No. 803,104. PATENTED OCT. 31, 1905.

B. P. HAZELTINE.

VERTICAL FILING CASE.

APPLICATION FILED JULY 30, 1904.

3 SHEETS—SHEET 1.

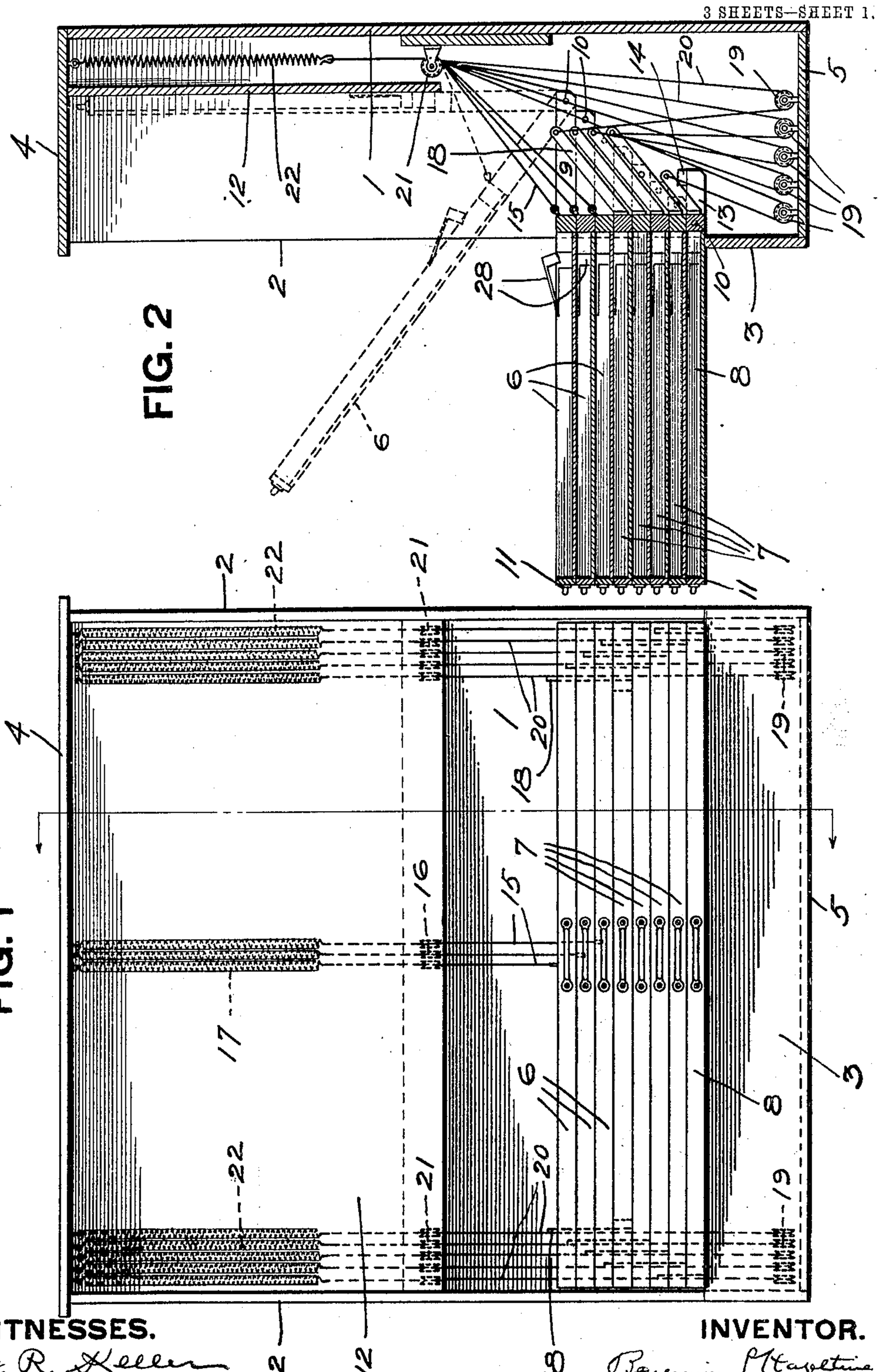


FIG. 2

FIG. 1

WITNESSES.

J. R. Kellen

Robert C Totten

INVENTOR.

Benjamin P Hazeltine

By Kay Totten & Winter

attorneys

ANDREW. B. GRAHAM CO., PHOTO-LITHOGRAPHERS, WASHINGTON, D. C.

No. 803,104. PATENTED OCT. 31, 1905.

B. P. HAZELTINE.

VERTICAL FILING CASE.

APPLICATION FILED JULY 30, 1904.

3 SHEETS—SHEET 2.

FIG. 4

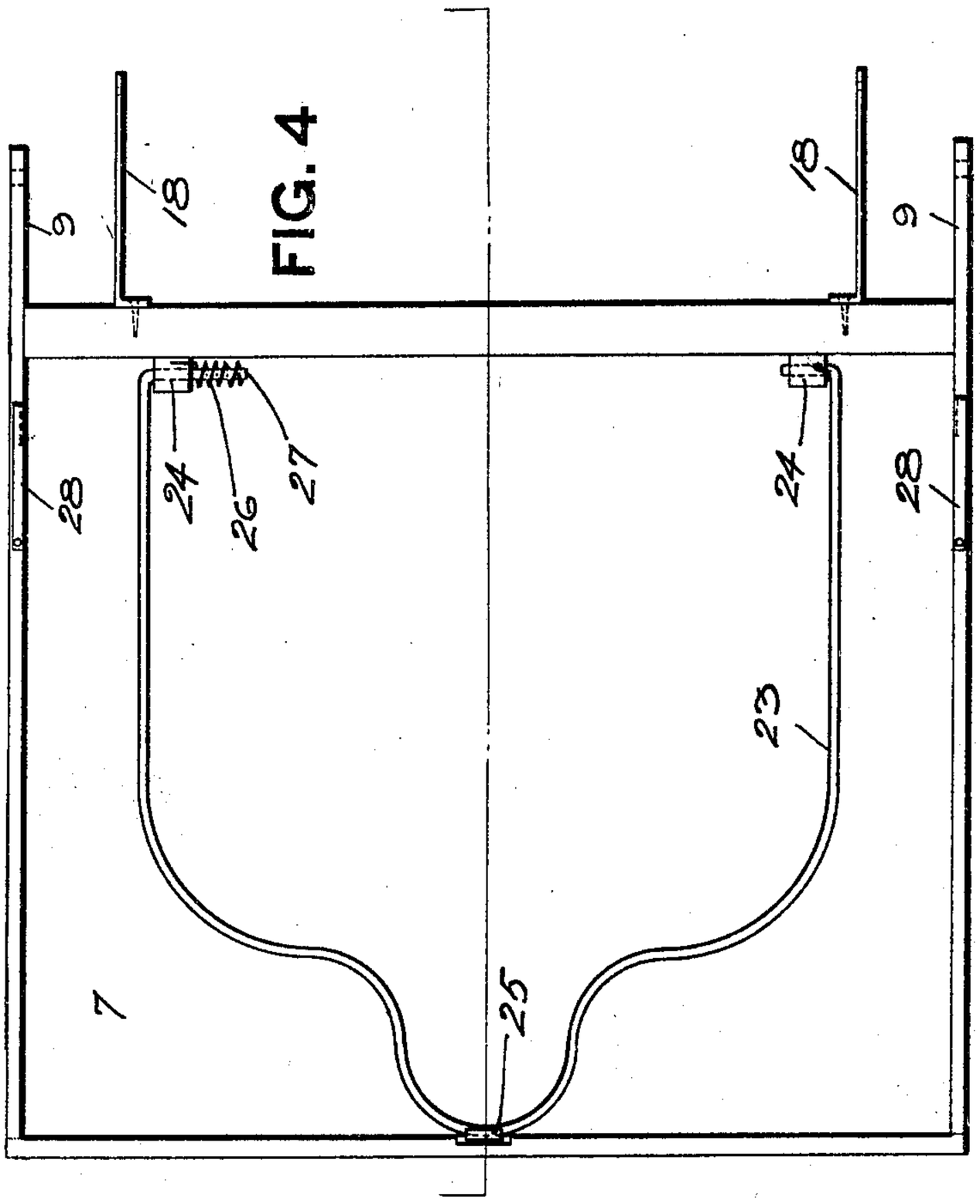


FIG. 5

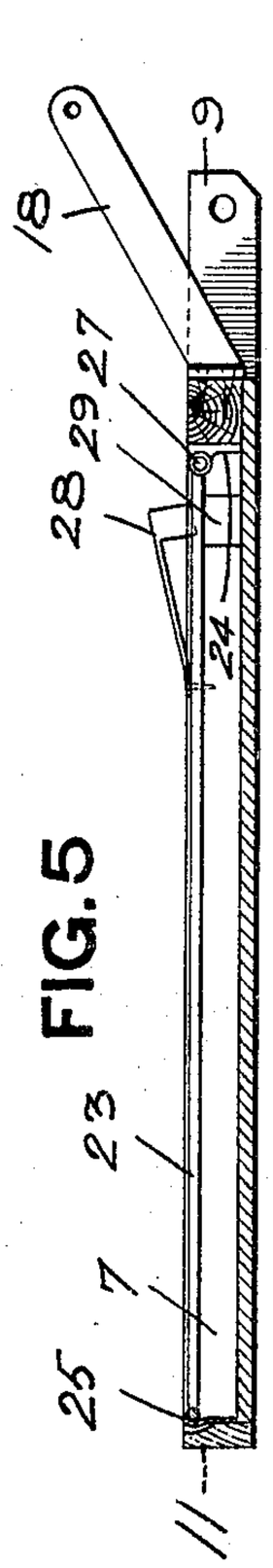
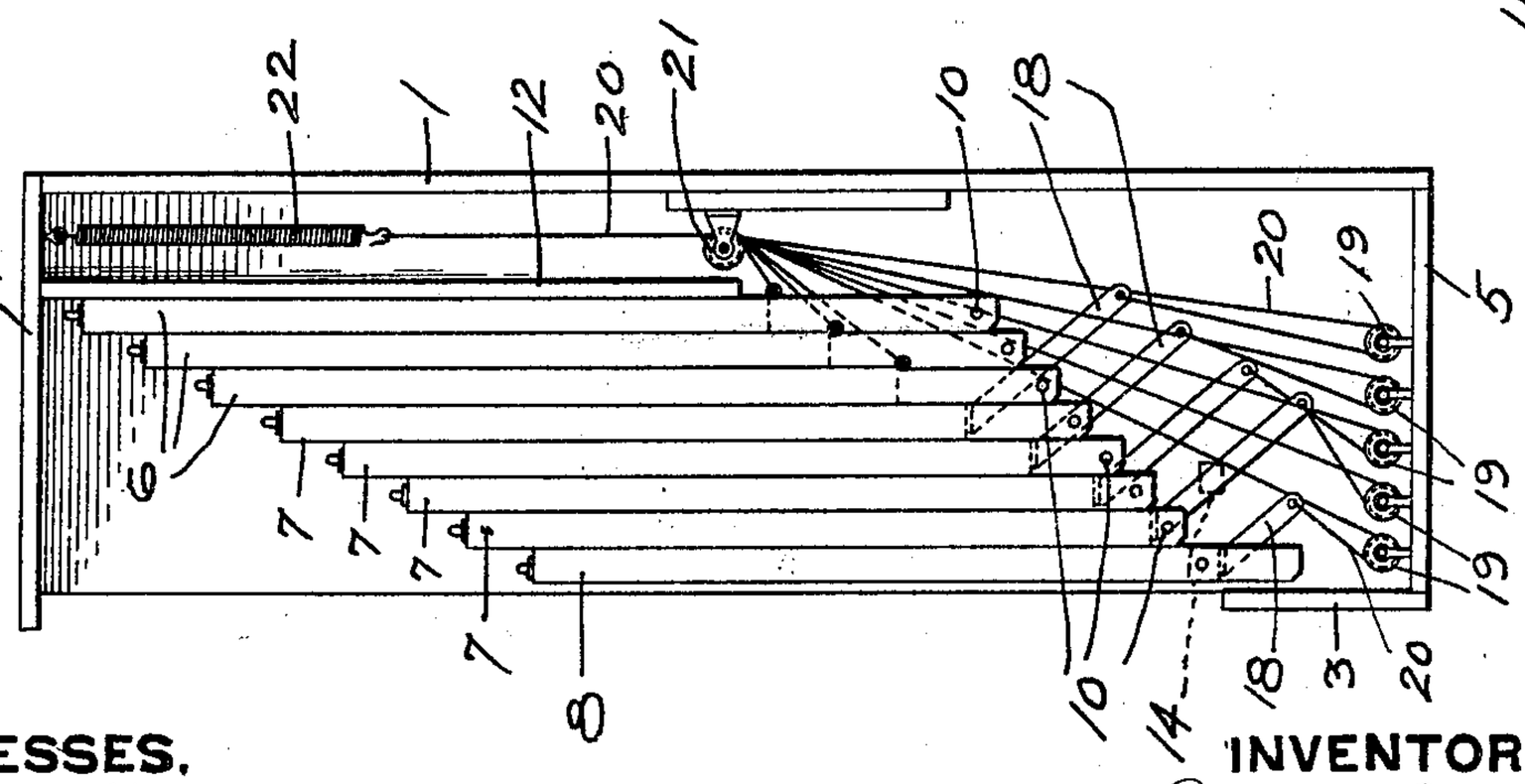


FIG. 3



WITNESSES.

J. R. Keller

Robert C. Totten

INVENTOR.

Benjamin P. Hazeltine

By Ray Totten & White

attorneys

ANDREW. B. GRAHAM CO., PHOTO-LITHOGRAPHERS, WASHINGTON, D. C.

No. 803,104. PATENTED OCT. 31, 1905.

B. P. HAZELTINE.

VERTICAL FILING CASE.

APPLICATION FILED JULY 30, 1904.

3 SHEETS—SHEET 3.

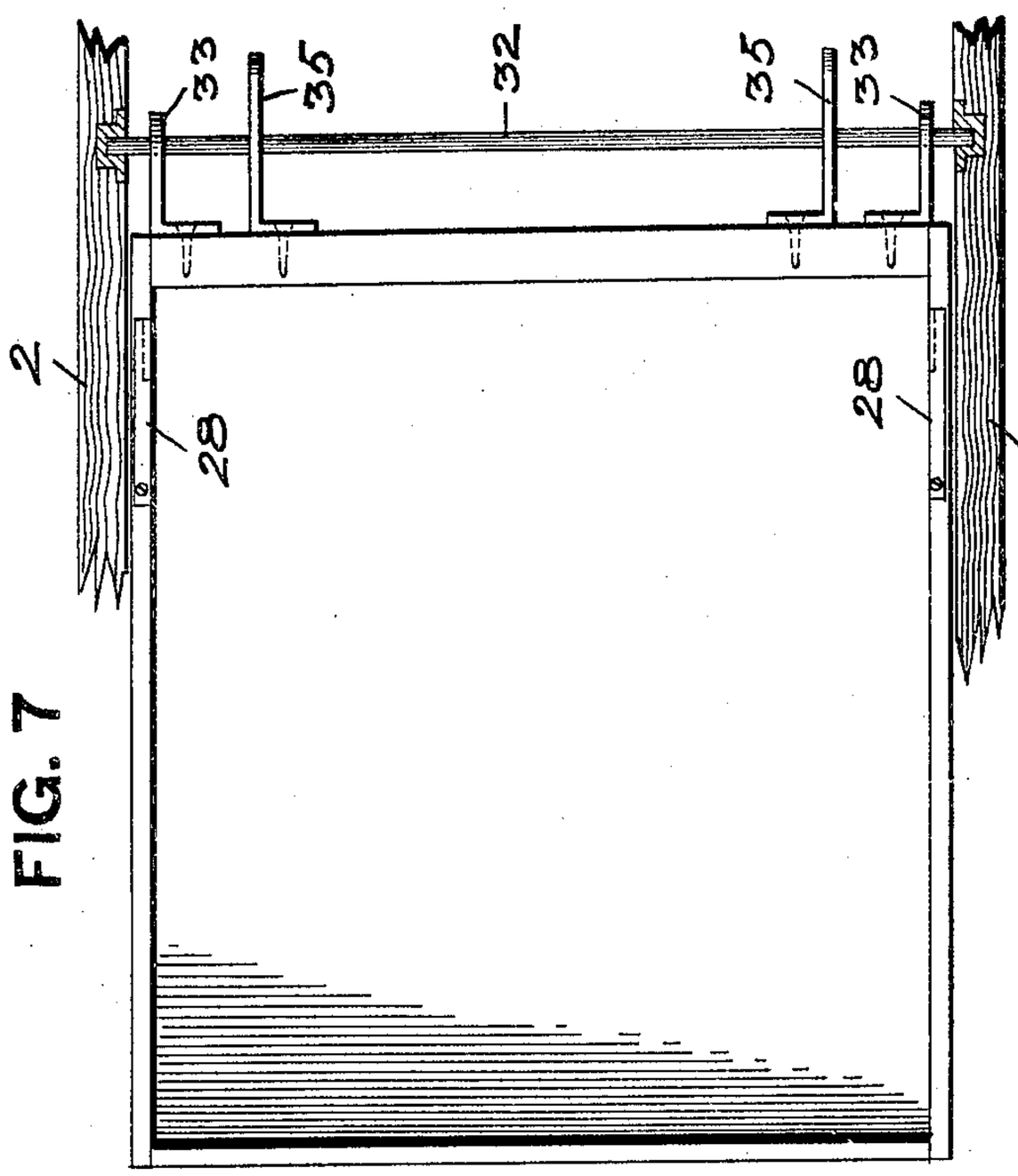


FIG. 7

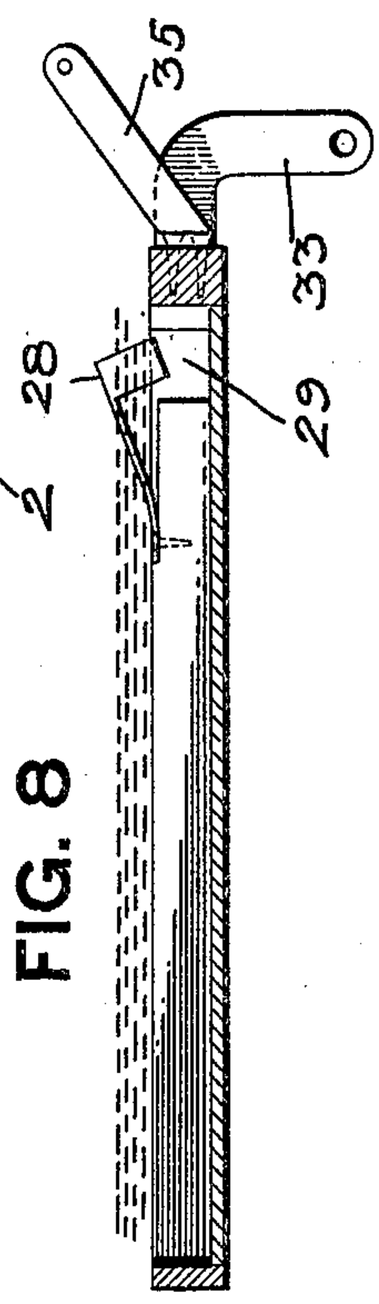


FIG. 8

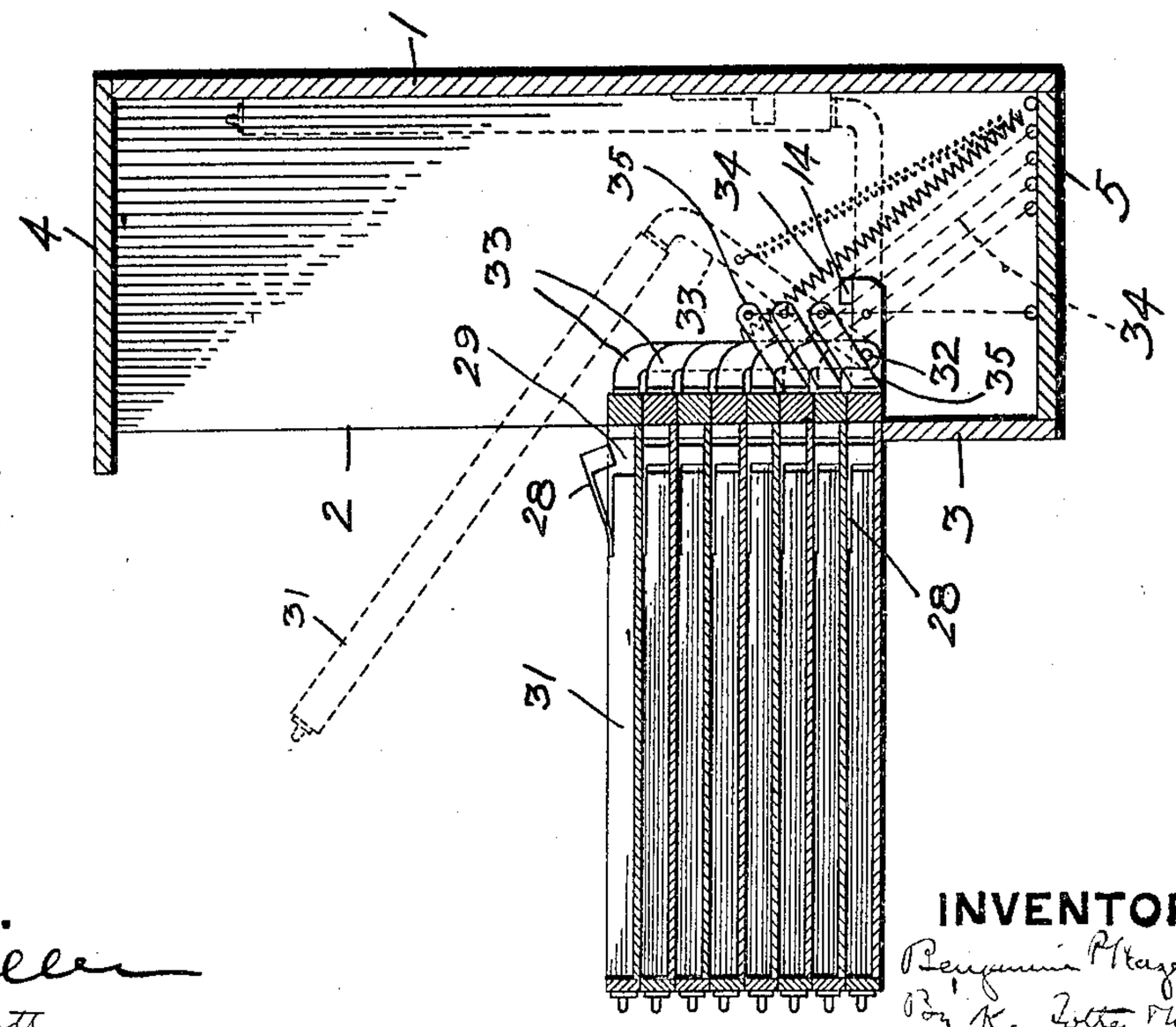


FIG. 6

WITNESSES.

J. R. Keller

Robert C Potter

INVENTOR.

Benjamin P. Hazeltine

By Kay Potter & Winter

attys

UNITED STATES PATENT OFFICE.

BENJAMIN P. HAZELTINE, OF McKEESPORT, PENNSYLVANIA.

VERTICAL FILING-CASE.

No. 803,104. Specification of Letters Patent. Patented Oct. 31, 1905.

Application filed July 30, 1904. Serial No. 218,940.

To all whom it may concern:

Be it known that I, BENJAMIN P. HAZELTINE, a resident of McKeesport, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Vertical Filing-Cases; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to filing-cabinets; and its main object is to provide a cabinet for filing large sheets, such as tracings and blue-prints, to provide for holding a large number of such blue-prints, and for easy access to the same.

The ordinary blue-print or tracing cabinet or case has been arranged with sliding drawers, and this required space for the access to the drawers equal to practically twice the width of the drawers to provide for drawing the same out of the cabinet, and it also required guiding means for each drawer, so that a large space was required for storing and access to the blue-prints.

By my invention I provide a filing-cabinet in which these objections are overcome and in which the blue-prints or like papers can be filed in vertical position and close to each other and can be brought into horizontal position for access, and the case occupies but little more room than the depth of the drawers, while the different drawers are closed by contact with each other, and the sheets are protected from dust and dirt, and a large number of sheets can be filed in a small space.

To these ends my invention comprises a vertical filing-cabinet having mounted therein a series of swinging racks or drawers pivoted within the cabinet and adapted to rest against each other when swung into vertical or closed position and with their forward edges in the same vertical plane adapted to rest upon each other when swung outwardly to give access to the different drawers.

In the accompanying drawings, Figure 1 is a face view of the cabinet, showing the racks in horizontal position. Fig. 2 is a vertical section of the same, showing the racks in the same position and illustrating their course in closing. Fig. 3 is a side view of the cabinet, one side thereof being removed, showing the racks in raised or vertical position. Fig. 4 is a top view of the rack, illustrating suitable means for confining the sheets within the rack. Fig. 5 is an enlarged vertical section of one of the racks. Figs. 6, 7, and 8 are views of a modified form of my invention.

The cabinet can be built of any suitable material, such as wood or metal, and may be closed, if considered necessary, by any suitable doors, sliding or otherwise, it not being considered necessary to illustrate the same.

The cabinet has the rear wall 1, the side walls 2, the front wall 3, top 4, and base 5. Mounted on the side walls are the series of racks or drawers 6, 7, and 8, the numeral 6 being applied to the three top racks, the numeral 7 to the middle racks, and the numeral 8 to the lower rack, on account of the different connections hereinafter referred to. These racks may, of course, be of any suitable depth and size, according to the blue-prints or other sheets to be filed, and in this form of my invention they may be pivoted at different points on the side walls, being perfectly pivoted, as illustrated, at different points successively in advance of each other corresponding to the thickness of the rack itself, so providing for the fitting of the different racks against each other when raised into closed position (particularly illustrated in Figs. 2 and 3) and at different points successively below each other so as to rest one upon the other when swung outwardly and have their forward edges in the same vertical plane. Such pivoting may be accomplished in any desired way. As illustrated, the racks 6 and 7 have extensions of different lengths, as at 9, which extend back from the rack-bodies to the pivot-points 10, on which extensions the racks are hinged, so that when lowered, as shown in Fig. 2, the racks fit the one upon the other, while their forward edges 11 are brought into the same vertical plane, and as the racks are swung upwardly the top of one rack is swung against the closed bottom of the other rack, which serves as a means for closing and preventing the entrance of dust to the sheets contained within the racks. To close the open top of the upper rack, I provide the partition 12, against which the same fits, said partition also covering the springs used for raising the racks, as hereinafter referred to. It will be noticed that in so pivoting the racks while their forward edges are brought to the same vertical plane when the racks are lowered the same forward edges are stepped when the racks are swung into vertical position and closed, the racks having thus a peculiar swinging move-

ment arising from the pivoting of the same at different successive points in front of each other and at different length from the forward edges of the racks. As illustrated, the bottom rack 8 is pivoted about in line with the rear wall of the rack and rests upon the top of the front wall of the cabinet; but as it supports the other racks when they are lowered it is considered well to provide it with extensions 13, which when the rack is lowered swing inwardly and rise into contact with the abutments 14, secured to the side walls of the cabinet, the lower rack being thus supported by contact with such abutments and by the top edge of the front wall.

While the different racks of the cabinet can be operated by hand, it is considered desirable to provide for counterbalancing the racks, and for that purpose I provide the mechanism illustrated. As the three top racks 6 have their pivot-points a considerable distance back from the rack-body, it is practicable to connect the spring mechanism directly to the rack-body, and for that purpose the cords or wires 15 extend over suitable pulleys 16 to springs 17, the upper ends of which are connected to the top wall 4 of the cabinet, and as the pulleys 16 are placed back of the swing of the rack when raised it is evident that the top rack will swing upwardly on its pivot-point, being raised by the spring until the rack is brought into contact with the partition 12, and the spring will hold it closed, and in like manner the other racks mounted in the same way and having the same spring connection will swing up against the racks above them and so be held closed, as illustrated principally in Fig. 3. The other racks of the cabinet are shown as provided with the levers 18, extending back therefrom and beyond their pivot-points and preferably at an upward incline, as shown. Below these levers and shown as secured to the bottom wall of the cabinet are pulleys 19, and the cords or wires 20 pass from the outer ends of the levers 18 downwardly to and around said pulleys and are then connected to the springs—for example, passing upwardly around the pulleys 21 and being connected to the springs 22 back of the partition-wall 12. In this arrangement it is preferred that the springs for operating the racks 6 be located about midway of the cabinet and that the springs for operating the racks 7 and 8 shall be located at the sides of the cabinet, as shown, though any suitable arrangement for applying the necessary spring-pressure or raising the racks may be employed. It will be noticed that the pulleys 19 are so located that when the racks are raised and closed the outer ends of the levers 18, to which the ropes are connected, are carried back of the points of mounting the pulleys 19, so that as the racks are raised the springs through said levers 18 draw the cords downwardly and forward toward the front of the cabinet, so applying the necessary pressure to hold the racks in closed position.

It is evident that in the swinging of the racks some means should be provided for confining the sheets therein. Any suitable clamping means may be employed for this purpose, that illustrated being the wire clamp 23, pivoted at 24 and having its forward end held by a spring-clip 25, the clamp preferably having the coil-spring 26 fitting around and secured to the extension 27 on one of its arms and connected to the bearing 24, and so providing for lifting the clamp out of the way when access is desired to the rack. Secured to the sides of the racks adjacent to the inner ends thereof are the spring-guards 28, which are adapted to engage the edges of the prints when the rack is lowered, as indicated in Fig. 8. When the racks are closed, these spring-guards enter into seats 29, formed for them in the rack, so as to be out of the way and not to interfere in any way with the closing of the racks.

The practical use of the cabinet has shown that it will accommodate a large number of blue-prints, as many as a thousand having been placed in a single cabinet, the blue-prints lying flat within the racks and being held therein by means of the clamps, as described. When access to the blue-prints in any one of the racks is desired, the handle of that particular rack is grasped, and that rack, with the ones below the same, is swung down into horizontal position, when easy access to any such blue-prints may be obtained. In this operation where the racks are pivoted at different points from the forward end, as illustrated, the racks will swing down in such position that their forward edges are on the same vertical plane, and therefore access can be had to the rack without carrying it as far from the rear wall as is necessary with the ordinary sliding rack, while the entire surface of the rack is exposed, and the blue-print or other sheet can be withdrawn and replaced with ease. When the racks are swung up into the cabinet, the top rack fits against the partition 12, so closing it, while the bottoms of the different racks serve to close the rack next to the same, and the blue-prints are protected from dust or injury, first, by filing the same in a substantially vertical position, and, second, by closing the rack by contact with the one next thereto. The closing of the rack is aided by the spring mechanism above described, and the racks are all held closed by the same, and the power is applied, as above described, in such way that a compact cabinet with evenly-balanced racks is obtained.

In Figs. 6, 7, and 8 I have illustrated a modified form of my invention in which the racks 31 are all pivoted to swing upon a single shaft 32. To provide for the ends of the racks being in line with each other when closed or open, the said racks are provided with arms

or extensions 33, varying in length and all mounted on the shaft 32. By this construction the height of the cabinet may be reduced, as said racks all swing from the same pivotal point. Connected to each arm 33 of the racks 31 is a spring 34, which when the rack is closed is under compression and when the rack is open is on tension. To avoid confusion, only one spring is illustrated in full, the others being indicated by simple lines. The lower arms of the series are provided with the extensions 35, to which the springs are connected.

While the cabinet is illustrated as formed of wood, it is evident that it may be formed of any suitable metal and, further, that the racks may be pivoted at any suitable points to provide for their vertical swinging into the cabinet and in contact with each other and that any suitable spring or other mechanism for balancing the racks may be employed.

What I claim is—

1. The combination with a case or cabinet, of a series of racks pivoted at the same pivotal point so as to swing upwardly within the cabinet in a substantially vertical position and downwardly into a substantially horizontal position.

2. The combination with a case or cabinet, of a series of racks pivoted at the same pivotal point so as to swing upwardly within the cabinet and having their forward edges in substantially the same vertical plane when swung into horizontal position.

3. The combination with a case or cabinet, of a series of racks having rear extensions on the body thereof, said racks being pivoted by means of such extensions in said cabinet, and said extensions being successively of greater length corresponding substantially to the thickness of the rack, whereby the forward edges of the racks will all be in substantially the same vertical plane when the racks are swung into a horizontal position.

4. The combination with a case or cabinet, of a series of racks having rear extensions on the bodies thereof extending at substantially right angles to the racks, said extensions being pivoted at the same pivotal point and being successively of greater length corresponding substantially to the thickness of the rack, whereby the forward edges of the racks are all in substantially the same vertical plane when the racks are swung into horizontal position.

5. The combination with a case or cabinet, of a series of racks pivoted therein adapted to swing upwardly into contact with each other for closing, and outwardly to a horizontal position when open, the lower rack having a rear extension beyond its pivot-point adapted to contact with a stop-lug above the same.

6. The combination with a case or cabinet, of a series of racks having rear extensions on the bodies thereof at substantially right-angles to the racks, said racks being pivoted at the same pivotal point by means of such extensions in said cabinet, said extensions being successively of greater length corresponding substantially to the thickness of the rack, and springs connected to said extensions and to the cabinet.

In testimony whereof I, the said BENJAMIN P. HAZELTINE, have hereunto set my hand.

BENJAMIN P. HAZELTINE.

Witnesses:
ROBERT C. TOTTEN,
G. C. RAYMOND.