

C. C. LYMAN.
Platform Scales.

No. 66,722.

Patented July 16, 1867.

Fig. 1

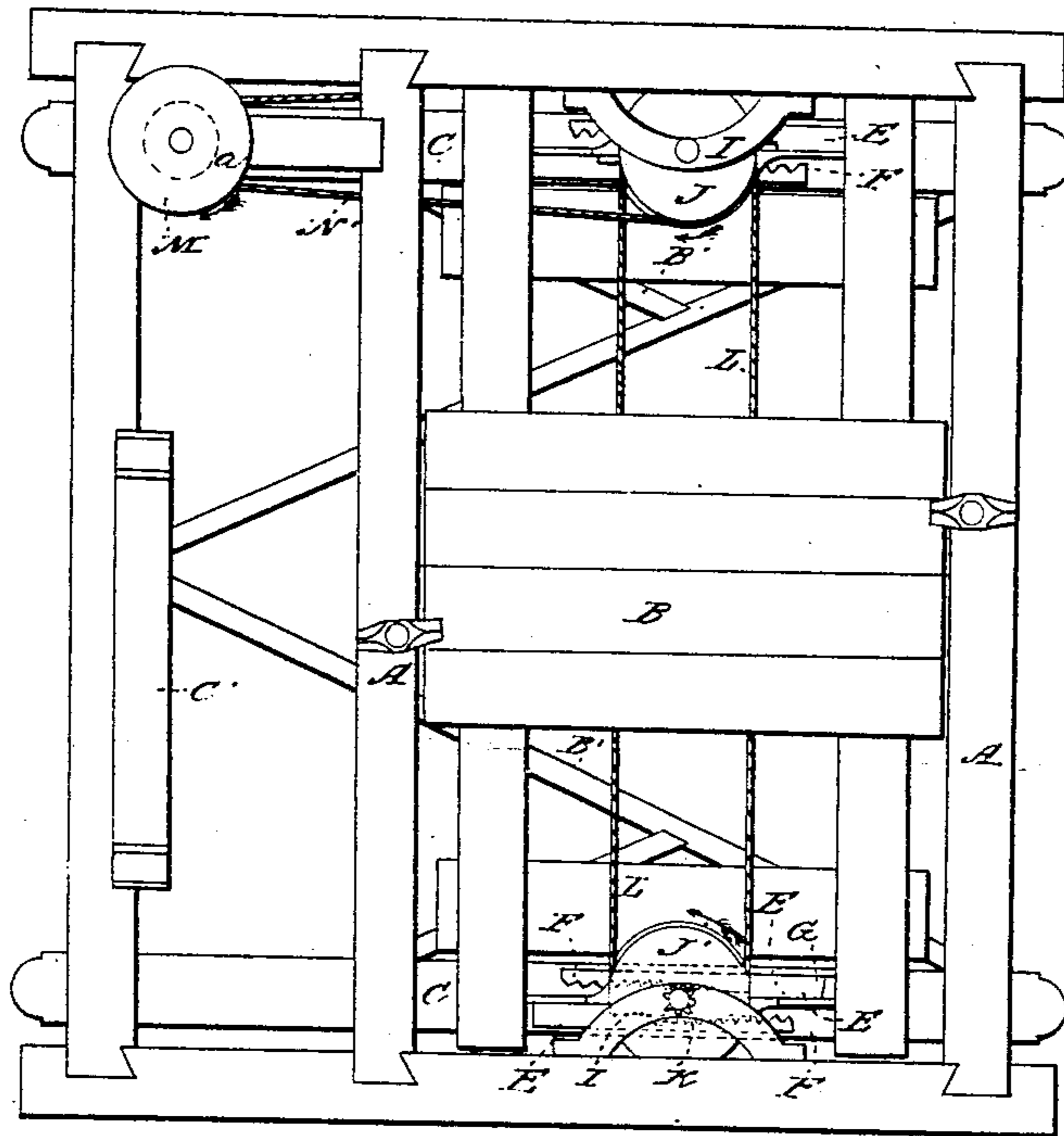
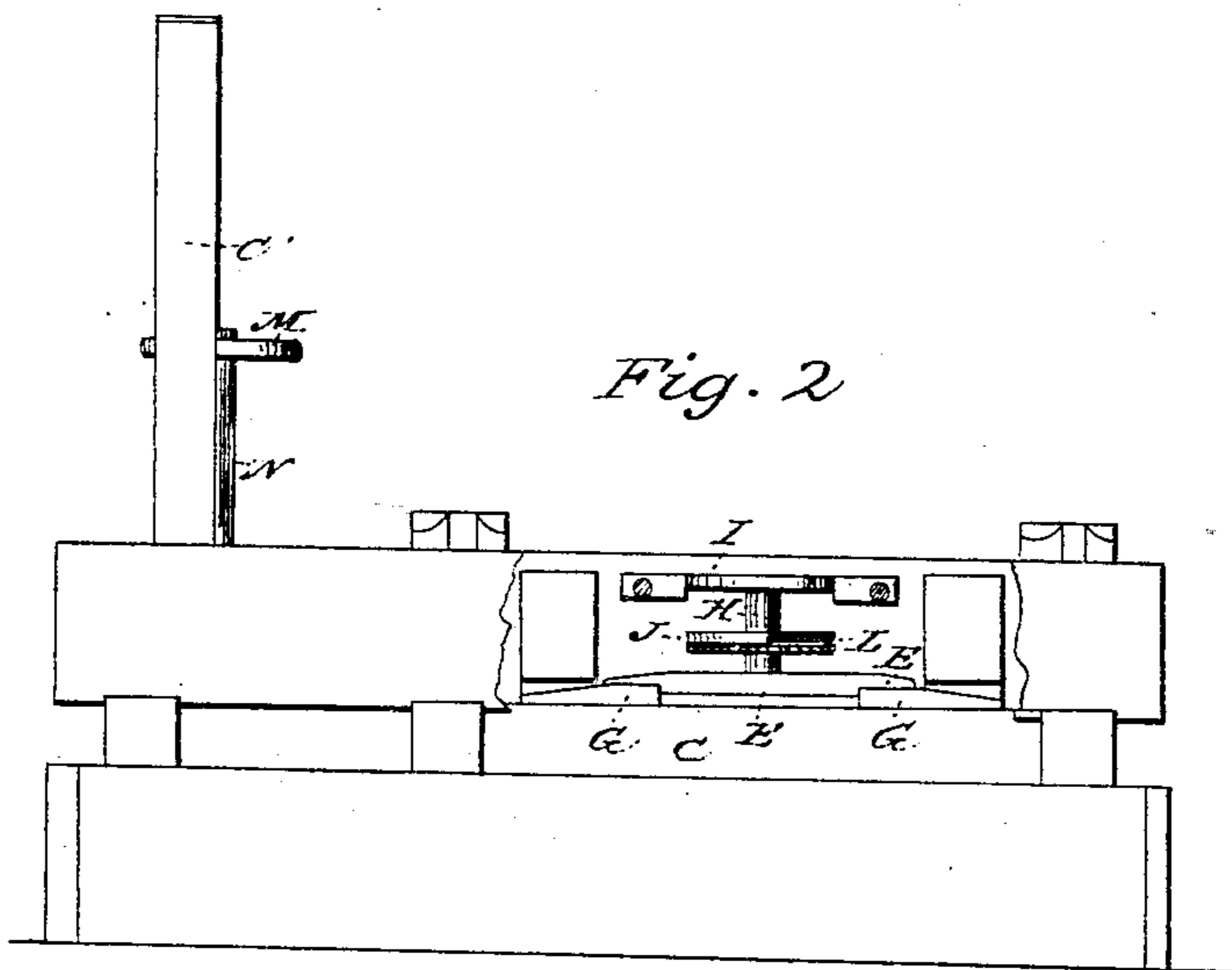


Fig. 2



Witnesses:

*W. H. Burnage
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Inventor.

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United States Patent Office.

C. C. LYMAN, OF EDINBORO, PENNSYLVANIA.

Letters Patent No. 66,722, dated July 16, 1867.

PLATFORM-SCALES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, C. C. LYMAN, of Edinboro, in the county of Erie, and State of Pennsylvania, have invented certain new and useful improvements in Platform Scales; and I do hereby declare that the following is a full and complete description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a top view of the scale.

Figure 2 is a side view of the same.

Like letters of reference refer to like parts.

In fig. 1, A is the bed or framework of the scales, in which is arranged the platform B, which is raised and lowered in the frame, in order to throw the weight upon or off the scale-beam or bearings B', by which it is connected to the balance, in the box C', in the manner as follows: On the cross-sill C, fig. 2, is arranged a pair of inclined planes or wedges, E, each of which is provided with a rack, F. These planes are placed between the cheeks of the stays G, in which they traverse backward and forward, and by which they are kept from being laterally displaced, and also guided in their reciprocal movements. H (fig. 2) is a shaft, having its foot bearing in a step between the two inclined planes, or rather the racks of the planes, whereas the upper end is supported in position by the stay I. To this shaft is keyed a grooved wheel, J, and a cog-wheel, K, said cog-wheel being so placed on the shaft as to bring it between the racks referred to, and by which they are operated, as will hereafter be shown. Each end of the frame is alike provided with the same arrangement of gearing, and which are connected to each other and operated conjointly by a rope or chain, L. It will be observed that the chain is not continuous, and thus simply passing around the pulleys, but consists of two separate pieces, the end of each being fastened in the periphery of the pulley, a groove being provided for each chain, thus making a double-grooved pulley, as shown in fig. 2, in which J is the pulley and L the chains. These two sets of pulleys are operated by a third one, indicated by the dotted lines *a* on the plane of the wheel M, fig. 1, M being a hand-wheel keyed to the upper end of the shaft N, fig. 2, and to the lower end of which is the pulley referred to. This pulley connects with the pulley J by chains or ropes N', and which are attached to the periphery of each in the same way as above described. By this arrangement it will be evident that, on turning the hand-wheel in the direction indicated by the arrow, the rope will wind up around the pulley *a*, and in so doing cause the pulley J to turn in the same direction, and thus wind up the rope or chain around it; this in turn will cause the pulley J' to turn and wind up the rope L, and so on. The reverse movement of the pulley M will cause a corresponding reversion in the movement of the other pulleys. It will be evident that as the pulleys J J' rotate, the cog-wheel K will also revolve, and in so doing will move the racks F backward or forward, and thus push the inclined planes toward the sides of the frame, or draw them back, according to the rotation of the pulleys. The sills of the platform B are made to reach over the top of the stays G, so that when the inclined planes or wedges are pushed out toward the sides of the frame, they will slide under them, and thus raise the platform upward from its bearings, lifting the weight from off the scale or balance, and causing it to rest upon the inclined planes, solidly and securely, upon the cross-sills C. This moving of the inclined planes in opposite directions, equally and simultaneously, wedges or raises up and lowers the platform, without pushing it sidewise or lengthwise, thus allowing the said platform to drop freely, leaving the cheeks loose at all times.

The peculiar advantage of this improvement is in elevating the platform of truck-scales, thereby allowing engines and heavy freight to pass over the scale without touching the scale-bearings, unless needed for weighing, in which case it is easily and readily adjusted in the manner as above described, either for weighing or not, as occasion may require. It will be obvious that the inclined plane or wedges can be operated without the aid of the pulley *a* and hand-wheel M, by simply extending the length of the shaft H above the platform and turning the same with a wrench constructed for that purpose, and that without in the least changing the nature of the invention, viz, the using of wedges or inclined planes for the purpose above specified; and so also the racks by which the wedges are operated may be dispensed with, and a screw substituted in place therefor, and that, too, without effecting any change in the purpose of an inclined plane or wedges being used for raising the platform from its bearings in the manner as above described, the application of a cam operating the same with a lever, screw, or by any appropriate device, and though with less advantage and convenience, still with good results. The plan

usually adopted for relieving the platform from its bearings is to lower the bearings down away from the platform, by the application of an arrangement of levers on its permanent rest. On the contrary, in the scale above described the platform is lifted from the bearings by the application of the wedges—a device never before introduced in the scale.

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

1. The rack F, inclined planes E, and cog-wheel K, as arranged, in combination with the platform B, for the purpose and in the manner as set forth.
2. The grooved pulley J, and rope L or its equivalent, as arranged, and operating the pulley J' in the manner and for the purpose described.
3. I claim the use of inclined planes or their equivalents, for the purpose of raising and lowering the platform, substantially as specified.

C. C. LYMAN.

Witnesses:

W. H. BURRIDGE,
J. HOLMES.