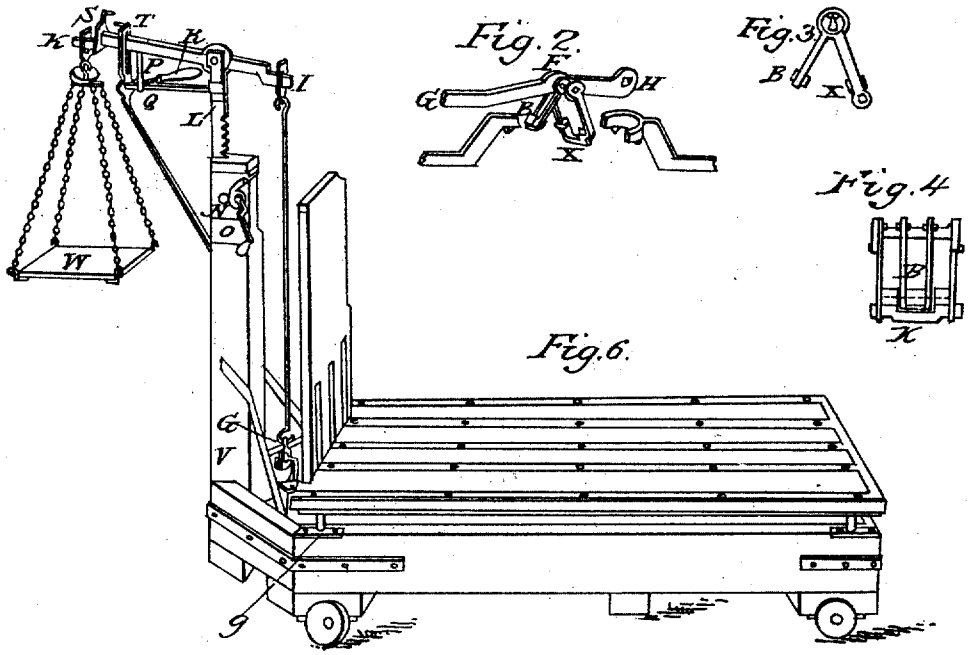
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J. B. MAAG.

Balances.

Patented Feb. 19, 1833.



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Feb 19. 1833. 12.

John B. Maag. of the City and State of New York.

Letters Patent.

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said John Baptist Maag himself of his improvement in the Balance.

Be it known that I John Baptist Maag of the State City County of New York, have invented and applied to use a new & useful improvement in the construction of Balances, or weighing scales made of several levers combined in various proportions so that a small weight shall equipoise the sum of the several powers of all their powers.

A true description of the combination of the Balances with my improvements and invention therein & the manner of their use is as follows viz.

O. V. I. Fig 1 of the accompanying Draft is a strong wooden frame upon which the machinery is combined, & is either fixed in solid Masonry or made moveable on wheels as may be most convenient for the different purposes to which it is to be adapted. The weighing platform which forms the whole top of the lower part of the frame & on which the load is placed rests on the iron levers A.B.C.B. uniting near B. to D.X.E.X. uniting also near X the points of the contact with each levers being in the points 1.2.3.4. The four shorter arms of these levers being fixed in A.C.D & E. & resting on the points connected with the frame as a fulcrum A.B.&C.B. the arms uniting near B, form a lever having its fulcrum A & C. the weight on the platform being applied equally to the points 1 & 2 & the greater arm of the lever is inserted in the moveable rectangular iron head piece B. Fig 2. by means of which one half of the whole weight becomes dependent on the third lever, G.H. at the point F. D.X. & E.X. the arms uniting near X, also from another lever having its fulcrum in D. & X. the weight or load being applied to the points 3 & 4. & the extremity of the greater arm at X. resting in the moveable rectangular iron head piece X, by means of which the other half of the whole weight is sustained on the same lever, G.H. in X at the same point F. The moveable iron head piece B.X. Fig 2. being perpendicularly upon an axis or iron arm through the middle

Vertically to the lever G.H. on each side of it in F and forms the penetrating point of the lever G.H., the lever G.H. has its fulcrum in H, resting upon a pin supported K fixed in the frame O.V.I. to the extremity of its arm G. is attached to the shorter arm of the lever I.K. by the perpendicular connecting rod I.G. which rod suspends the lever G.H. with the load when the machine are in action or in a state of suspension,

I.K. is another lever which may be called the double beam having its fulcrum in L. form the greater arm of which at K. the scale W containing the weights is suspended,

The fulcrum L. is a moveable perpendicular iron bar serrated on the inner edge for the purpose of admitting the grooves of a small wheel turned by a windlass N of which it forms part being supported by 2 uprights in the perpendicular post N.V. by means of which moveable bar which windlass the whole combination of levers with the weighing platform is either elevated or depressed according to circumstances, elevated for the purpose of being put in a state of suspension when the true weight is to be ascertained or depressed that the machinery may be at rest.

The greater arm of the lever I.K. being kept compact by 2 moveable in the projecting iron bar T.P. is by means of the small rectangular piece of iron P.R. with a wooden handle which moves on a pivot at Q. raised up and lowered under T.

The windlass being then turned up the levers are all raised with it & brought to act upon and bear up the load on the platforms in a state of suspension, & thereby also to keep the platforms free from contact with the frame & prevents all friction with it while the true weight is being ascertained.

When the windlass is let down the whole platforms rests upon the four supports 6.7.8 & 9. fixed in the frame and then the whole construction of the machine when not in operation is preserved from injury and in a steady secured position for the reception of a load. of the two points S.V.T. which serve to ascertain the equipoise of the weights in the scale W with the load S. is moveable attached to the end of the scale beam I.K.T is stationary and fixed to the upright perpendicular post so that when the points meet the scale beams is exactly horizontal & the true weight indicated.

Fig 2 is a draft showing the particular & exact insertion of the two levers being into the moveable rectangular iron head piece B & K. and their connexions with the lever G.H. & dependance upon the axis F.

Fig 3. is a lateral view of Fig 1. a front view of the rectangular iron head piece. Fig 5. is a plan of the weighing platforms detached from the ma-
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acted thereon at the point G. by which it rests upon the lower Levers.

Fig 6. is a view of the machine at rest. That which is specially claimed as a new invention & improvement are the disposition & distribution of the whole weight good by upon the four lower levers so as to unite their powers with the total weight at the point F of the lever G. H. together with the construction position & combination of these lower levers.

Also the construction, position & operation of the moveable serrated arm bar forming a fulcrum for the scale beam, together with the windlass & wheels connected therewith by which the whole scale bed platform are acted upon & suspended in equilibrium.

Witness,
Danl Hasty Taylor
John A. Taylor

John Balliet Mang

(Dr in pat Office) 1278 acres

C&C
C.J.W.