(Model.) 2 Sheets—Sheet 1.

J. L. WEAVER & H. BRENCKE, Jr.

ATTACHMENT FOR MOTIVE POWER MACHINES.

No. 477,391. Patented June 21, 1892.

FIG 1

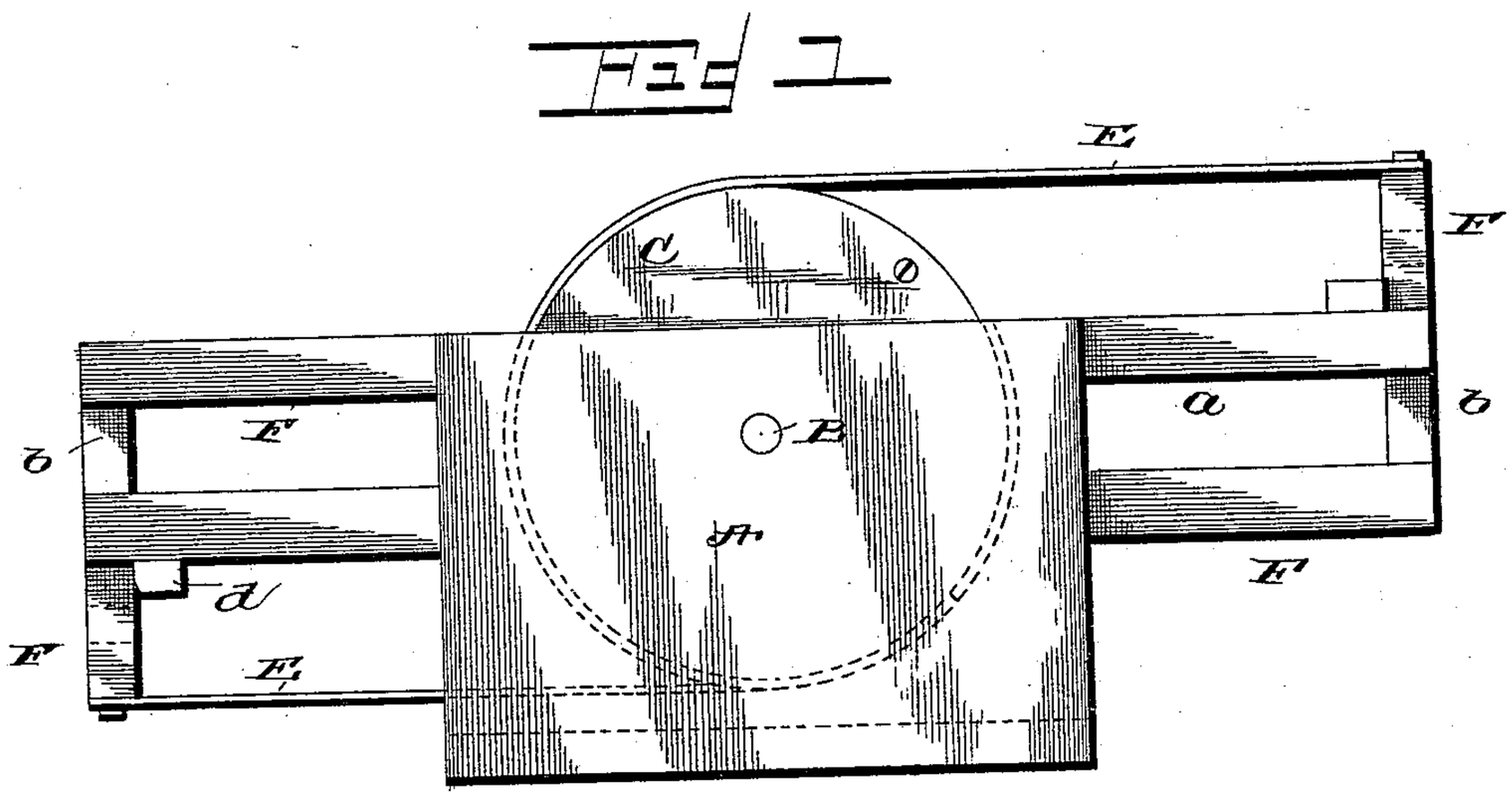
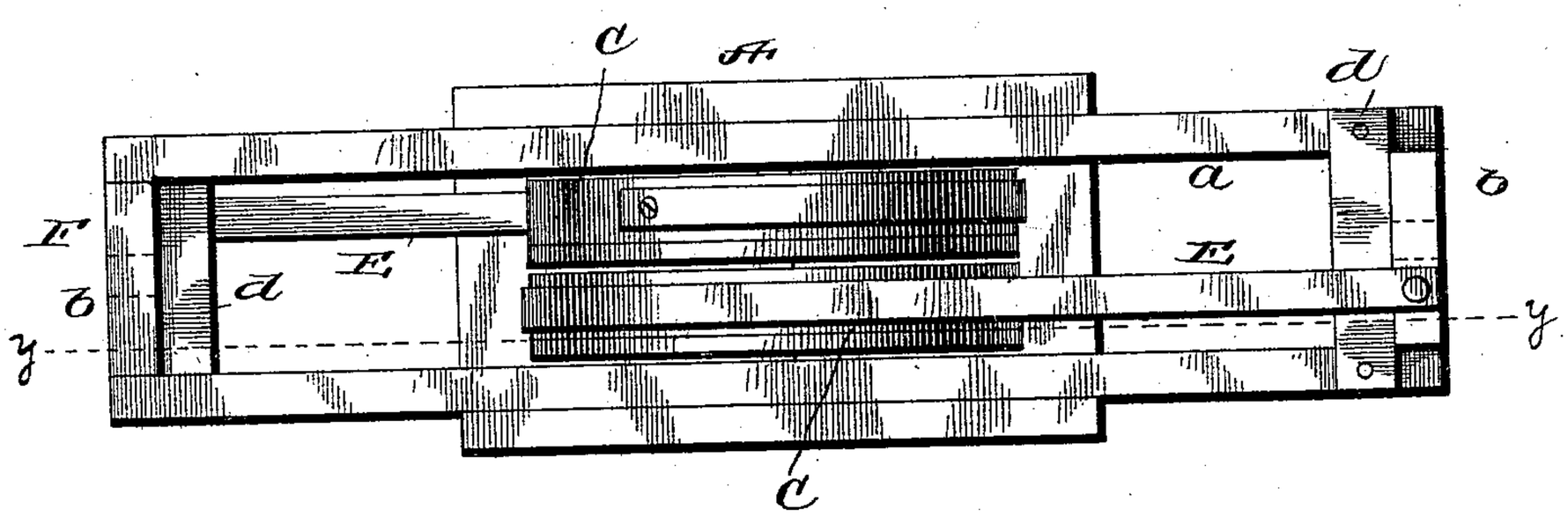


FIG 2



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(Model.) 2 Sheets—Sheet 2.

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Fig 3

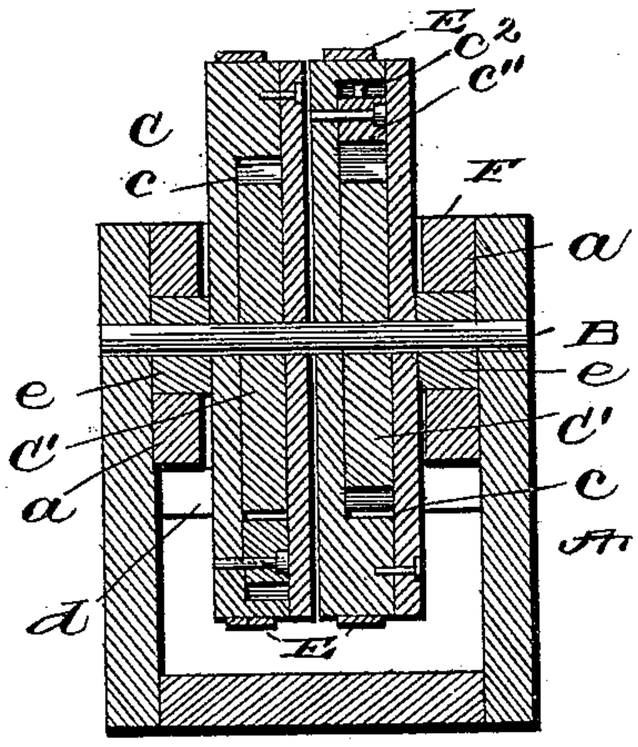
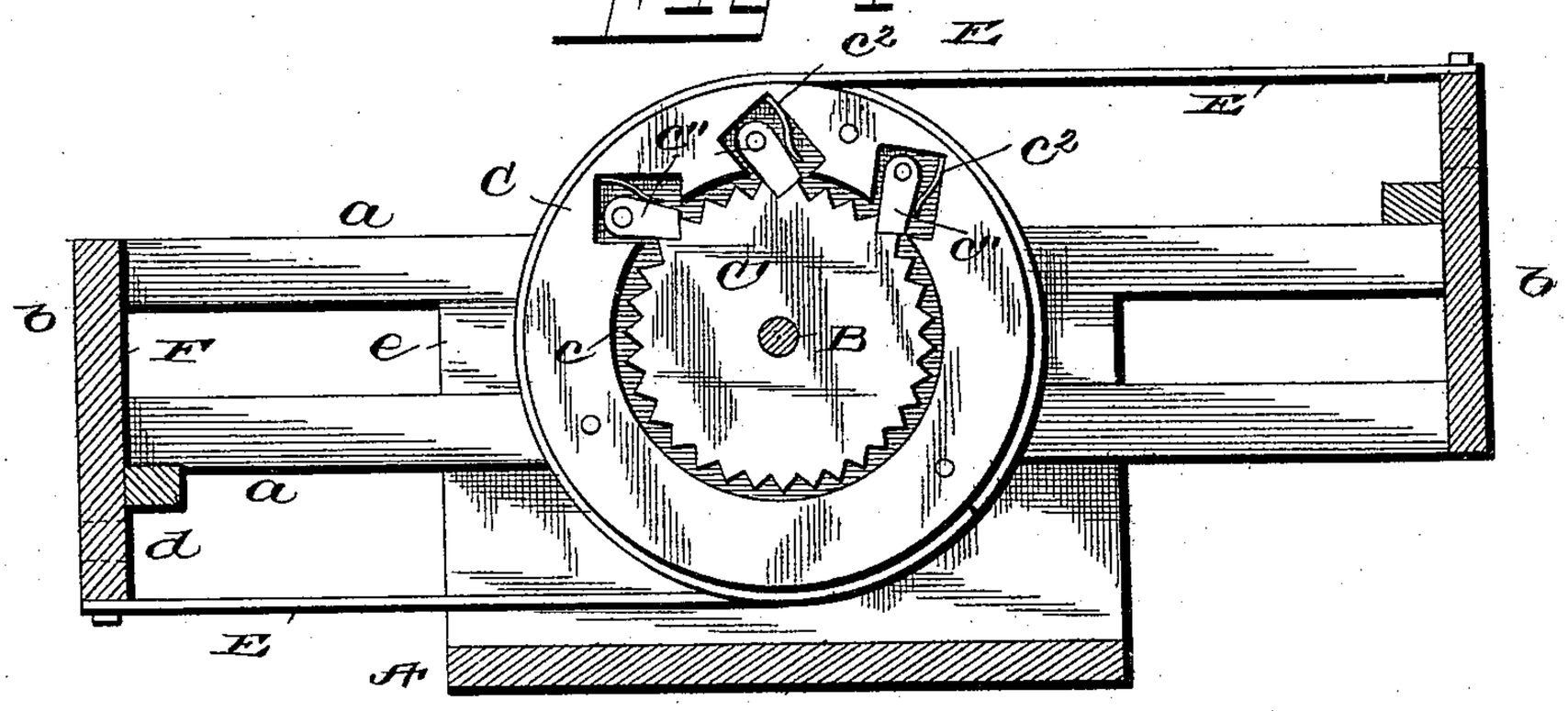


Fig 4



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UNITED STATES PATENT OFFICE.

JOHN L. WEAVER AND HENRY BRENCKE, JR., OF GEORGETOWN, TEXAS.

ATTACHMENT FOR MOTIVE-POWER MACHINES.

SPECIFICATION forming part of Letters Patent No. 477,391, dated June 21, 1892.

Application filed March 10, 1891. Serial No. 384,483. (Model.)

To all whom it may concern:

Be it known that we, JOHN L. WEAVER and HENRY BRENCKE, Jr., citizens of the United States, residing at Georgetown, in the county of Williamson and State of Texas, have invented certain new and useful Improvements in Attachments for Motive-Power Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

Our improved attachment for motors is designed to prevent the loss of leverage and power which ordinarily obtains in such motors and in all machinery where the power is taken from cranks, and also to overcome what is known as the "dead-center," and thus to greatly increase the power of the machine to which the attachment is applied; and it consists in the novel construction and combination of the parts, substantially as hereinafter more fully disclosed, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation for our improved attachments for motors. Fig. 2 is a plan view thereof. Fig. 3 is a central cross-section of the same; Fig. 4, a longitudinal section on the line *y y* of Fig. 2.

In the organization of our invention we support on a guide-platform A, by means of a journal B, the corresponding wheels C C, each wheel having rigidly secured to it an elastic metallic band or spring E, the other end of each band or spring being secured to opposite ends of the sliding frame F on the upper and lower sides thereof. Each wheel C has set in a circular groove or recess *c* therein a ratchet C′, fast to the journal or shaft B and which engages, preferably, a series of pawls *c″*, pivoted in recesses in the wheel and held by the action of springs c^2 in forcible engagement with the ratchet, said springs being secured to the said wheel and pressing upon said pawls.

The shaft or journal B in practice forms the driving-power or source thereof.

The guide-platform A has integral therewith or rigidly secured thereto the guide-bars *e e* for guiding the sliding frame F, as shown.

The sliding frame F consists of the four longitudinal bars *a a*, cast integral with or secured at their ends in any ordinary manner to its lateral braces *b b*, and said frame is additionally strengthened at each end by the cross-bars *d d*.

It will be understood that the guide A is—as, for instance, in a sewing-machine—secured to the supporting-frame, and the treadle connecting-rod connected in any suitable manner to the sliding frame F. It will therefore be seen that as the sliding frame is reciprocated by the action of the treadle connecting rod or pitman the springs, which are in their normal position when the wheels are central of the sliding frame, are alternately carried to each end of the sliding frame, and in this movement one of the springs E is alternately wound and unwound from its respective wheel C, and thus the wound-up spring has the same conserved force to unwind itself, and the operation is thus continually repeated and the excess of force employed is stored and economized upon the driving-shaft through the wheels C, and it is obvious that the dead-center is also overcome.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

The combination of the sliding frame, the support having upon its inner opposite sides guide-bars arranged between the side bars of said sliding frame, the driving-shaft mounted in said support, the wheels having pawl-and-ratchet connection with said shaft, and the spring-metal straps connected at diametrically-opposite points to said wheels and at opposite ends to the respective ends of said frame, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN L. WEAVER.
H. BRENCKE, JR.

Witnesses:
E. M. HARRIS,
G. W. PAYNE.