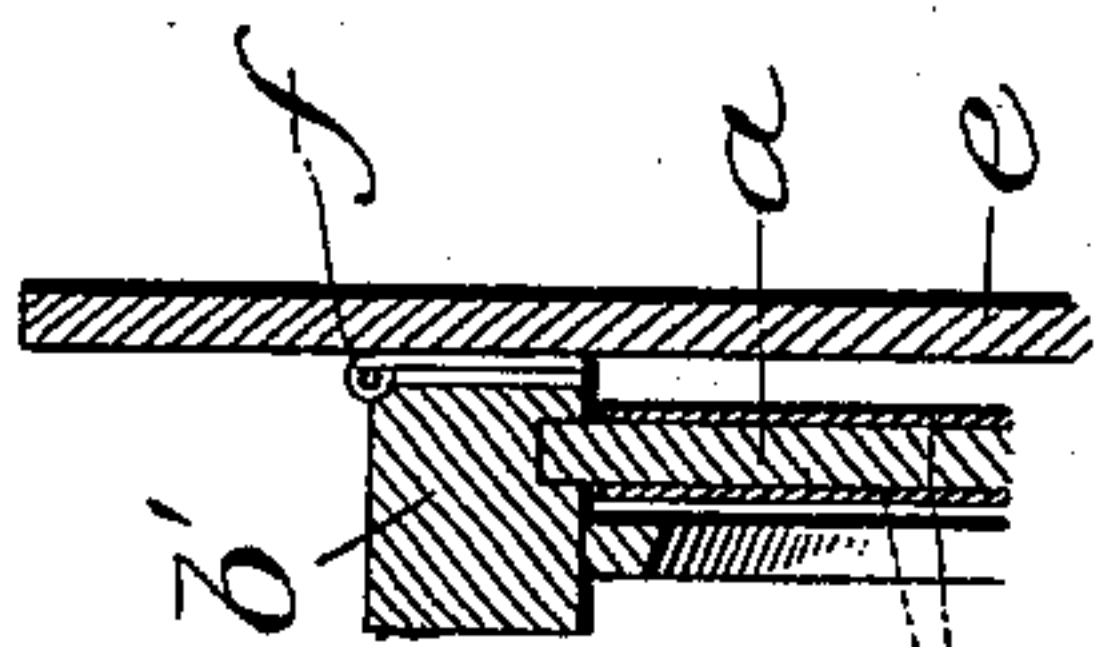
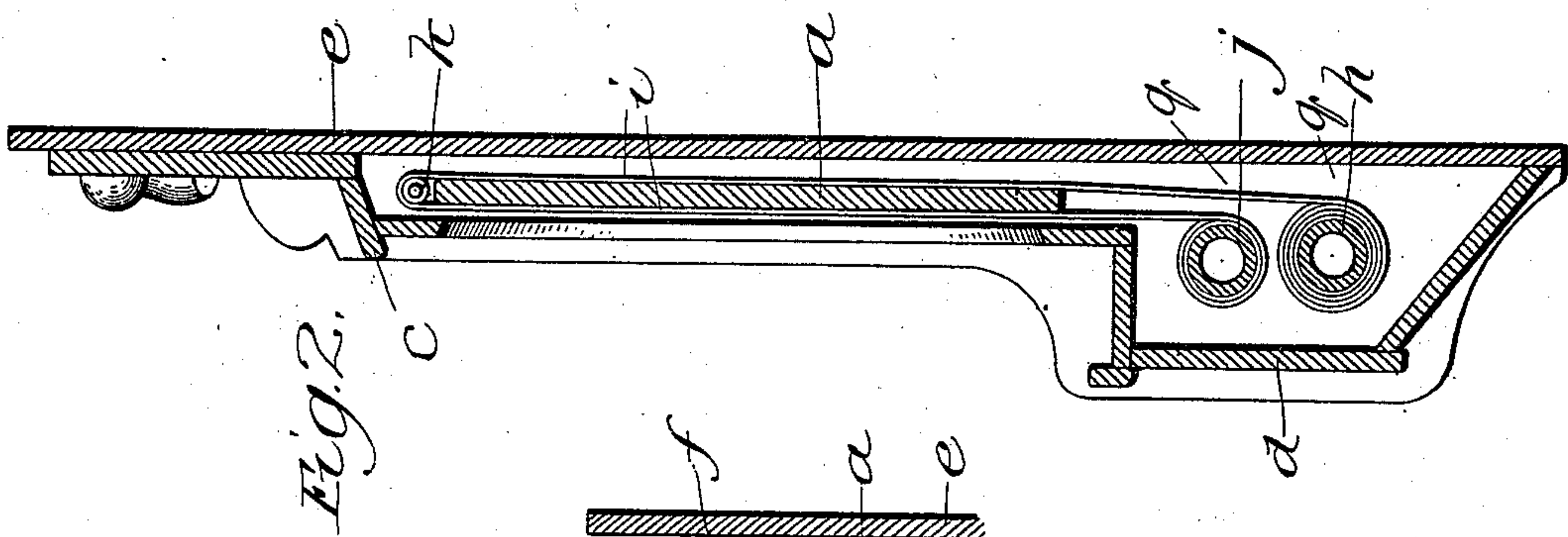
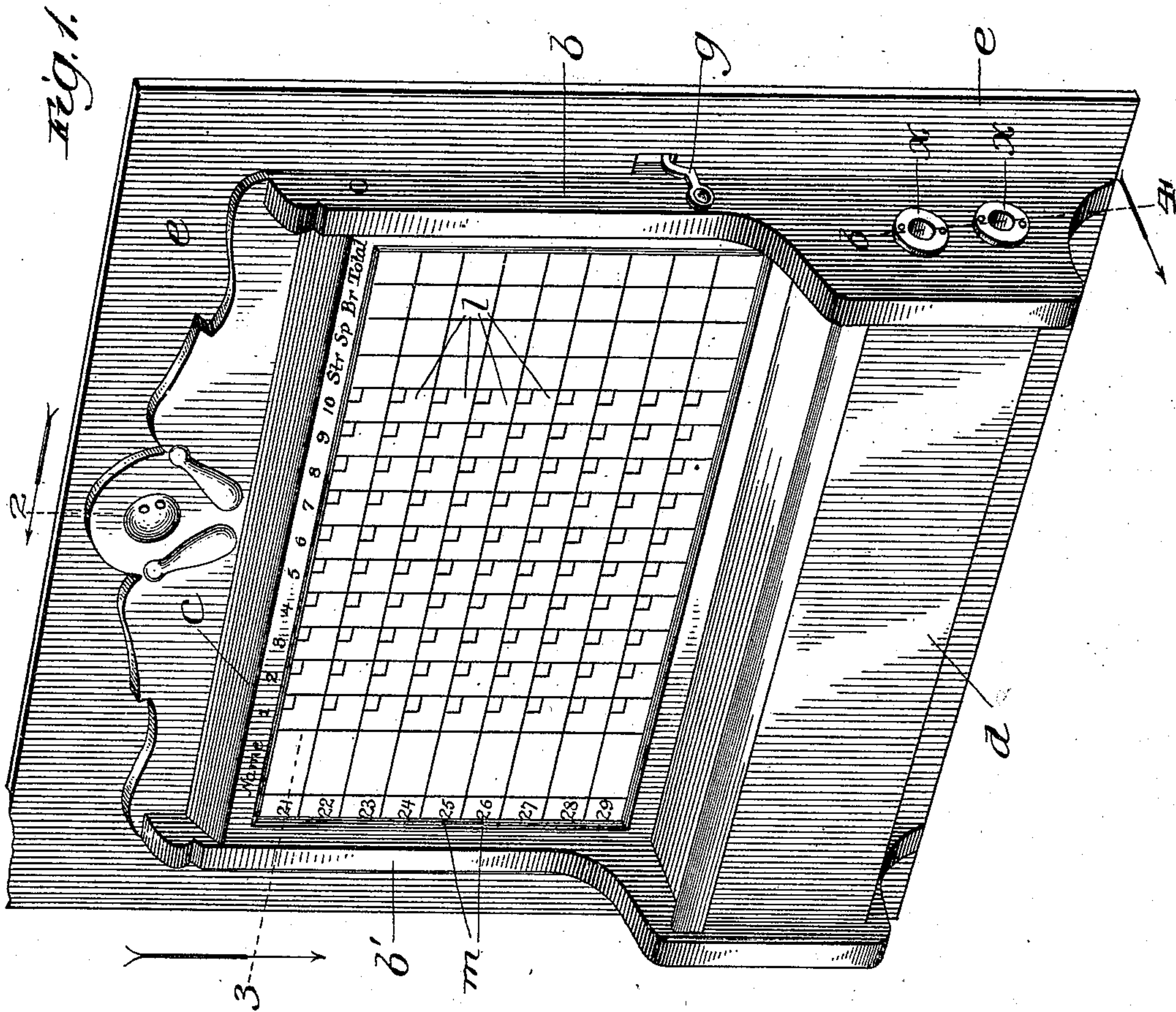
Patented June 10, 1902.

J. PAUPA & G. F. HOCHRIEM.
SCORE BOARD FOR BOWLING ALLEYS.

(Application filed July 28, 1901.)

(No Model.)

2 Sheets—Sheet 1.



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No. 702,072.

Patented June 10, 1902.

J. PAUPA & G. F. HOCHRIEM.
SCORE BOARD FOR BOWLING ALLEYS.

(Application filed July 29, 1901.)

(No Model.)

2 Sheets—Sheet 2.

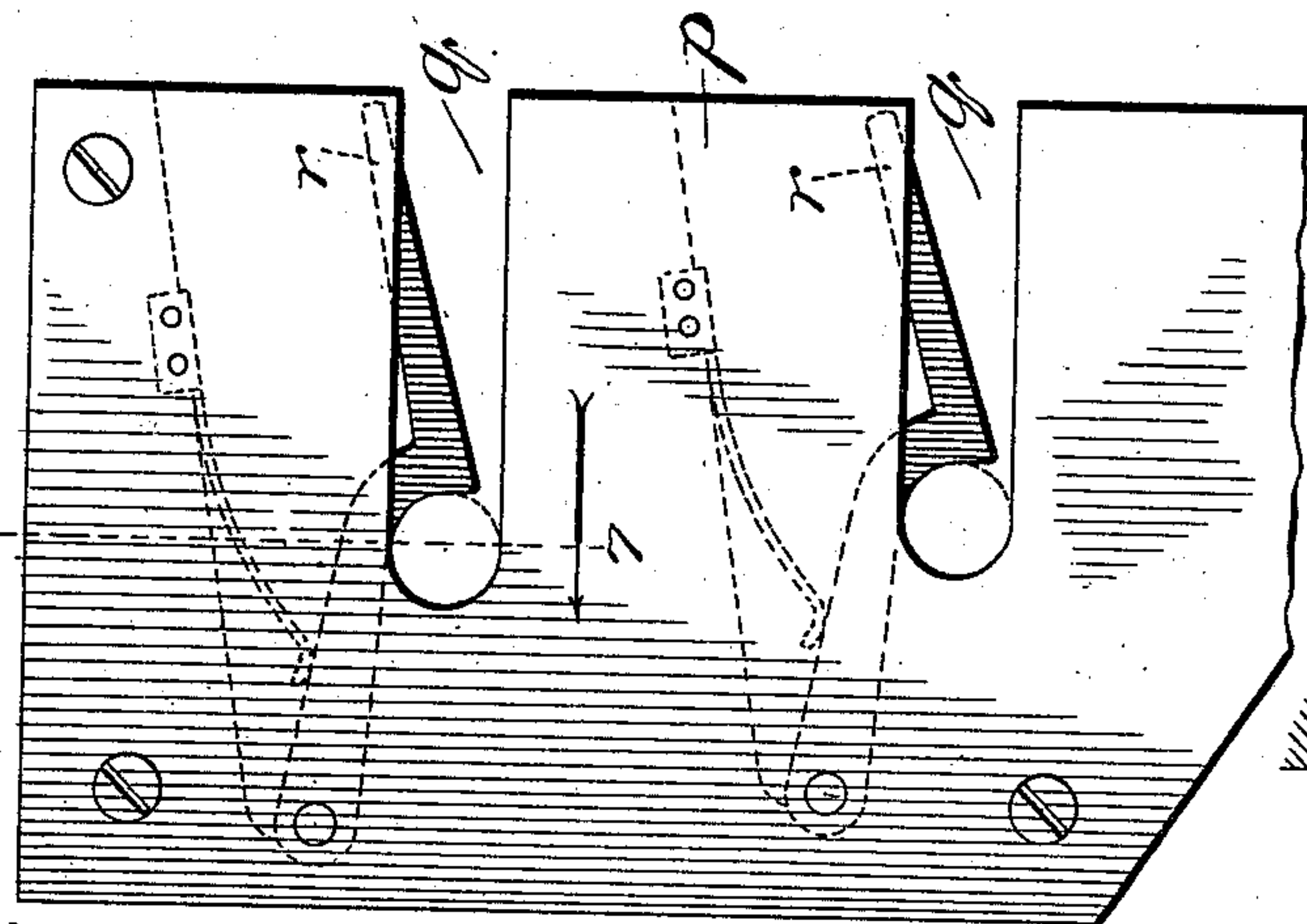


Fig. 6.

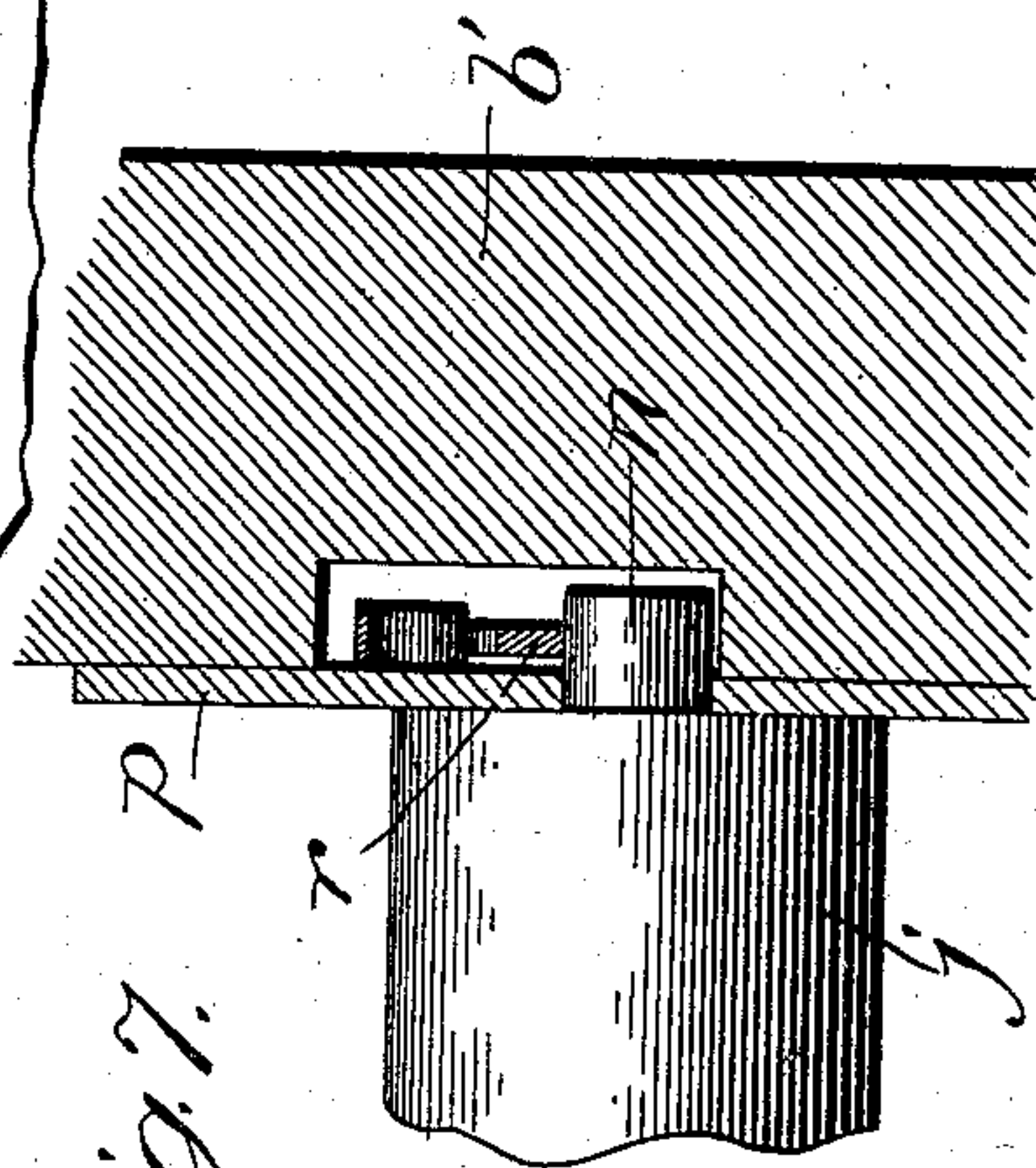


Fig. 7.

Fig. 5.

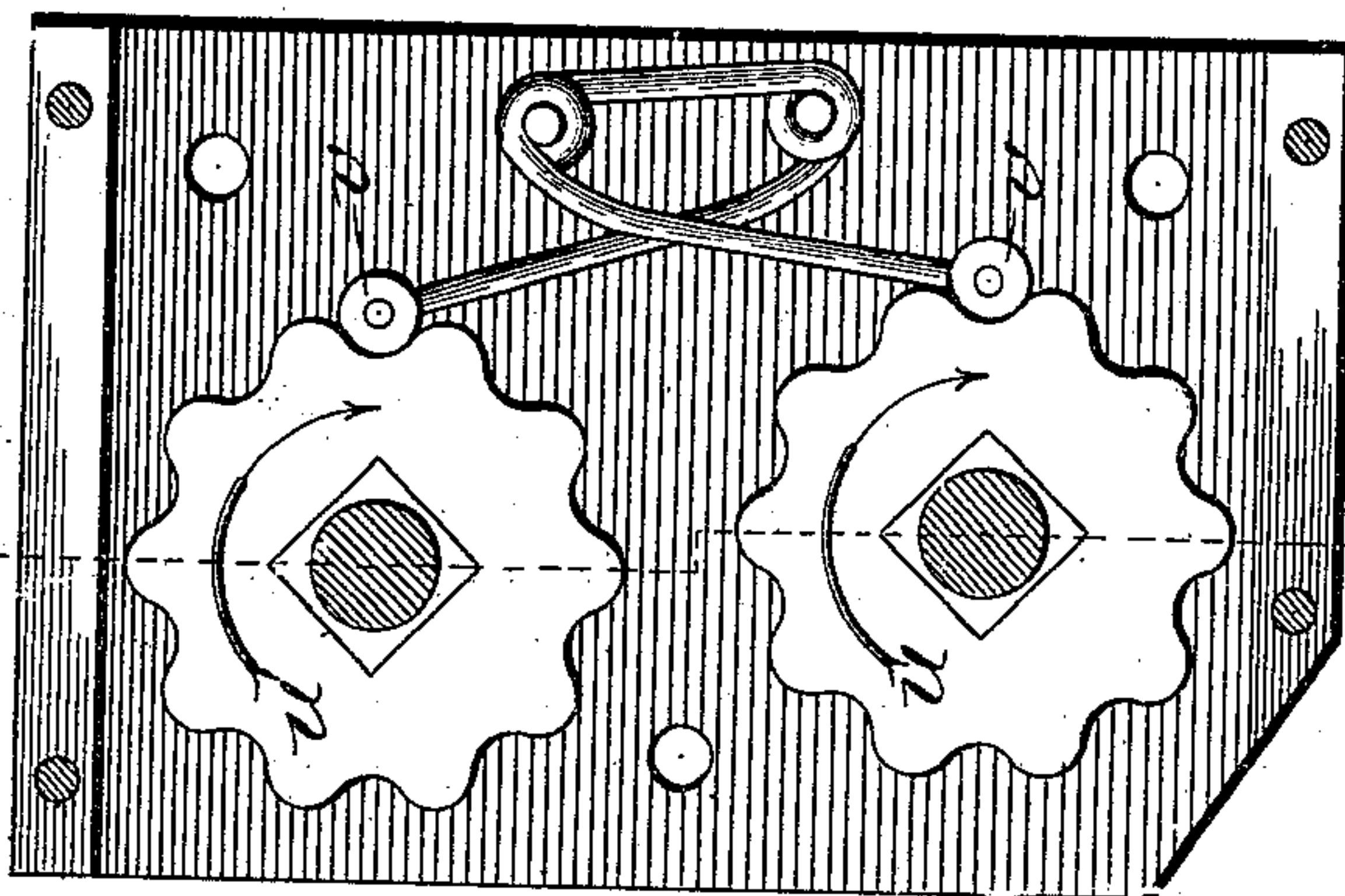


Fig. 4.

Fig. 4.

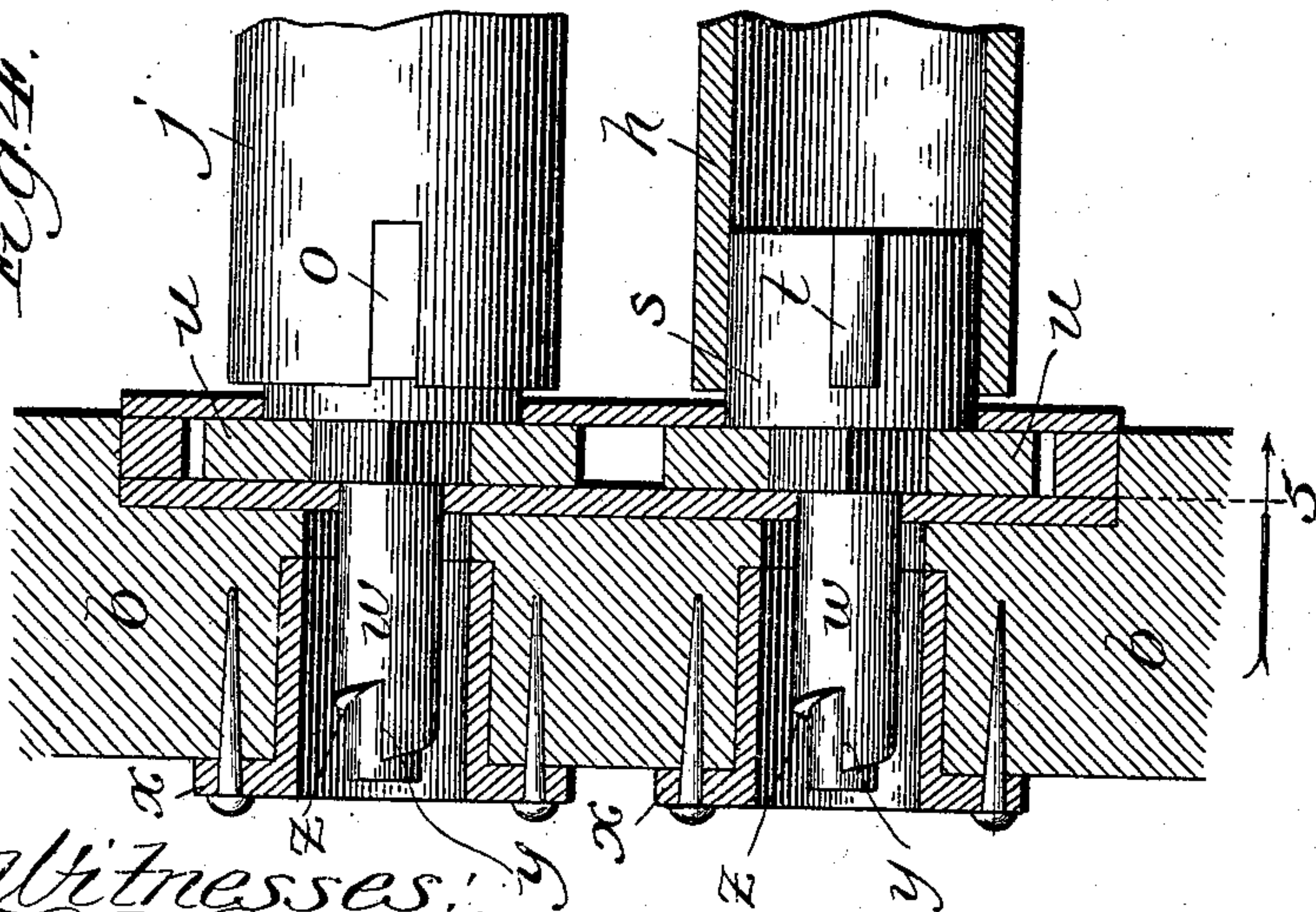
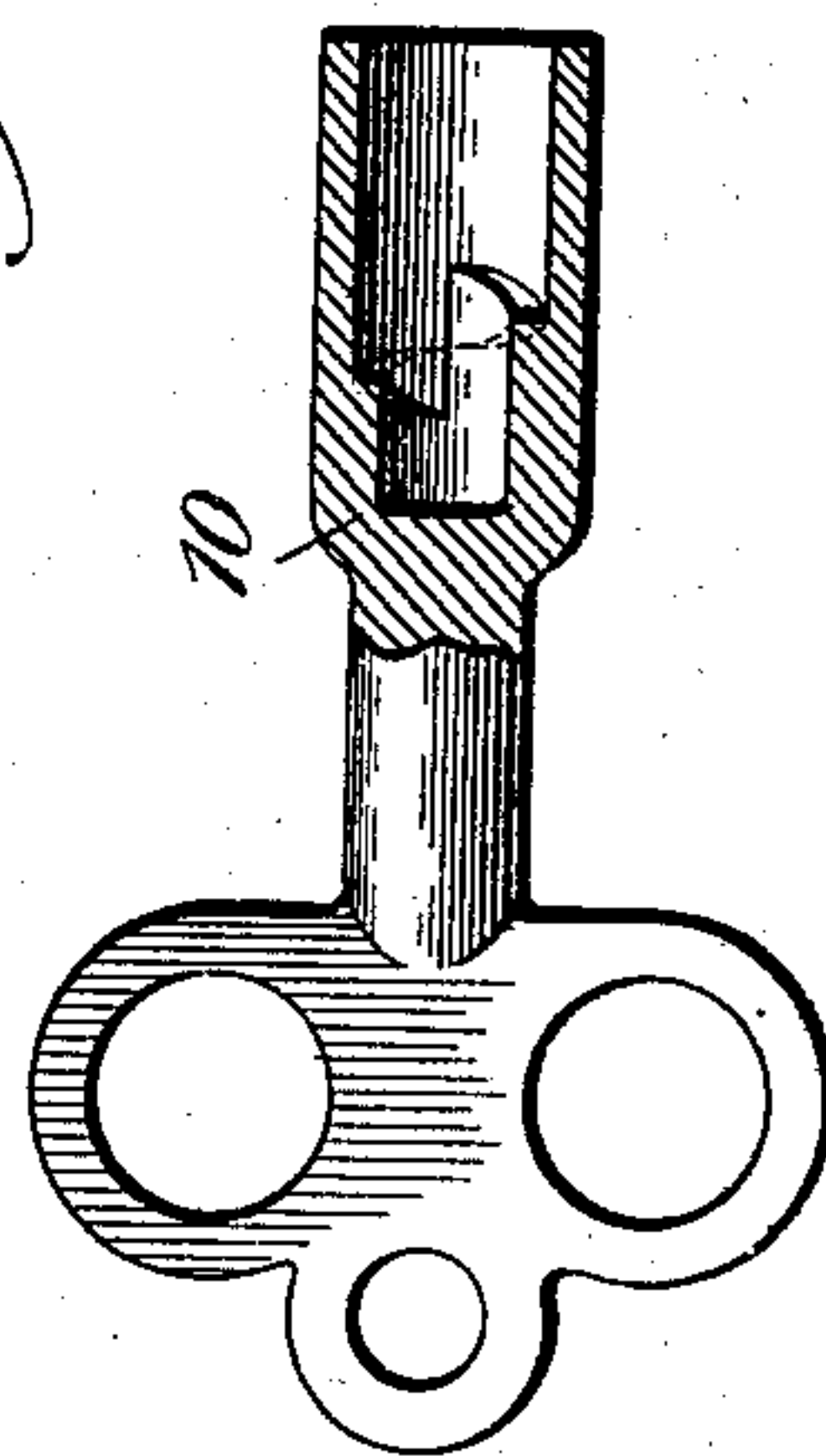


Fig. 8.



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UNITED STATES PATENT OFFICE.

JOSEPH PAUPA AND GUSTAV F. HOCHRIEM, OF CHICAGO, ILLINOIS.

SCORE-BOARD FOR BOWLING-ALLEYS.

SPECIFICATION forming part of Letters Patent No. 702,072, dated June 10, 1902.

Application filed July 29, 1901. Serial No. 70,046. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH PAUPA and GUSTAV F. HOCHRIEM, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Score-Boards for Bowling-Alleys, of which the following is a specification.

The principal object of our invention is to provide a simple, economical, and efficient score-board for bowling; and the invention consists in the features, combinations, and details of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a board constructed in accordance with these improvements; Fig. 2, a vertical sectional elevation taken on line 2 of Fig. 1; Fig. 3, a sectional detail, taken on line 3 of Fig. 1, looking in the direction of the arrow; Fig. 4, an enlarged sectional detail of the roll mechanism, taken on line 4 of Fig. 1; Fig. 5, a sectional elevation taken on line 5 of Fig. 4; Fig. 6, an enlarged detail of the pivot-plate for the opposite end of the rolls from that shown in Fig. 4; Fig. 7, a sectional detail taken on line 7 of Fig. 6; and Fig. 8, a broken view, partly in section, of the key for operating the rolls.

In the art to which this invention relates it is well known that the common board in which the bowling-score is kept is an ordinary blackboard having the "frames" printed thereon and that as a consequence no permanent record of the games can be kept for future reference. The old form of score-boards is also objectionable in that it furnishes a temptation to dishonest employees to render false reports of the number of games played on their respective alleys to the owners or proprietors thereof.

The principal object of our invention, therefore, is to provide a simple, economical, and efficient score-board which will remove the above-named objections and provide a means by which a permanent record of the number of games played and the scores thereof may be easily kept, all of which will more fully hereinafter appear.

In constructing a score-board in accordance with these improvements we provide a backing-board *a*, of the desired size and shape, which is substantially square when viewed in

front elevation. This board may be supported in any desired way; but we prefer to support it in two uprights *b* and *b'*, which are connected together at the top by means of a cross-piece *c* and at their lower ends by a box-like structure *d* and which practically form an inclosing casing or frame portion. This frame portion is pivoted to a base-board *e* by means of hinges *f* (shown particularly in Fig. 3) and is locked to the main supporting-board by means of a latch *g*. If necessary, this latch can be dispensed with and an ordinary lock of any description provided, the key of which may be kept by the employer or owner, and thus prevent the abstraction of the score-paper by other than the trusted individual.

The mechanism thus far described is nothing more or less than the supporting mechanism. It is necessary to provide means, however, for keeping the score of the games as they are played. To accomplish this result we provide a receiving-roll *h* at the lower end of the frame below the backing-board and mount it in suitable bearings thereon, as hereinafter described. This receiving-roll is adapted to receive one end of a strip of paper *i* and wind it around thereon, as shown particularly in Fig. 2. This strip of paper is passed from a supplying-roll *j*, arranged in line with and adjacent to and just above the receiving-roll, as shown particularly in Fig. 2, and also has its rotatable bearings in the supporting-frame. The strip of paper is passed from the supplying-roll upwardly against the front of the backing-board over an idler-roll *k*, then downwardly and adjacent to the rear of the backing-board and engaged with the receiving-roll, so that as such latter roll is wound up the paper is passed over the backing-board in the desired manner.

The paper is provided with blank score-squares *l*, printed thereon in succession or series, and opposite each set or transverse row of squares is a set of spaces for the name of the bowler, the number of strikes, totals, &c., while adjacent to each name is arranged a series of numbers *m*, printed upon the paper, so as to readily furnish a means of ascertaining the number of games played, and thereby furnish a check on the employees.

From the foregoing description of construction and operation it will be seen that it is

necessary to provide means by which a new roll of paper may be readily inserted and a completed roll removed. To accomplish this result, the rolls are made in the shape of hollow cylinders, provided with pivots *n* at one end (see Fig. 7) and split at *o* at the other hollow end. (See Fig. 4.) The pivots of these rolls are inserted in a pivot-plate *p*, (see Fig. 6,) which is slotted in two places at *q* and provided with spring-pressed levers *r*, so arranged that as the pivots are inserted such levers are moved to one side, and after the rolls have reached their desired position the spring-pressed levers move to their normal position and lock the rolls in such position and until they are again pressed back to permit of the removal of such pivots. The hollow slotted ends of the rolls are arranged to engage stub-shafts *s*, provided with feathers *t*, arranged to engage with the slots thereof. Each of these stub-shafts is provided with a wave-wheel *u*, which is contacted by spring-pressed pawls *v*, so that the paper supplying and receiving rolls are thereafter kept in the desired position or until they are turned by use of extraneous force, as will be more fully hereinafter described.

From the above description it will be seen that the rolls may be removed whenever necessary by simply pressing backwardly the spring-pressed levers *r* and sliding the rolls from their engagement with the stub-shafts and also that a new set of rolls can be supplied by slipping the hollow ends thereof into engagement with the stub-shafts and inserting the pivots into engagement with the pivot-plate, as above described. It is desirable, however, to provide means by which the rolls may be turned in one direction only, for the reason that it is essential that each of such rolls should only be turned to wind the paper thereon and permit it to unwind on the other roll—in other words, to prevent the slack of the paper in the frame—all of which will be appreciated by those skilled in the art. In order to accomplish this result, the stub-shafts are provided with projecting studs *w*, which pass through one of the supporting-uprights of the score-board frame and through the sockets *x*. The ends of these studs are cut in a helical manner, so as to provide shoulders *y* and helices *z*. A socket-key 10 is provided and forms the counterpart (see Fig. 8) of the helical studs, so that when engaged with such studs it moves them in one—the desired—direction—that is, while the key is being turned in one direction—while during an opposite movement of the key it simply slips over the helical portion of the studs. In this manner the rotation by the key of each roll is provided for in one direction only.

We claim—

1. In a score-board for bowling-alleys, the combination of a frame portion, a backing-board therein, a supply-roll formed of a hollow cylinder provided with a pivot at one end and slotted at the other hollow end, a receiv-

ing-roll formed of a hollow cylinder pivoted at one end and slotted at the other, a pivot-plate for removably holding such pivots in position, and stub-shafts rotatably mounted in the frame portion provided with feathers to removably engage the hollow slotted ends of the rolls, substantially as described.

2. In a score-board for bowling-alleys, the combination of a frame portion, a backing-board therein, a supply-roll formed of a hollow cylinder provided with a pivot at one end and slotted at the other hollow end, a receiving-roll formed of a hollow cylinder pivoted at one end and slotted at the other hollow end, a pivot-plate for removably holding such pivots in position, stub-shafts rotatably mounted in the stub portion provided with feathers to removably engage the hollow slotted ends of the rolls, and spring-pressed levers on the pivot-plate for yieldingly holding the pivots of the rolls in engagement with the pivot-plate, substantially as described.

3. In a score-board for bowling-alleys, the combination of a frame portion, a backing-board therein, a supply-roll formed of a hollow cylinder provided with a pivot at one end and slotted at the other hollow end, a receiving-roll formed of a hollow cylinder pivoted at one end and slotted at the other hollow end, a pivot-plate for removably holding such pivots in position, stub-shafts rotatably mounted in the frame portion provided with feathers to removably engage the hollow slotted ends of the rolls, spring-pressed levers on the pivot-plate for yieldingly holding the pivots of the rolls in engagement with the pivot-plate, wave-wheels on the stub-shafts, and spring-pressed pawls *v* engaging the wave-wheels to yieldingly hold said rolls in their desired position, substantially as described.

4. In a score-board for bowling-alleys, the combination of a frame portion, a backing-board therein, a supply-roll formed of a hollow cylinder provided with a pivot at one end and slotted at the other hollow end, a receiving-roll formed of a hollow cylinder pivoted at one end and slotted at the other hollow end, a pivot-plate for removably holding such pivots in position, stub-shafts rotatably mounted in the frame portion provided with feathers to removably engage the hollow slotted ends of the rolls, spring-pressed levers on the pivot-plate for yieldingly holding the pivots of the rolls in engagement with the pivot-plate, wave-wheels on the stub-shafts, spring-pressed pawls *v* engaging the wave-wheels to yieldingly hold said rolls in their desired position, and helical-cut studs on the stub-shafts arranged to be engaged by a proper key and rotated thereby in one direction only, substantially as described.

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