

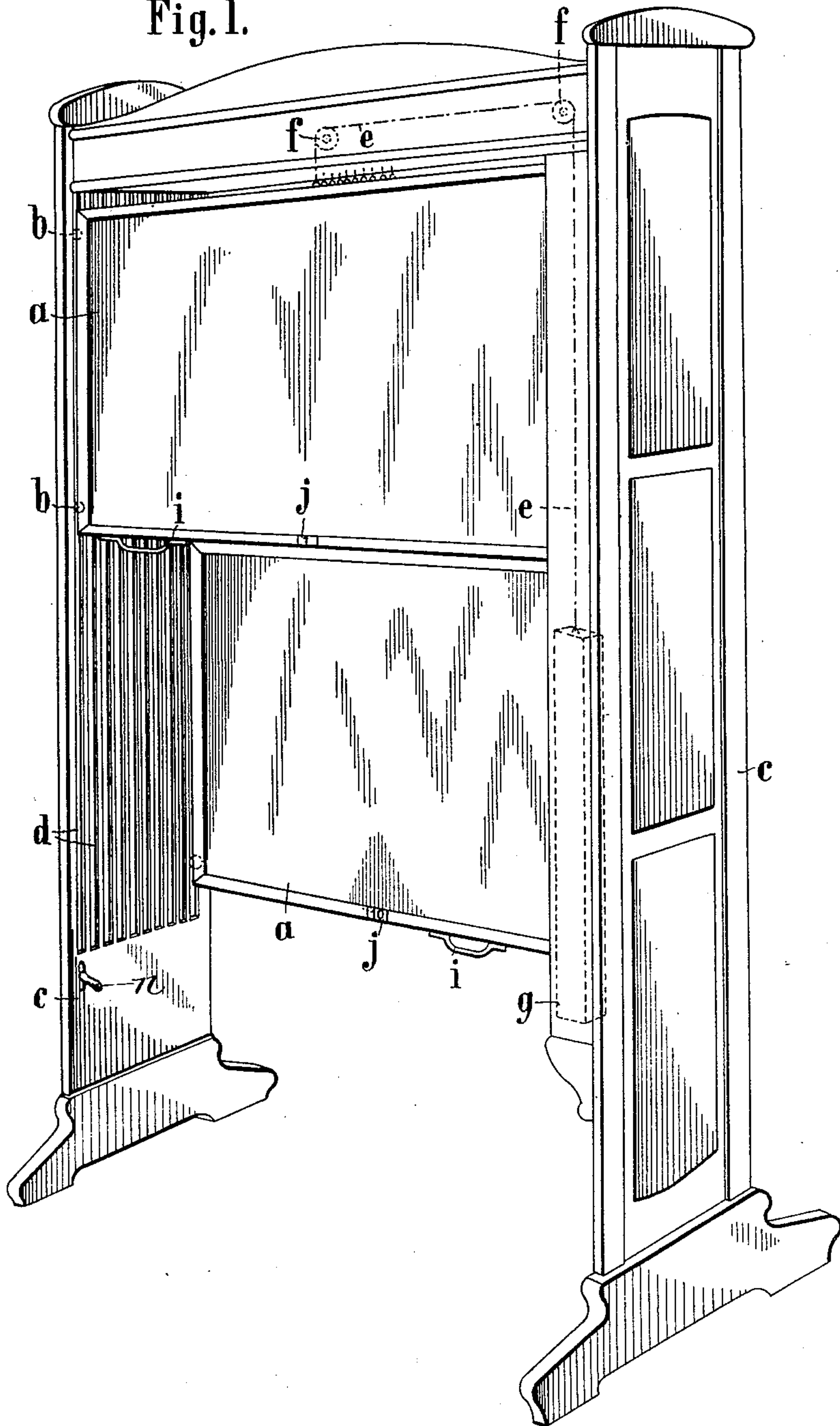
H. WOERNLE.
TIME TABLE DISPLAY CASE.
APPLICATION FILED OCT. 26, 1908.

946,649.

Patented Jan. 18, 1910.

3 SHEETS—SHEET 1.

Fig. 1.



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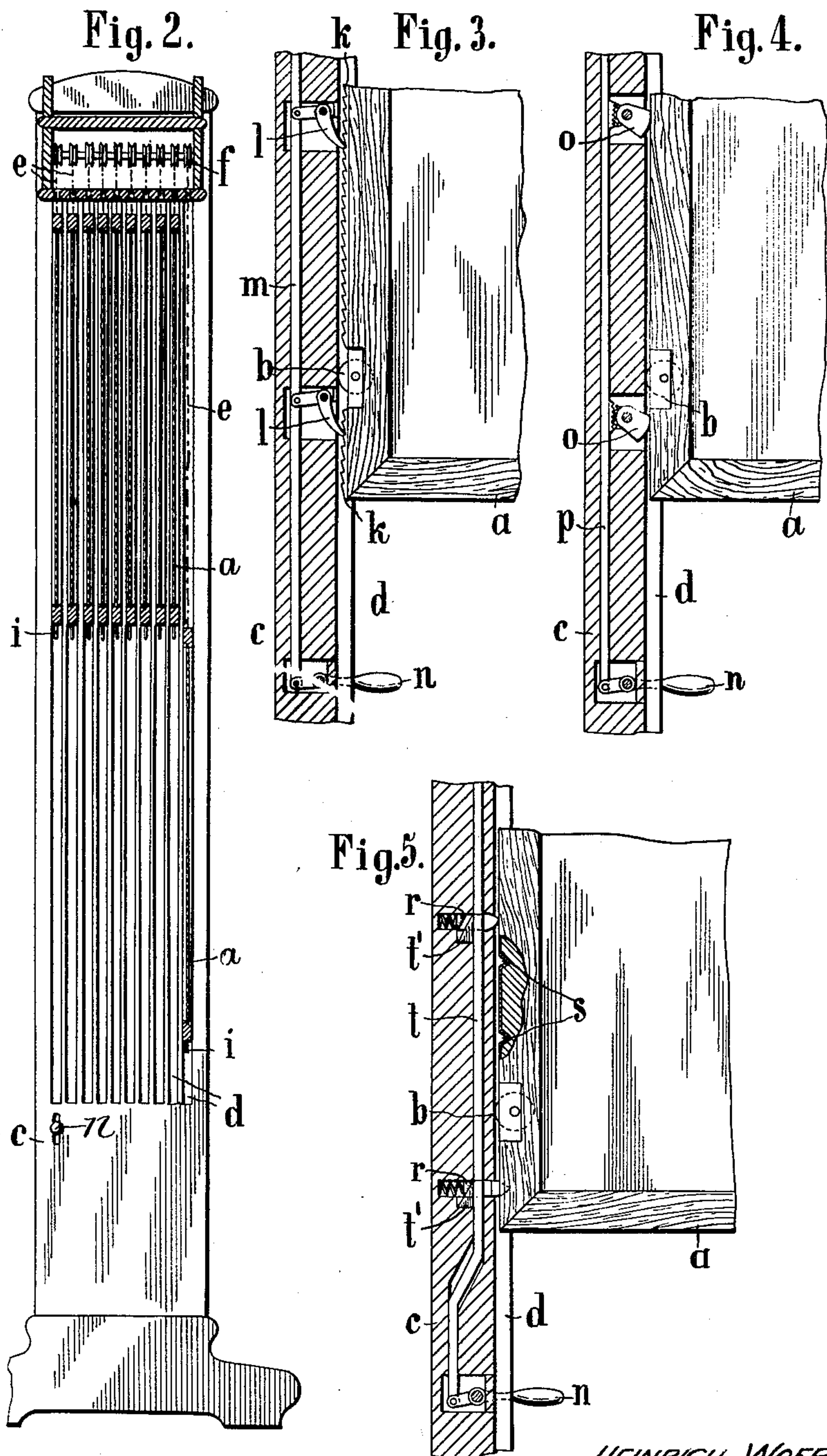
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

Fig. 6.

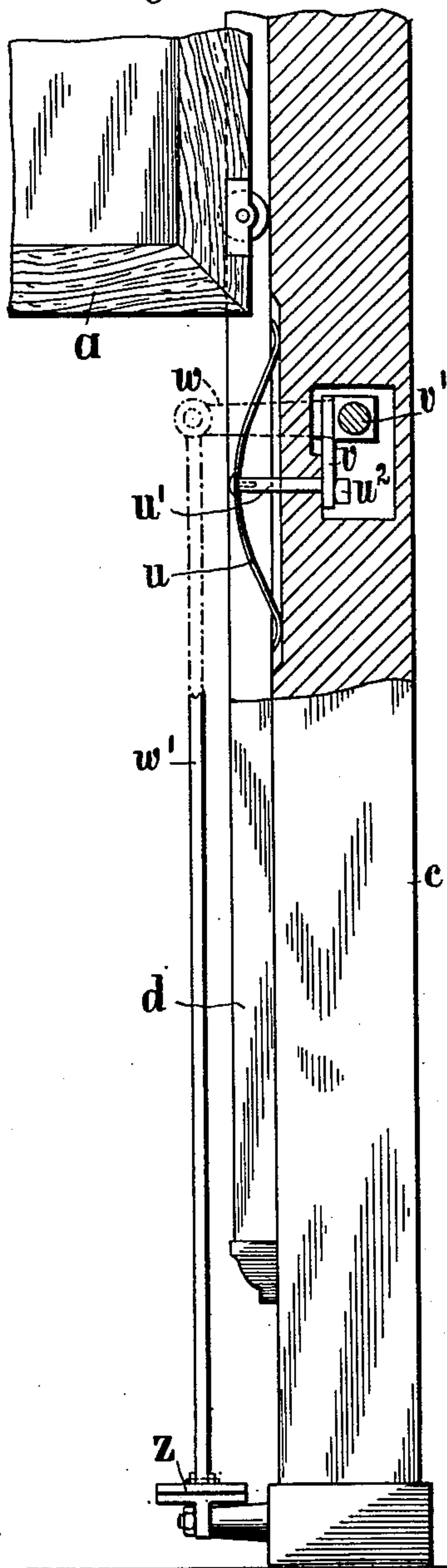
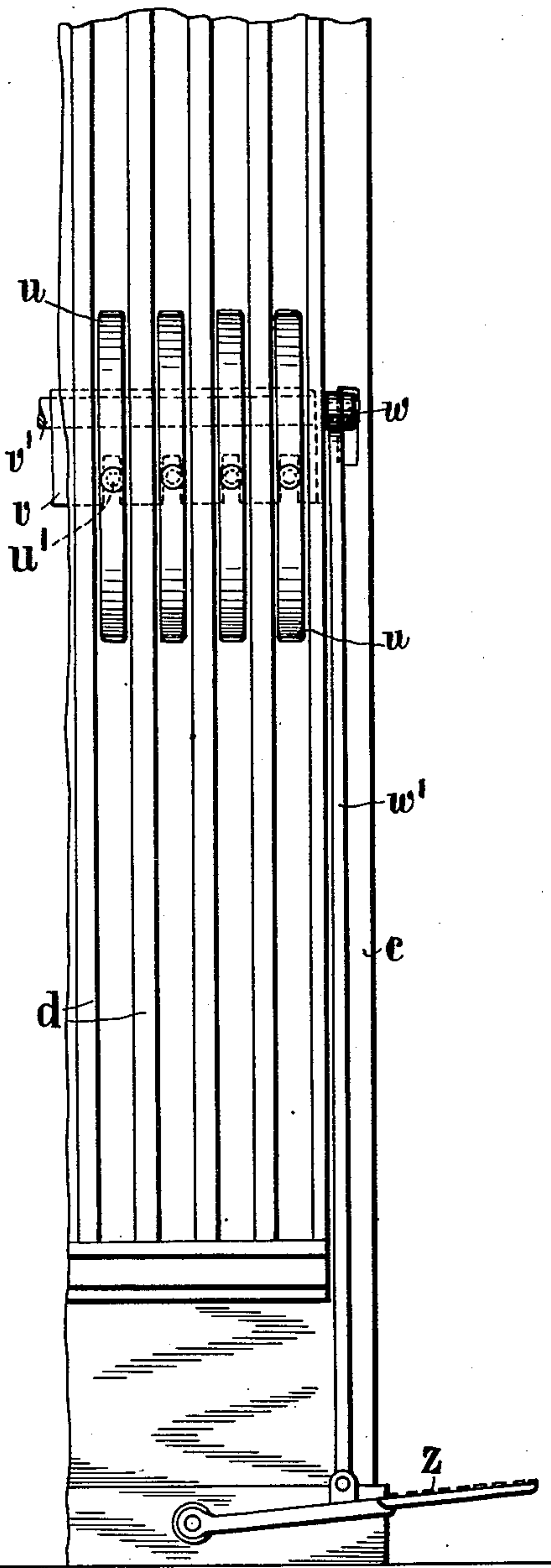


Fig. 7.



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UNITED STATES PATENT OFFICE.

HEINRICH WOERNLE, OF STUTTGART, GERMANY.

TIME-TABLE-DISPLAY CASE.

946,649.

Specification of Letters Patent.

Patented Jan. 18, 1910.

Application filed October 26, 1908. Serial No. 459,573.

To all whom it may concern:

Be it known that I, HEINRICH WOERNLE, a subject of the King of Württemberg, residing at 6 Gutenbergstrasse, Stuttgart, Germany, have invented certain new and useful Improvements in Time-Table-Display Cases; and I do hereby declare the following to be a full, clear, and exact description of the invention.

10 The official time tables of the various railway companies are usually displayed in the railway stations by being pasted on available vacant surfaces on the walls, or on large panels resting on feet. There being a large number of such time tables, they are necessarily distributed over the walls of the station and its precincts, so that they cannot be grouped together for convenient reference. There is however usually no room for a large number of panels resting on feet on the ground.

Now according to this invention the above stated drawbacks are remedied by mounting panels behind one another in a frame or casing in such a manner that they can be drawn up into their upper positions by means of counterweights and when drawn down can be held fast by means of locking or jamming devices to any position in which they are drawn. In this manner any desired point of a time table can be brought onto a level with the eyes and fixed in that position. The pawls of all the panels may be connected together so that they can be released by means of a common handle. When released from the locking devices the panels are drawn by the counterweights up into their upper positions. The locking devices may be of any kind, and may either arrest the motion of the panels in one direction only, or they may be arranged to yield in both directions to the pressure of the panels when these are moved by hand.

45 In the accompanying drawings which illustrate by way of example one form of this invention, Figures 1 and 2 are respectively a perspective elevation and a vertical cross-section of a frame containing a number of panels. Figs. 3 to 6 illustrate different constructions of the locking device. Fig. 7 is a partial elevation to Fig. 6.

50 The panels *a* are arranged to slide on rollers *b* in the usual manner in guides *d* in the side pieces *c* of the frame. The panels *a* are suspended by means of ropes *e* that pass over rollers *f* and carry at their other

ends counterweights *g* which have a constant tendency to draw the panels *a* into their upper positions. The panels are further provided with handles *i* for the purpose of drawing them down, and with numbers or name plates *j* to indicate the several time tables. For the purpose of fixing the panels in any positions into which they may be drawn down, there is provided a locking device which may be constructed in different ways.

In the construction shown in Fig. 3, each panel is provided on one of its side edges with a ratchet rack *k* having upwardly directed teeth which are omitted at the places where the guide rollers *b* bear.

In one side piece *c* of the frame there are arranged at different levels pawls *l* which are pressed constantly against the rack *k* by the weight of a connecting rod *m*. The rod *m* is connected in any suitable manner with a handle *n* which is located outside of the frame, and which, when pressed raises the rod *m* whereby the pawls *l* are released so that the panels that have been drawn down are returned by the counterweights automatically into their initial positions.

Instead of the ratchet rack with pawl, a gripping lever locking device may be employed as shown in Fig. 4.

In one side piece of the frame there are mounted at different levels, one or more cams *o* which are connected with one another by a rod *p* engaging by means of teeth with tooth-sectors on the cams *o* and are constantly pressed by the weight of the rod *p* against one side edge of the panels *a*. By reason of their eccentric rolling edge when the panels are drawn down the cams *o* are pushed aside so that they do not hinder this movement. If however the panel when drawn down, be released in any desired position, it will be immediately gripped by the cams *o*. The rod *p* may be also moved up by means of a handle *n* located on the outside of the frame, for the purpose of releasing the panels from the cams *o* whereby all the panels that are more or less drawn down, are returned automatically into their upper positions.

The two above described locking devices allow the panels to be moved by hand only in one direction. If it is desired to move the panels by hand in both directions with locking of the panels each time on being released, the locking catch shown in Fig. 5

may be employed. In the side piece *c* spring-pressed catches *r* are arranged at different levels, and their locking surfaces are beveled in both directions. The corresponding side edge of the panels *a* is formed with a series of recesses *s* which are staggered with relation to the catches, and into which the catches *r* can snap alternately. The spring pressure of the catches is greater than the preponderance of the counterweights so that the panels *a* can be fixed in any desired position in being drawn down. On the other hand the catches owing to their beveled locking surfaces will yield to the pressure of the panels when these are moved by hand. They can therefore be pushed by hand up and down at will. In the side pieces *c* there is also guided vertically a rod *t* which is provided on the level of the catches *r* with shoulders *t'* that are formed with wedge-shaped surfaces against which the corresponding wedge-shaped surfaces of the catches *r* are adapted to bear. The rod *t* may in the same manner as hereinbefore described be moved upward by means of a handle *n*. In this movement the shoulders *t'* push back the catches *r* and the panels *a* are released and can move up.

A further development of the locking device according to Figs. 6 and 7 consists in the use of elastic bodies (such as flat springs) as fixing devices for the panels, so that the panels are held solely by friction in their various positions when drawn down. This arrangement has the advantage that it works quite noiselessly, while the panels are free to move in either direction at will.

In order to fix the panels in opposition to the action of the counterweights, in every position to which they may be drawn down, flat springs *u* are provided in the guiding grooves and arranged to bear with their convex surfaces against the side edges of the panels when these are drawn down, and thus fix the panels in position. The strength or pressure and the number of the springs must be such as to allow the panels to be

moved by hand in both directions without much trouble. The springs *u* are held by means of guide pins *u'* in the sides *c* of the frame. The drawing back of the springs *u* for the purpose of releasing the panels is effected by means of a plate *v* which serves as a lever for each spring, and extends over all the guides *c*. This plate is arranged on a shaft *v'* mounted in the frame and engages behind stops *u²* of the pins *u'*. On the shaft *v'* there is mounted on one or both sides of the frame, a lever *w*, to which is connected a rod *w'*, that is connected at its lower end to a treadle *z*. By operating the pedal all the springs are moved back, and any panels that happen to be drawn down are returned automatically into their initial positions.

It is further obvious that any desired number of panels *a* may be arranged in one and the same frame, and that all the panels or their locking devices may be released by means of the same handle.

I claim:

1. A device of the character described, comprising a frame, a plurality of panels slidably mounted therein, means for holding the panels in any desired position, means for simultaneously releasing all of the holding means, and means for automatically returning the panels to their initial positions when they are released.

2. A device of the character described, comprising a frame, a plurality of panels slidably mounted therein, retractable means for holding the panels in any desired position, means for simultaneously retracting all of said holding means, and means for automatically returning said panels to their initial positions when they are released.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

HEINRICH WOERNLE.

Witnesses:

FRIEDRICH WOERNLE,
WALTER C. KNOLL.