A. J. TIZLEY.

AUTOMATIC RELEASING DEVICE.

APPLICATION FILED NOV. 17, 1914.

1,167,231. Patented Jan. 4, 1916.

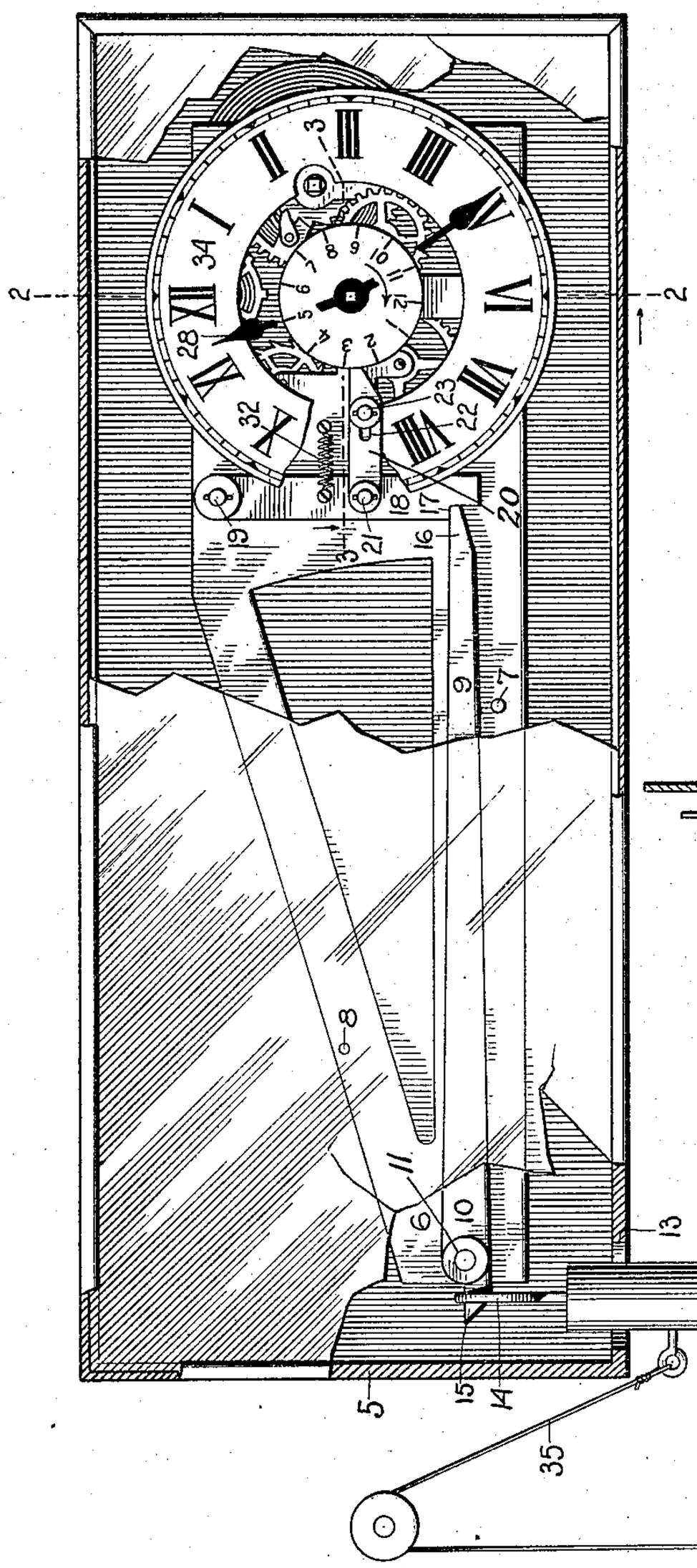

Fig. 1.

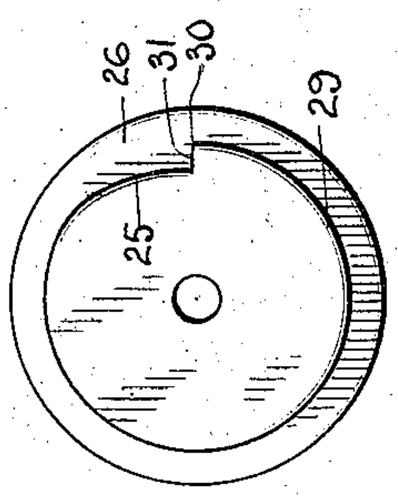

Fig. 4.

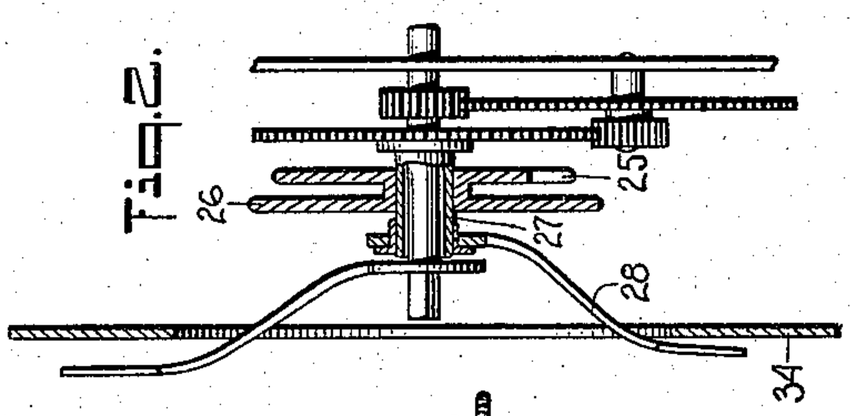

Fig. 2.

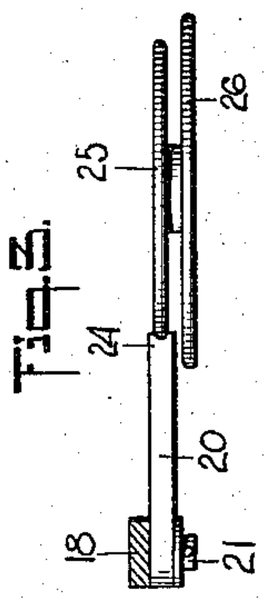

Fig. 3.

WITNESSES

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AUTOMATIC RELEASING DEVICE.

1,167,231. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed November 17, 1914. Serial No. 872,546.

To all whom it may concern:

Be it known that I, ARTHUR J. TIZLEY, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, county of Kings, and State of New York, have invented a new and Improved Automatic Releasing Device, of which the following is a full, clear, and exact description.

My invention has for its object to provide an automatic releasing device which may be used to open or close feeding apparatus, the drafts on furnaces and stoves and for similar purposes.

The device is constructed with a lever on one arm of which a weight is disposed, the other arm being engaged by a shoulder on a second lever, positioned at an angle to the first lever. When the second lever is operated by means provided, it frees the shoulder from the first lever to permit the first lever to move to free the weight therefrom, thereby permitting the fall of the weight to operate means connected with the feeding apparatus or the furnace drafts.

Additional objects of the invention will appear in the following specification in which the preferred form of my invention is disclosed.

In the drawings similar reference characters refer to similar parts in all the views in which—

Figure 1 is a view showing my invention in elevation, parts being broken away to better illustrate the construction; Fig. 2 is an enlarged sectional view on the line 2—2 of Fig. 1; Fig. 3 is a sectional view on the line 3—3 of Fig. 1; and Fig. 4 is an enlarged view showing the rear cam member.

By referring to the drawings it will be seen that a casing 5 is provided in which there is disposed a frame 6 having stops 7 and 8 which serve to limit the movement of the arm 9 of the lever 10 fulcrumed at 11 to the frame 6. A weight 12 is disposed through an opening 13 in the bottom of the casing 5 and is provided with a loop 14 which is normally disposed over the other arm 15 of the lever 10. The end 16 of the arm 9 of the lever 10 is normally engaged by a shoulder 17 on a vertically disposed lever 18 which is fulcrumed at 19 to the frame 6. An arm 20 is articulated to the lever 18 at 21, this arm 20 having a slot 22 in which a guide pin 23 is disposed, the guide pin 23 being supported by the frame 6. The outer terminal 24 of the arm 20 is disposed for engagement by the cam 25 on the cam member 26, this cam member 26, as best shown in Fig. 2 of the drawings, being mounted on the sleeve 27 of a clock which carries the hour hand 28, the cam member 26 having frictional engagement with the said sleeve 27 so that while it may be rotated relatively to the said sleeve 27, the cam member 26. under normal conditions will be rotated by the sleeve 27. It will be understood that the portion 29 of the cam will normally engage the terminal 24 of the arm 20, to push the lever 18 into position where its shoulder 17 will engage the terminal 16 of the arm 9 of the lever 10; but with the rotation of the cam member 26, the cam at the point 30, will engage the terminal 24 of the arm 20 and with the further rotation of the cam member 26, the terminal 24 of the arm 20 will move to the recess 31, under the influence of the lever 18 and the spring 32 which connects the lever 18 with the frame 6 at the point 33. This will free the lever 18 at its shoulder 17 from the terminal 16 of the lever 10.

The front of the cam member 26 has the hours marked thereon as shown in Fig. 1 of the drawings, so that it may be set relatively to the hands of the clock. The arm 20 is positioned at the hour nine on the clock dial 34 and the recess 31 is disposed opposite the hour 9 on the face of the cam member 26. It will, therefore, be understood that the cam member 26 may be rotated relatively to the sleeve 27 until the hour at which the device is to operate is positioned at the hour hand 28 on the clock. When this has been done, the cam member 26 will rotate with the sleeve 27 and when the hour hand 28 of the clock reaches the hour on the clock dial 34 at which the device is to operate, the recess 31 will be positioned to permit the terminal 24 of the arm 20 to move under the influence of the lever 18 and the spring 32. This permits the arm 15 of the lever 10 to descend under the influence of the weight 12 and as the weight 12 is connected by a cord 35 with the means to be actuated, the downward movement of the weight 12 will produce the desired operation of the devices which are to be operated at a predetermined time.

Having thus described my invention I

claim as new and desire to secure by Letters Patent:

1. In a device of the class described, a lever, a weight normally supported on one arm of the lever, a second lever disposed substantially at right angles to the first mentioned lever and having a shoulder engaging the other arm of the first mentioned lever, a spring for moving the second mentioned lever to free its shoulder from the first mentioned lever, an arm pivoted to the second mentioned lever for moving the latter against the resiliency of the spring, the arm being disposed in a horizontal plane substantially parallel with the first mentioned lever, guide means for the arm, a rotatably mounted member, and a cam engaging the arm and having frictional engagement with the rotatably mounted member.

2. In a device of the class described, a horizontal lever, a weight normally supported on an arm of the lever, a second lever having a shoulder engaging the other arm of the first mentioned lever, a spring for moving the second mentioned lever to free its shoulder from the first mentioned lever an arm for moving the latter against the resiliency of the spring, the arm being disposed in a horizontal plane substantially parallel with the first mentioned lever, a rotatably mounted member having a hand, clock means for rotating the member, a cam rotatably mounted on the member and having frictional engagement therewith, the cam normally engaging the arm and having marks thereon to assist in setting the cam relatively to the hands.

In testimony whereof I have signed my name to this specification in the presence of the two subscribing witnesses.

ARTHUR J. TIZLEY.

Witnesses:
HENRY C. HARRIS,
GEO. KNOCHE.