

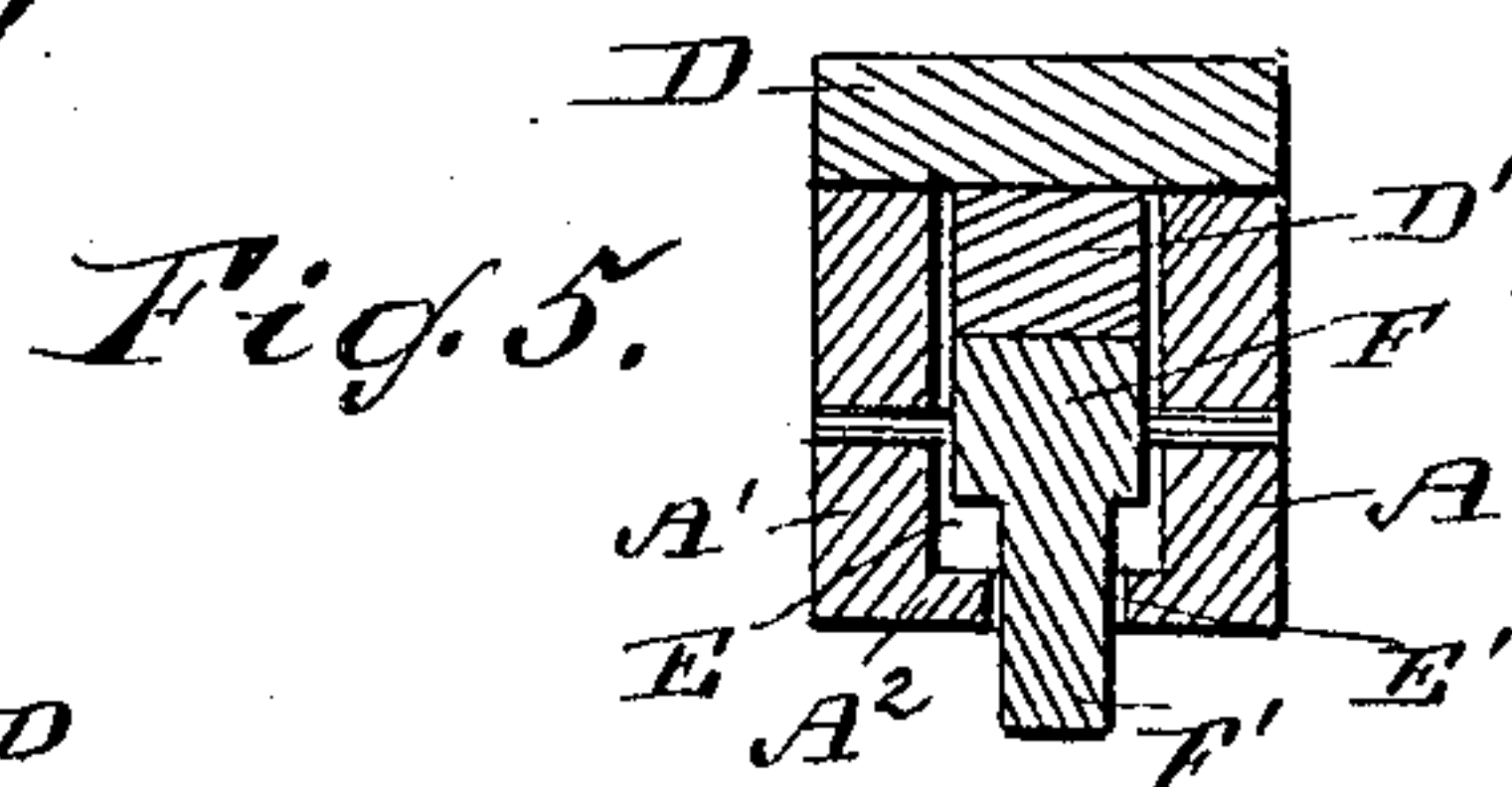
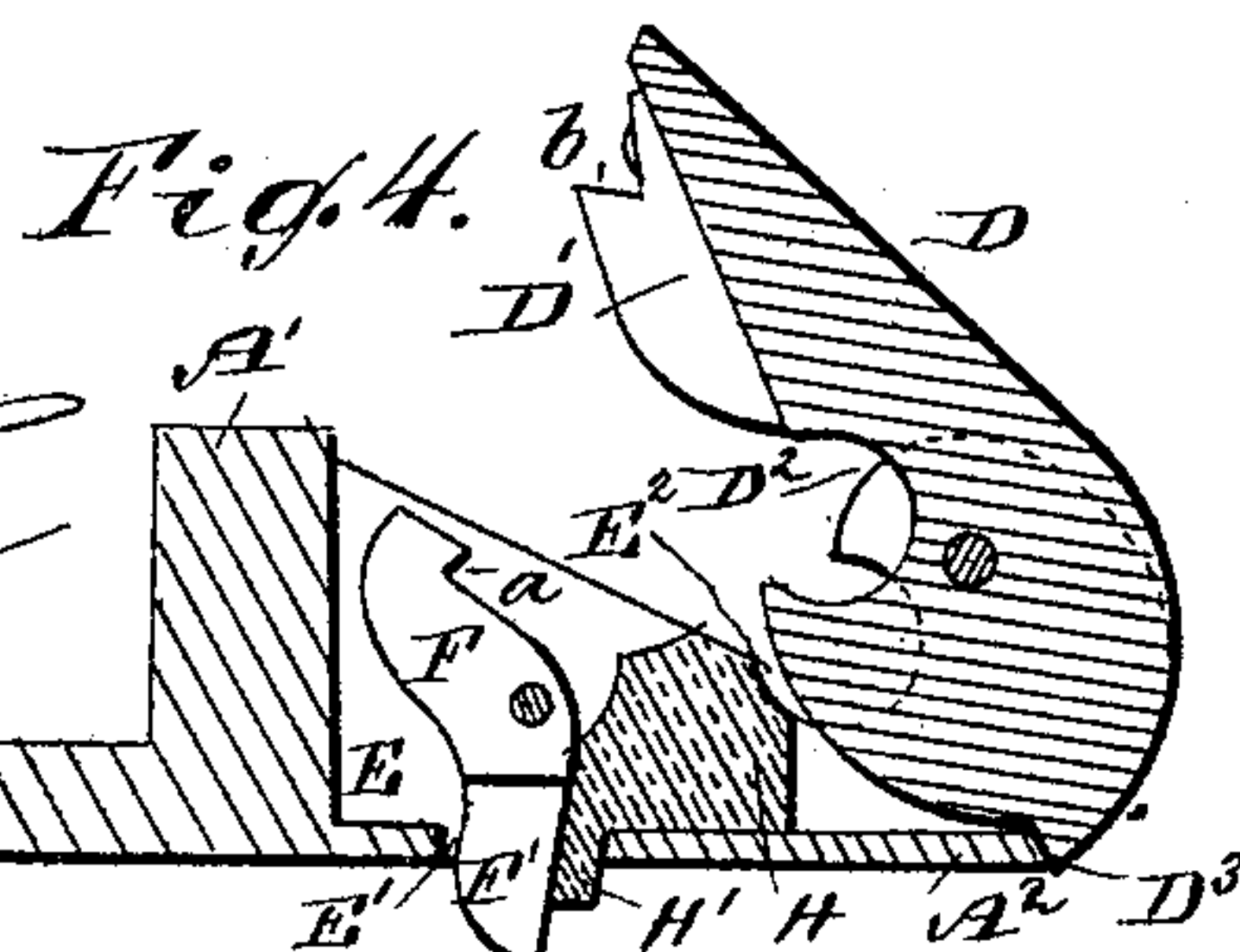
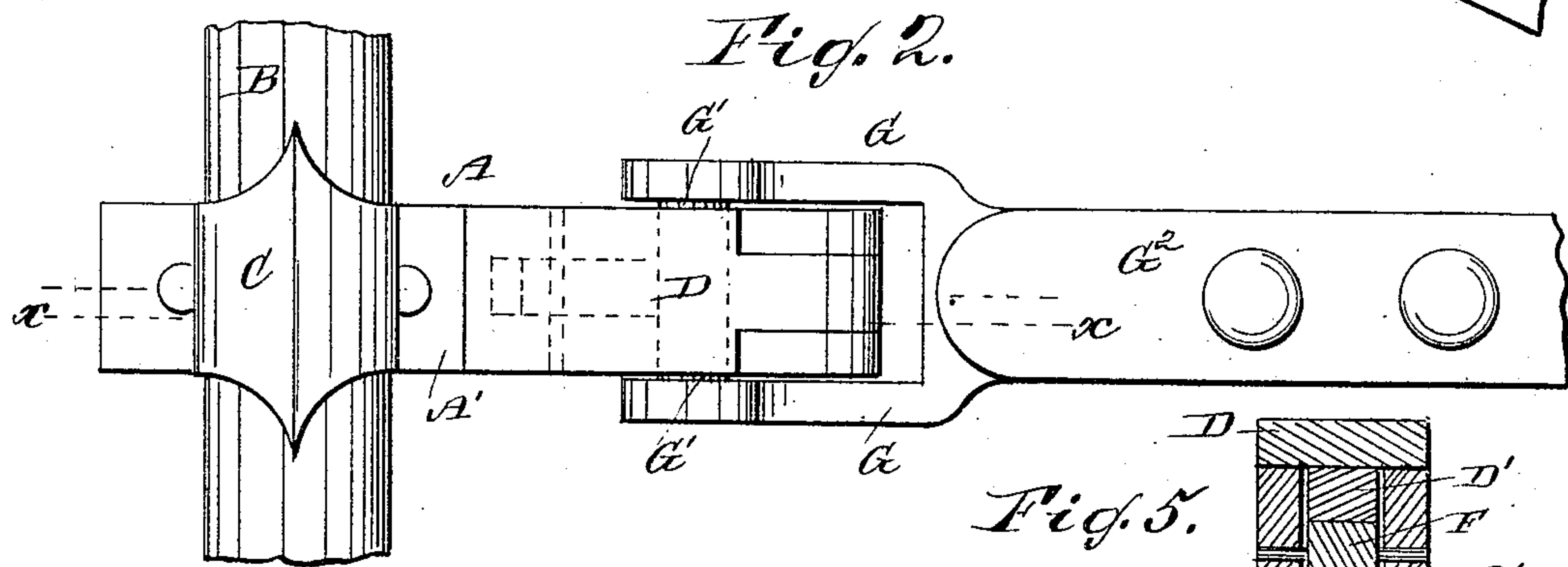
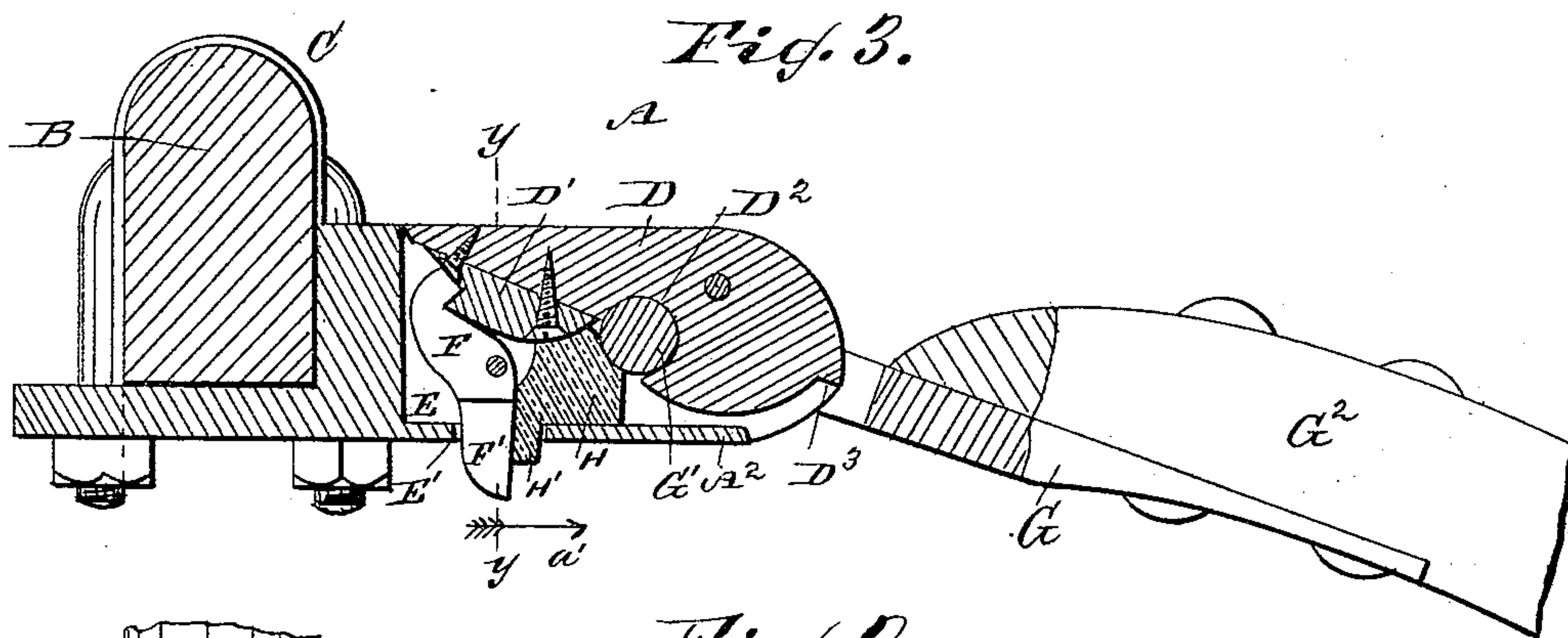
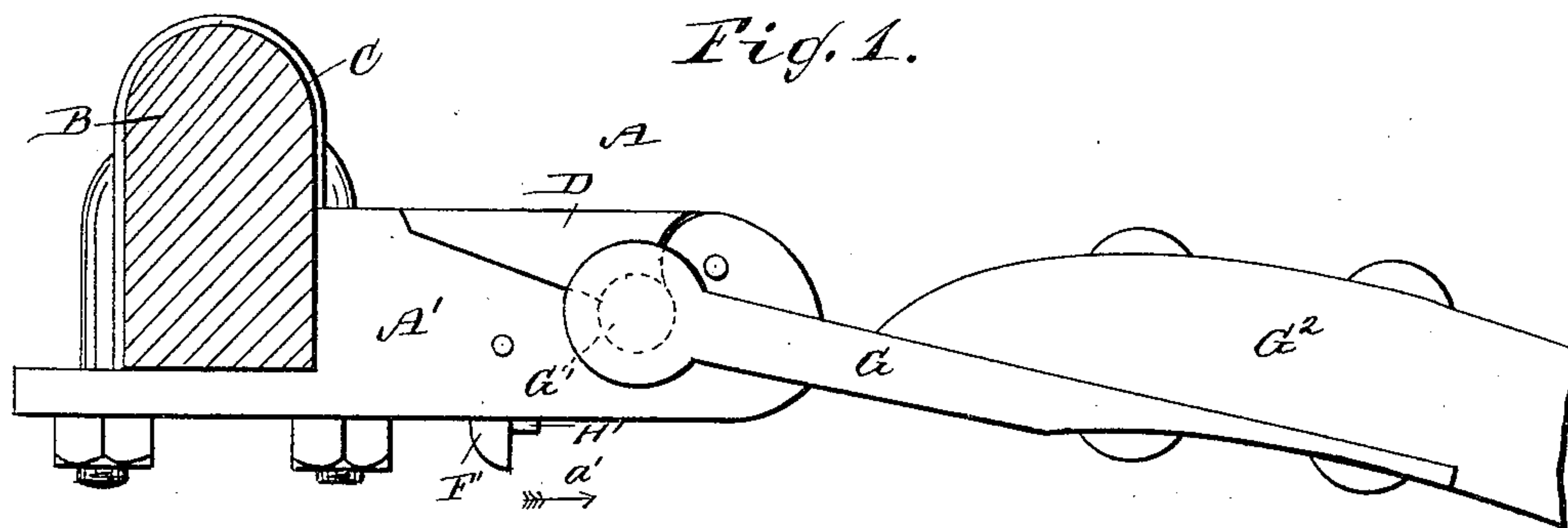
(Model.)

B. C. SMITH & C. W. PRIDE.

THILL COUPLING.

No. 328,726.

Patented Oct. 20, 1885.



WITNESSES:
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UNITED STATES PATENT OFFICE.

BENJAMIN CLARK SMITH AND CHARLES WILLIAM PRIDE, OF BOSTON,
MASSACHUSETTS.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 323,726, dated October 20, 1885.

Application filed April 11, 1885. Serial No. 161,973. (Model.)

To all whom it may concern:

Be it known that we, BENJAMIN CLARK SMITH and CHARLES WILLIAM PRIDE, both of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Thill-Coupling, of which the following is a full, clear, and exact description.

The object of our invention is to provide a new and improved thill-coupling which can be attached to any vehicle and which allows an easy coupling or uncoupling of the shaft, and which cannot become uncoupled when the vehicle is in motion, and which is neat and compact in construction.

The invention consists of the combinations of parts, including their construction, substantially as hereinafter fully set forth.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of our improved thill-coupling, showing the same attached to the axle of a vehicle and the shaft coupled. Fig. 2 is a plan view of the same. Fig. 3 is a longitudinal section on the lines *x x* of Fig. 2. Fig. 4 is a longitudinal section of the thill-coupling with the cover or lid open and the shaft removed, and Fig. 5 is a cross-section on the lines *y y* of Fig. 3.

The thill-coupling A is provided with a frame, A', which is attached to the axle B of the vehicle by the clip C, and is also provided with the cover or lid D, hinged to the front end of the said frame A'.

In a recess, E, in the top of the frame A' is pivoted the latch F, which is provided with a shoulder, *a*, and an arm, F', extending downward through an opening, E', in the bottom A² of the frame A' and below the same. The hinged cover D is provided on its inner under side with a catch, D', which is provided with a shoulder, *b*, which engages the latch F, and thereby locks the cover D to the frame A'.

The hinged cover D has a recess, D², to receive the bolt G', which is a part of the forked frame G, to which the shaft G² is fastened, and is also provided with a shoulder, D³, which strikes against the front end of the

bottom A² of the frame A' when the cover is opened, as shown in Fig. 4, and thereby preventing any further opening. A recess, E², similar to the recess D², is formed on each side of the frame A', the said recesses D² and E² forming, when the lid is closed, a complete opening for the bolt G'. An irregular-shaped piece, H, of rubber is placed in the recess E of the frame A', which has a lip, H', placed against the arm F' of the latch F, and projects downward through and fills the remaining part of the opening E' in the bottom A² of the frame A'. The upper part of the rubber H presses against the catch D' when the cover D is closed against the bolt G' of the forked shaft-frame G when the same is coupled in the frame A'. The rubber H thereby acts as a spring pressing against the latch F, the catch D', and the bolt G', and whereby all rattling of any of these pieces is prevented when the vehicle is in motion.

The coupling or uncoupling of the shaft G² is accomplished as follows:

To couple the shaft G² to the frame A', it is necessary to raise the hinged cover D to the position as shown in Fig. 4, which is done by exerting a pressure in the direction of the arrow *a'* against the arm F' of the latch F, whereby the latter disengages the catch D' and unlocks the hinged cover D from the frame A', and the said cover D can then be swung upward to the position as shown in Fig. 4. The bolt G', attached to the forked shaft-frame G, is then placed in the recess D² of the hinged cover D, and the latter pressed downward until the catch D' strikes against the latch F and forces it back until the notches *a* and *b* engage each other and thereby lock the cover D and bolt G' to the frame A'. The rubber H being depressed during this operation, acts as a spring against the latch F, the catch D', and the bolt G'.

To uncouple the shaft G² from the coupling A, the operation as before described for unlocking the cover D from the frame A' is repeated, and the cover D swung upward to the position as shown in Fig. 4, and the bolt G' lifted from the recess D² in the cover D.

Having thus described our invention, what

we claim as new, and desire to secure by Letters Patent, is—

In a thill-coupling, the frame A', having a recess, E, the bottom plate, A², having an
5 opening, E', the pivoted latch F, having a shoulder, a, the arm F', and the rubber H, provided with the lip H', in combination with the hinged cover D, having the recess D², and

the shoulder D³, the catch D', having a shoulder, b, substantially as shown and described. 10

BENJAMIN CLARK SMITH.
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Witnesses:

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