

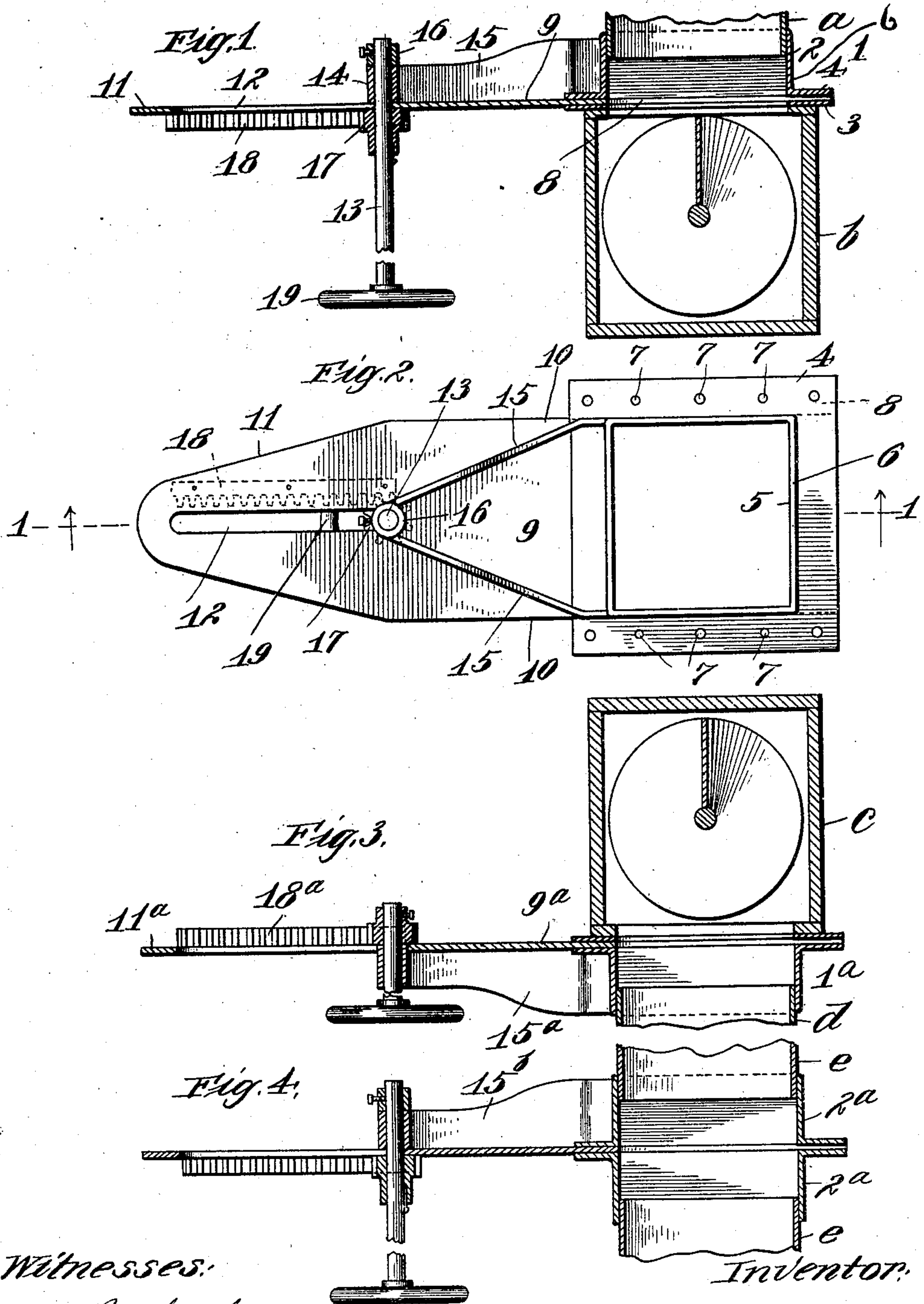
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J. F. DORNFELD.

CUT-OFF SLIDE.

APPLICATION FILED MAY 2, 1907.



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Specification of Letters Patent.

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Application filed May 2, 1907. Serial No. 371,374.

To all whom it may concern:

Be it known that I, JOHN F. DORNFELD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Cut-Off Slides, of which the following is a specification.

This invention relates to valves for cutting off the flow of grain, malt, or other granular or fluid material through a conductor, and its object is to simplify the construction of such valves, render them easily operable from a distance, and to improve them in the other respects hereinafter pointed out.

In the accompanying drawings, Figure 1 is a sectional view of a cut-off slide embodying the features of my invention. Fig. 2 is a top plan view thereof. Figs. 3 and 4 are sectional views of slightly modified forms of the invention.

In Fig. 1 a slide embodying my invention is represented as used for cutting off the flow of material from a spout *a* to a screw conveyor *b*. The casing 1 of the cut-off slide is made in two sections 2 and 3, the section 2 comprising a plate or rim 4 having an opening 5 therein and an upwardly-extending flange 6 surrounding said opening and affording means of attachment for the spout *a*. The section 3 of the slide casing consists of a plate having an opening therein registering with the opening 5 in the upper casing-section. Said casing-sections are secured together by means of screws, rivets, or equivalent means 7 extending through two opposite side edges of said sections, and through spacing plates 8 lying between said sections at opposite sides of the opening 5. The slide casing 1 is secured in any suitable way to the conveyor casing.

A slide 9 is mounted in the guide-way formed between the casing-sections 2 and 3, said slide having parallel side edges 10 which slide in contact with the spacing plates 8. In an extension 11 of said slide is formed an elongated opening 12 through which an operating rod 13 passes, said rod being rotatably mounted in a bearing 14 supported at a suitable distance from the slide casing 1 by means of two arms 15, said bearing and arms preferably being cast integral with the casing-section 2. Upon the upper end of the operating rod 13 is fixed a collar 16, and upon said rod just below the slide 9 is rigidly fixed a pinion 17 arranged to mesh with a rack bar 18 secured in any suitable way to

the extension 11 of said slide. Upon the lower end of the operating rod 13 is fixed a hand wheel 19 by means of which said rod may be rotated to reciprocate the slide 9.

In practice, the cut-off slide is located at the required point, and the operating rod 13 made long enough to extend to any point convenient for operating the slide, which point may be several stories below the story in which the slide is located. The arms 15 support the slide 9 when extended and prevent it from sagging and binding in its guide-way. It will be observed that the slide casing, the slide, and the means for rotating the slide, form a self-contained structure which may be operatively placed in position by merely securing the slide casing in proper relation with the conductor to be controlled.

In Fig. 3 I have shown what is substantially an inversion of the construction shown in Fig. 1, the slide casing 1^a being arranged to communicate at its upper end with a conveyor casing *c* and at its lower end with a spout or other conductor *d*. The arms 15^a, in this construction, are cast integral with the lower casing-section, and the rack bar 18^a is fixed to the upper side of the operating extension 11^a of the slide 9^a.

Where the slide is to be used at a point between the ends of a conductor, the construction shown in Fig. 4 may be employed. In this construction, the slide casing consists of the substantially-similar sections 2^a each providing means of attachment for the conductor sections *e*. The arms 15^b are herein shown as cast with the upper casing section 2^a, but obviously they may be attached to either section.

I claim as my invention:

1. In a cut-off slide, in combination, a casing; a slide movably mounted in said casing; a hanger extending from said casing; a shaft supported in said hanger and acting with the casing, as a guide for said slide; a pinion and a hand wheel on said shaft; and a rack bar attached to said slide and meshing with said pinion.

2. In a cut-off slide, in combination, a casing; an arm extending outwardly from said casing; a bearing at the outer end of said arm; a slide movably mounted in said casing and having an extension provided with an elongated opening; an operating rod rotatably mounted in said bearing and extending through said elongated opening; a rack bar

fixed to said slide extension; and a pinion fixed on said rod and meshing with said rack bar.

3. In a cut-off slide, in combination, a casing comprising two sections; spacing means lying between said sections; securing means extending through said sections and said spacing means, one of said sections having means of attachment for a conductor; an arm cast integral with said last-mentioned section; a bearing at the outer end of said arm; a slide movably mounted between the

sections of said casing, said slide having an operating extension provided with an elongated opening; an operating rod rotatably mounted in said bearing, and extending through said opening; a rack bar fixed to said operating extension; and a pinion fixed on said operating rod and meshing with said rack bar.

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