

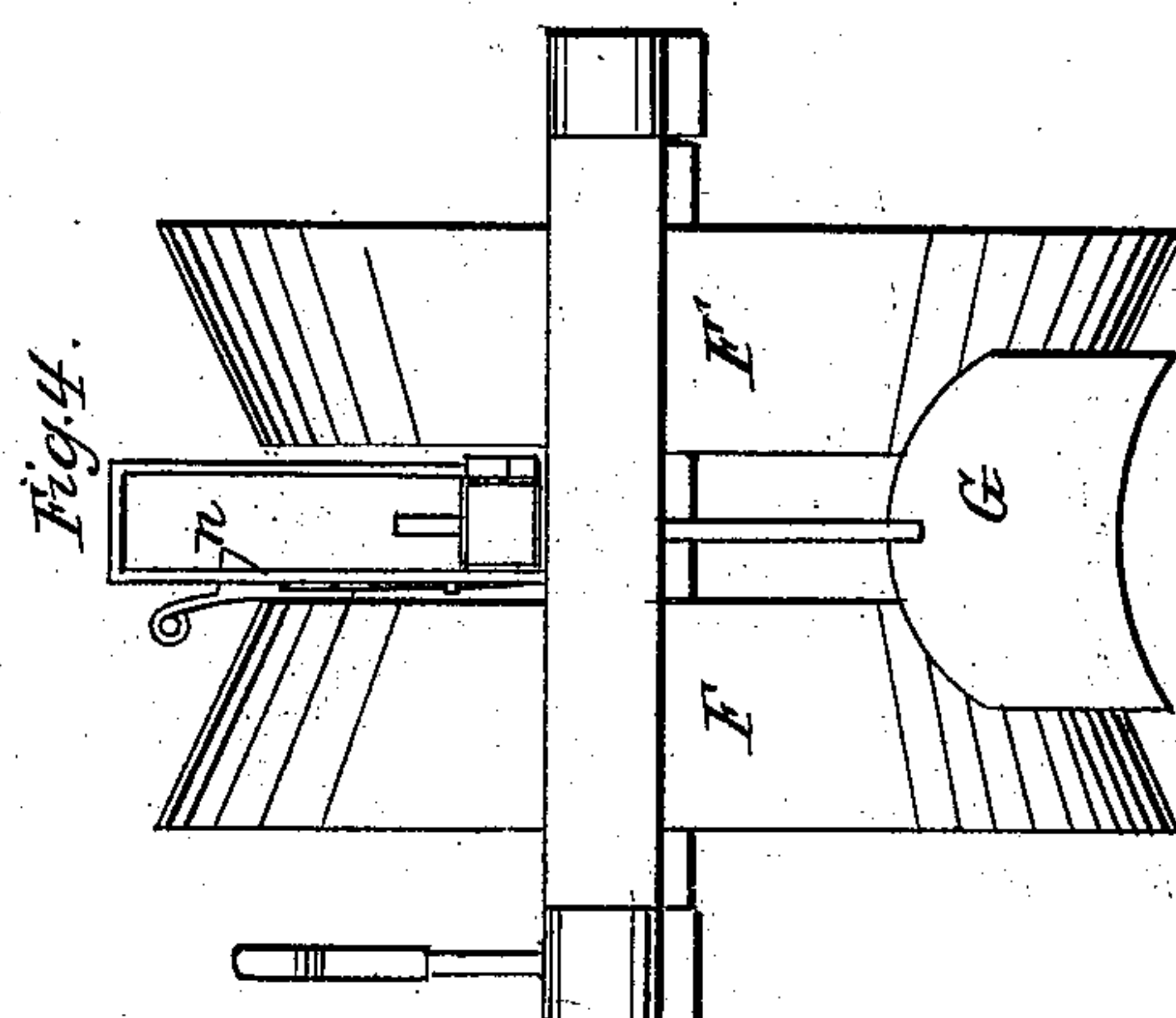
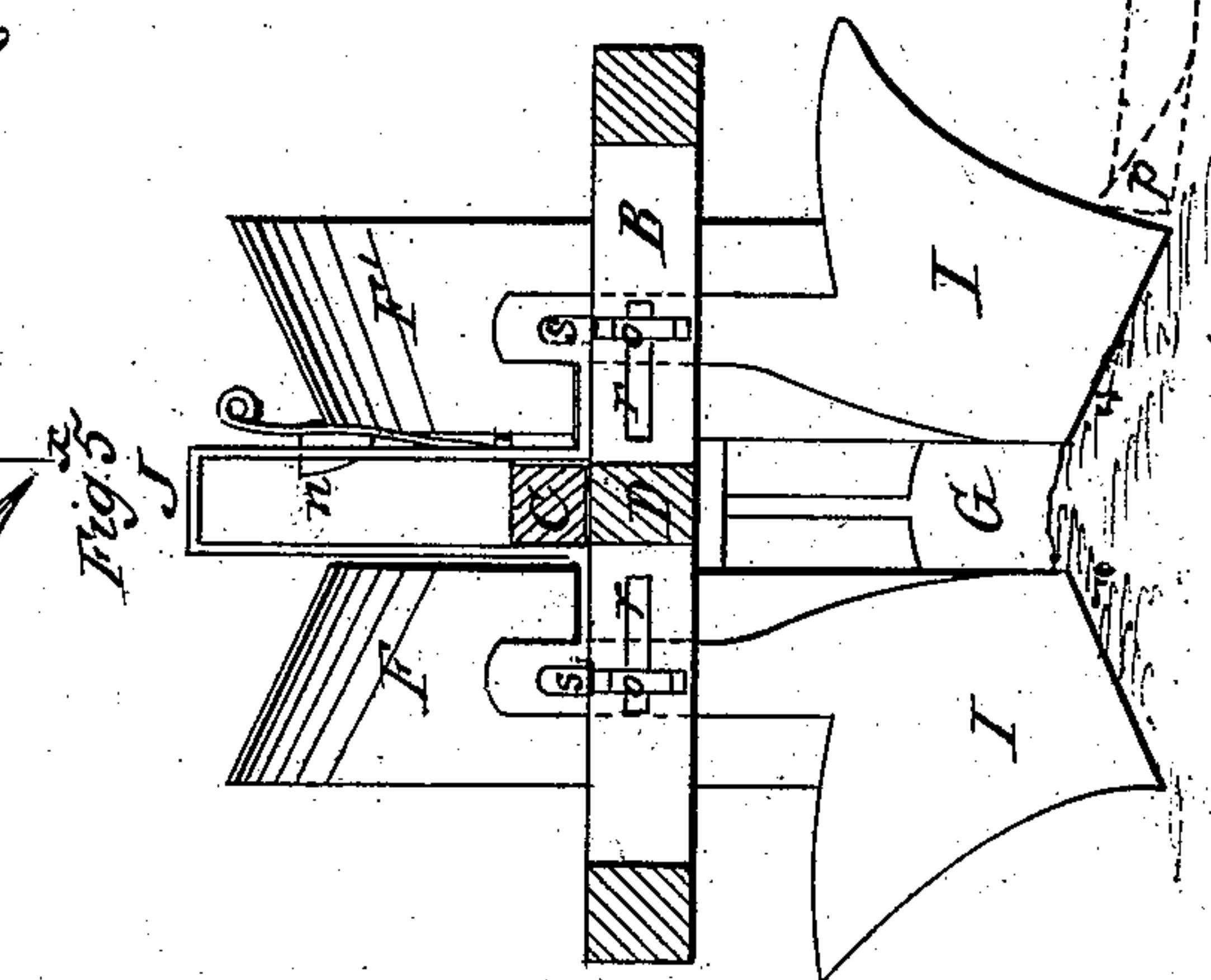
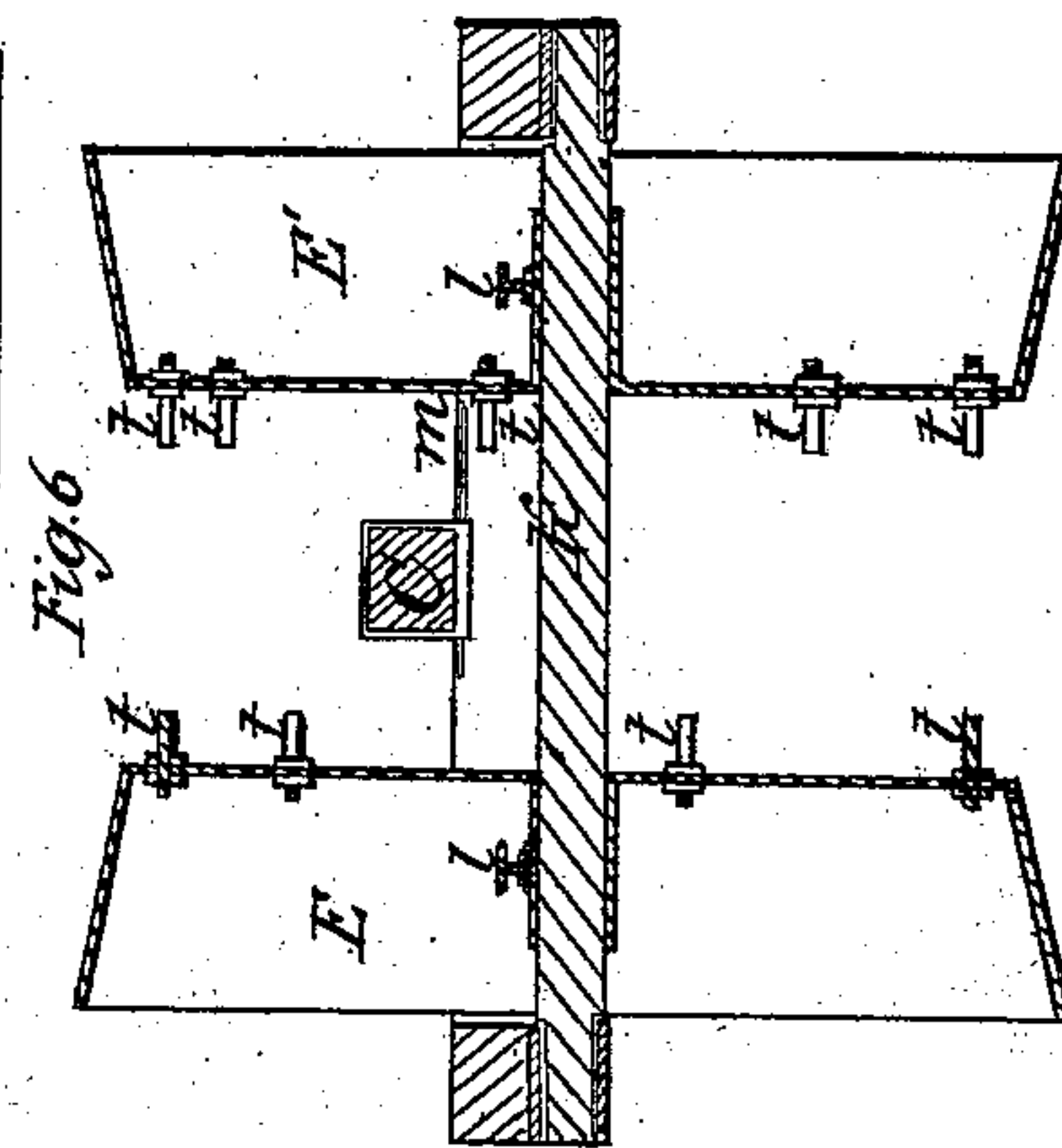
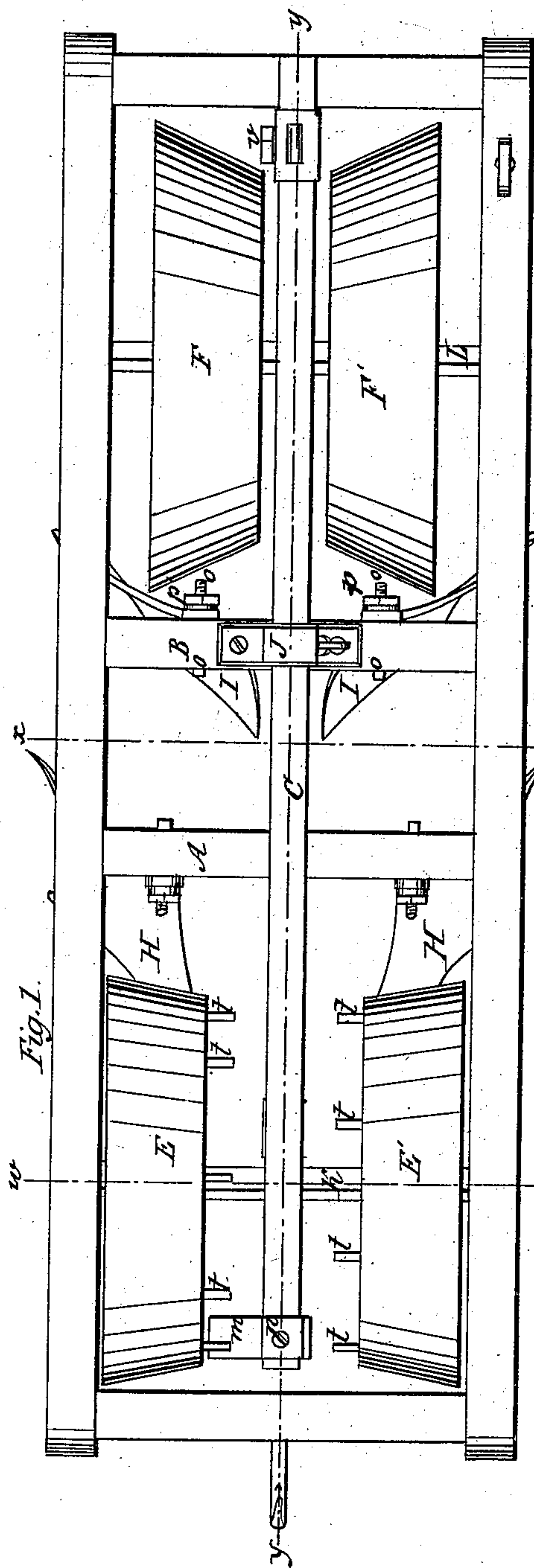
A. W. WASHBURN.

2 Sheets—Sheet 1.

Shovel Plow.

No. 14,540.

Patented Mar. 25, 1856.

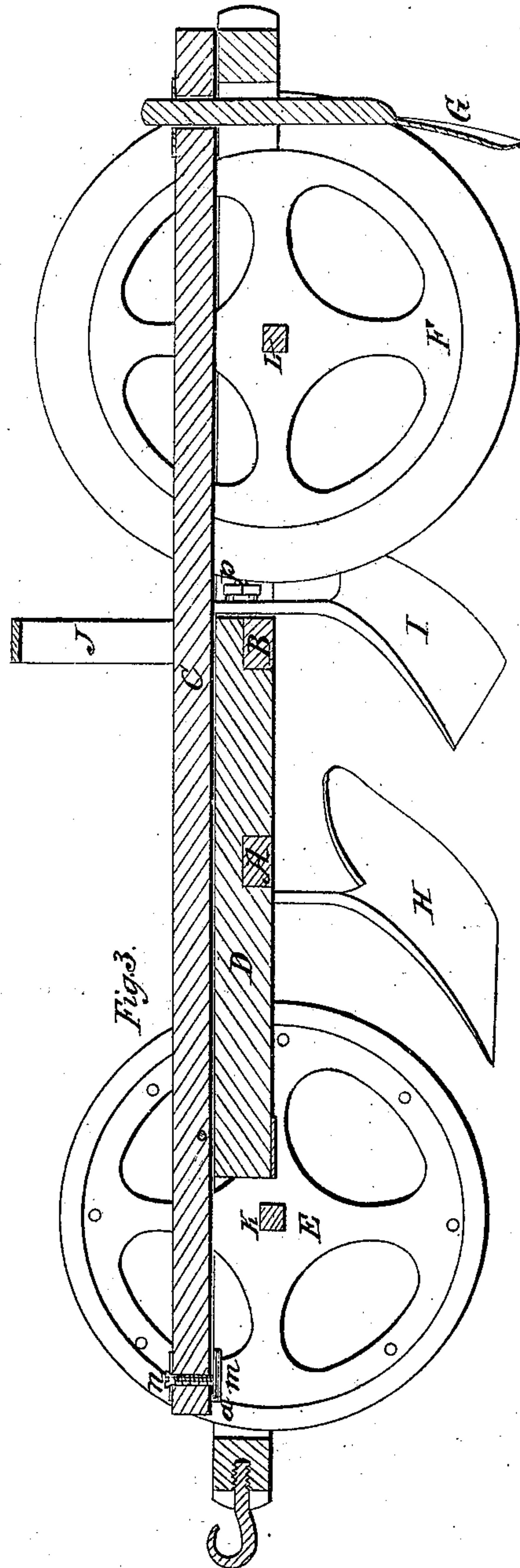
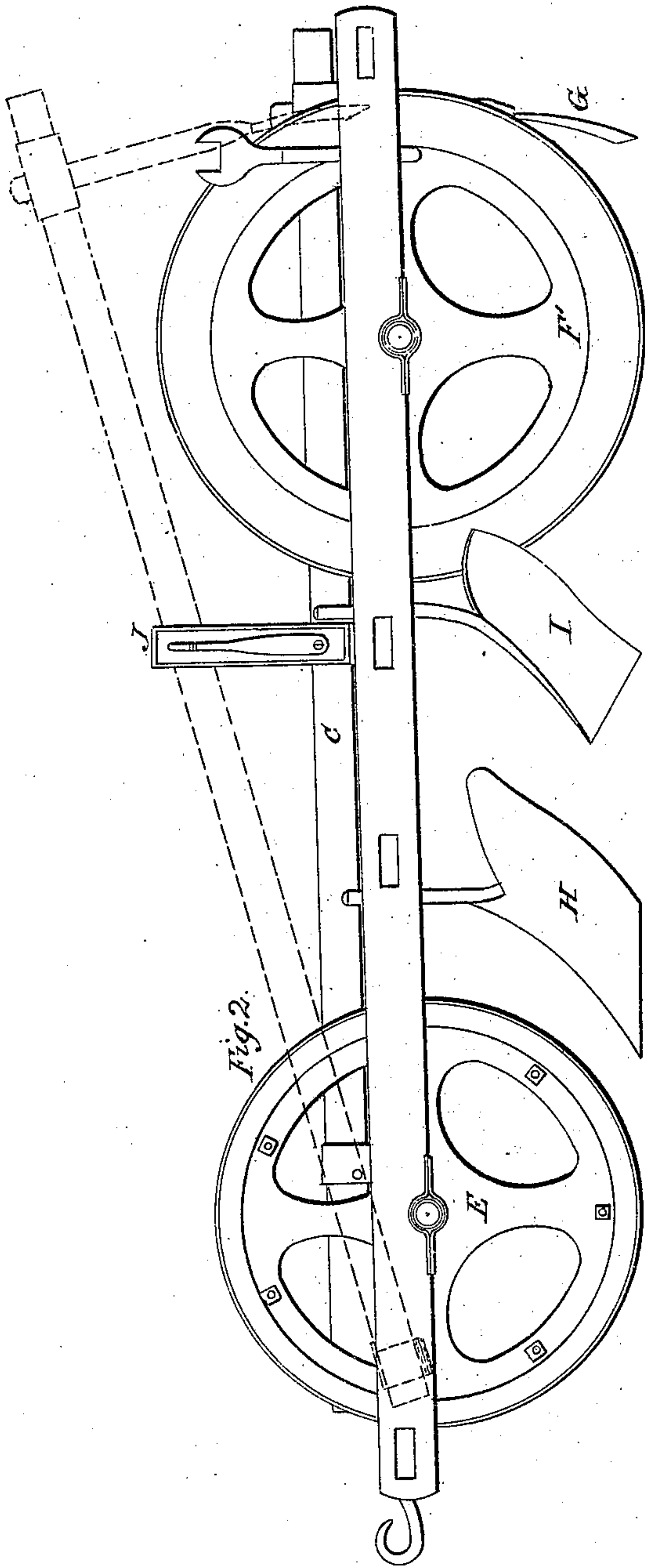


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UNITED STATES PATENT OFFICE.

A. W. WASHBURN, OF YAZOO CITY, MISSISSIPPI.

IMPROVEMENT IN COTTON-SCRAPERS.

Specification forming part of Letters Patent No. 14,540, dated March 25, 1856.

To all whom it may concern:

Be it known that I, A. W. WASHBURN, of Yazoo City, in the county of Yazoo and State of Mississippi, have invented a new and Improved Agricultural Implement or Machine, which I term a "Cotton-Scraper;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification—

Figure 1 being a top view; Fig. 2, a side view; Fig. 3, a longitudinal vertical section in the line *y y* of Fig. 1; Fig. 4, a view of the rear end of the implement; Fig. 5, a transverse section in the line *x x* of Fig. 1; and Fig. 6 is a transverse section in the line *w w* of Fig. 1.

Similar letters indicate like parts in all the figures.

Cotton-seeds are planted in continuous drills formed in the tops of ridges. As soon as the cotton-plants have attained the proper size they are subjected to what is technically termed the operation of "scraping." Said scraping operation has heretofore been accomplished by means of three distinct operations following each other in immediate succession, viz: first, a turning-plow drawn by a single mule performs what is termed "barring off," or, in other words, said turning-plow turns a portion of the base of each side of a ridge over into the space between two ridges. In Fig. 5, *p* (inclosed in dotted lines) will give an idea of the portion of each side of a ridge that is turned over into the space between two ridges. The said turning or barring-off plow is followed by a scraper drawn by a single mule, which shaves off, one after the other, both sides of a ridge, from the bottom of the furrow formed on each side by the turning-plow up to within an inch or two of the line of the plants. The said scraper is followed by eight good field-hands with hoes, who chop out portions of the plants, so as to leave bunches of suitable size and at proper intervals for cultivating.

Now, my improved cotton-scraper is so constructed that when drawn by two mules and guided by one field-hand it performs at one operation all that has heretofore been performed by ten field-hands, two mules, and a plow and a scraper, as above set forth.

The usual form of the rectangular frame of

my cotton-scraper is clearly represented in the accompanying drawings. The said frame rests upon the rotating axles *K L*, which are combined with the pairs of wheels *E E'* and *F F'* in such a manner that said wheels can be moved in or out upon their axles, and be secured in any desired positions by means of set-screws *l l*, substantially as represented in Fig. 6. The peripheries of the wheels *E E'* and *F F'* are beveled for the purpose of adapting them to the shape of the sides of the cotton-plant ridges. The ends of the axles *K L* fit into suitable journal-boxes secured to the sides of the frame of the machine.

To the cross-piece *A* of the frame of the machine a pair of turning-over or barring-off plows, *H H*, are secured by means of set-screws that pass through vertical slots in the shanks of the plows and through horizontal slots in said cross-piece *A*, or by any other method that will admit of vertical and lateral adjustment of the positions of said plows.

The cross-beam *B* of the frame, which is placed a short distance in the rear of the cross-beam *A*, has two scrapers, *I I*, combined with it in such a manner that the said scrapers can be laterally or vertically adjusted to any desired positions, which may be accomplished by means of the screws *o o* passing through vertical slots *s s* in the shanks of the scrapers and through horizontal slots *r r* in the beam *B*, in connection with the use of the nuts *p' p'*; or the same thing can be accomplished in various other ways.

In the central portion of the frame of the machine a longitudinal beam, *D*, is secured to the cross-beams *A B*, as shown in Fig. 3. A lever, *C*, extending the entire length of the machine, rests upon the beam *D*, and is jointed to the forward end thereof. The shank of a thinning-cutter, *G*, is secured to the rear end of the lever *C* in such a manner that it can be moved up or down and secured in any desired position.

A collar is secured on the forward end of the lever *C*, beneath which is a loop, *u*, for the reception of the plate *m*. The said plate *m* may be made to project from either side of the lever *C*, and may be secured in any desired position by the set-screw *n*, as shown in Fig. 3.

From the inner sides of the forward wheels,

E E', tilting-pins *t t* are made to project at regular intervals. When the machine is put in motion the said tilting-pins *t t* in one or the other of the wheels E E' strike against the aforesaid plate *m*, (projecting from the collar at the front end of lever C,) and thereby cause a regular reciprocating movement to be imparted to said lever. The rear end of the lever C should be sufficiently heavy to enable its descent to drive the thinning-cutter G the proper distance into the ridge. While the thinning-cutter is in the ridge the forward movement of the machine will cause it to cut up the cotton-plants, and the temporary elevation of the rear end of the lever C will cause said thinning-cutter to pass over a certain number of plants, and thus the reciprocating movements at regular intervals of the said thinning-knife will properly thin out the plants into bunches for cultivating. The size of said bunches and their distance apart can be regulated and adjusted by arranging the tilting-pins *t t* at a greater or less distance from each other. I place a greater number of tilting-pins *t t* in one of the forward wheels, E E', than in the other, and therefore, by shifting the position of the plate *m* from one side of the lever C to the other, the length of the spaces between the bunches of cotton left for cultivation by the thinning-cutter will be increased or diminished.

By changing the position of the collar on the front end of the lever C, so as to bring the plate *m* onto the top of the lever, the rear end of said lever will be carried up so high by the tilting-pins that the moment the thinning-cutter G strikes into the ground it will be again carried upward, thus enabling it to be used for marking purposes merely when it may be deemed expedient. It will readily be perceived that the barring-off plows H H may be ob-

liquely adjusted so as to be used as scrapers whenever circumstances may render it expedient to make such a use of them.

The metallic staple J, which rises from the cross-beam B of the frame, serves to guide the lever C in its movements, and the spring-catch *n*, which is combined with one side of said staple, enables the said lever to be retained in an elevated position in transporting the machine from place to place, or when it is desired to use the machine without using the thinning-knife.

The bevel of the peripheries of the pairs of wheels E E' F F' enables them to follow a ridge with such accuracy that the scrapers are prevented from coming too near to the line of the cotton-plants.

The operation of my cotton-scraper as it is drawn forward is doubtless already made sufficiently apparent. The forward pair of plows, H H, perform the operation of barring off the base of a ridge, or turning it outward each way into the space between two ridges. The scrapers I I shave off the sides of the ridges, and the cutter G performs the operation of bunching the cotton-plants, and all by a single passage of said machine along a ridge of cotton-plants.

Having thus fully described my improved cotton-scraper, what I claim therein as new, and desire to secure by Letters Patent, is—

The bevel-wheels for supporting and guiding the machine, when they are arranged in combination with the side scrapers, I I, and the thinning-out cutter G, or either of them, substantially in the manner and for the purpose herein set forth.

A. W. WASHBURN.

Witnesses:

Z. C. ROBBINS,
THOMAS W. LAY.