(No Model.)

# E. R. IVES.

## TOY LOCOMOTIVE.

No. 303,934. Patented Aug. 19, 1884.

Fig. 1.

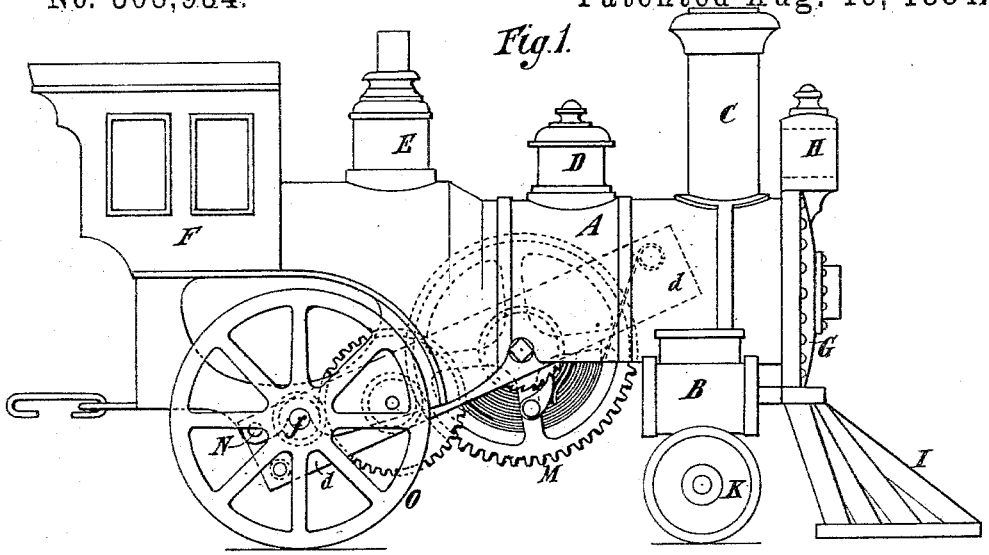



Fig. 2.

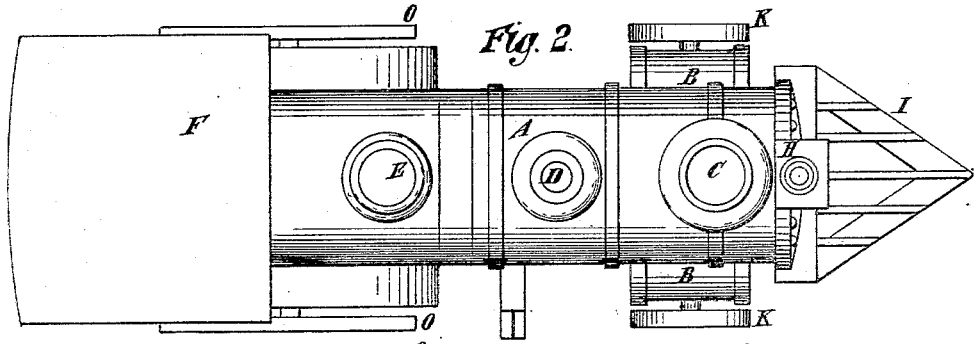



Fig. 3.

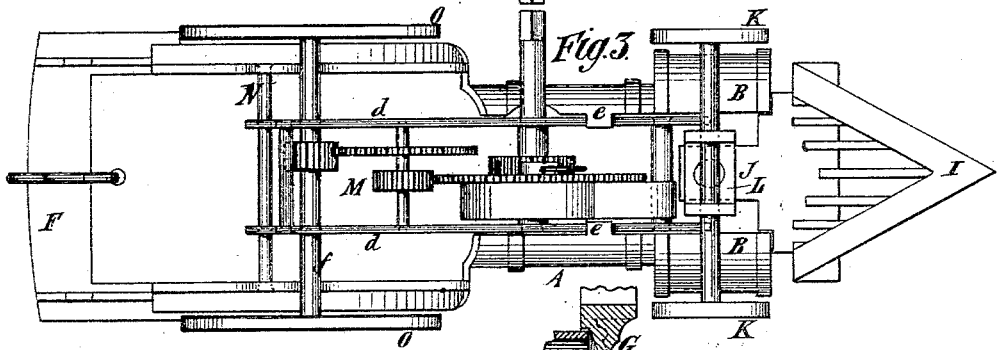
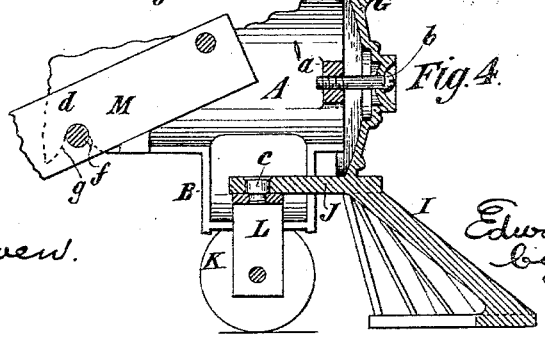



Fig. 4.




Witnesses
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# UNITED STATES PATENT OFFICE.

EDWARD R. IVES, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO IVES, BLAKESLEE & CO., OF SAME PLACE.

## TOY LOCOMOTIVE.

SPECIFICATION forming part of Letters Patent No. 303,934, dated August 19, 1884.

Application filed May 13, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD R. IVES, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a certain new and useful Improvement in Toy Locomotives, of which the following is a specification.

I will describe a toy locomotive embodying my improvement, and then point out the various features in claims.

In the accompanying drawings, Figure 1 is a side view of a toy locomotive embodying my improvement. Fig. 2 is a plan or top view of the same. Fig. 3 is an inverted plan of the same. Fig. 4 is a vertical longitudinal section of the forward portion.

Similar letters of reference designate corresponding parts in all the figures.

I cast in one piece the body A, the representations of cylinders B, the representations of the smoke-stack C, the steam-dome D, the sand-box E, and the cab F. The casting comprising these parts is hollow. The body A and cab F are not closed at the bottom or at the rear end. The body A is not closed at the front, but there is cast with it a cross-bar, *a*.

The front end, G, of the locomotive-body, the representation of the head-light H, and the cow-catcher I are formed integral in a second casting. This casting also comprises an integral rearward extension, J, which projects under the forward part of the body A. This casting, which comprises the front end, G, of the locomotive-body, is secured to the main casting by a rivet, screw, or like device, *b*, passing from the front end, G, into the cross-bar *a*.

The front wheels, K, of the locomotive have their axle journaled in a frame, L, which may be made of sheet metal, and is connected by a rivet, *c*, or like device to the extension J, so that it can be swung around to admit of the adjustment of the wheels at different angles relatively to the length of the locomotive.

M is a motor for propelling the locomotive. It consists of a train of gear-wheels actuated by a spring. The gear-wheels and shafts of this motor are journaled in a frame, *d;* hence the motor is complete in itself, independently of the locomotive-body. The motor is inserted at an angle into the locomotive-body and pushed forward in the same, so that the side pieces of its frame will slip above inwardly-extending lugs *e*, which are cast integral with the body. The motor is thus forced into such position that its shaft *f* may enter recesses *g* in the lower edges of the body. When the motor has been adjusted in the locomotive-body, a rod, N, is passed through holes formed in the lower part of the locomotive-body, and through holes formed in the side pieces of the motor-frame, whereupon the ends will be riveted and the motor will be firmly secured.

After the motor has been secured in place the hind wheels, O, are secured on the shaft *f*. One may be made fast and the other loose, if preferable.

It will be seen that I provide for making a toy locomotive in a very cheap manner. By making it as described I obviate unsightly seams or joints in places where they will be so conspicuous as to detract from the appearance of the toy.

I am aware of the Letters Patent granted to J. B. Secor, June 8, 1880, numbered 228,562, for an improvement in toy locomotives, and I do not herein claim, broadly, anything claimed therein.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A toy locomotive having its body, cylinders, and cab made integral in one casting, and the front end of its body and the cow-catcher made integral in another casting and secured to the former, substantially as specified.

2. A toy locomotive having its body, cylinders, smoke-stack, and steam-dome made integral in one casting, and the front end of its body, the head-light, and the cow-catcher made integral in another casting and secured to the former, substantially as specified.

3. A toy locomotive having its body, cylinders, and cab made integral in one casting, and having the front end of its body, the

cow-catcher, and a rearward extension, J, formed integral in another casting, said extension J having the front wheels connected to it, substantially as specified.

4. The combination, with a locomotive-body made open at the bottom and provided with inwardly-extending lugs *e*, of the motor M, extending above the lugs, and the rod N, extending through the locomotive-body and the motor-frame, substantially as specified.

EDWARD R. IVES.

Witnesses:
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