

T. T. V. SMITH.

LOCOMOTIVE.

No. 188,971.

Patented March 27, 1877.

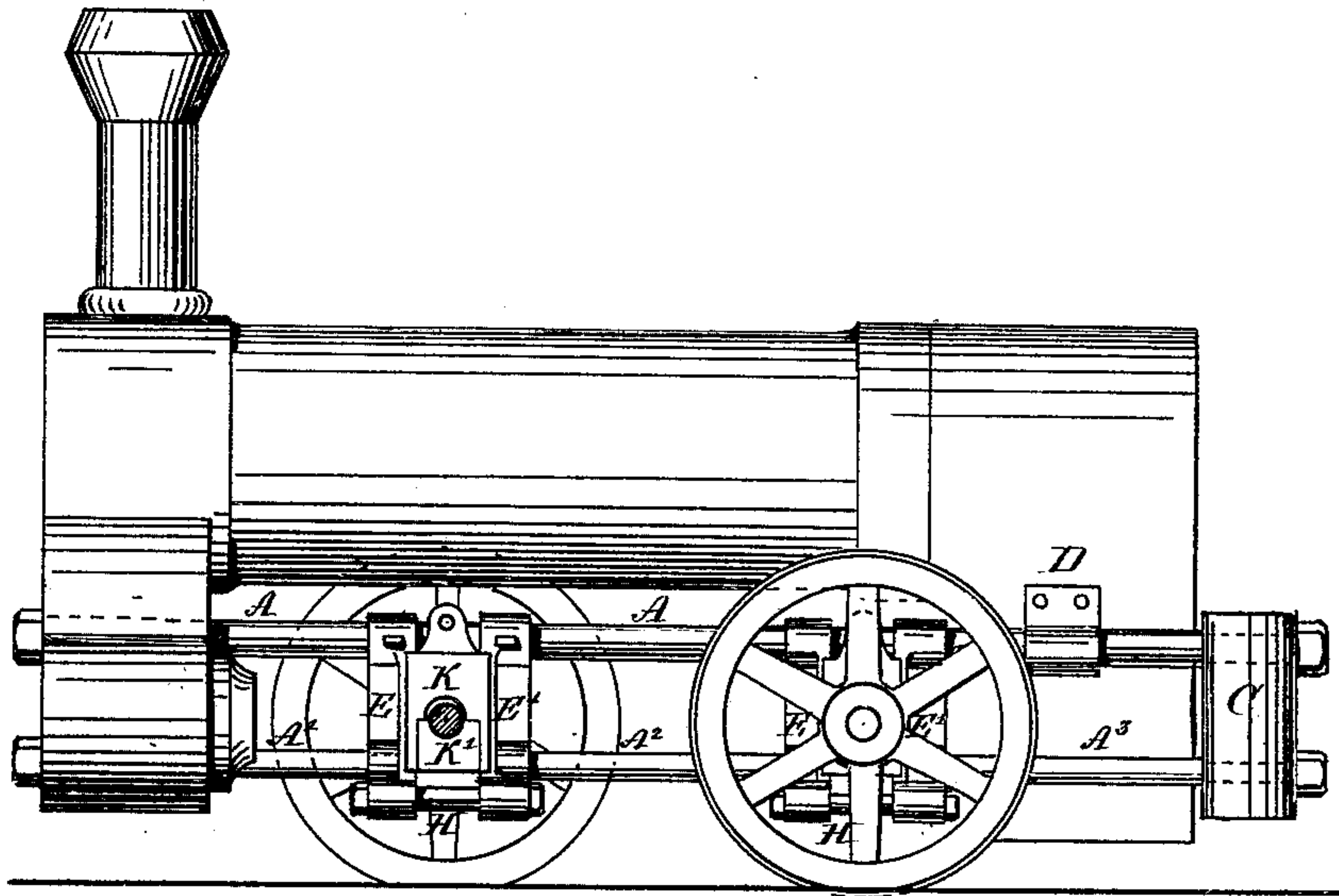


FIG. 1.

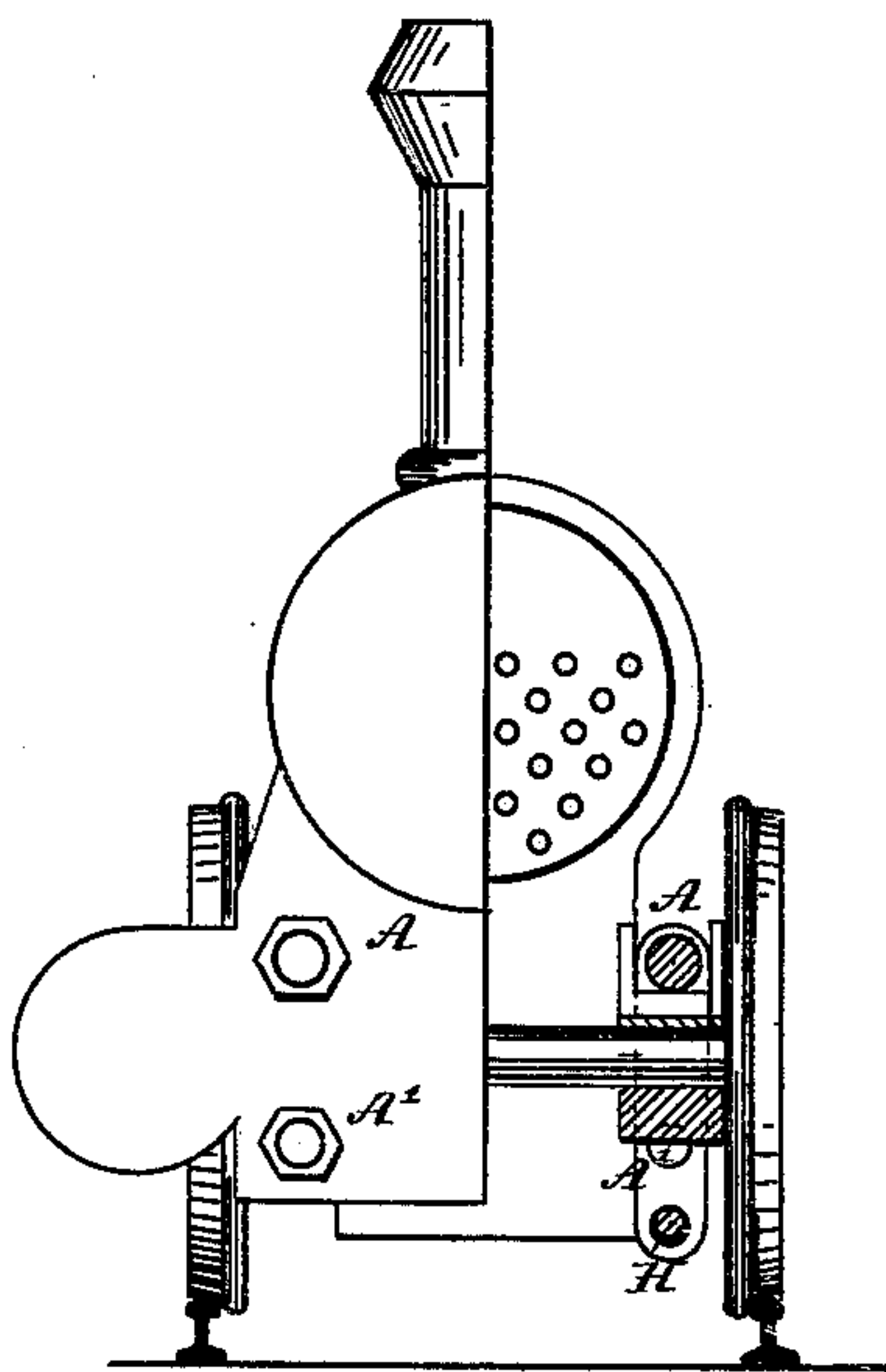


FIG. 2.

WITNESSES

*W. A. Chandler*  
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INVENTOR

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Per *Frank G. Parker Atty.*

# UNITED STATES PATENT OFFICE.

THOMAS T. V. SMITH, OF YARMOUTH, NOVA SCOTIA.

## IMPROVEMENT IN LOCOMOTIVES.

Specification forming part of Letters Patent No. **188,971**, dated March 27, 1877; application filed January 16, 1877.

*To all whom it may concern:*

Be it known that I, THOMAS T. V. SMITH, of Yarmouth, Nova Scotia, have invented certain new and useful Improvements in Locomotives, of which the following is a specification:

The nature of my invention consists in the peculiar construction and arrangement of a supporting-frame for a locomotive-engine, the supporting-frame consisting of round bars attached in front to the cylinder-supports, and at the rear to the fire-box and buffer-beam, the object being to simplify the construction so as to place it within the skill of the most ordinary mechanic, so that the parts may be detached or connected without the aid of a highly-skilled mechanic.

Figure 1 is an elevation, one of the wheels being removed to show the housing more clearly. Fig. 2 is a part front elevation and part section.

As the boiler, cylinder, and fire-box are made in the ordinary manner they require no description. The frame is made as follows: A A are two round rods, of iron or steel, extending from the cylinder-supports in front of the engine to the buffer-beam C, at the rear of the engine, and being attached to the fire-box by a saddle-piece, D, Fig. 1.

The lower part of the frame also consists of round bars, but not in a single piece like the upper ones, the part A<sup>1</sup> extends from the cylinder-support to the front of the first housing, while the part A<sup>2</sup> extends from the rear of the first housing to the front of the second

housing, and the part A<sup>3</sup> extends from the rear of the second housing to the buffer-beam C.

The housing has two side pieces, E and E', which are slipped onto the upper rod A of the frame, and are fastened to it by means of keys or pins.

The lower rods A<sup>1</sup> A<sup>2</sup> A<sup>3</sup> are fastened into these side pieces E E', the ends of the rods simply passing through the side pieces E E', and stopping even with the inner face of the same.

K K' represent the journal-boxes. H is a short rod, which serves to connect the lower ends of the side pieces E E', and thus complete the housing. This may be fastened by screws or keys.

From the above it may be seen that to remove an axle I have only to take out the short bolt H. This leaves the boxes and axles free. By this style of frame I secure great simplicity, cheapness, and strength.

I claim as my invention—

1. The combination of the rods A A<sup>1</sup> A<sup>2</sup> A<sup>3</sup>, with the buffer-beam C, fire-box, and cylinder-supports, all constructed substantially as described, and for the purpose set forth.

2. The combination of the rods A A<sup>1</sup> A<sup>2</sup> A<sup>3</sup>, with the sides E E', of the housings and the rod H, all constructed substantially as described, and for the purpose set forth.

THOMAS T. VERNON SMITH.

Witnesses:

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