

B. BEHR.
 DEVICE FOR ADJUSTING SLIDES IN CALCULATING MACHINES.
 APPLICATION FILED APR. 17, 1911.

1,013,981.

Patented Jan. 9, 1912.

Fig1

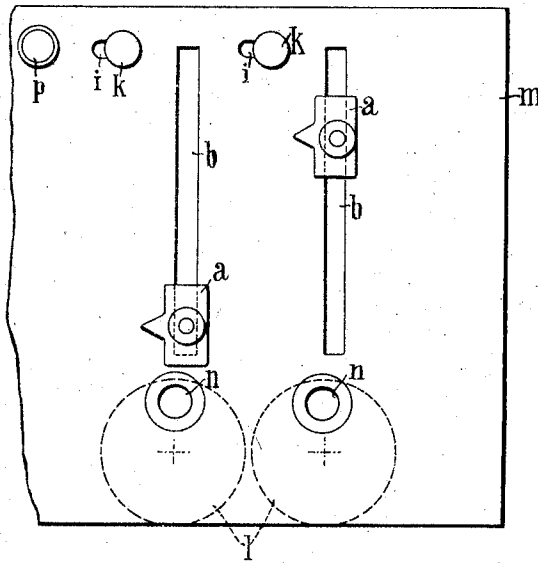
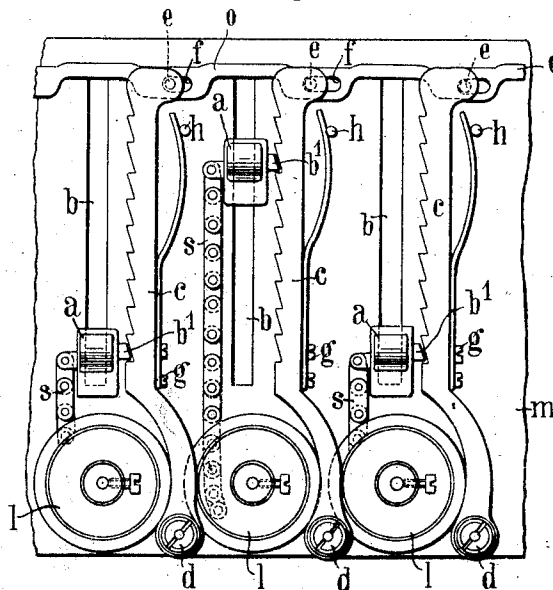


Fig.2



Witnesses.
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UNITED STATES PATENT OFFICE.

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DEVICE FOR ADJUSTING SLIDES IN CALCULATING-MACHINES.

1,013,981.

Specification of Letters Patent.

Patented Jan. 9, 1912.

Application filed April 17, 1911. Serial No. 621,564.

To all whom it may concern:

Be it known that I, BERNHARD BEHR, citizen of the German Empire, residing at Hamburgerstrasse 19, Dresden, Germany, have invented certain new and useful Improvements in Devices for Adjusting Slides in Calculating-Machines, of which the following is a specification.

This invention relates to a Thomas calculating machine provided with adjusting sliders, which are under the action of springs and are adjustable in slots in the dial plate, to which is secured a rigid tooth which engages with the rotatable rack provided laterally of the guiding slot. The upper end of this rotatable rack is provided with a pin which projects outwardly through a slot in the dial plate and passes simultaneously through a slot in a common operating rod so that each rack can be separately or all the racks together can be moved out of engagement with the tooth of the slider so as to move the sliders separately or together into the zero position.

An object of the invention is to provide slides in a calculating machine which may be readily placed in the proper position and which may be locked in said position, and to provide means for releasing each slide from its locking element independently of the other slide and also to provide means for releasing all of said slides simultaneously from their locking elements.

In the accompanying drawing is shown a constructional form of the invention with the parts of the Thomas calculating machine which come into question.

Figure 1 is a plan and Fig. 2 is an under-side plan.

In the slots *b* of the dial plate *m* are guided the adjusting sliders *a*. Laterally of the slots are rotatably mounted about the pivots *d* plates *c*, which on the side toward the slot are provided with teeth and each of which has the upper end provided with a pin *e* passing through a slot *f* in the common operating rod *o* and a slot *i* in the dial plate. Each slider is provided with a rigid tooth *b*¹ which in the normal position of the racks *c* engages with the tooth corresponding to the adjustment. The position of each rack *c* is insured by a leaf spring secured to the back thereof by a screw *g*, the end of the spring resting against a pin *h* provided in the dial plate. The pins *e* of the racks *c* passing through the slots *f* and *i* are provided with

a head *k* for the purpose of laterally moving each slider separately and separately moving the sliders correspondingly into the zero position. For the purpose of moving all the sliders into the zero position there is provided the rod *o* having the head *p* and the slots *f*.

Each adjusting slider *a* is connected by a pitch chain *a* to a spring casing *l*. In consequence of this each slider tends to move downward automatically that is into the zero position which occurs when the rack *c* which engages the detent *b*¹ is moved laterally. The spring casing is on its face provided with figures 0-9 or with a figure disk carrying these figures. The figures are visible in the dial plate *m* of the machine through apertures *n*. Before commencing the calculation the adjusting sliders *a* are adjusted at zero. If a certain number is required the adjusting sliders *a* are adjusted at the number just above by hand whereupon the slider is released and is adjusted at the next lower figure which is the one required. On the adjustment of the sliders the spring operated racks *c* are automatically moved laterally until the sliders have reached the required position. On the adjustment of the slider the chain *e* is unrolled from the spring casing *l* in the known manner and the corresponding number appears behind the aperture *n*. The apertures *n* are disposed in a row and are thus easily kept in view. If the number adjusted by a slider *a* is to be corrected it suffices to move the slider slightly upward or to laterally move the head *k* and placing a finger on the required number and allowing the slider to move back, then releasing the head *k*, whereupon the rack locks the tooth of the slider. For the purpose of simultaneously adjusting all the sliders to the zero position, the rod *o* is moved laterally by means of the handle *p* and thus also the slots *f*, whereby the pins *e* and consequently the racks *c* are moved and the teeth *b*¹ of the sliders are released.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In a device for adjusting slides in a calculating machine the combination of a slide, a dial plate, the slide being movable in a slot of said plate, an element pivotally supported adjacent the slot, means for inter-

locking said slide with said element at a plurality of positions, and means for swinging said element about its pivot to release said slides.

5 2. In a device of the class described, the combination of a dial plate, a plurality of slides movable independently of each other in slots of said plate, an element pivotally supported adjacent each slot and interlock-
10 able with said slide at a plurality of positions and means for swinging each of said elements independently of the others about its pivot to release the slide interlocked therewith.

15 3. In a device of the class described the combination of a dial plate, a plurality of slides movable independently of each other in rectilinear slots in the plate, an element pivotally supported adjacent each slot and
20 interlockable with said slides at a plurality of positions, and a common means for

swinging all of said elements about their pivots to release all of the slides interlocked therewith.

4. In a device of the class described the 25 combination of a dial plate, a plurality of slides movable independently of each other in slots of said plate, an element pivotally supported adjacent each slot and interlock-
30 able with said slides at a plurality of positions, and a common means for swinging all of said elements simultaneously about their pivots to release simultaneously all of the slides interlocked therewith.

In testimony whereof I have hereunto set 35 my hand in presence of two subscribing witnesses.

BERNHARD BEHR.

Witnesses:

PAUL ARRAS,
CLÁRE SIMON.