J. MITCHELL.

LOCOMOTIVE COW CATCHER.

No. 18,348. Patented Oct. 6, 1857.

Fig. 1.

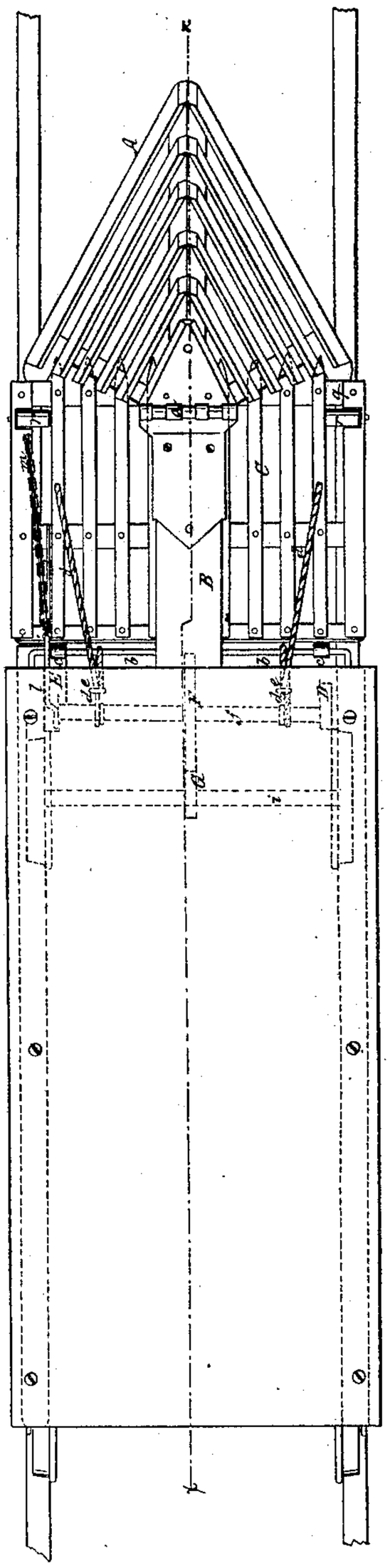


Fig. 2.

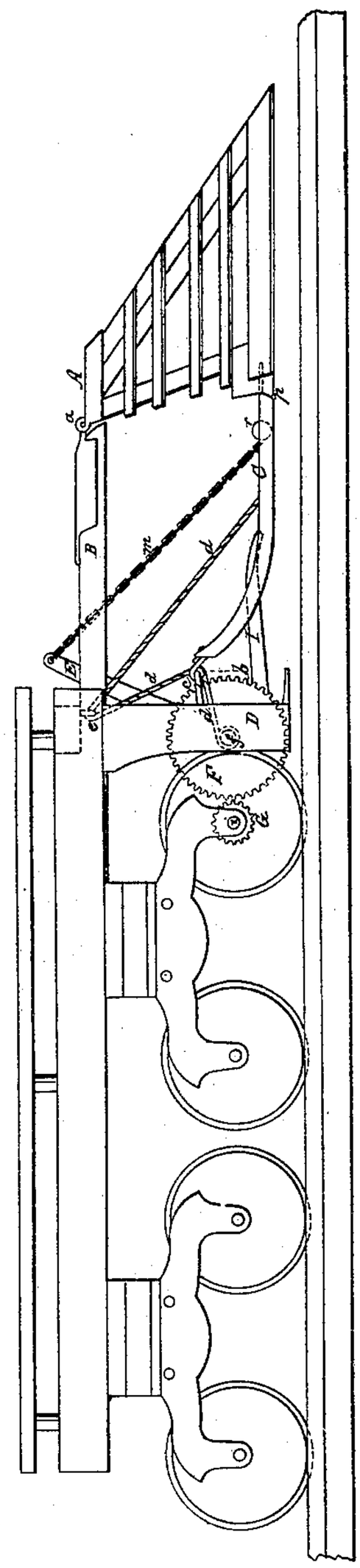
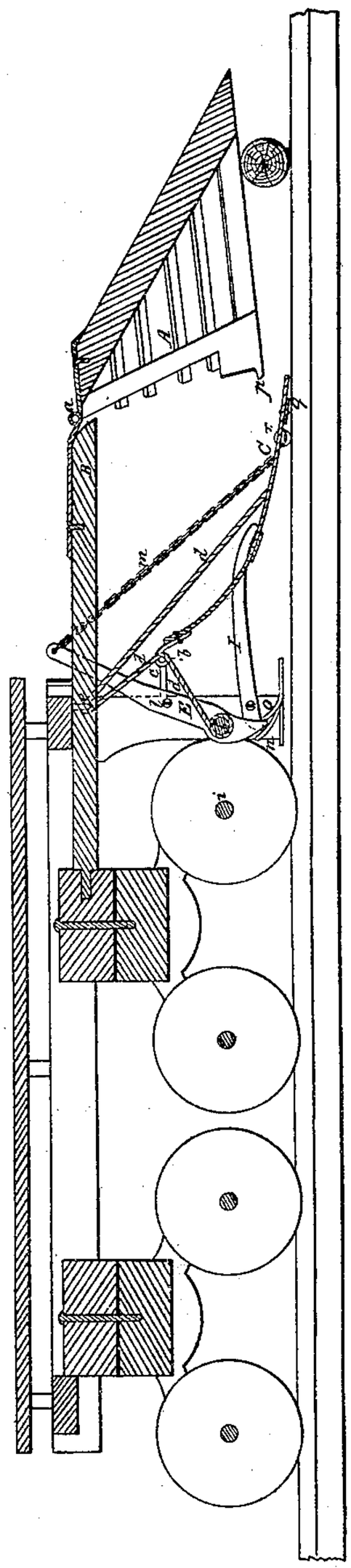


Fig. 3.



UNITED STATES PATENT OFFICE.

JAMES MITCHELL, OF OSCEOLA, IOWA.

LOCOMOTIVE COW-CATCHER.

Specification of Letters Patent No. 18,348, dated October 6, 1857.

To all whom it may concern:

Be it known that I, JAMES MITCHELL, of Osceola, in the county of Clark and State of Iowa, have invented a new and useful Improvement in Cow-Catchers for Locomotives; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, forming part of this specification, in which—

Figure 1 is a top view of my improved cow catcher. Fig. 2 is a side elevation of the same, with rear section elevated. Fig. 3 is vertical longitudinal section on *x x;* with rear section in operating position.

Similar characters of reference in the several figure denote the same part.

The nature of my invention consists in a secondary catching apparatus behind the ordinary angular track clearer, which is brought into action when an obstruction lifts the angular clearer; the details of construction and operation being as follows—

In the drawing A is the ordinary angular track clearer, hinged at *a* to the bar B, projecting from the front of the locomotive.

C is a grating connected with a bar *b* at *c c* and capable of movement about said bar to permit it to assume the positions shown in Figs. 2 and 3. Cords or chains *d d* run from the grating C to a shaft *f*, as shown in Figs. 2 and 3, so that the rotation of this shaft will lift the front of the grating. The eyes *e* should in practice have rollers to permit the free movement of the cords *d d*. The shaft *f* extends across the front of the locomotive, and has its bearings; at one extremity in the fixed piece D and at the other in the lever E. On this shaft is a cog wheel F capable of meshing with wheel G on shaft *i*. The lever E has its fulcrum at *l*, and its long arm is connected with the grating C by a chain *m*, so as to throw the wheels F and G in gear, when the grating assumes the position of Fig. 3. There is another lever I, whose long arm rests upon the grating, and whose short arm acts upon spring *n* to cause spring *o* to release the point of lever E, and permit it by gravity of shaft *f* to clear wheel F of wheel G, after the grating has been lifted.

The operation of the cow-catcher is as follows:—During the runing of the engine the clearer A and grating C have the positions shown in Fig. 2. The wheels F and G being out of gear, and the front of the grating resting on the projections *p* of the clearer A. Should an obstruction be encountered which can be turned aside by the clearer A, the grating is not brought into operation. But should the clearer rise over the obstruction, as in Fig. 3, the grating falls, with the rollers *r* upon the rails, and receives the obstacle. The dropping of the grating throws wheels F and G into gear, causing the cords *d d* to wind on shaft *f*, and thus lift the grating. During the time the grating is resting upon the track, spring *o* forces wheels F and G into gear, which relation they maintain until by the rise of the grating lever I, forces down spring *o*, which permits the lower portion of lever E to fall forward and disengage the cogs of the aforesaid wheels. The projections *p* of the clearer drops under the cross piece *q* of the grating and all parts have the positions from which they started. The advantage of this construction consists in bringing in action an apparatus for lifting the obstacle from the track, after the clearer has been lifted by it; thus preventing the throwing of the engine from the rails.

I claim—

The combination cow catcher composed of clearer A and grating C, so constructed that the latter will be brought into action by the lifting of the clearer, and all parts be made to resume their original position by the forward movement of the engine; substantially as set forth.

In testimony whereof, I have hereunto signed my name before two subscribing witnesses.

JAMES MITCHELL.

Witnesses:

GEO. PATTEN,

JOHN S. HOLLINGSHEAD.