

No. 616,794.

Patented Dec. 27, 1898.

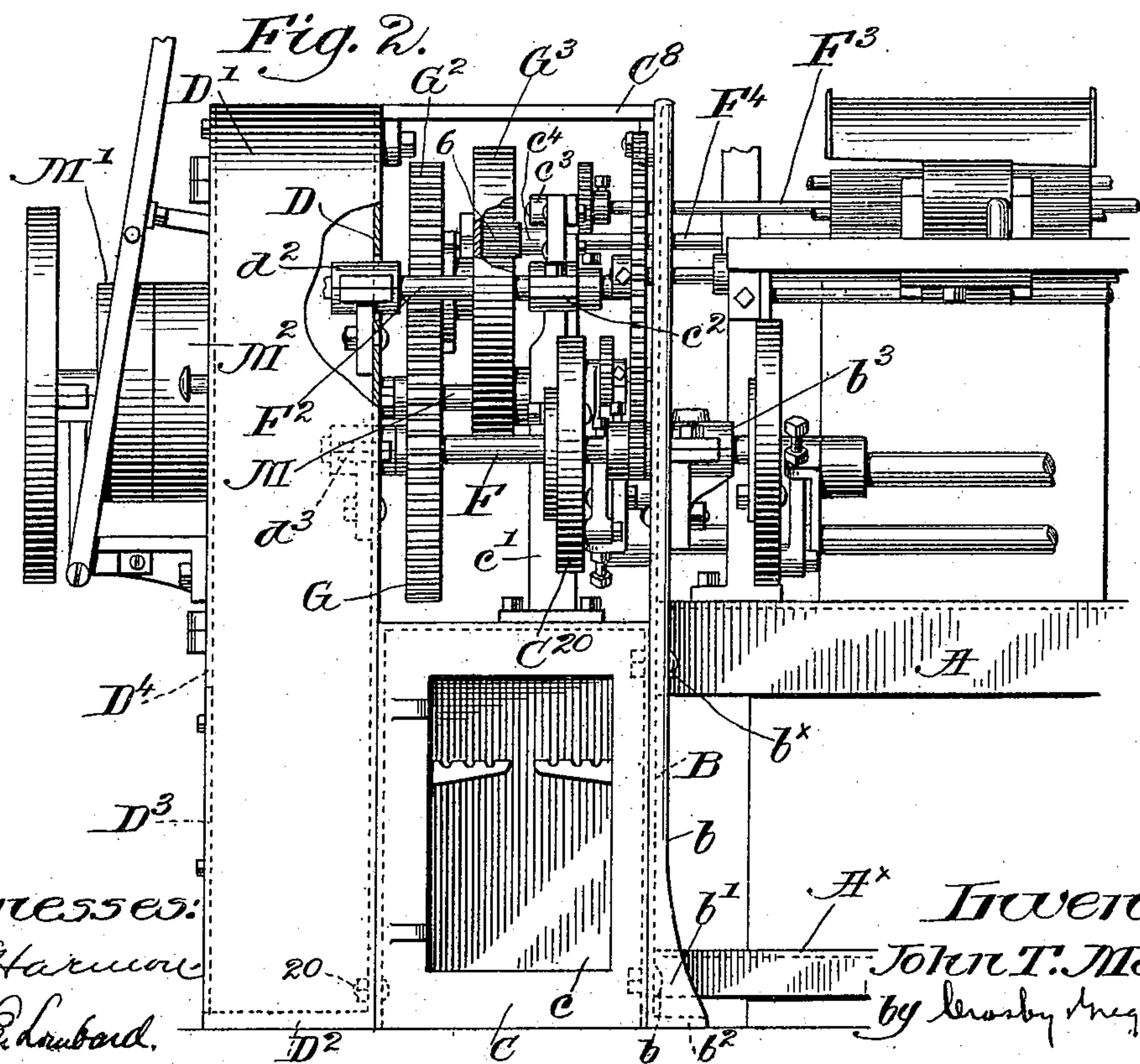
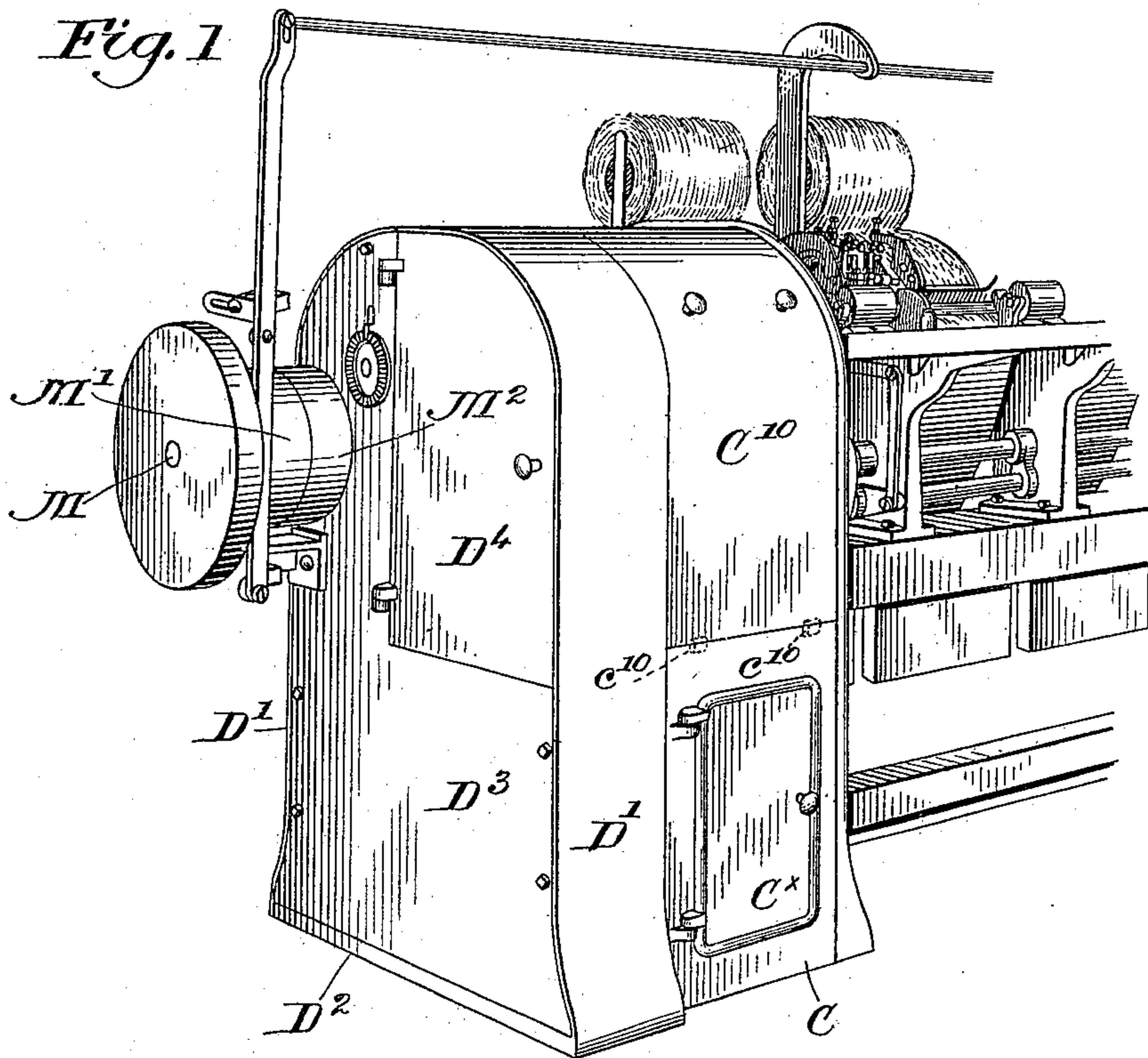
J. T. MEATS.

FRAME FOR COTTON COMBING MACHINES.

(Application filed Dec. 31, 1897.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:
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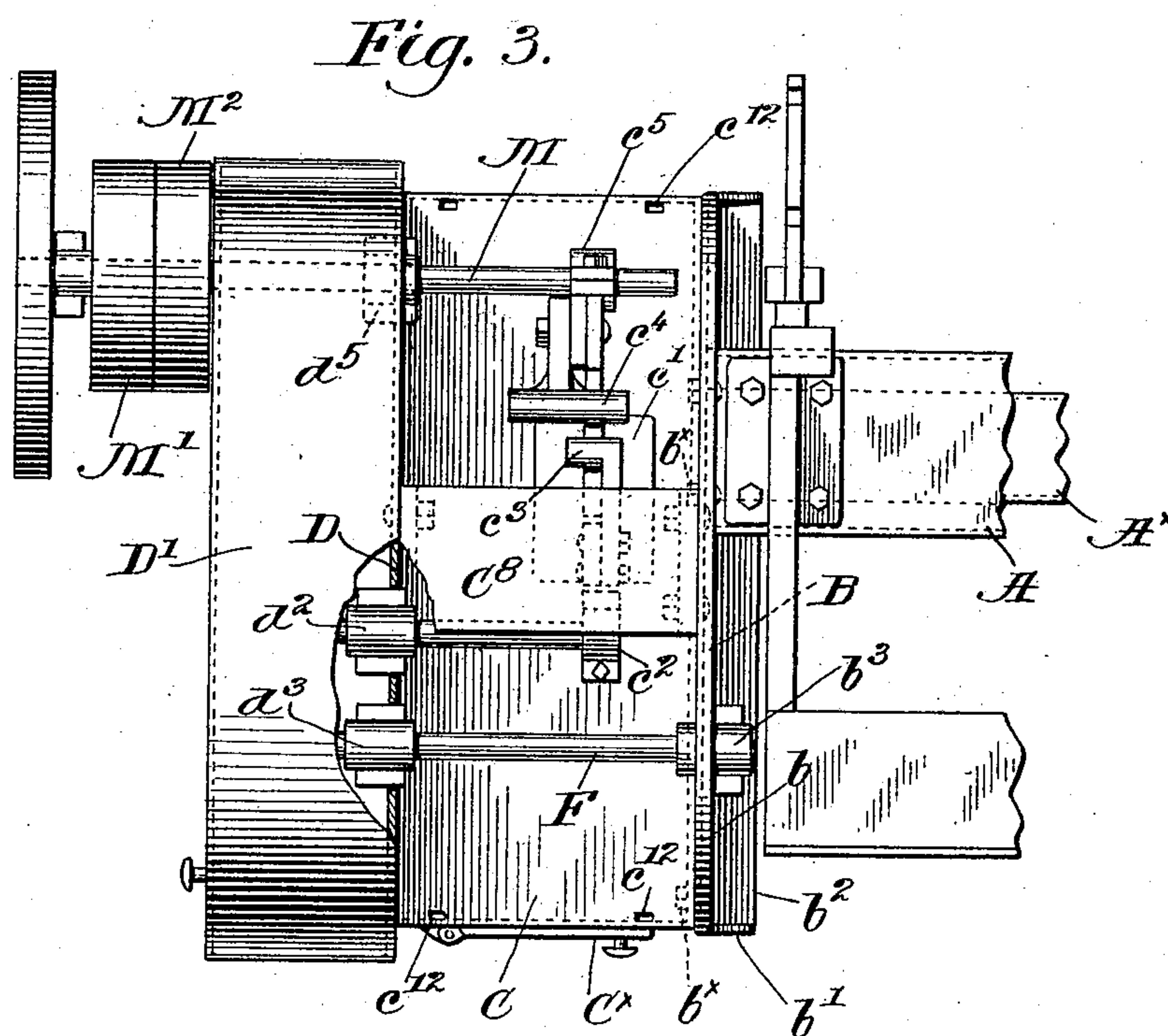
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FRAME FOR COTTON COMBING MACHINES.

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(No Model.)

2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

JOHN T. MEATS, OF TAUNTON, MASSACHUSETTS, ASSIGNOR TO THE MASON MACHINE WORKS, OF SAME PLACE.

FRAME FOR COTTON-COMBING MACHINES.

SPECIFICATION forming part of Letters Patent No. 616,794, dated December 27, 1898.

Application filed December 31, 1897. Serial No. 664,825. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. MEATS, of Taunton, county of Bristol, State of Massachusetts, have invented an Improvement in Frames for Cotton-Combing Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates more particularly to that class of combing-machines wherein a number of heads, with their coöperating mechanism, are mounted upon a long frame comprising upright ends and a main beam or support supported thereby, upon which beam the greater portion of the operating parts are mounted and sustained.

At one end of the frame is located the main driving-shaft, provided with fast and loose pulleys, and the intermediate gearing or connections between said shaft and the several shafts which transmit motion to the combing mechanisms, and in actual practice it has been found that the main beam is subjected to great strain, resulting in undue vibration, with consequent rapid wear of the parts, and particularly of the connections between the driving-shaft and combing mechanism.

My present invention has for its object the production of a novel framing for such apparatus whereby the main beam is more rigidly supported, the connections between the driving-shaft and combing mechanism inclosed and protected from dust, lint, &c., and the bearings for such connections supported independently of the main beam, and as very close setting of the parts actuated by the gears and cams is necessary to produce the best work it is of great importance that there should be no springing or trembling of those parts, which would interfere with their positive movement.

Figure 1 is a perspective view of the driving end of a combing-machine embodying my invention. Fig. 2 is an elevation thereof, partially broken out and with one of the covers removed; and Fig. 3 is a top or plan view thereof, also partially broken out, with the detachable cover removed and the gearing omitted to more clearly show the arrangement of the bearings.

The main beam A and lower girth A^x are substantially of usual construction, though shorter than in like apparatus as commonly constructed, and the combing mechanism (partly shown) may be of well-known construction and forms no part of my present invention.

At the driving end of the apparatus the end of the frame is substantially composed of three parts—viz., an upright casting B, forming a transverse wall, a box-like casting C, and an adjacent upright box-casting D.

The casting B is shown as a plate extending transversely of the frame and of a height sufficient to provide suitable bearings for and partly inclose some of the driving mechanism, said plate preferably having a peripheral stiffening-flange *b* projecting from its inner face, increasing in depth at its lower ends, as at *b'*, where it gives a broadened base flange or foot *b*². A journal-box *b*³ is bolted to the plate B for the shaft F, an opposite journal-box *d*³ being bolted or otherwise secured to the main web of the casting D, (see dotted lines, Fig. 2, and full lines, Fig. 3,) and in each case a portion of the journal-box is extended through the plate or web to which it is secured.

The ends of the main beam A and girth A^x are rigidly bolted to the plate B.

As shown in Figs. 2 and 3, the casting C is in the form of a rectangular box having an open bottom and an opening *c* in one end conveniently closed by a door C^x, Fig. 1, the open bottom being on a plane with the foot *b*² of the plate B, while the top of the casting is shown as at substantially the height of the top of the beam A or a little below it.

The casting C and plate B are rigidly connected by suitable bolts *b*^x, so that a firm and unyielding attachment is secured, the casting C acting substantially as a transverse box-guide for the main beam A.

An upright stand *c'* is bolted to the top of the casting C, the stand being of suitable shape and strength to support bearings *c*², *c*³, *c*⁴, and *c*⁵, (best shown in Fig. 3,) the bearing *c*⁵ receiving and sustaining the inner end of the main driving-shaft M, provided with usual fast and loose pulleys M' and M².

One end of the shaft F² is supported in the

bearing c^2 , its other end being supported in a journal box or bearing d^2 , secured to the web of the casting D and shown in Figs. 2 and 3 as extended therethrough, while the bearings c^3 and c^4 support shafts F^3 and F^4 , extended through the plate B, as shown in Fig. 2.

The shaft F has mounted thereupon the usual cam C^{20} and also a gear G, in mesh with a gear G^2 on an intermediate shaft driven by a pinion (not shown) on the main shaft M, while the shafts F^3 and F^4 are roll-driving shafts, the latter having fast thereon a pinion 6, in mesh with an internal gear G^3 on the shaft F^2 . Inasmuch as this connecting-gearing between the driving-shaft and the combing-heads forms no part of this invention, the same need not be described herein in detail.

A plate C^8 is bolted to the end walls B and D at the top, and removable cover-plates C^{10} are adapted to fill in the spaces between said walls and the top plate and box-girder C, suitable lugs c^{10} (see dotted lines, Fig. 1) on the bottoms of the cover-plates entering holes or seats c^{12} in the top of the box-girder C.

When the cover-plates are in position, as shown in Fig. 1, the entire mechanism shown in Fig. 2 as located between the walls B and D is inclosed and thoroughly protected from dust and dirt, and said mechanism is supported firmly entirely independent of the main beam A, resulting in more even running, greatly-decreased vibration, and consequent reduction of wear, and the operation of the machine is further enhanced by the protection of the power-transmitting devices from dust and dirt.

The wall D has a deep outwardly-extended flange D' around its side edges and curved top, continuing across the bottom to form a broad supporting foot or base D^2 .

A plate D^3 is bolted to the flange, inclosing the space between the wall or web D and the flange and base, protecting any mechanism

therein, access being had thereto by means of a door D^4 , mounted on and completing the plate D^3 .

The box-girder C and the web D are rigidly connected by suitable bolts 20, (see dotted lines, Fig. 2,) so that the three-part end of the frame of the machine forms a rigid whole of great strength and rigidity, yet of comparatively light weight.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a combing-machine, the main beam, a transverse box-girder at one end thereof, an upright end plate rigidly attached to said girder and beam whereby the beam is supported by the girder and plate, an outer end casting secured to the girder and comprising a web and a peripheral flange, shaft-bearings in said web and end plate, an upright standard secured to the girder, and shaft-bearings mounted on the standard.

2. In a combing-machine, the main beam, and a three-part end frame for and rigidly attached to one end of the beam to support the latter at such point, said frame comprising an inner transverse wall, an outer box-like casting having a vertical web, a top plate rigidly connecting the upper ends of said wall and web, a box-girder interposed between the lower portions of said wall and web and rigidly connecting their lower ends, removable cover-plates to close the space between said box-girder, top plate, and web and wall, and supporting-bearings for power-transmitting mechanism mounted wholly on the box-girder, web and wall.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN T. MEATS.

Witnesses:

JOHN C. EDWARDS,
EMMA J. BENNETT.