

(No Model.)

4 Sheets—Sheet 1.

A. MNISZEWSKI.

CONTROLLING APPARATUS FOR MONEY BOXES.

No. 582,298.

Patented May 11, 1897.

Fig:1.

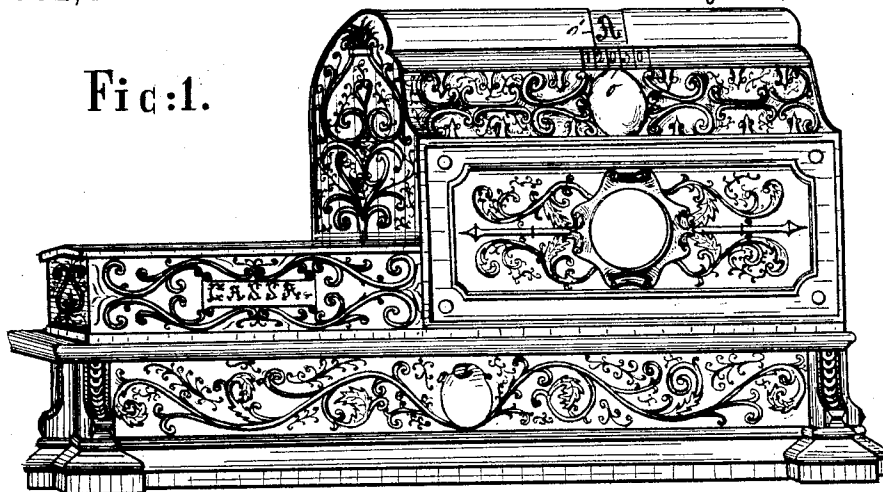
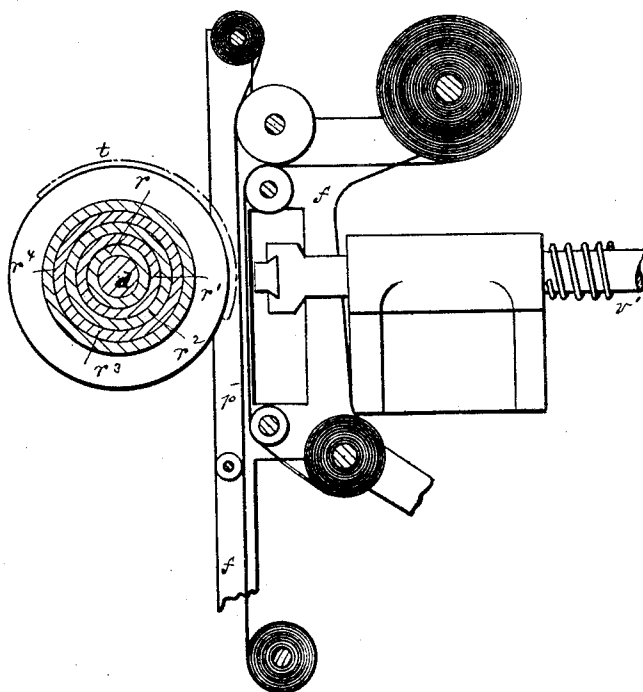


Fig:7.E-F.



Witnesses:
Willie Miller
John Becker

Inventor:
Anton Mniszewski
by his attorneys
Roeder & Briesend

A. MNISZEWSKI.

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Fig. 2.

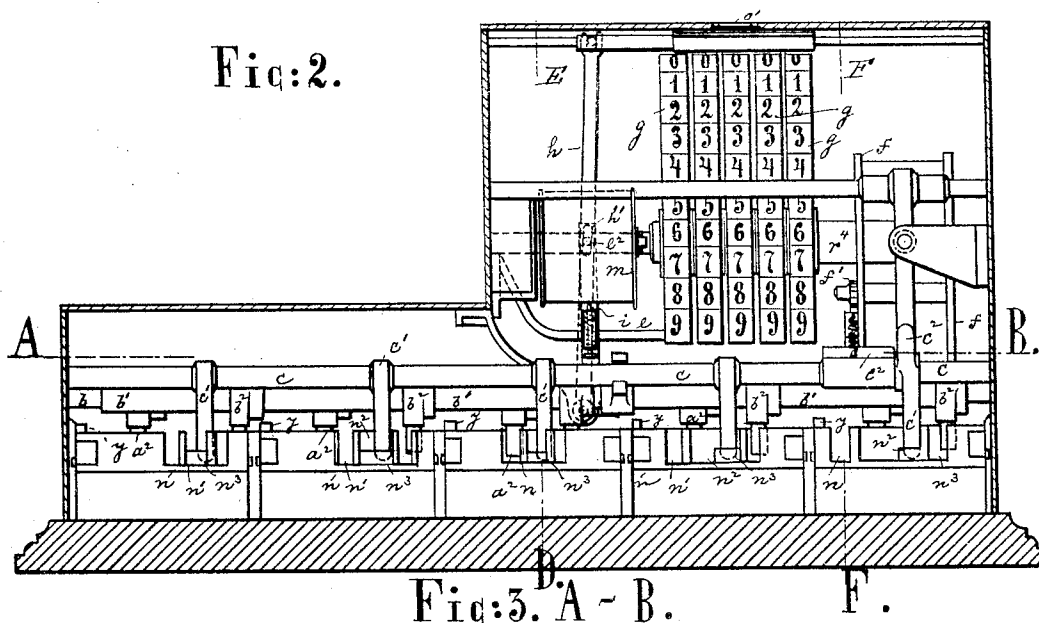
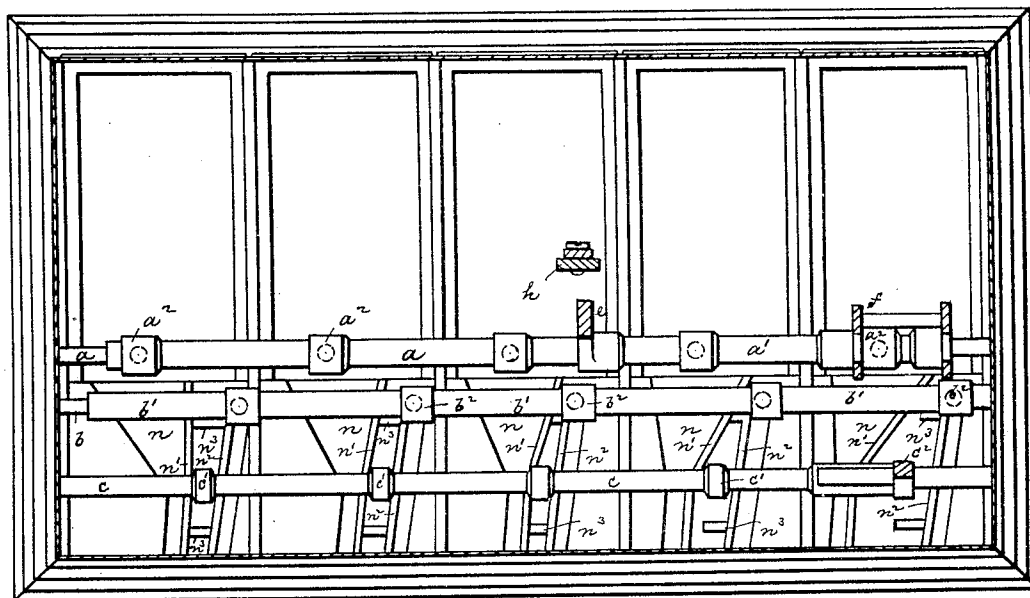


Fig. 3. A ~ B.

F.



Witnesses:
 Willie Miller
 John Becker.

Inventor:
 Anton Mniszewski
 by his attorneys
 Roeder & Briener

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Fig: 5.

G ~ D.

Fig: 6.

E-F.

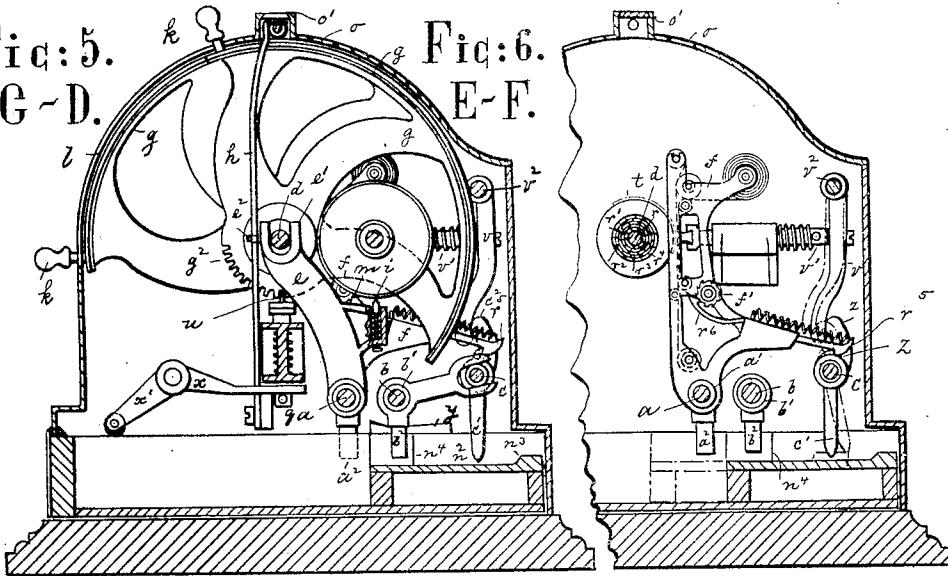
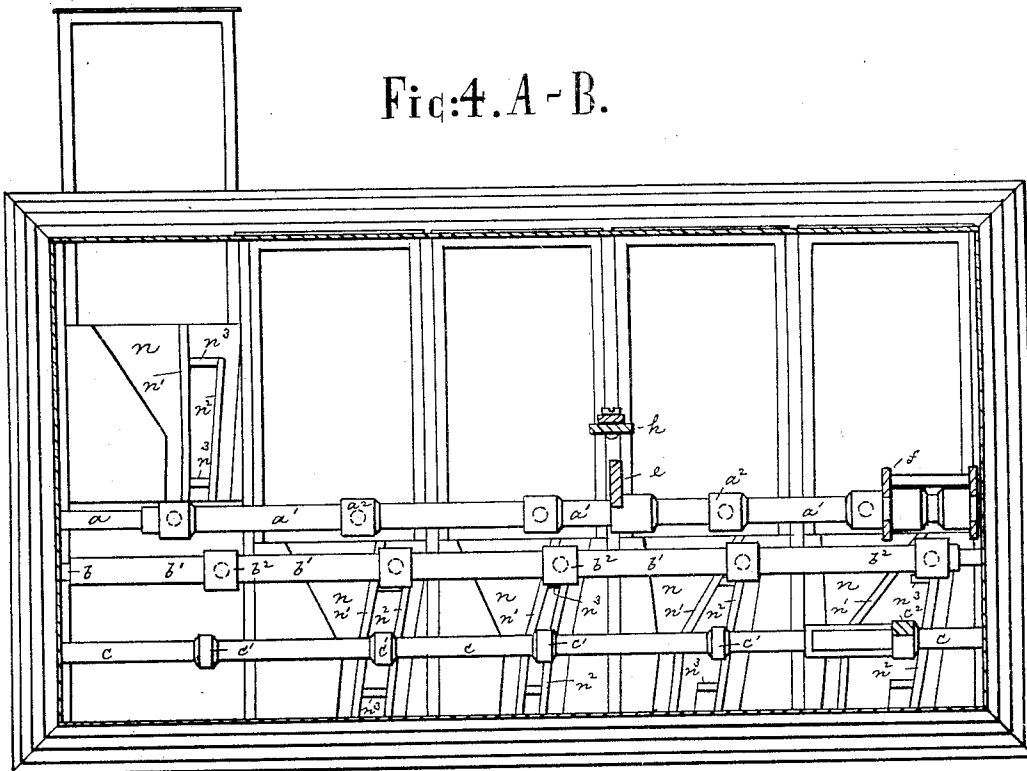


Fig:4.A - B.



Witnesses:
Willie Miller
John Becker.

Inventor:
Anton Mniszewski
by his attorneys
Roeder & Brien

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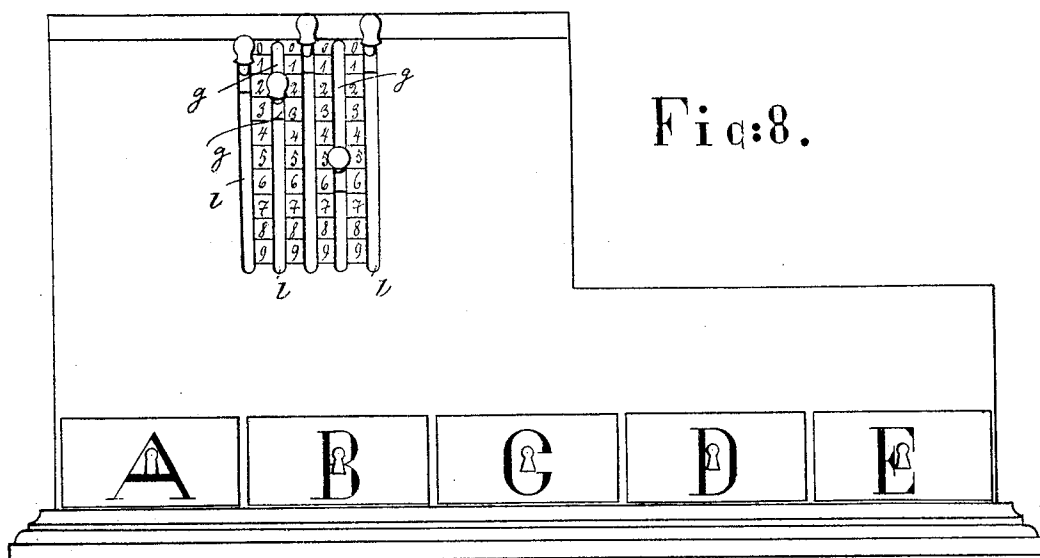
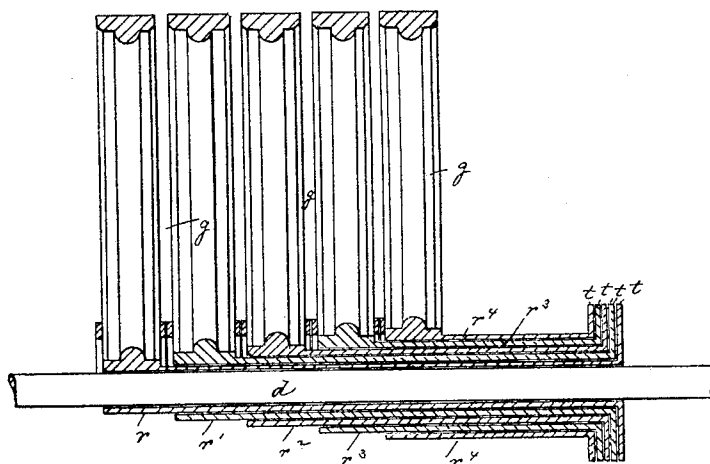


Fig. 8.

Fig. 9.



Witnesses:
Walter Miller
John Becker.

Inventor:
Anton Mniszewski
by his attorneys
Roeder & Briesen.

UNITED STATES PATENT OFFICE.

ANTON MNISZEWSKI, OF DUSSELDORF, GERMANY.

CONTROLLING APPARATUS FOR MONEY-BOXES.

SPECIFICATION forming part of Letters Patent No. 582,298, dated May 11, 1897.

Application filed July 22, 1896. Serial No. 600,167. (No model.) Patented in France April 23, 1895, No. 237,425, and in Belgium September 16, 1895, No. 117,145.

To all whom it may concern:

Be it known that I, ANTON MNISZEWSKI, a subject of the German Emperor, residing at Dusseldorf, Germany, have invented certain
5 new and useful Improvements in Controlling Apparatus for Money-Boxes, (for which I have obtained a patent in Belgium, dated September 16, 1895, No. 117,145, and in France, dated April 23, 1895, No. 237,425,) of which the fol-
10 lowing is a description.

This invention relates to a controlling apparatus for money-boxes which possesses the following characteristics: First, it has a separate till for each employee, accessible only
15 to such employee; second, by opening one of the tills all the others are locked, so that but a single till can be opened at a time; third, the apparatus indicates the particular employee using the same; fourth, it does not
20 alone indicate and print the amount paid in, but prints it in a separate column for each employee; fifth, the apparatus records upon the paper strip of a controlling-clock the exact time at which a payment is made. Thus
25 an error in the amount paid in is indicated, and also the particular employee who has made a mistake is registered.

In the accompanying drawings, Figure 1 is a perspective view of my improved control-
30 ling apparatus. Fig. 2 is a vertical longitudinal section thereof; Fig. 3, a horizontal section on line A B, Fig. 2; Fig. 4, a similar section showing the parts in a different position; Fig. 5, a cross-section on line C D, Fig. 2;
35 Fig. 6, a partial cross-section on line E F, Fig. 2; Fig. 7, a similar section on an enlarged scale; Fig. 8, a front elevation of the apparatus, and Fig. 9 a detail of one end of shaft *d*.

If an employee has taken in a sum of money,
40 he opens his particular till and indicates the amount received by moving a button *k* along a slot *l*, provided in the frame of the apparatus, such slot carrying a scale of "0" to "9," Fig. 8. The buttons *k* are secured to seg-
45 ments *g*, mounted on shaft *d*. Upon the periphery of these segments the numbers "0" to "9" are represented, which are by the depression of the buttons *k* exposed through an opening *o* of the frame, Figs. 1 and 5. Thus the
50 purchaser and other persons present can read

off and check the figure to which the apparatus is set.

Each of the segments *g* is secured to one of a number of telescoped tubes *r r'* of different lengths, Figs. 7 and 9. The tubes *r r'*
55 carry at their other end the type-wheels *t*, which must thus participate in the movement of the segments. The type-wheels *t* are provided with the raised or engraved numbers "0" to "9," against which the strip *p* to be
60 printed is pressed by the closing of the till, Fig. 7. A color-ribbon may be placed between the type-wheel and the strip *p*, so that the numbers may be printed in color upon the
65 strips.

Within the rear part of the apparatus are journaled the shafts *a b c*. Upon the shafts
70 *a* and *b* are slipped the tubes *a'* and *b'*, which do not extend to the ends of the shafts, but are longitudinally movable thereon. These
75 tubes carry noses *a*² and *b*², which may be provided with antifriction-rolls. The shaft *a*, with its tube *a'*, serves to properly shift the strip *p* laterally, so as to bring its proper column into alinement with the type-wheel
80 and also to bring a letter or sign corresponding to the opened till in line with an opening *o'* of the casing, so that such letter may be seen by the purchasers and the other employees. To the tube *a'* there is secured the frame *f*, carrying the strip *p*, so that the frame must participate in the lateral movement of the tube.

If the parts are in the position indicated in Fig. 3, the central till (marked C) was last
85 opened and the frame *f* is in its central position. If the last till E is opened, Fig. 4, the tube *a'*, with its frame *f*, is brought into its extreme right-hand position. This is accomplished by providing the rear ends of the tills
90 with grooves *n*, having different deflections and which are engaged by the noses *a*², secured to tube *a'*, so that at the opening of the till the tube *a'* and frame *f* are displaced laterally to a distance equal to the inclination
95 of the groove. The grooves *n* are so wide at their forward end that the noses *a*² must always enter the same upon the opening of the till, Fig. 4. The strip to be printed contains as many longitudinal columns or spaces as
100 there are tills, so that in the example illus-

trated, where five tills are shown, the front ends of the grooves n must be five times as wide as the five type-wheels t . If a greater or less number of tills are used, the tube a' must be correspondingly shifted. So, also, if amounts over one thousand dollars and cents are to be registered additional segments and type-wheels must be used, and if the latter cannot be made any narrower the paper strip should be made wider and the tube a' be moved farther sidewise.

The nose a^2 of tube a' moves along the inclined edges n' of the grooves n until it arrives at a point where the groove contracts to a width corresponding to the width of the nose.

The tube a' carries at about its center an arm or lever e , which serves to expose a letter or sign corresponding to the opened till at the opening o' of the machine-frame. The lever e is guided by a fork e' along the shaft d , that carries the segments g , so that a rotation of the tube a' is prevented.

A lever h is pivoted to a support q and carries at its upper end the letters "A" to "E." This lever has a slit h' , which is engaged by a pin e^2 of lever e , Fig. 2.

When the lever e is moved by the opening of a till and the corresponding motion of tube a' , it will thus take the lever h along with it to bring the proper sign or letter in front of the opening o' . As the tube a' , with its arm e , is moved more or less to the right or left, according to the location of the particular till opened, the letters on lever h will be correspondingly moved, so that the proper letter will be brought into line with opening o' .

To the lever e there is secured a pencil or marker i , which by the shifting of the tube a' moves across a drum m , which is revolved by clockwork. By thus moving the pencil i back and forth across the paper strip wound on the drum a line is drawn which indicates at which time and which particular till has been opened. The grooves n are somewhat inclined at their rear ends, so that even when a till should be opened twice a lateral motion of the pencil is effected to produce a mark upon the drum.

The shaft b , upon which a movable tube b' is mounted, serves to instantly close all the other tills upon the opening of one till. To this effect a second inclined groove n^2 is formed next to the groove n , which is engaged by noses b^2 of tube b' . When one of the tills is opened, the inclined position of its groove n^2 will cause its nose b^2 to so move the tube and the other noses that they will arrive in front of projections n^4 of the other tills and thus lock the latter.

In order to print the paper strip after the proper figure has been set in and the till has been opened and again closed, the shaft c is provided, which carries the noses or tappets c' . Within the tills there are arranged the inclined projections n^3 , which when the till is opened engage the tappets c' to rock shaft

c . The shaft c carries at the side of the printing apparatus a tooth z , corresponding in length to the degree of lateral motion of tube a' . This tooth is engaged by a pawl of a lever r^5 , which is mounted movably upon the frame that guides the paper strip, but participates in the lateral motion of the same, so that the lever glides along the tooth. The lever r^5 has a nose r^6 , which engages a ratchet-wheel f' , operating the reel upon which the printed strip is wound. If upon the opening of a till the shaft c is rocked by means of its tappet, the tooth z will carry the lever r^5 along, Fig. 6, and draw it forward, so that the lever in turn rotates the wheel f' for the distance of one tooth. Thus at every opening of a till the paper strip is fed forward, so that a new surface will be exposed. The printing of the paper strip is effected by the closing of the till in the following manner:

The shaft c carries the upwardly-extending nose c^2 , placed in front of a lever v , which carries a bolt v' , adapted to press the paper strip against the type-wheel. If the shaft c is rocked by tappet c' upon the closing of the till, the nose c^2 will press against the lever v , pivoted at v^2 , whereby the bolt v' will be pressed against the type-wheel. In this way the paper strip will be placed between the type-wheel and the bolt v' , and the proper number will be printed upon the strip, Figs. 6 and 7.

In order to ascertain which employee has last used the register and which amount he has taken in, the segments are provided with teeth g^2 , which are engaged by a pawl u when the till is closed. Only when the till is entirely opened its nose y will pass beneath and lift a lever x' of a shaft x , so that the pawl u will become disengaged from the teeth g^2 , and the segments can be revolved.

If the apparatus is to be used simultaneously as a cash-counter, the operating mechanism above described is secured only within one of its sides, Fig. 1.

What I claim is—

1. The combination in a control apparatus of a series of tills, with a printing device, an indicator, a control mechanism, and a locking mechanism, operated by the tills, substantially as specified.

2. The combination of a series of tills having grooves n , of different deflection, with a shaft a , a tube a' , movable thereon and having noses a^2 , that engage the grooves, and with frame f , secured to the tube and adapted to carry the paper strip, substantially as specified.

3. The combination of a series of tills having grooves n , of different deflection, with a shaft a , a tube a' , movable thereon and having noses a^2 , that engage the grooves, an arm e , secured to the shaft, and a sign-carrying lever h , engaged by the arm, substantially as specified.

4. The combination of a series of tills having inclined grooves n^2 , and locking projec-

tions n^4 , with a shaft b , a tube b' , movable thereon and having noses b^2 , that are adapted to engage said grooves and projections, substantially as specified.

5 5. The combination of shaft c , having tappet c' , with tooth z , lever r^5 , having nose r^6 , a receiving-drum, and a ratchet-wheel f' , secured thereto, and adapted to be engaged by the nose, substantially as specified.

10 6. The combination of a series of tills with a shaft c , having tappet c' , and nose c^2 , a le-

ver v , having bolt v' , and a type-wheel adapted to be engaged by the bolt, substantially as specified.

In testimony whereof I have signed this 15 specification in the presence of two subscribing witnesses.

ANTON MNISZEWSKI.

Witnesses:

WM. ESSENWEIN,
LAURA LIEBER.