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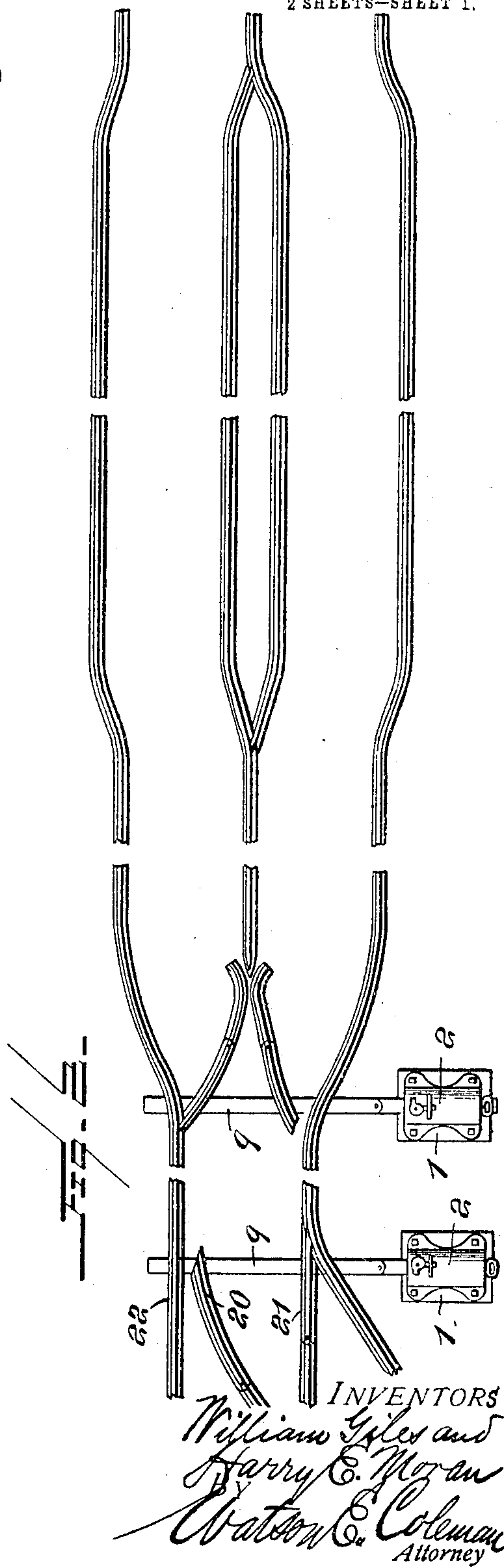
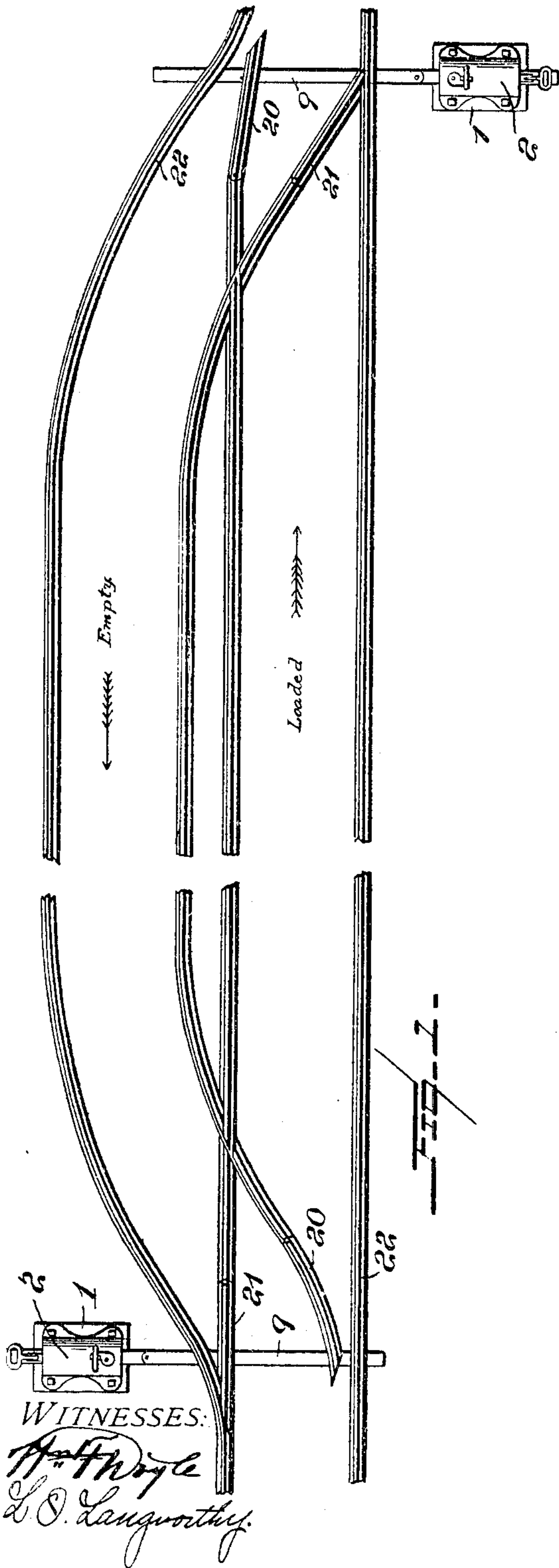
PATENTED SEPT. 12, 1905.

W. GILES & H. E. MORAN.

AUTOMATIC SWITCH.

APPLICATION FILED FEB. 25, 1905.

2 SHEETS—SHEET 1.



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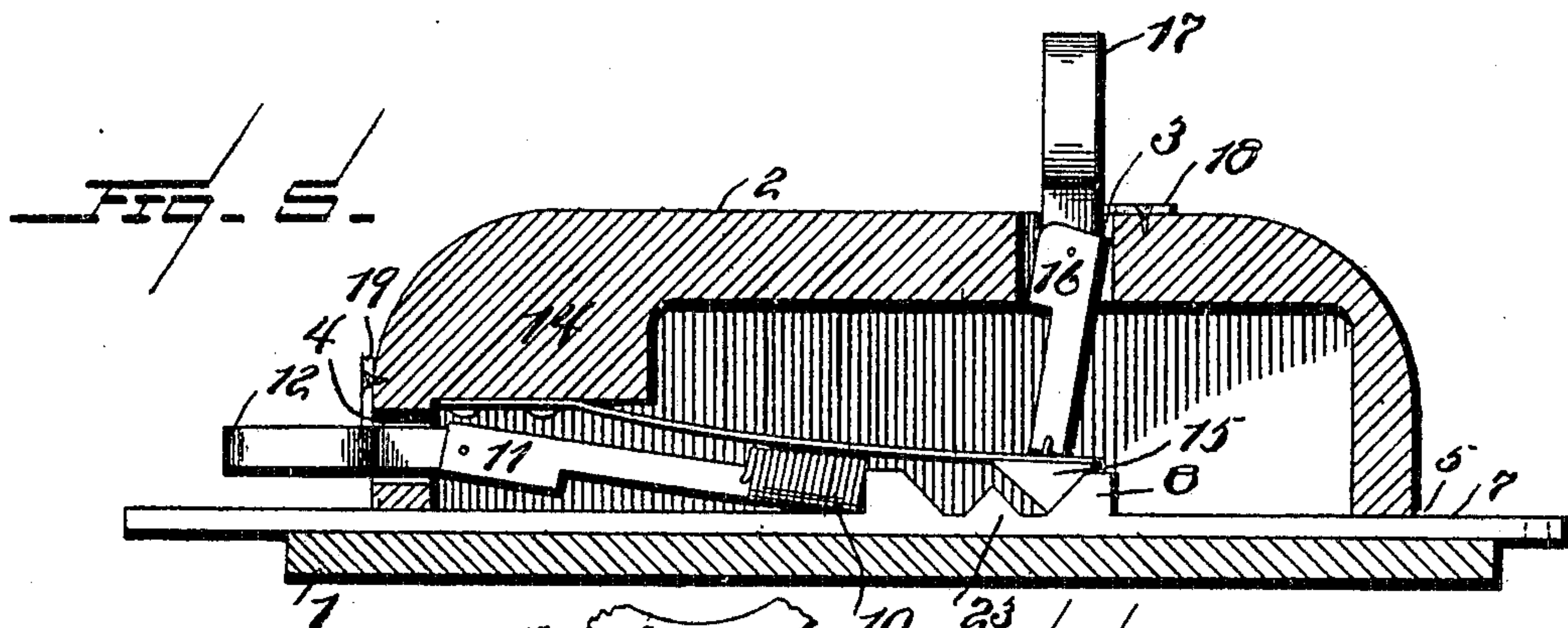
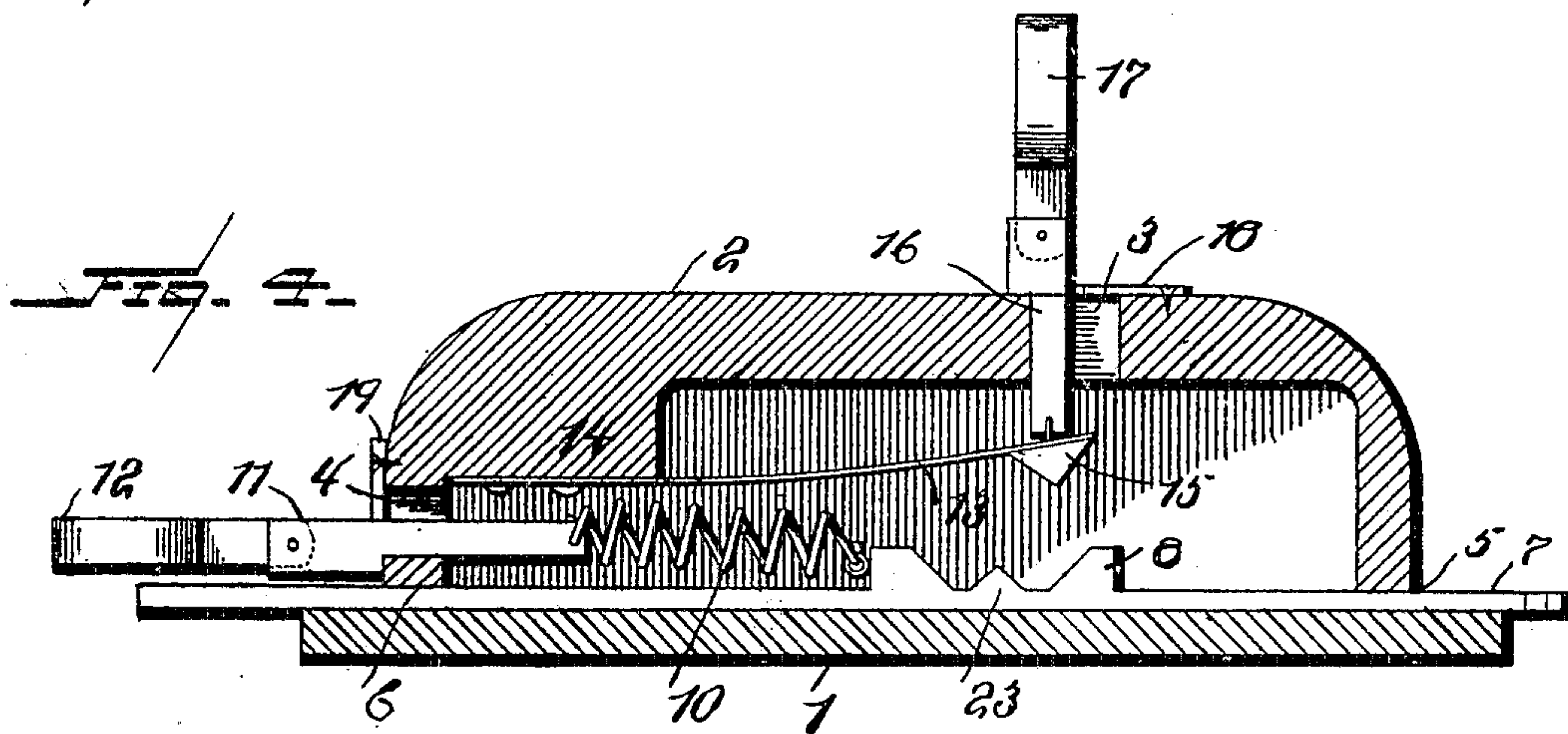
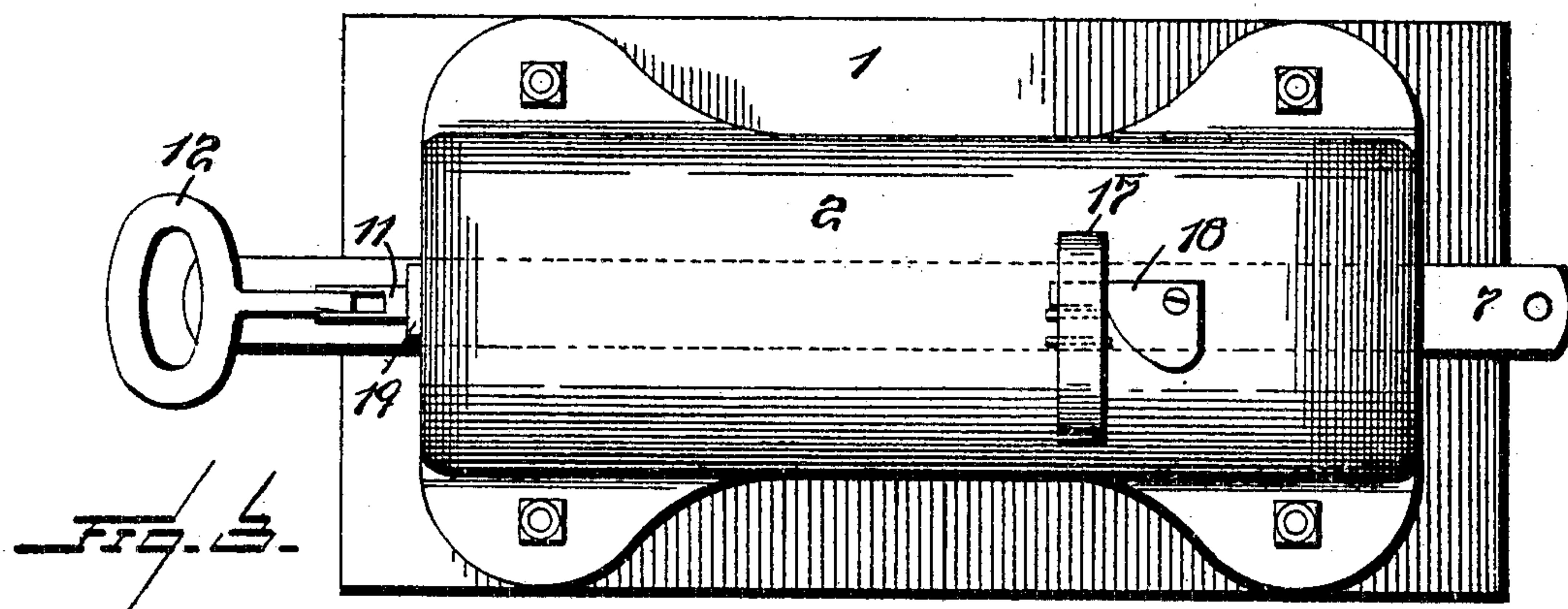
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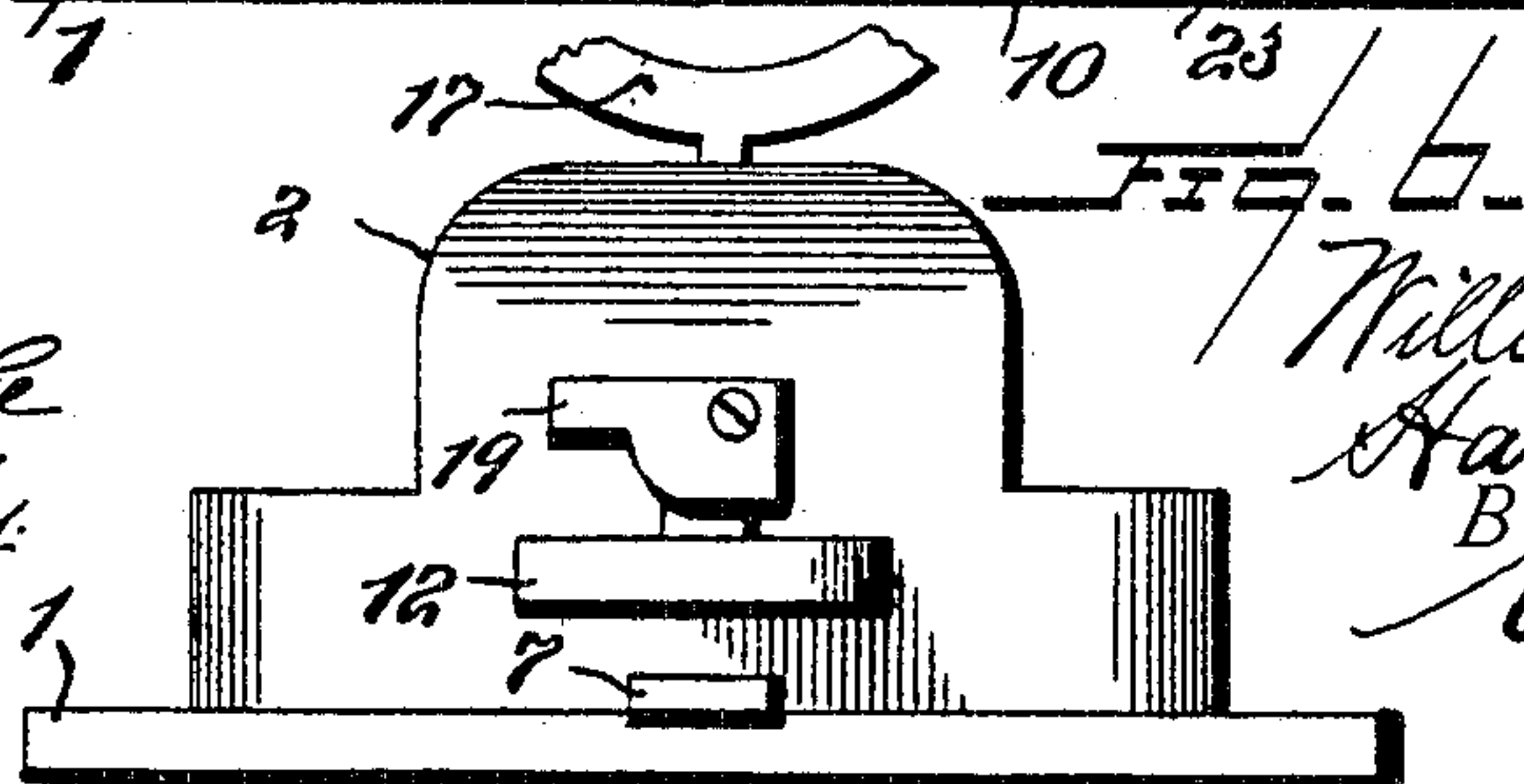
AUTOMATIC SWITCH.

APPLICATION FILED FEB. 25, 1905.

2 SHEETS—SHEET 2.



WITNESSES:
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UNITED STATES PATENT OFFICE.

WILLIAM GILES AND HARRY E. MORAN, OF WYNDAL, WEST VIRGINIA.

AUTOMATIC SWITCH.

No. 799,154.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed February 25, 1905. Serial No. 247,340.

To all whom it may concern:

Be it known that we, WILLIAM GILES and HARRY E. MORAN, citizens of the United States, residing at Wyndal, in the county of Fayette and State of West Virginia, have invented certain new and useful Improvements in Automatic Switches, of which the following is a specification, reference being had therein to the accompanying drawings.

Our invention relates to railroad-switches, and more particularly to that class of switches that are automatically controlled, one of the objects being to provide a device of the character described that shall be simple in construction, durable and effective in operation, and by means of which a switch may be opened and closed by the cars passing over the same.

A further object of our invention is to provide an automatic switch-operating mechanism especially adapted for use in mines where cars are run to and fro from the mines on a plurality of tracks and where it is necessary for such cars to pass each other in going to and fro.

Other objects and advantages of our invention, as well as the structural features by means of which said objects are attained, will be made clear by an examination of the specification, taken in connection with the accompanying drawings, in which the same reference-numerals indicate corresponding portions throughout, and in which—

Figure 1 is a top plan view showing one application of our invention. Fig. 2 is a similar view showing another application. Fig. 3 is an enlarged top plan. Fig. 4 is a vertical longitudinal section with parts shown in one position. Fig. 5 is a similar view showing the parts in another position, and Fig. 6 is an end view.

1 designates a platform on which is removably mounted in any suitable manner a hollow frame 2, having openings 3, 4, 5, and 6 therein. 7 designates a bar slidably mounted in the openings 5 and 6 in said frame and resting on the platform 1, said bar being provided with a notched or serrated projection 8. This bar extends beyond the frame at each end and at one end is pivotally connected with another bar 9, which said bar extends out to the rails of the track and has secured thereto the ends of the switch-rails which are to be thrown into and out of operative position, as shown in Figs. 1 and 2.

10 designates a helical spring connecting the notched projection 8 on the slidably-mounted bar 7 with a cam projection 11 to which is pivotally connected at the outer end a handle 12, said cam projection 11 working through the opening 4 in the frame 2.

13 designates a leaf-spring secured to a depending projection 14 formed integral with the frame 2 and having at its free end a cam-lug 15 corresponding in contour to the serrations or notches in the projection 8.

16 designates a cam projection operating through the opening 3 in the frame 2 and to the lower end of which is secured in any suitable manner the free end of the leaf-spring 13. The other end of said cam projection has pivotally mounted thereon a suitable handle 17.

18 designates a pivotally-mounted safety-catch arranged to engage with the cam projection 16 and hold the same in position, and 19 designates a similar pivotally-mounted safety-catch adapted to engage with the cam projection 11 and hold it in position.

In operation the cam projection 11, by means of the handle 12, is pulled out through the aperture 4 until the cam-lug rests against the outer edge of the frame 2, whereupon the safety-catch 19 is pushed around against said cam projection, holding it securely in place. The bar 7 is actuated by the helical spring 10, and the two rails of the switch 20 and 21, which are pivotally mounted on said bar 7, are pulled around, so that the rail 21 contacts with the fixed rails 22, as shown in Fig. 1, so that when the cars pass down the tracks, of which the fixed rails 22 form a part, the flanges on the wheels coming in contact with the short pivotally-mounted rail 20 force the same against the tension of the helical spring 10 over against the rails 22 until the cars pass over the same, whereupon the short pivoted rail 20 is released and the tension of the helical spring 10 pulls the rails 20 and 21 back into the position shown in Fig. 1. When it is desired to have the short rail 20 remain in contact with the fixed rail 22, the cam projection 16 is permitted to drop through the aperture 3, so that the lug 15 rests in one of the notches or serrations in the projection 18, as shown in Fig. 5, and the other cam projection 11 is released from the tension of the spring 10, as shown in said Fig. 5. When the flanges of the wheels then come in contact with the short rail 20, they push the same over against the fixed rail 22 and the lug 15

passes over the short cam 23 into the next serration or notch, and thus holds the short rail 20 in fixed position against the rail 22.

Having thus described our said invention, what we claim as new, and desire to secure by Letters Patent of the United States, is—

1. In an automatic switch, a slidably-mounted spring-actuated bar having serrations therein, a switch-bar pivotally mounted on the spring-actuated bar, a leaf-spring rigidly mounted at one end on a suitable support, a cam-shaped lug carried by the free end of the leaf-spring and adapted to engage with the serrations in the bar, and means for controlling the free end of said spring, substantially as described.

2. In an automatic switch, a slidably-mounted horizontal bar having serrations therein, a spring secured to the bar, means connected with the spring whereby the tension thereof on the bar may be increased or decreased, a leaf-spring having one end rigidly mounted on a suitable support, a cam-lug carried by the free end of the spring and adapted to engage with the serrations in the bar, and means connected with the free end of the leaf-spring and adapted to control the same, substantially as described.

3. In an automatic switch, a slidably-mounted spring-actuated horizontal bar having serrations therein, a switch-bar pivotally mounted thereon, switching-rails pivotally mounted on the switch-bar, a leaf-spring rigidly mounted at one end on a suitable support, a cam-lug carried by the free end of said spring and adapted to engage with the serrations, a vertical lever pivotally mounted on the free end of said spring, and a handle pivotally mounted on said lever, the two comprising a trigger, by means of which the free end of said leaf-spring is controlled, substantially as described.

4. In an automatic switch, a hollow frame, a spring-actuated bar slidably mounted in

said frame, a projection on said bar having notches or serrations therein, a spring-actuated lug corresponding in contour to the serrations or notches and adapted to engage therewith, means for holding the lug out of operative position, and means for releasing the tension of the spring, substantially as described.

5. In an automatic switch, a suitable frame, a spring-actuated bar slidably mounted in said frame, a projection formed integral with said bar and having notches or serrations therein, a spring-actuated lug corresponding in contour to said notches or serrations and adapted to engage therewith, means for operating against the tension of the last-mentioned spring for holding said lug out of operative position, and means for releasing the tension of the spring-actuated bar, substantially as described.

6. In an automatic switch, the combination with a suitable frame, of a bar slidably mounted in said frame, said bar having a projection formed integral therewith and containing notches or serrations, a spring secured to said bar, a cam projection secured to the other end of said spring and arranged to be operated against the tension of the same, means for holding said cam projection in operative position, a spring-actuated lug corresponding in contour to the serrations or notches and adapted to engage therewith, means adapted to operate against the tension of the spring and to hold said lug out of operation, a switch-bar pivotally mounted on said serrated bar, and switching-rails pivotally mounted on the switch-bar, substantially as described.

In testimony whereof we hereunto affix our signatures in presence of two witnesses.

WILLIAM GILES.
HARRY E. MORAN.

Witnesses:

W. H. HILL,
R. H. MILLER.