

No. 674,081.

Patented May 14, 1901.

G. L. DRY & E. M. KUTZ.
CATTLE UNHITCHING AND DOOR OPENING DEVICE.

(Application filed Sept. 27, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

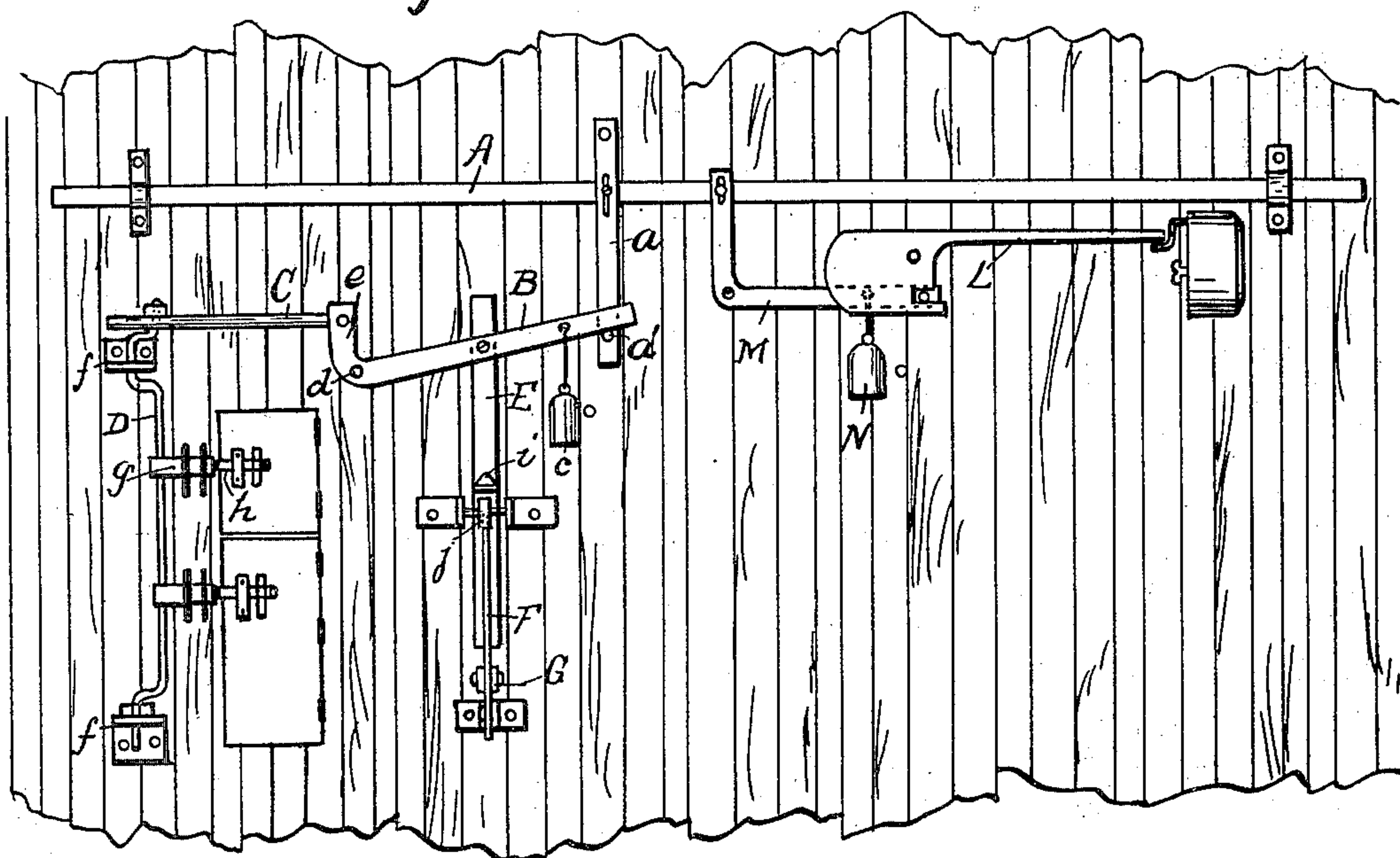


Fig. 3.

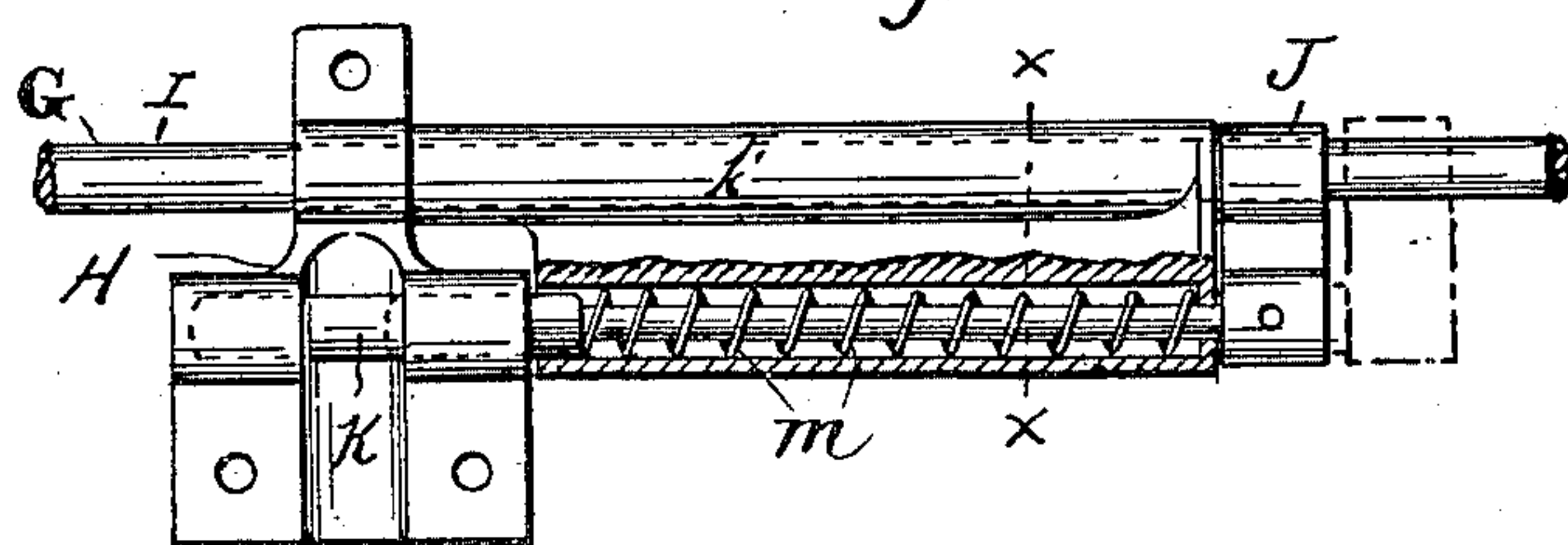
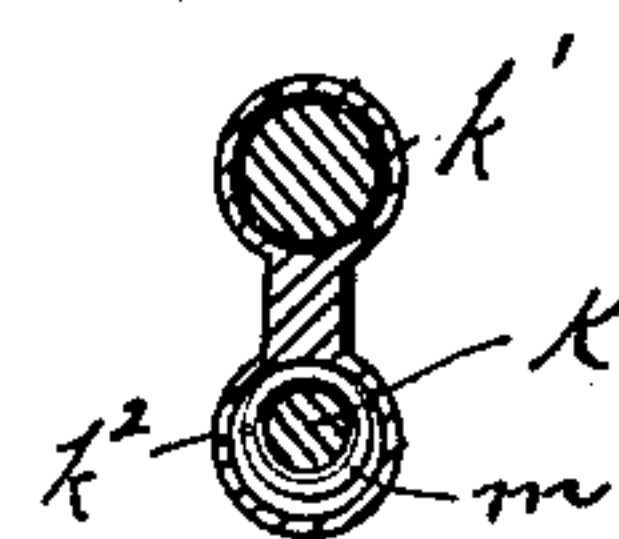


Fig. 5.



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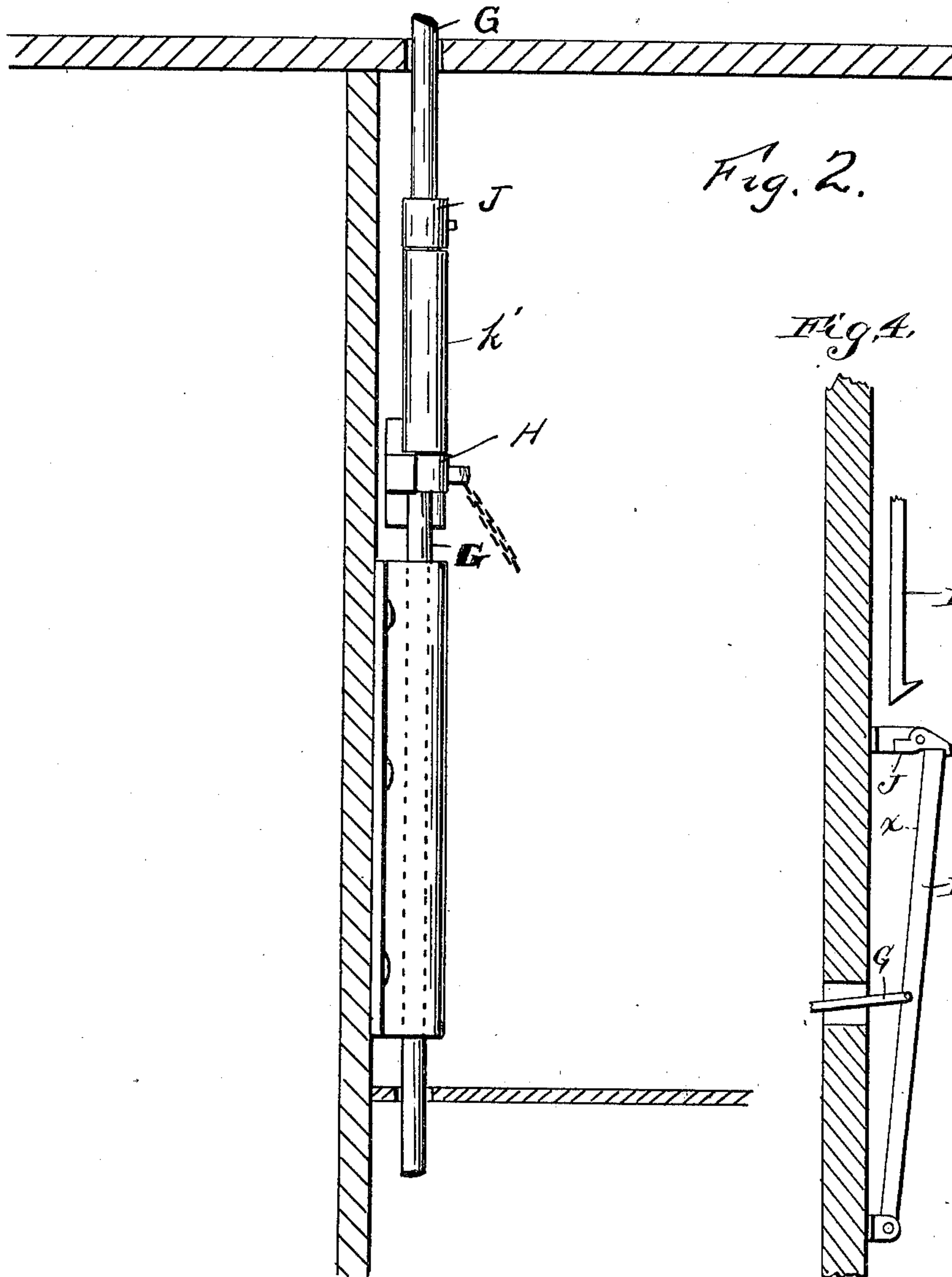
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

GEORGE L. DRY, OF BOWERS STATION, AND ELLSWORTH M. KUTZ, OF
READING, PENNSYLVANIA.

CATTLE-UNHITCHING AND DOOR-OPENING DEVICE.

SPECIFICATION forming part of Letters Patent No. 674,081, dated May 14, 1901.

Application filed September 27, 1900. Serial No. 31,250. (No model.)

To all whom it may concern:

Be it known that we, GEORGE L. DRY, residing at Bowers Station, and ELLSWORTH M. KUTZ, residing at Reading, in the county of Berks and State of Pennsylvania, citizens of the United States, have invented certain new and useful Improvements in Cattle-Unhitching and Door-Opening Devices; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a cattle-unhitching and door-opening device.

The object of the invention is to produce an apparatus whereby all the doors of a barn may be opened at the same time and by the same operation all the cattle in said barn may be released from their fastenings and be free to pass from the barn.

The apparatus is so constructed that it may be operated either by hand or by means of a time-operated mechanism.

The invention is fully set forth in the accompanying drawings and clearly described in the following specification.

In the drawings, Figure 1 is a front view of a portion of a barn with our device attached thereto. Fig. 2 is a plan view showing a portion of the inside of the barn. Fig. 3 is a detail of the hitch. Fig. 4 is a detail of the lever F and its connections. Fig. 5 is a sectional view of the hitch.

The bar A is mounted in suitable hangers along the entire front of the barn and is adapted to slide in said hangers horizontally. Through this bar the door-opening devices are operated. A supplemental bar *a* depends therefrom and is provided with a pin *a'*, on which rests the end of the lever B. This lever is weighted at *c* near its outer end and is pivoted at a point *d* to the barn and is formed with a right-angled end *e*, to the extremity of which is secured a rod C, which in turn is connected to the swinging crank D. This crank has a rocking movement in its hangers *f* and is provided with one or more pushing-bars *g*, adapted to contact with the sliding bolts *h* on the doors.

About midway on the lever B is pivoted a vertical operating-rod E. This rod has a trip

i, which operates a trigger *j*, supported in hangers immediately before it and adapted to catch and hold the free end of a vertical lever F. This lever is pivoted at its lower end to the barn, and at a point above its pivotal connection it is joined to a rod G, which passes into the barn and to the stalls. To this rod G is secured one or more of the unhitching devices. This device consists of a hanger H, which is secured to the manger and carries a casing comprising two barrels *k'* and *k''*. The rod G passes through the upper barrel *k'* and through the single opening in the hanger. A link J seats against the end of the barrels, and the rod G also passes through it. The lower end of said link is secured by a pin to a second rod K, which works in the lower barrel *k''* and is sufficiently reduced in diameter to permit a coiled spring *m* to surround it inside the barrel and hold the hitch closed by keeping the bolt K in the two lower openings or ears of the hanger H. In the space between these ears and around the bolt K is secured the ring on the chain that secures the animal. The same device may be continued for any number of stalls by continuing the operating-rod G.

The operation is as follows: When the time-operating mechanism has been set and the time of operation arrives, the clock *r*, which is an ordinary alarm-clock, with a trip or extension *s* fastened to the winding-key, will, when the alarm begins to operate, unwind the key, and the extension thereto will move away from its supporting position and release the counterbalanced rod L, and the pin on the drop-rod M will be released, allowing said rod, by means of its weight N, to drop, pulling the main bar A forward, releasing the bar B, and by its weight it will be drawn down and the trip *i* on the rod E will strike and release the trigger *j*, which holds the free end of the lever F, and the continued dropping of the rod E will force the lever F outward by reason of its contact along the rear surface of said lever, thus drawing the rod G, which is attached to said lever, outward, and when the rod G is so drawn it will open every hitch in the barn, thus releasing all the cattle simultaneously. The dropping of the lever B will, through the rod C, draw the

crank-arm D around in its hangers and cause the pushing-bars *g* to force open the sliding bolts of the doors.

What we claim is—

- 5 In combination, a bell-crank lever B, the bar E carried thereby, an automatic releasing device operated by said bar E, a door-releasing mechanism connected with and operated by said bell-crank, said door-releasing
10 mechanism comprising a rock-rod D, and the

pushing-bars *g* operatively connected with said rock-rod, substantially as described.

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

GEORGE L. DRY.

ELLSWORTH M. KUTZ.

Witnesses:

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