

No. 668,870.

Patented Feb. 26, 1901.

J. H. CARVER.
PAPER WEIGHT AND CHART CASE.

(Application filed June 22, 1900.)

(No Model.)

Fig. 1.

Fig. 4.

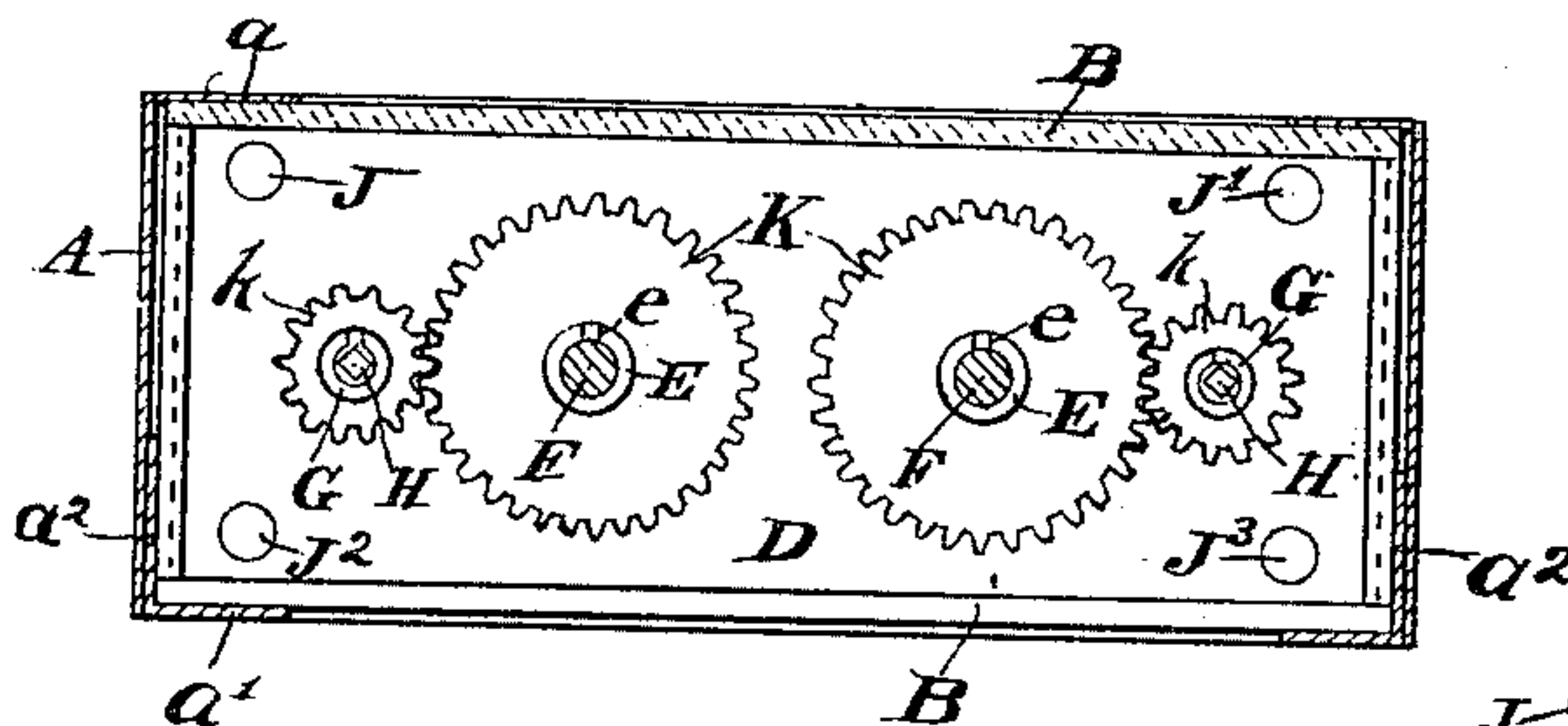
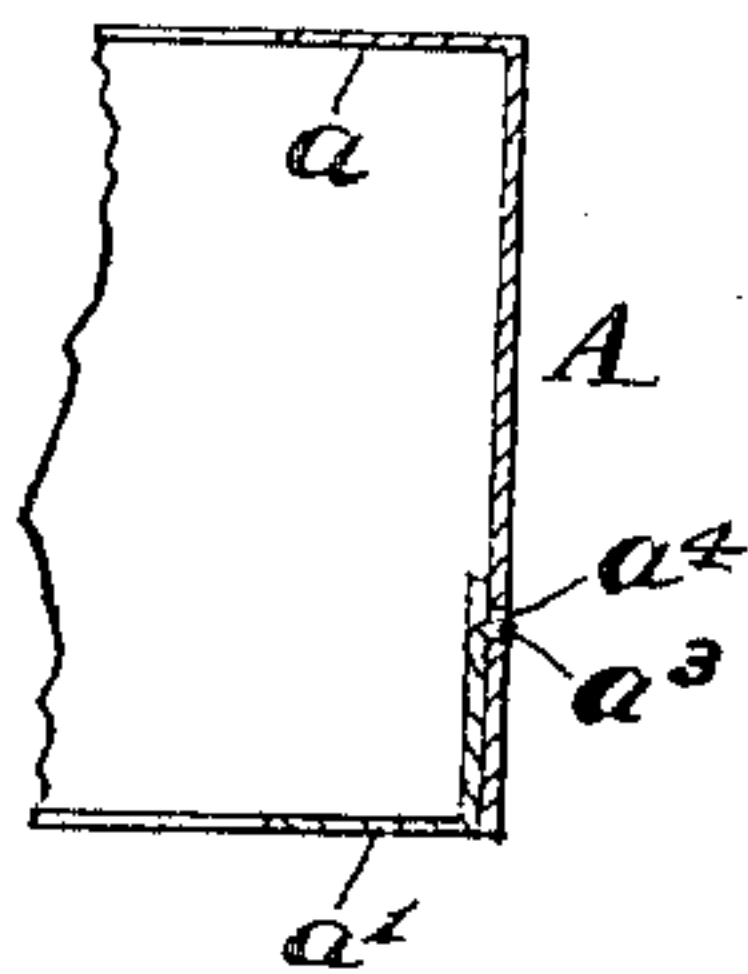


Fig. 5.



Fig. 2.

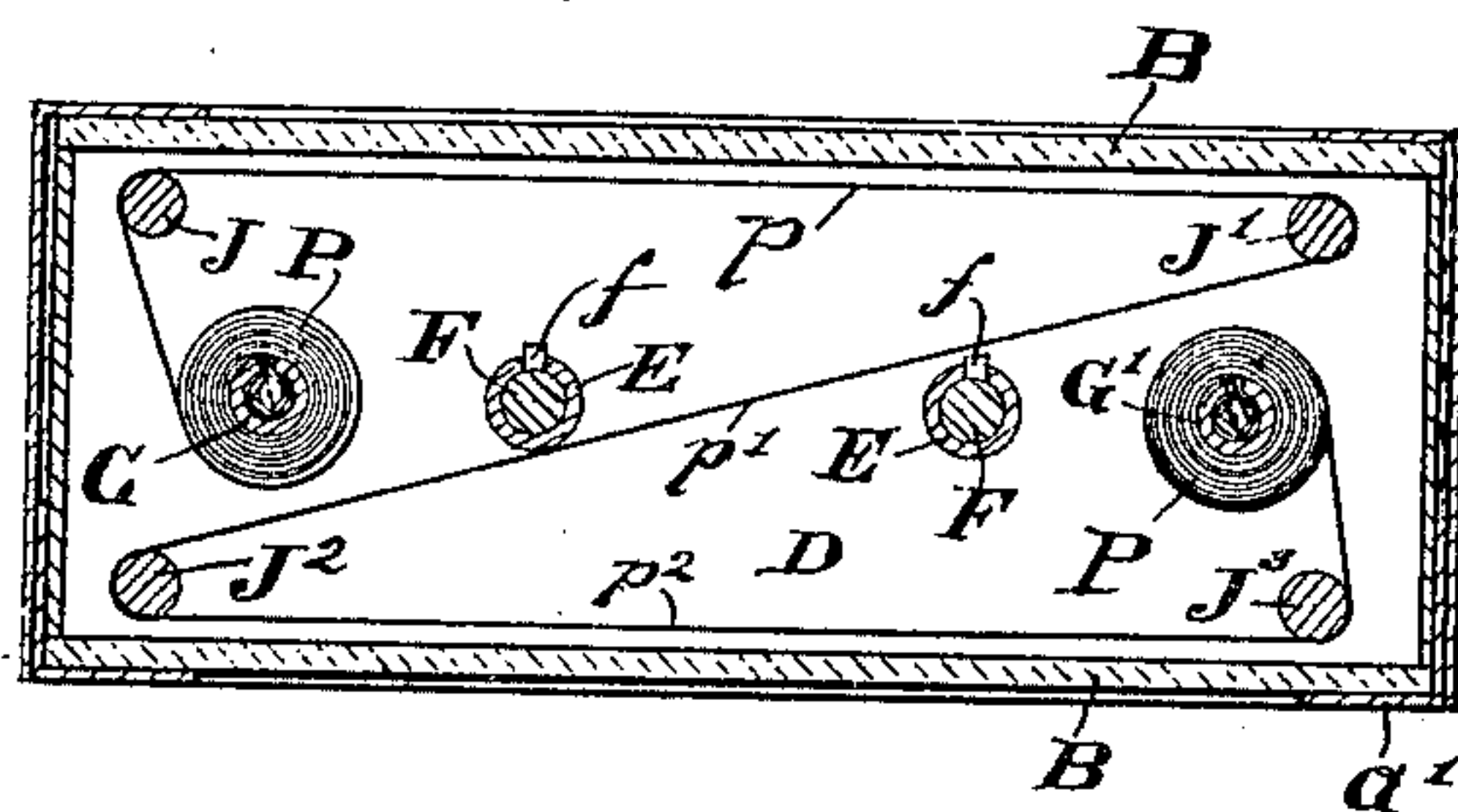


Fig. 6.

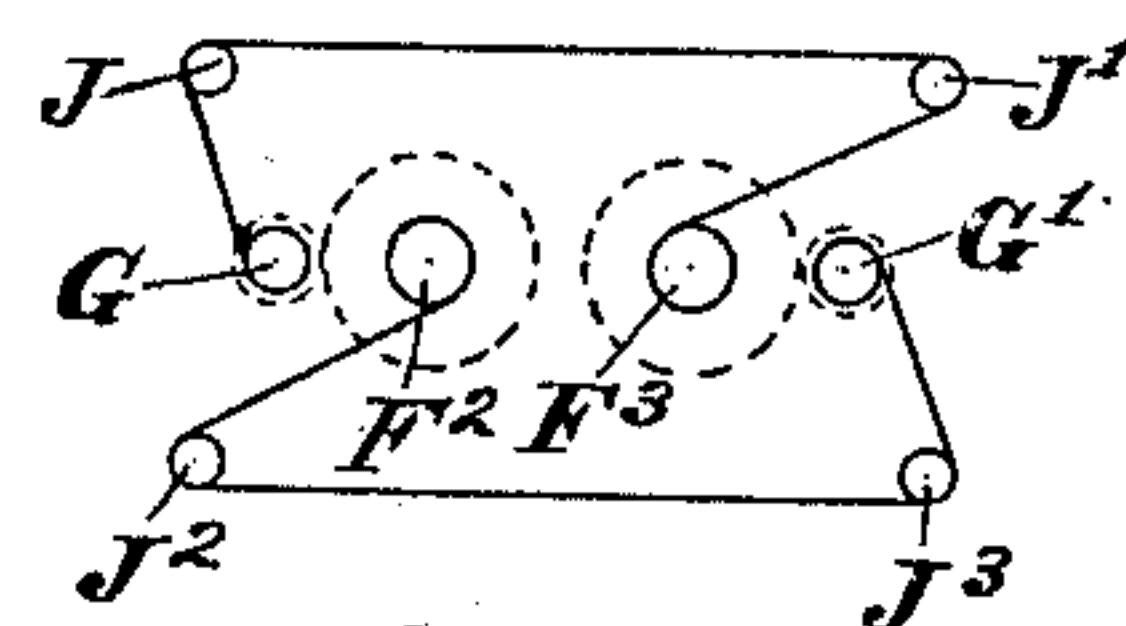
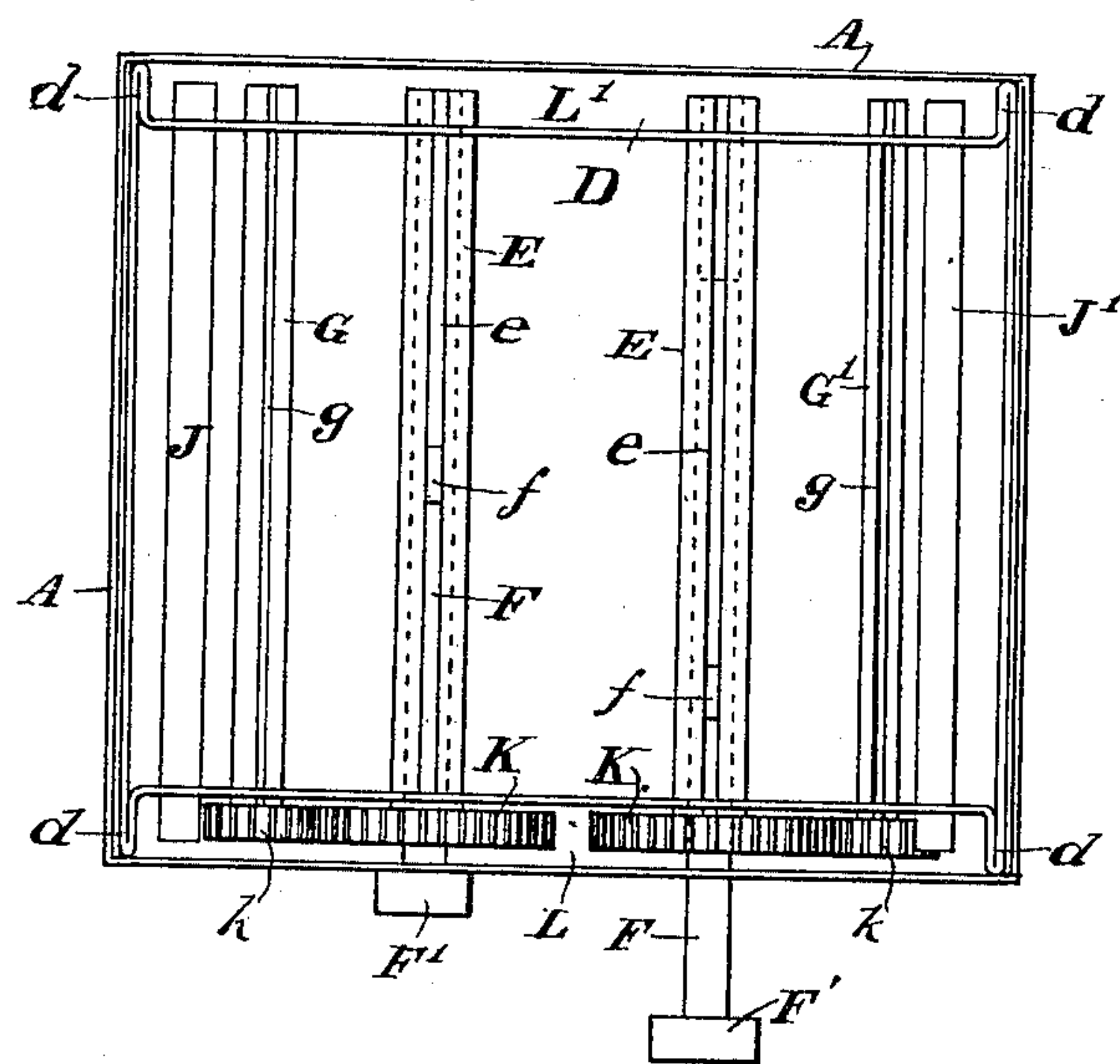


Fig. 3.



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UNITED STATES PATENT OFFICE.

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PAPER-WEIGHT AND CHART-CASE.

SPECIFICATION forming part of Letters Patent No. 668,870, dated February 26, 1901.

Application filed June 22, 1900. Serial No. 21,216. (No model.)

To all whom it may concern:

Be it known that I, JACOB H. CARVER, a citizen of the United States, and a resident of New York city, borough of Manhattan, in the county of New York and State of New York, have invented a new and Improved Paper-Weight and Chart-Case, of which the following is a full, clear, and exact description.

My invention relates to an improvement in chart-cases and is also designed for use as a paper-weight. It comprises certain novel parts and combination of parts, which will hereinafter be particularly pointed out in the claims.

In the drawings accompanying herewith and forming a part of the specification similar letters of reference indicate the same parts in the various figures.

Figure 1 is a sectional elevation of my device, taken just within one side of the casing. Fig. 2 is a sectional elevation taken through the middle of the case. Fig. 3 is a plan view with the chart or belt removed. Fig. 4 is a detail showing one means for fastening the bottom in the case. Fig. 5 shows in detail the manner of securing the chart or belt to the rollers. Fig. 6 shows diagrammatically a different manner of placing the webs, but using the same mechanism, two webs being used instead of one.

The object of my invention is to provide a convenient and cheaply-made case for holding a roll of paper which shall contain thereon any matter which it is desired to make available for quick and convenient reference. This object is secured by means a preferred form of which is herein described. I do not, however, wish to limit myself to a construction exactly as herein shown in all respects, as details thereof might be considerably changed without departing from the spirit of my invention.

The case within which the paper roll or chart and the means for shifting it so as to bring any part thereof desired into view are placed, as herein shown, consists of a main portion A, made in the form of a box without either top or bottom except for inwardly-projecting flanges a around one edge, a skeleton cover a' a^2 , which is angle-shaped in cross-section and fits within the main portion, and

the glass plates B B, which lie within the flanges a a' . An additional skeleton cover may, if desired, be used instead of the flange a .

The frame which contains the mechanism for holding and manipulating the roll is herein shown as made of a single bar or strip D, which is bent and perforated so as to provide suitable support for the various rolls and shafts and to fit snugly within the case. At the corners of the case this strip is bent upon itself forming arms or projections d , which hold two sides of the frame—those at the top and bottom of Fig. 3—away from the corresponding side of the case, thus forming recesses or pockets L L', adapted to receive the projecting ends of the rolls and the gears used. It is obvious, however, that the frame may be made of several pieces properly secured together or of a single piece otherwise shaped; but it should furnish suitable supports removed sufficiently from two opposite sides for the reception of the various rolls and shafts. Journaled in these two opposite sides are the two rolls G G', to which opposite ends of the paper P are secured, and the shafts and rolls necessary to turn the paper-rolls and to guide it in its proper course. In Fig. 2 the paper is shown as wound in about equal amounts upon the two rolls G G'. The course of the web P from the left-hand roll in Fig. 2 is first upward and about a guide roll or bar J, thence just within the upper glass cover B to and about a similar guide roll or bar J', and thence in succession to and about the two guide rolls or bars J² and J³, which guide it just within the other glass plate B, so as to expose the other side of the paper, which is then rolled upon the other roll G'. This course of the paper exposes both sides of the paper, one at each side of the case. The two rolls G G' each have a pinion k secured to one end and outside the frame D or within the pocket L. Two gears K mesh one with each of the pinions, said gears being secured to hollow shafts E, journaled in the frame D. These shafts besides being hollow have slots e in one side adapted to receive fins or keys f upon rods F, which fit and slide within the shaft E. The outer case A has holes permitting these rods to project from the case. As a matter of convenience these rods are shown as having heads or knobs F',

by which they may be readily turned by hand to thus turn the gears K K and the rolls G G' to wind the paper upon either one desired.

The paper may be secured to the rolls G G' in any desired manner. I have shown a preferred means for securing the paper, which is shown more in detail in Fig. 5. In this construction the rolls are made in the form of a tube which has a slot *g* extending along one side to the end. Within this tube is a bar H, which is herein shown as square in cross-section. In putting the paper in place the roll G is removed from its bearing in one side of the frame and raised, so that the bar H may be removed from within the roll, the end of the paper being then passed about the bar H. The bar H is then inserted within the roll G, the paper passing into the slot *g*. It is thus securely held in place, but may be easily removed, if desired.

The removable bottom or cover, whichever it may be considered, is herein shown as fitting within the body of the case A and secured in place by having a slightly-projecting tongue *a*³ formed upon two or more of the peripheral flanges *a*² and entering holes *a*⁴, formed in the side of the case, as shown in Fig. 4. Any other means for suitably holding this cover in place may, however, be adopted, the above being given as an illustration of a desirable means and one which enables the cover to be removed and then securely replaced whenever desired.

The glass plates B B are held in place between the inner surfaces of the flanges *a* *a*' and the outer edges of the frame D. The rods F, by which the rolls are turned, are intended to be normally inserted within the shafts E; but when one is to be used it may be drawn out where it may be more readily turned. In Fig. 3 one is shown in each position. The keys or fins *f* should be long enough to prevent the rods F from being drawn entirely out of the shafts E.

In using my device one or the other of the shafts E is turned, thus winding the web upon the roll G, which is connected therewith, and unwinding it in corresponding amount from the other roll G'. This causes the web to travel beneath the glass plate. By turning the other rod F the web may be caused to travel in the other direction. By reversing the position of the case the opposite side of the web may be examined. It is thus possible to print matter upon both sides of the web and to thus double the capacity of the device. The matter printed upon the web may be any matter to which it may be desirable to refer. The web may also be of paper, cloth, or other suitable material.

In Fig. 2 a single web is shown, which has sections *p*¹ and *p*² exposed in front of the two windows, these sections being connected by a diagonal section *p*³, by which arrangement both sides of the web are exposed, one being shown at each window, and the web when

moving is traveling in the same direction at each window. With this arrangement both sides of the web may be printed and exposed to view.

In Fig. 6 an arrangement is shown by which with the same mechanism two webs are used, and the webs are printed on one side only. In this arrangement the two shafts F² F³ are used to roll the web upon, and the web from the roll G, after passing over the guide-rolls J J', is led to and around the shaft F³, while the web from the roll G', after passing over the guide-rolls J³ and J², is led to and about the shaft F². With this arrangement there will at times be a certain amount of slack in the webs; but this will not ordinarily cause any trouble, as it will mostly, if not entirely, be accommodated by the expansion or loosening up of the roll which is turning at an excess speed.

The whole device is a very convenient and cheap means of large capacity for making conveniently available any sort of chart, table, or other matter. In small sizes it also forms an attractive paper-weight, and in large sizes it might be used to hold maps or works of reference, which would then be printed or mounted upon a large belt. For public libraries and large offices, where such things are often referred to, it would render them accessible without any restraint and yet prevent their being damaged by handling.

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

1. A chart-case comprising a case having windows upon two sides, one of said sides being removable and constituting a cover, a removable frame fitting within the case, glasses held in position before the windows by engagement of said frame, two rolls journaled in the frame, a web or band having its ends secured to said rolls, means for turning either roll to wind the band thereon, and means for reversing the exposed surface of the band in its passage from one window to the other.

2. A chart-case having a window, a frame fitting within the case and having two sides offset inwardly, a glass held before the window between the frame and case, two rolls journaled in the case, a gear-train connected with each roll and lying between the offset side of the frame and the side of the case, a telescopic shaft for the driving member of each gear-train, one member of the shaft being adapted to project from the case, and a web or band having the chart thereon and connected with the rolls.

3. A chart-case having two opposite windows, a frame fitting within the case and having two opposite sides offset, glasses between said frame and the windows, two rolls journaled in the offset sides of the frame, means for turning said rolls, a web or band having its ends secured to said rolls, and guide-rolls journaled in the same sides of the frame and

adapted to convey the web in succession before each window and with both sides moving in the same direction.

4. A chart-case having a removable cover, windows formed in said cover and in the side opposite, a frame fitting snugly in the case, glasses loosely lying before the windows and held in place by engagement with frame and case, and means carried by said frame for supporting and guiding a web before both windows.

5. A chart-case having a removable cover provided with a window, a removable frame fitting snugly within the case, a glass fitting the case and held in place before the window by contact with the adjacent sides of the frame and the cover, a web, rolls journaled in said frame carrying and guiding the web before said window, and means for rolling up either end of the web.

6. A chart-case having two windows upon different faces, one of the sides containing a window constituting a removable cover, a frame fitting within said case, glasses held in front of the windows by engagement with said frame, two rolls journaled in the frame, means for turning said rolls, a web secured by its ends to said rolls and having the chart thereon and guides for said web carried by the frame and adapted to convey the web first in front of one window, then back to the opposite end of the other window and then in front of said other window, the sections of web in front of each window both traveling in the same direction.

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Witnesses:

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