

I. SCHWARZ.
 SELF ACTING CLOCKWORK DEVICE FOR TEARING THE LEAVES OFF BLOCK CALENDARS.
 APPLICATION FILED MAR. 22, 1910.
 990,459. Patented Apr. 25, 1911.

Fig. 1

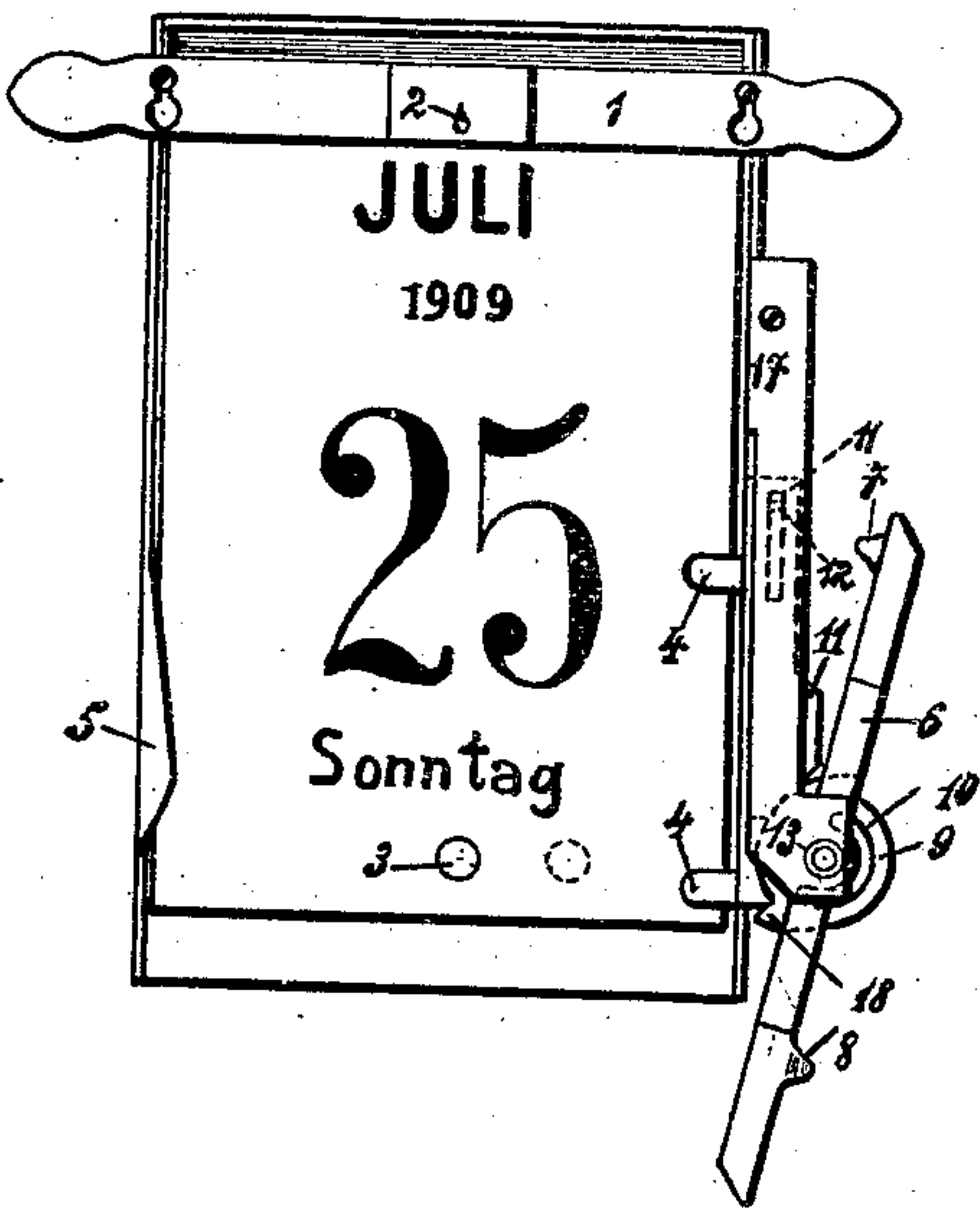


Fig. 2

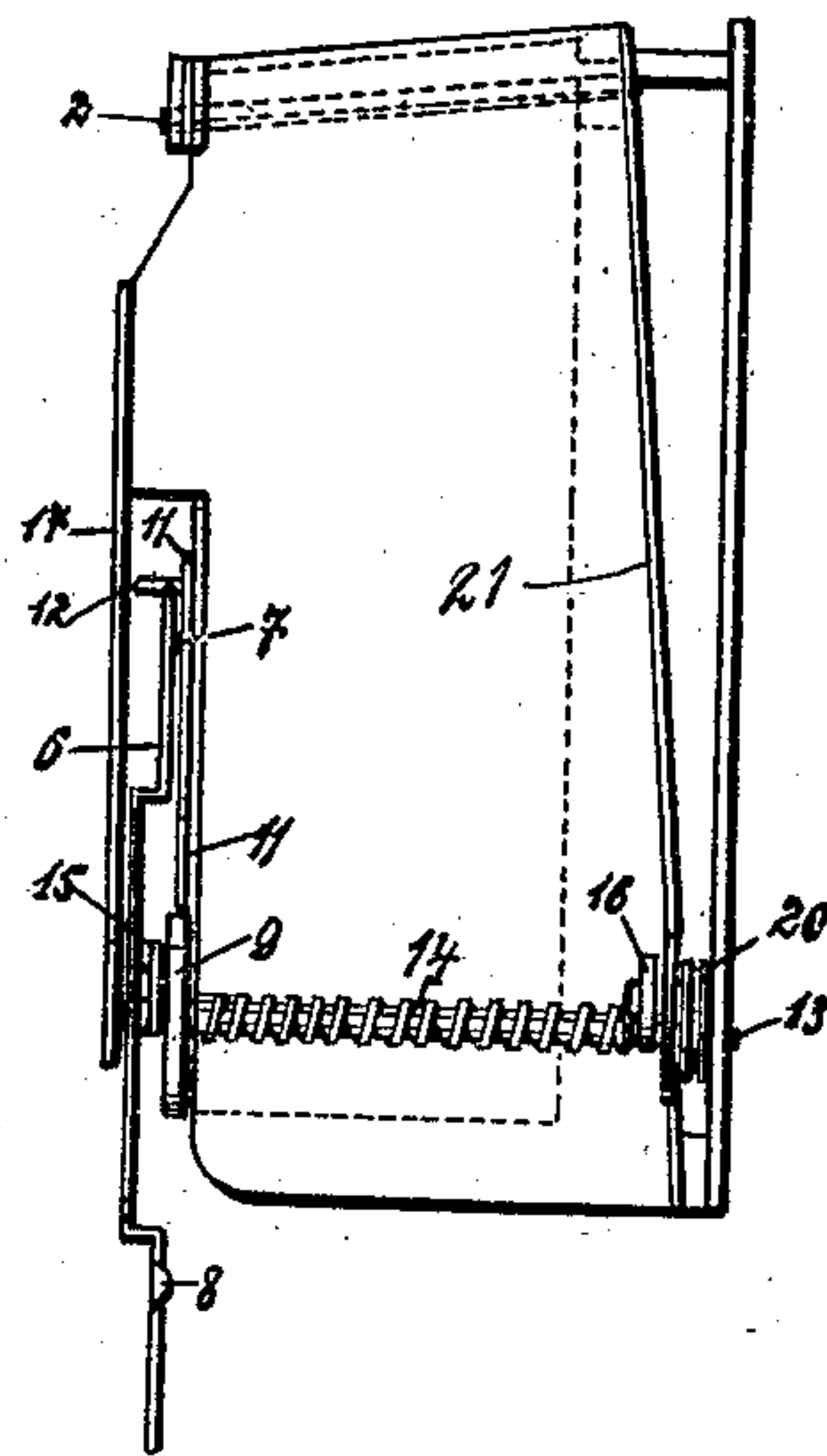


Fig. 3

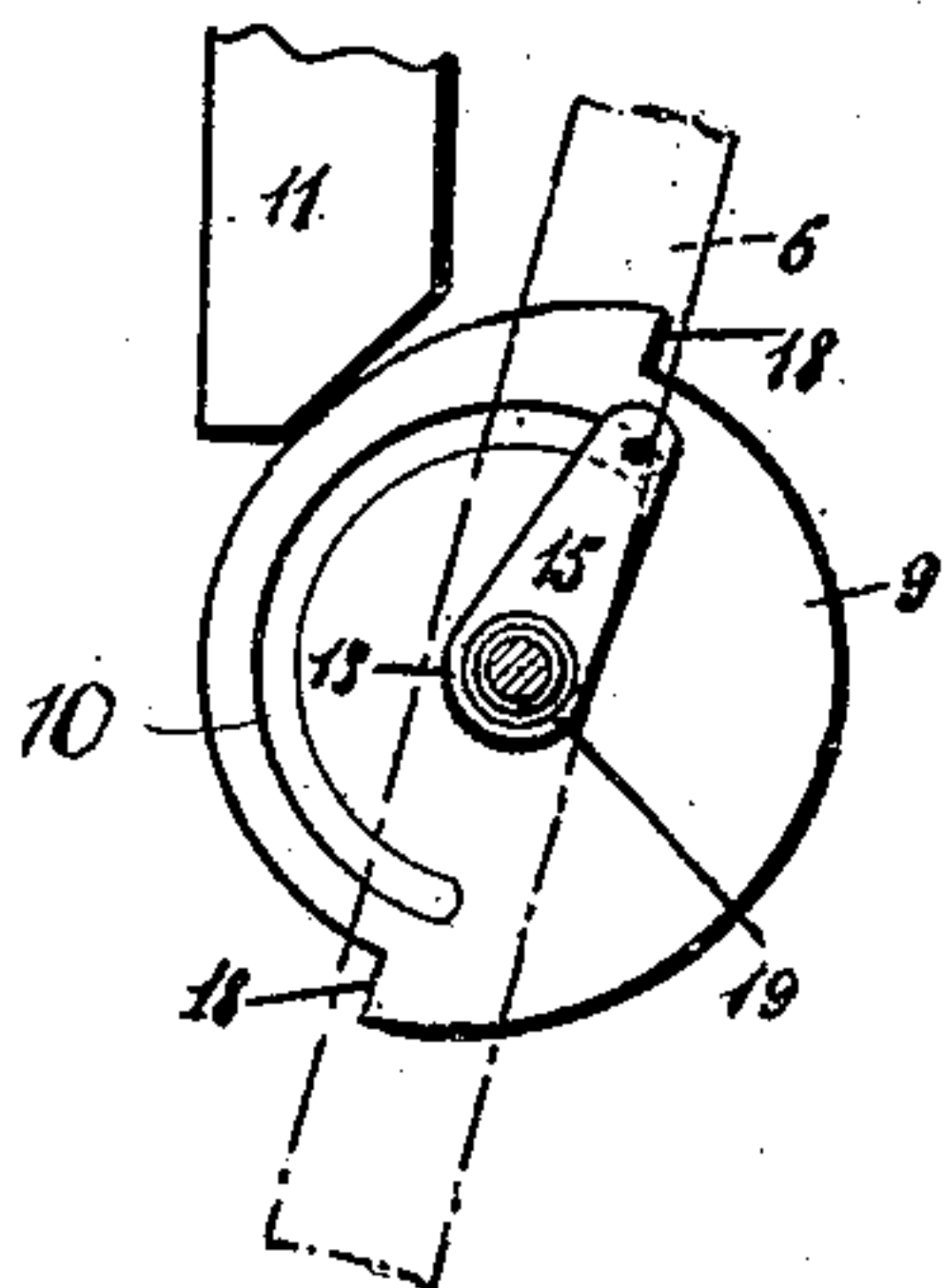
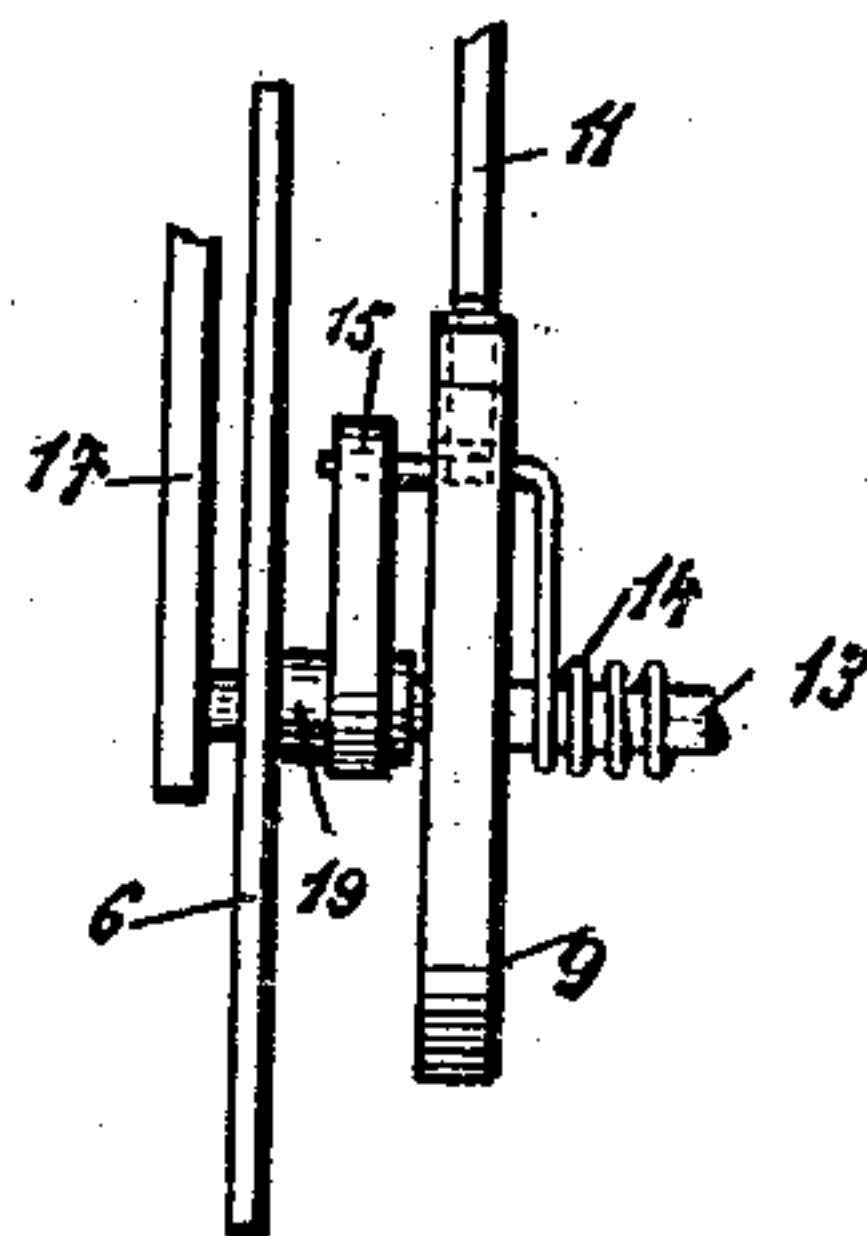


Fig. 4



Witnesses
[Signature]
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UNITED STATES PATENT OFFICE.

IGNAZ SCHWARZ, OF LINZ, AUSTRIA-HUNGARY.

SELF-ACTING CLOCKWORK DEVICE FOR TEARING THE LEAVES OFF BLOCK-CALENDARS.

990,459.

Specification of Letters Patent.

Patented Apr. 25, 1911.

Application filed March 22, 1910. Serial No. 551,020.

To all whom it may concern:

Be it known that I, IGNAZ SCHWARZ, a subject of the Austro-Hungarian Emperor, and resident of 21 Steingasse, Linz-on-the-Donau, Austria-Hungary, have invented a Self-Acting Clockwork Device for Tearing the Leaves Off Block-Calendar, of which the following is a specification.

The subject of the present invention is a device for tearing the single leaves off a block calendar, which can be inserted in or used in combination with a clock without in any way disturbing the action of the clock mechanism.

In order that the invention may be more clearly understood reference is made to the accompanying drawings wherein—

Figure 1 is a front elevation showing the block and tearing device. Fig. 2 is a side elevation of same. Fig. 3 an elevation of the cam wheel. Fig. 4 a side elevation of a detail.

The block is thrust on the pin 2 attached to the block holder 17. In order that the forward movement of the block shall keep pace with the number of leaves torn off, a plate 21 can be provided behind the block, and which by leaning at an angle against the same, tends to press this latter forward. By reason of this, as well as by the sloping position of the pin 2, and the weight of the block itself, the block continues to move forward as the leaves are torn off so that it is continually pressing against the leaf holders 4, 4 and 5.

The part which does the actual tearing off is the double armed lever 6 revolvably mounted on the shaft 13 and having two projections or hooks 7 and 8 respectively. A bracket 15 is connected with the lever 6 by means of a collar 19, one end of the spring 14 situated on the shaft 13 engaging in the end of the bracket 15, the other end of said spring engaging in the projecting end of the tensioning bracket 16 situated at the opposite end of shaft 13. On the said shaft 13 is a driving wheel 20 connected to be driven by the clock mechanism by means of an endless band, cog wheel or the like; the said shaft also carrying a cam wheel 9 provided with cams 18 and a semi-circular slot 10 for the reception of the end of the spring 14. The bolt 11 is movable in a vertical direction and has a projecting pin 12 the upward vertical movement being caused by the cam wheel 9. When the cam

wheel 9 is rotated one of the cams 18 engages under the lower edge of the bolt 11 and raises it up; when the bolt is raised up sufficiently the pin 12 which has been holding the lever 6 back is raised up also thus releasing said lever which immediately turns half a revolution owing to the tension of the spring 14. It cannot complete more than half a revolution as by this time the bolt 11 has dropped again, and the other end of the lever 6 is prevented from turning further by means of the pin 12.

As will be seen from Fig. 1 the leaves of the block are provided with holes 3, these holes being alternately arranged to the right and left of each other so that the hooks 8 cannot tear off several leaves at a time. The said hooks 8 being arranged at different distances from the turning point of the lever 6 so as to correspond to the holes 3.

The driving mechanism of the device must be so arranged that the cam wheel 9 completes half a revolution once every 24 hours, this being preferably accomplished by any suitable form of gearing connecting the driving wheel 20 with the clock mechanism.

The way the leaves are torn off is as follows:—The cam wheel 9 is solidly mounted on the shaft 13 as is the tensioning bracket 16 so that when said shaft is turned the spring is gradually tensioned by reason of the other end of said spring engaging in the bracket 15 which is loosely mounted on said shaft and connected by a collar 19 with the lever 6. The shaft 13 when turning, turns also the cam wheel 9 so that the bolt 11 is gradually raised up by one of the cams 18 until the pin 12 which has been holding the lever 6 back is raised so high that the said lever is able to pass, whereupon it swings down owing to the tension of the spring 14. During the turning of the lever one of the hooks 7, 8 engages in the corresponding hole 3 in the top most leaf and pulls it down with it and allows it to drop into a box or other receptacle. While the lever is completing half a revolution the cam has passed from under the bolt 11 so that this latter falls into its original position, thus when the other part of the lever swings up it is prevented from turning further by reason of the pin 12. This action is repeated from day to day, the apparatus being preferably arranged so that the tearing off always takes place at midnight.

Having now fully described my inven-

tion what I claim and desire to secure by Letters Patent is:—

5 A self acting clock-work device for tearing the leaves off block calendars comprising in combination a holder adapted to receive a block calendar, a shaft adapted to be driven by the mechanism of a clock, a double armed lever mounted on said shaft, a stop for the movement of said lever, a
10 cam wheel carried by said shaft, and also adapted to be driven by the clock mechanism, a spring engaging with the lever and being tensioned during the turning of the

shaft, and two hooks integral with said lever arranged so that each alternately 15 grips a leaf when the lever is being turned, substantially as described and shown and for the purpose set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing 20 witnesses.

IGNAZ SCHWARZ.

Witnesses:

AUGUST FUGGER,
MARIE MISTERKA.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
