(No Model.) 3 Sheets—Sheet 1.

M. M. MOLLNAU.

PLATFORM SCALE.

No. 488,284. Patented Dec. 20, 1892.

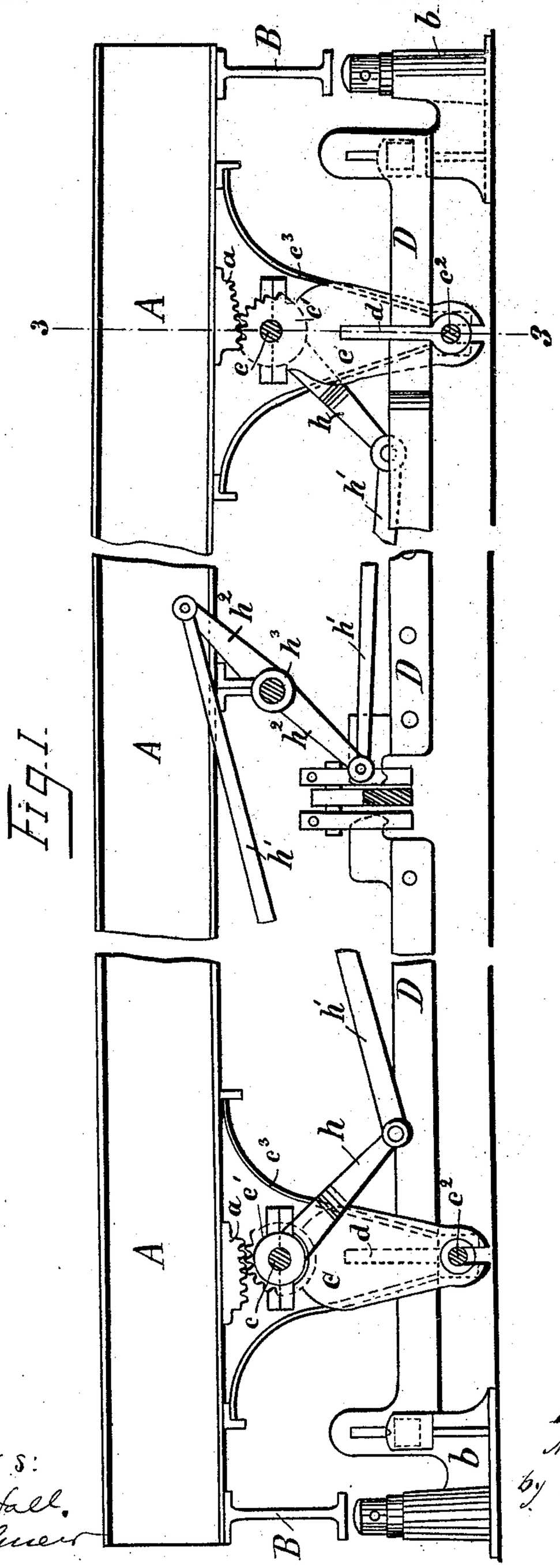


Fig. 1.

WITNESSES:
Marion Hall.
Chas. Kachlmeier

INVENTOR
M. M. Mollnau
by Gaspel & Prueger
ATTORNEYS.

(No Model.) 3 Sheets—Sheet 2.

M. M. MOLLNAU.

PLATFORM SCALE.

No. 488,284. Patented Dec. 20, 1892.

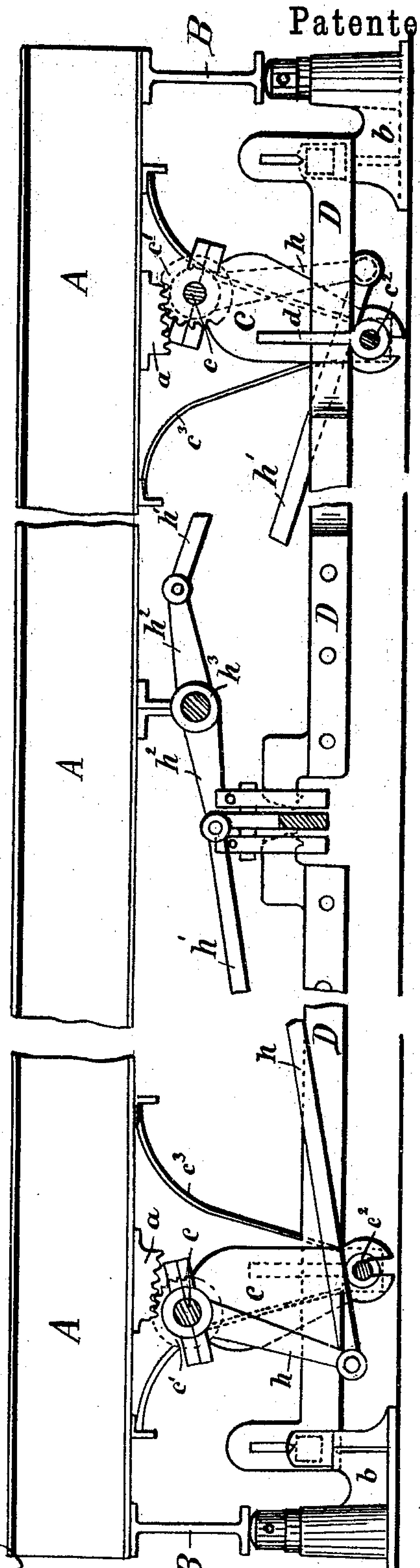


Fig. II.

WITNESSES:
Marion Hall
Chas. Koehler

INVENTOR
M. M. Mollnau.
by Goepel & Raegener
ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

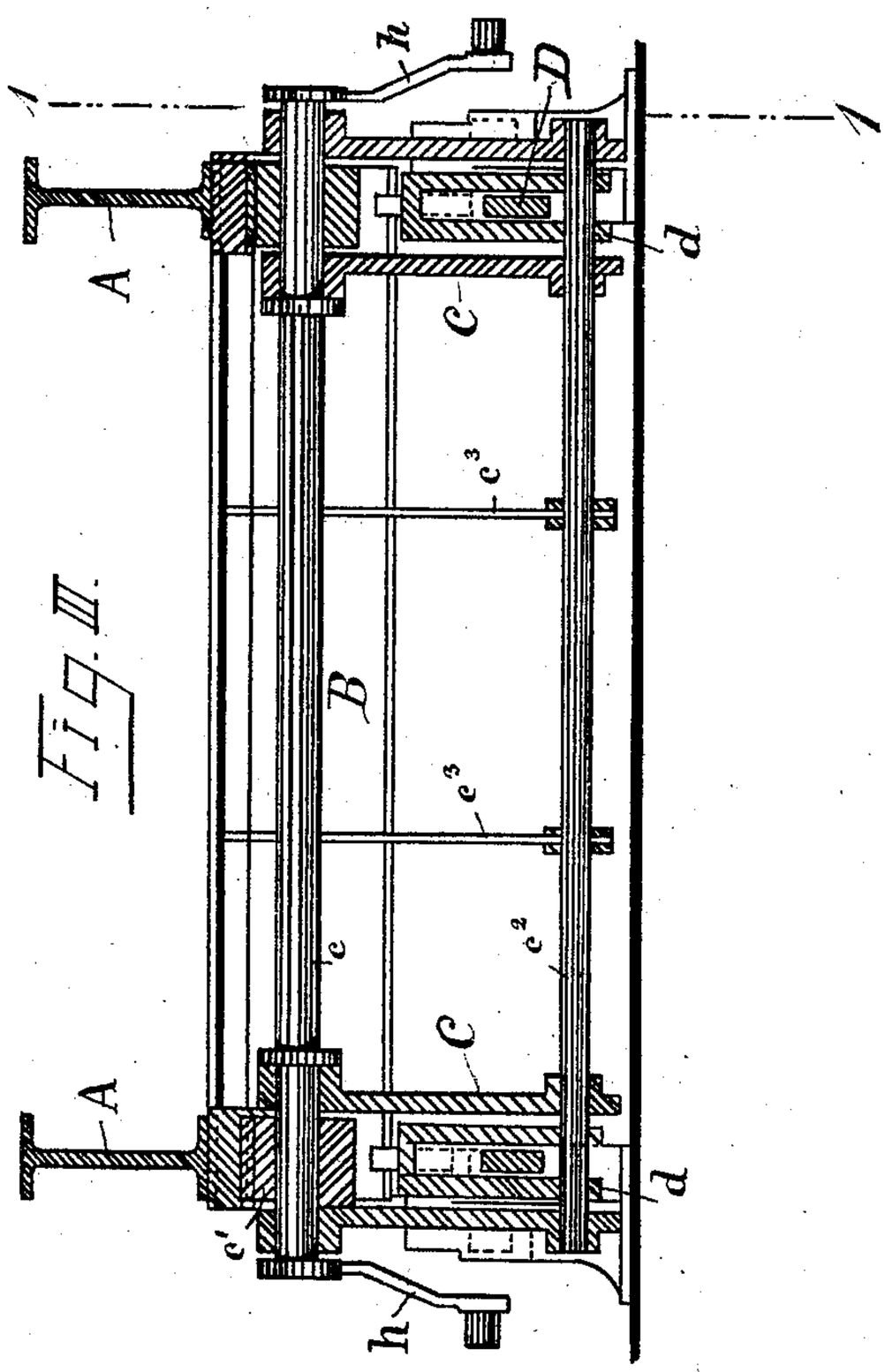
(No Model.) 3 Sheets—Sheet 3.

M. M. MOLLNAU.

PLATFORM SCALE.

No. 488,284. Patented Dec. 20, 1892.

Fig. 3.



WITNESSES:
Marion Hall
Theo Kuehlhorn

INVENTOR
M. M. Mollnau.
by Goepel & Raegener
ATTORNEYS

UNITED STATES PATENT OFFICE.

MARTIN MORITZ MOLLNAU, OF HALLE-ON-THE-SAALE, GERMANY.

PLATFORM-SCALE.

SPECIFICATION forming part of Letters Patent No. 488,284, dated December 20, 1892.

Application filed June 18, 1892. Serial No. 437,125. (No model.)

To all whom it may concern:

Be it known that I, MARTIN MORITZ MOLLNAU, a resident of Halle-on-the-Saale, Germany, and a subject of the King of Prussia, have invented certain new and useful Improvements in Weighing-Machines, of which the following is a specification.

The object of my invention is to provide a new and improved attachment to platform scales by means of which the platform can be lowered upon its supports or raised without in any way changing the supports of the balancing beams.

The invention consists in the combination with a platform scale, of swinging legs for supporting said platform and means for swinging the legs from or toward the center of the platform, so as to permit said platform to descend upon its supports or to be raised.

The invention also consists in the construction and combination of parts and details which will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a partial elevation and longitudinal section, on the line 1 1, of Fig. 3, of a platform scale provided with my improvement, parts being broken out and the platform being in raised position ready for operation. Fig. 2 is a similar view, the platform being lowered so as to rest on its supports when the scale is not to be used. Fig. 3 is a vertical transverse-sectional view on the line 3 3, of Fig. 1.

Similar letters of reference indicate corresponding parts.

The platform of the scale, which is not shown, rests upon the longitudinal beams A which in turn rest upon and are secured to the transverse end-beams B. To the under side of each beam A a wedge-shaped piece *a* is fastened that is provided with teeth or cogs on its bottom edge. The end-beams B can, when the platform is in the lowered position, rest upon the vertically-adjustable supports *b* and thus prevent the further descent of the platform. The scale-beams D are mounted in the usual manner, and each passes through a stirrup piece *d* provided with a knife-edge on the bottom of its top cross-piece, which knife-edge rests in a suitable notch in the top of the scale beam D. A transverse shaft c^2 passes through the eyes in the lower ends of the stirrup pieces *d* at each end of the scales, and said shafts pass loosely through and are guided by the slotted heads of arms c^3 attached to and projecting downward from the beams A. Supporting legs C provided with slotted bottom ends for receiving the shafts c^2 rest upon said shaft. Two legs C are arranged below each beam A and in the four legs at each end of the platform a shaft *c* is mounted loosely. Between each two legs C a cogged head *c'* is fixed on the shaft *c*, said cog-head *c'* engaging the bottom toothed edge of a wedge-shaped piece *a* secured to the beam A. Each shaft *c* is provided with an arm *h*, and the arms *h* at the opposite ends of the platform scale are connected by connecting-rods *h'* with a lever h^2 fixed on a rocking-shaft h^3, suitably mounted in bearings suspended from the bottom edges of the beams A. As shown in Fig. 1, the parts of the scale are in operative position and a load on the scales acts by means of the wedge-shaped pieces *a* and the legs C upon the shaft c^2, which in turn, by means of the stirrup pieces *d* acts on the scale beam D. When it is desired to bring the scale out of operation the rocking shaft h^3 is turned by means of a suitable key or other appliance applied on one end of the same in such a manner as to bring the arms h^2 of said shaft h^3 into the position shown in Fig. 2. Thereby the arms *h* on the ends of the shaft *c* are swung toward the ends of the platform and turn the shafts *c*. As the cogged heads *c'* are fixed on the shafts *c* and engage the wedge-shaped pieces *a*, they roll under said wedge-shaped pieces and move toward the outer ends of the platform. As the height of the wedge-shaped pieces *a* decreases from the center toward the ends of the platform, it follows that the length of support for the platform decreases, and consequently the platform must descend until its end beams B rest upon the supports *b*. As the cogged-heads *c'* roll on the wedge-shaped pieces *a*, said shafts move toward the ends of the platforms, the legs C assume an inclined position as shown in Fig. 2. When the scale is to be brought in operation again, the rocking shaft h^3 is turned so as to bring the arms h^2 back into the position shown in Fig. 1, and

thereby the arms *h* are swung in the direction from the ends of the platform toward the center and the cogged heads *c'* roll along the bottoms of the wedge-shaped pieces and move the shafts *c* in the direction toward the center of the platform, and thereby the platform is moved upward. The engagement of the stirrups with the levers D is not changed by raising or lowering the platform, and this is a matter of great advantage, as in ordinary platform scales the knife-edges usually leave their seats or the seats leave the knife-edges when the platform is lowered. The true and accurate working of the scale is thus in no wise affected by my lowering and raising device.

Having thus described my invention I claim as new and desire to secure by Letters Patent:—

1. In a platform scale, the combination, with a platform, of cogged wedge-shaped pieces on the undersides of the platform, rocking legs for supporting the platform and means for moving the upper ends of said legs along said wedge-shaped pieces, substantially as set forth.

2. In a platform scale, the combination, with a platform, of cogged wedge-shaped pieces in the under sides of the platform, swinging supports on said platform, shafts in said supports, cogged heads on said shafts engaging the cogged wedge-pieces on the platform and means for turning the shafts in the upper ends of said legs, substantially as set forth.

3. In a platform scale, the combination, with a platform, of cogged wedge-shaped pieces on the undersides of the same, cogged heads engaging said wedges, a rocking-shaft on which the cogged heads are fixed, swinging legs in which the shafts are mounted, a shaft supporting said legs, stirrups supporting said shaft, beams supporting said stirrups, an arm on each rocking-shaft and means for connecting the rocking shafts at the opposite ends of the scale to support and operate together, substantially as set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

MARTIN MORITZ MOLLNAU.

Witnesses:
CARL BORNGRAEBER,
BRUNO LIESRICH.