

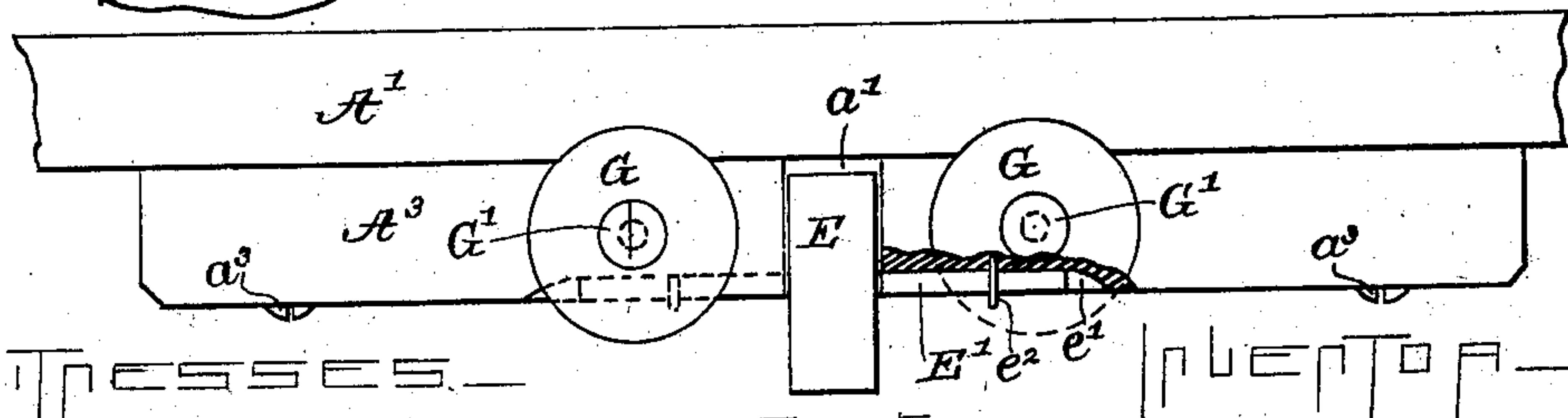
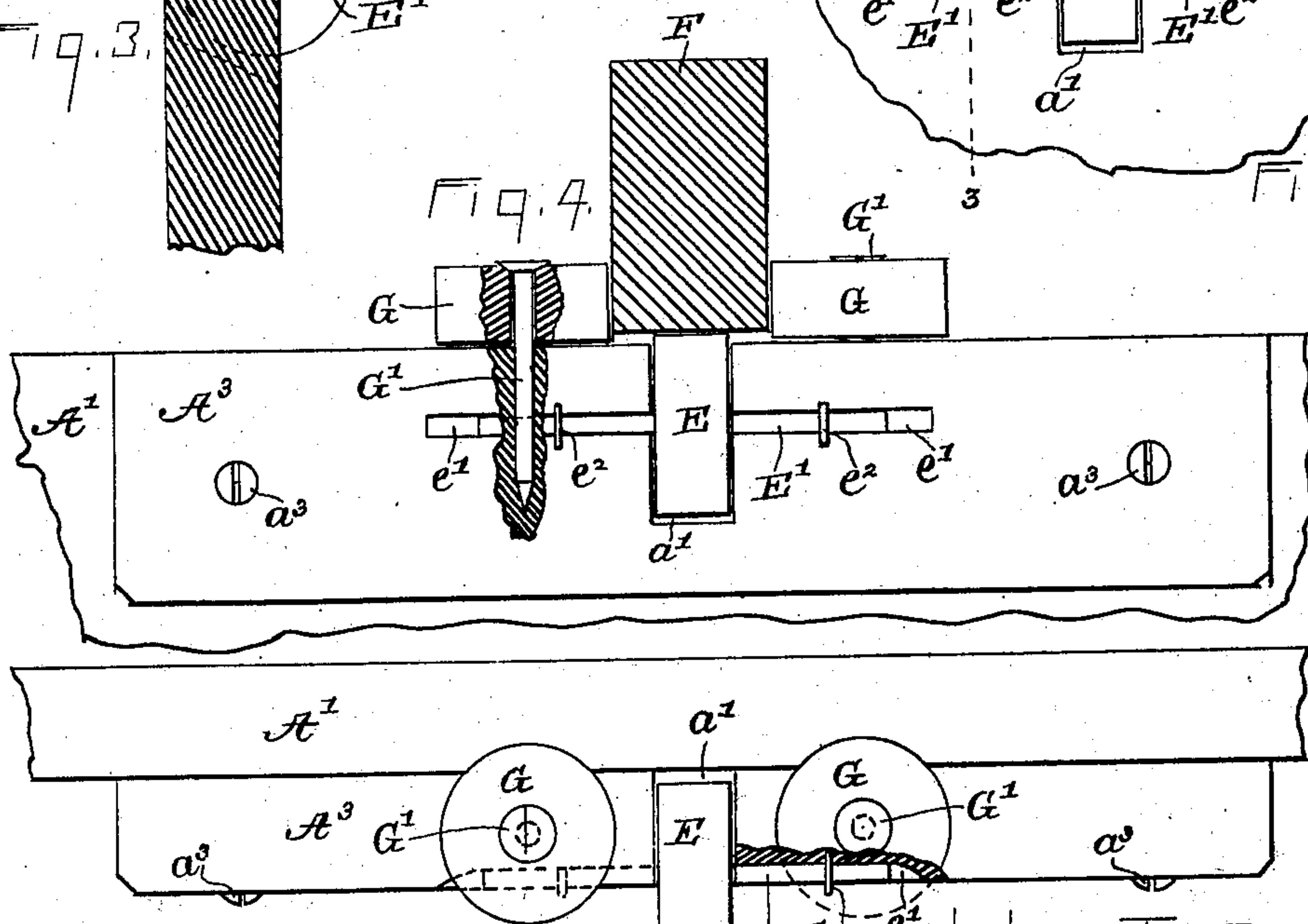
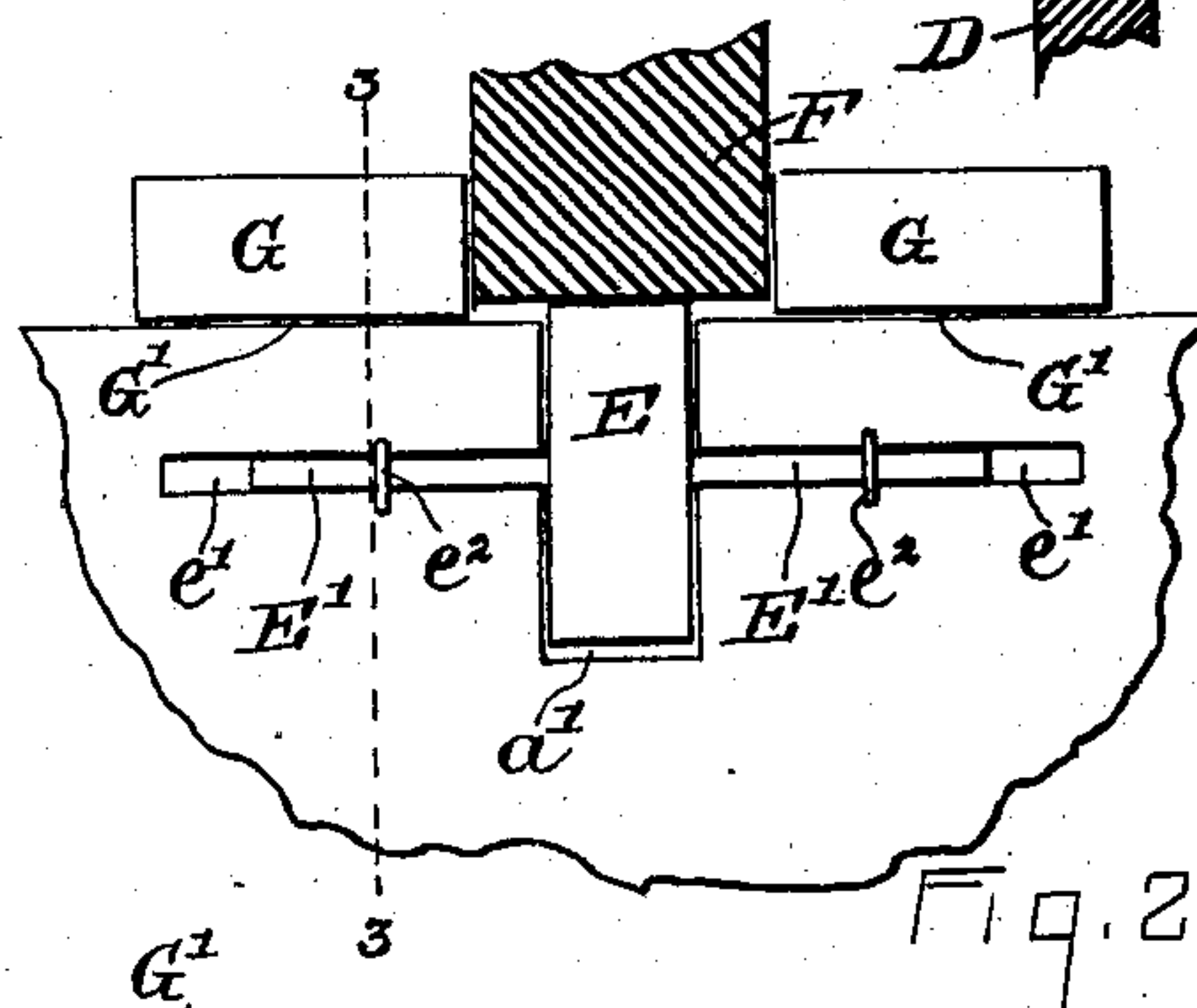
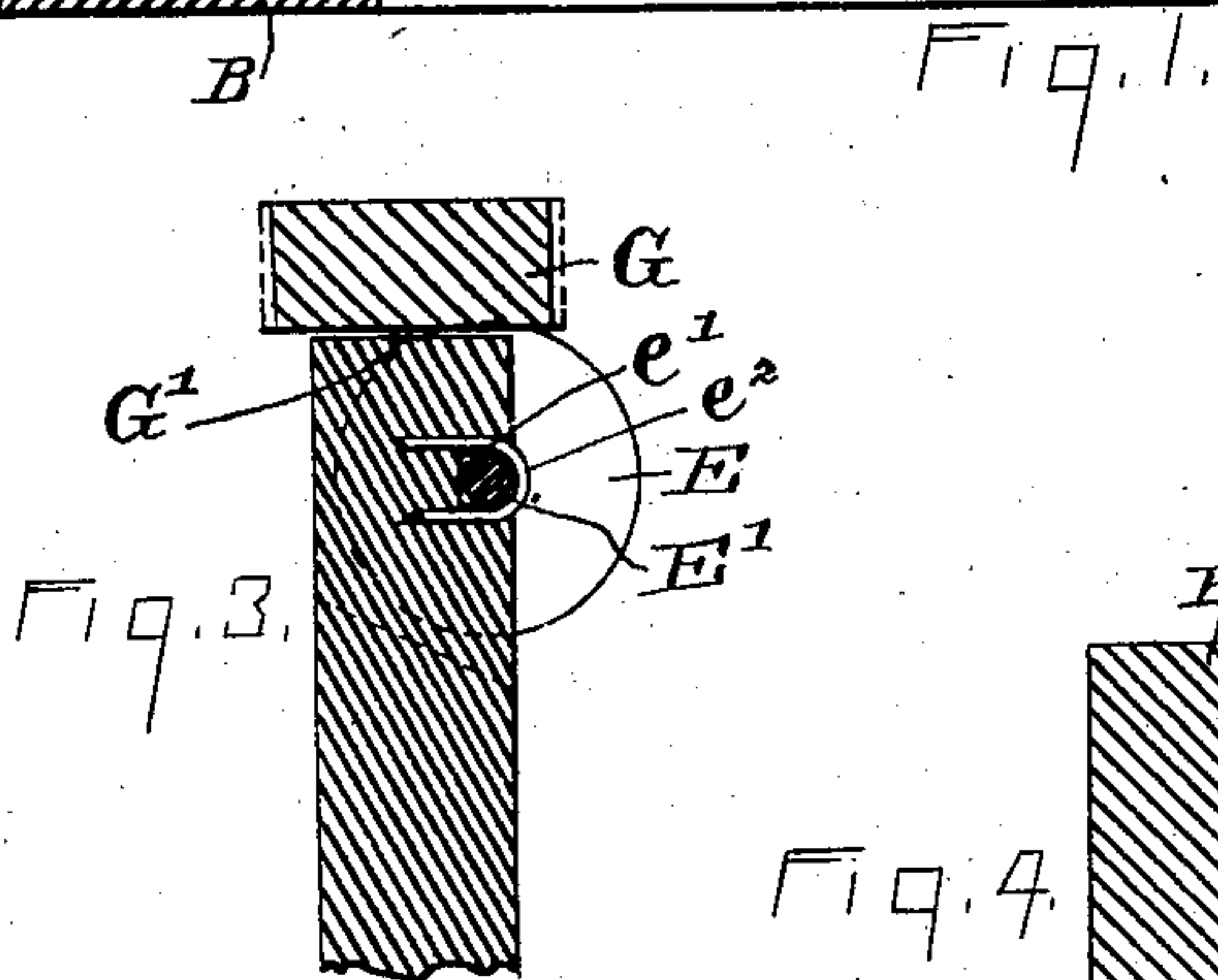
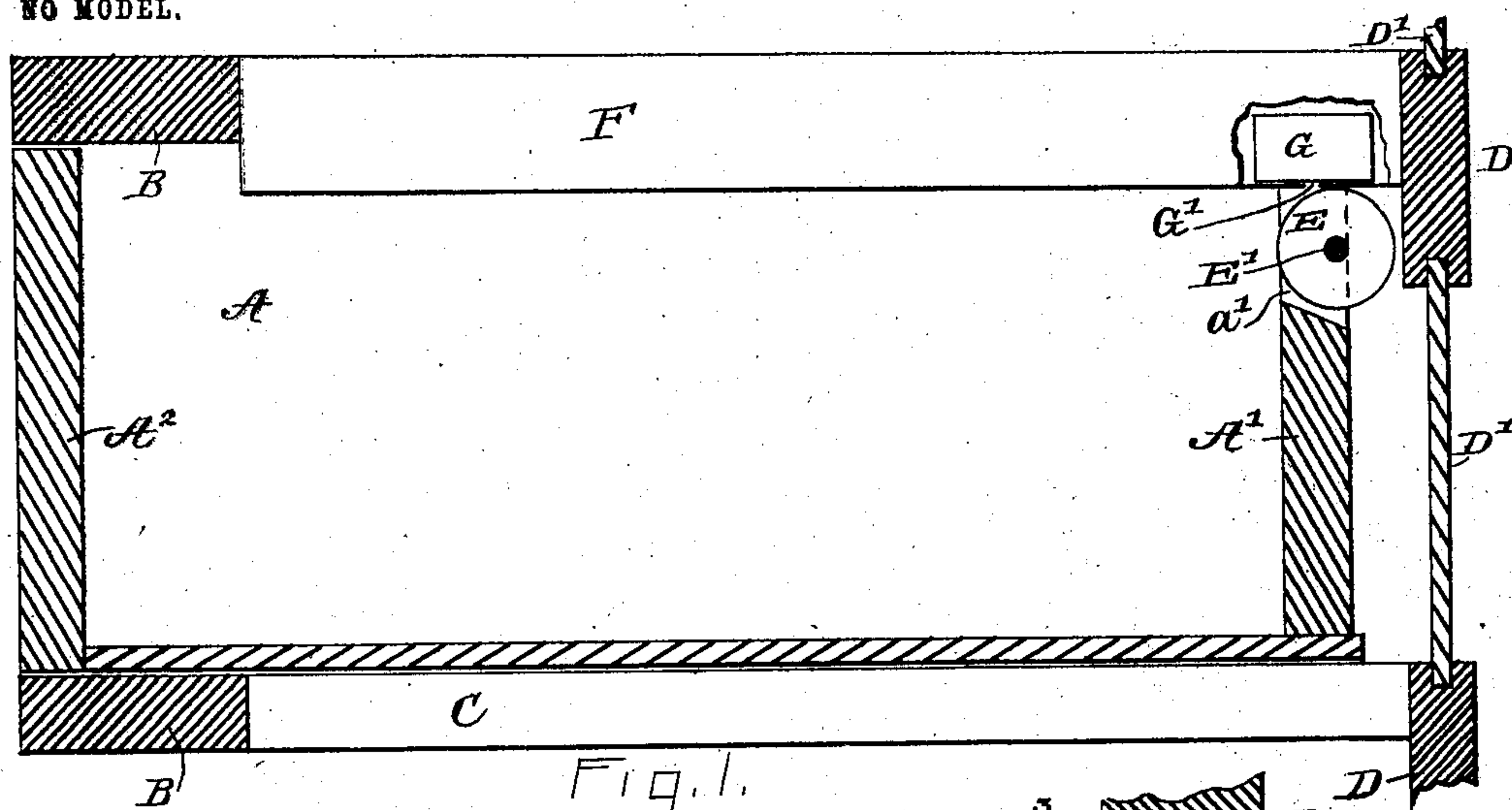
No. 742,132.

PATENTED OCT. 20, 1903.

J. SCHAAD.
DRAWER GUIDE.

APPLICATION FILED JAN. 28, 1903.

NO MODEL.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN SCHAAD, OF KNOXVILLE, TENNESSEE.

DRAWER-GUIDE.

SPECIFICATION forming part of Letters Patent No. 742,132, dated October 20, 1903.

Application filed January 26, 1903. Serial No. 140,475. (No model.)

To all whom it may concern:

Be it known that I, JOHN SCHAAD, a citizen of the United States, residing at Knoxville, in the county of Knox and State of Tennessee, have invented a new and useful Improvement in Drawer-Guides, of which the following is a specification, reference being had to the accompanying drawings.

The object of my improvement is to provide the drawers of bureaus, desks, and similar pieces of furniture with antifriction devices for preventing the binding of the drawers while being opened or closed. It is the purpose of said devices to prevent the drawer from turning laterally out of parallel with the space in which the drawer normally rests and also to prevent the rear upper portion from binding when the drawer has been partially opened and the front part of the drawer bears downward and the rear portion is raised, the drawer resting pivotally upon the front rail.

My invention is specially designed to afford simple and economical means for forming said guides.

The present invention is an improvement upon the construction described in Letters Patent of the United States No. 710,523, granted to me October 7, 1902.

In the accompanying drawings, Figure 1 is a vertical transverse section through a drawer embodying my improvement. Fig. 2 is an enlarged fragmentary rear elevation of the drawer shown in Fig. 1. Fig. 3 is a section on the line 3-3 of Fig. 2. Fig. 4 is a rear elevation, and Fig. 5 is a plan, of a modification in which the guide-rollers are secured to a block and the block is secured to the rear face of the rear wall of the drawer.

Referring first to Figs. 1, 2, and 3, A is the drawer. B B are the horizontal front rails located above and below the drawer-compartment. C is one of the horizontal end rails upon which the drawer rests. D D are back rails, and D' D' are panels filling the spaces between the back rails D. Said rails D and panels D' together form the rear wall of the drawer-compartment. Obviously said rear wall may be formed in any suitable manner, or it may be incomplete or altogether omitted, according to the nature of the article of furniture.

A' is the rear wall of the drawer. The upper edge of this is preferably lower than the upper edge of the front wall A². At its middle the rear wall A' has a transverse vertical recess or notch a' cut into its upper edge of suitable width and depth to receive the vertical roller E, which is suitably journaled, as by a horizontal axle E', said axle being secured upon or in the rear face of the drawer, preferably by forming a horizontal saw-cut e' of proper width and depth to receive said axle. Said axle may be a piece of wire or a nail and may be secured by staples e². Said roller E is preferably of small enough diameter to avoid extending through the notch a' into the drawer, and the axle E' is preferably located just high enough to make the upper portion of said roller reach slightly above the upper face of the rear wall of the drawer and against or nearly against the lower face of the guide-rail F. Located directly over said roller E is a horizontal guide-rail F, secured in any suitable manner, as by the attachment of its ends to the adjacent front and back rails. The lower edge of said guide-rail almost touches said roller and is adapted to receive contact from the latter when the drawer is being pulled out or tilted upward at the rear.

On each side of the guide-rail F a horizontal roller G is mounted upon the upper edge of the rear wall of the drawer, a suitable vertical post or axle G' extending centrally through each of said rollers. Said rollers are placed so near the adjacent faces of said guide-rail as to cause engagement between said rollers and said faces when the drawer shifts laterally to a slight extent. Thus the usual binding of the drawer at its ends when moved out of parallel by moving one end in or out in advance of the other end is prevented. The lateral movement of the drawer is prevented by said rollers, and, furthermore, binding on the guide-rail is prevented by the ready rotation of the roller G, which is brought into contact with said guide-rail. The attachment of said guide-rail is easily made by cutting it of proper length to extend across the space between the front and back rails. The attachment of said antifriction-rollers is simply and economically accomplished. The notch a' may be readily cut

out of one board or simultaneously cut out of a number of boards clamped together.

By placing the axle E' against or into the vertical face of the rear wall of the drawer instead of into recesses cut down through the upper face of the drawer, as described in my said Letters Patent, the labor is lessened and the entire upper face of the drawer-wall is left clear and free for the application of the horizontal rollers G, and the axle E' may be made of any desired length without interfering with the vertical posts or axles G', which support the two horizontal rollers G, and it is unnecessary to fill recesses in the upper face of the rear wall of the drawer preparatory to attaching the rollers G. It will be observed that under this construction the guide-rail F may be narrowed as much as desired and the rollers G brought correspondingly near to each other.

In Figs. 4 and 5 a block A³ is secured to the rear face of the rear wall A' of the drawer, the upper edge of said block being flush with the upper edge of said wall, and the rollers E and G are secured to said block precisely as they are secured directly to said wall in Figs. 1, 2, and 3. Said block A³ may be secured to said wall by screws a³ or in any suitable manner. These blocks A³ may be made separately from the drawers and have the rollers attached by the use of special machines and applied to the drawers after the latter are otherwise completed. The block A³

is to be regarded as a part of the wall A' of the drawer after said block has been secured to said wall. Said blocks may be of wood or metal and may be varied in form.

I claim as my invention—

1. The combination of a drawer, the rear wall of which has a transverse notch in its upper portion, a vertical roller located in said notch and having its axle secured to one of the vertical faces of said wall, two horizontal rollers secured to the upper face of said wall, one at either side of said vertical roller, and a guide-rail.

2. The combination of a drawer comprising a block applied to the rear wall of said drawer so as to constitute a part of said wall, said block having a transverse notch in its upper portion, a vertical roller located in said notch and having its axle secured to one of the vertical faces of said block at a proper elevation to bring the upper portion of said roller approximately into line with the upper face of said block, two horizontal rollers secured to the upper face of said wall, one at either side of said vertical roller, and a guide-rail.

In testimony whereof I have signed my name, in presence of two witnesses, this 12th day of January, 1903.

JOHN SCHAAD.

Witnesses:

ERNEST KOELLER,
JOHN ROTACH.