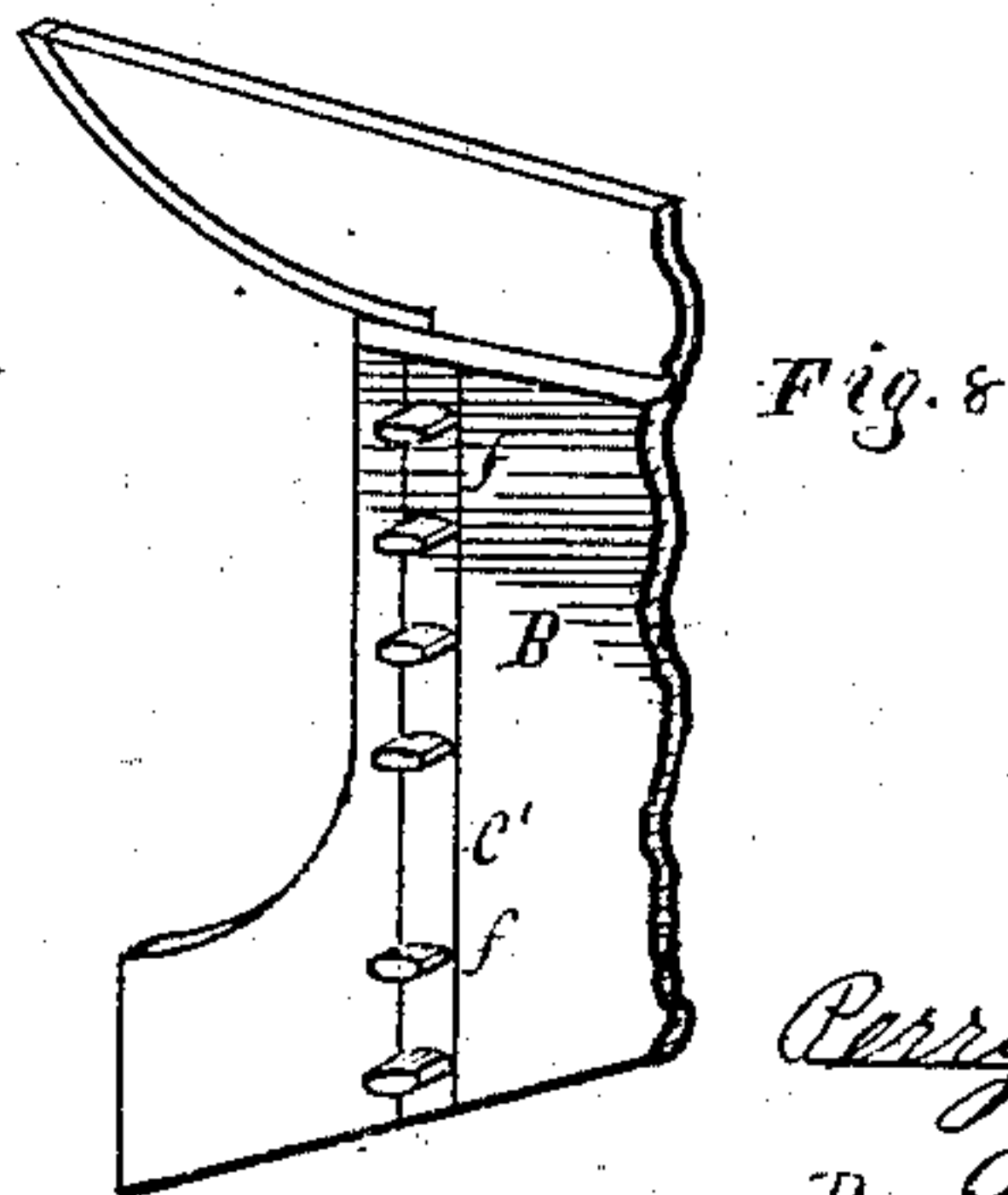
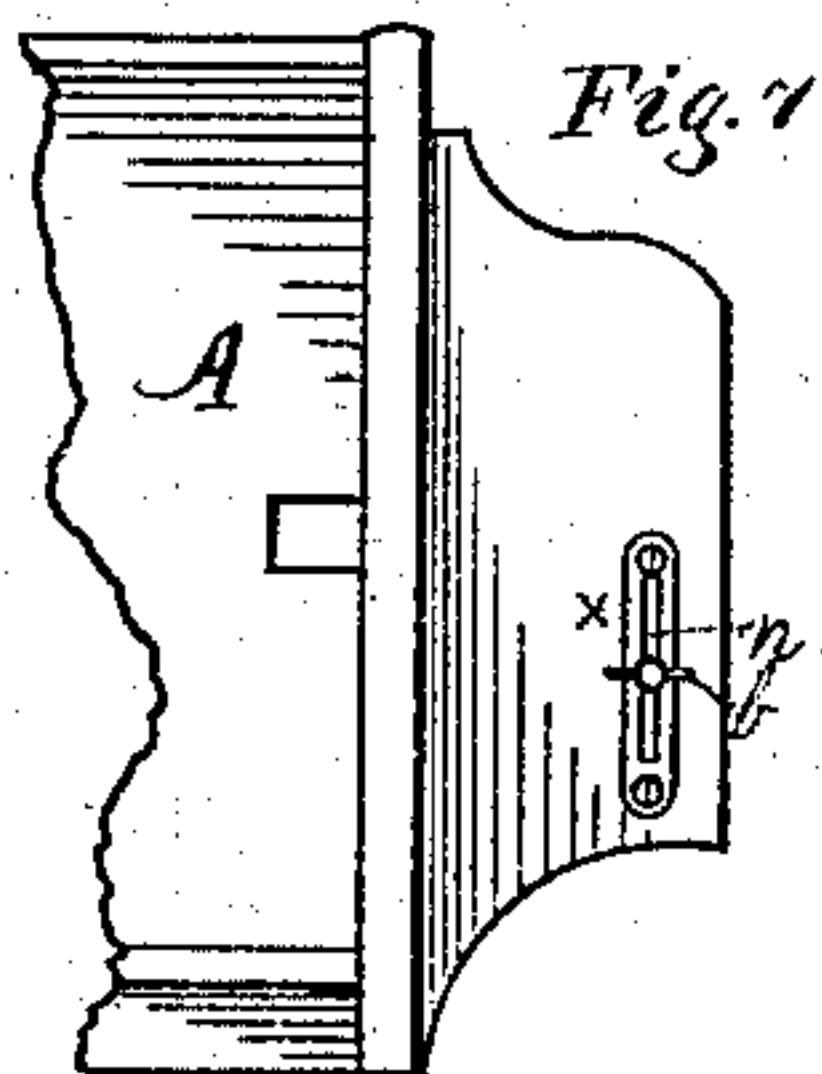
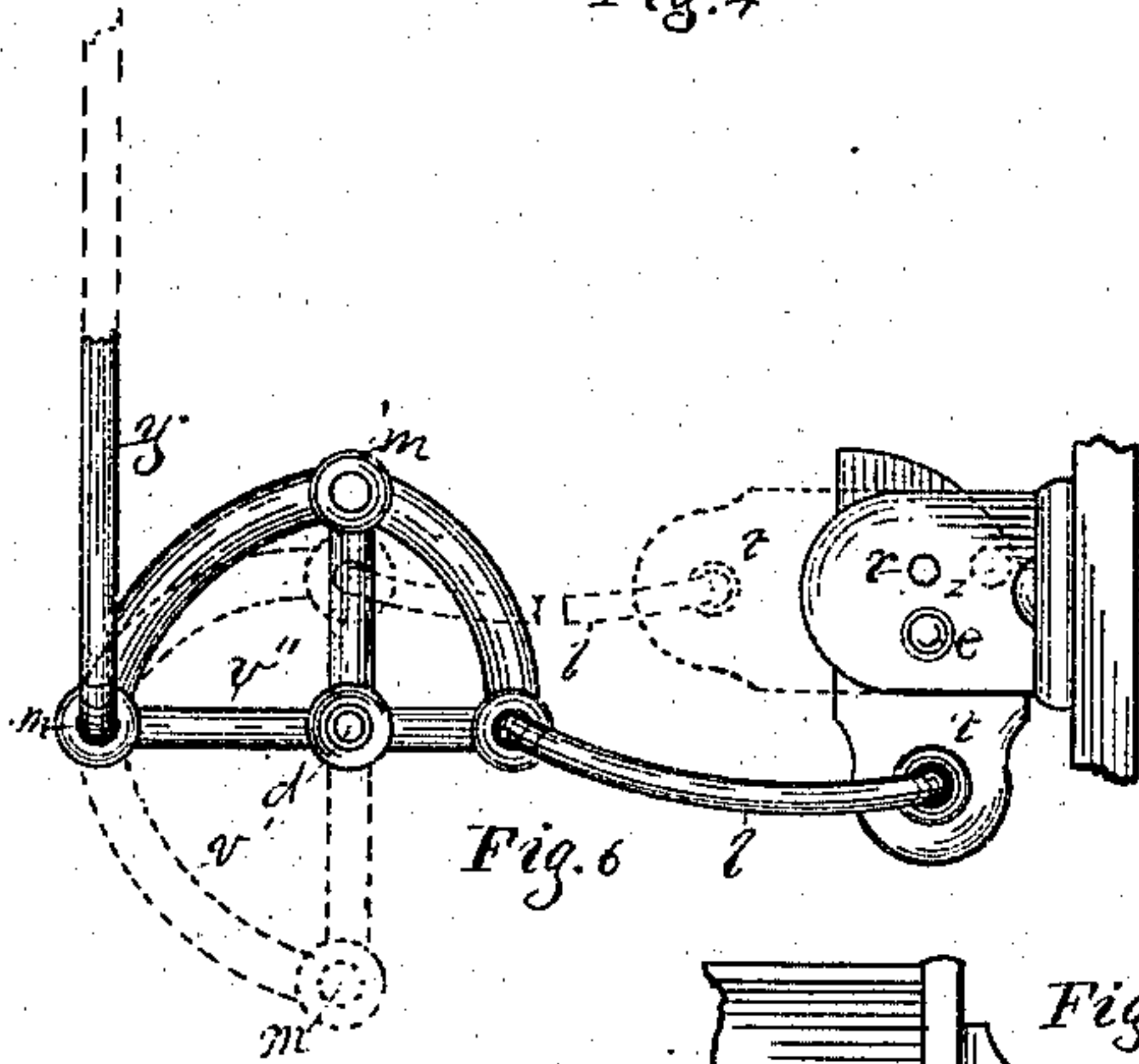
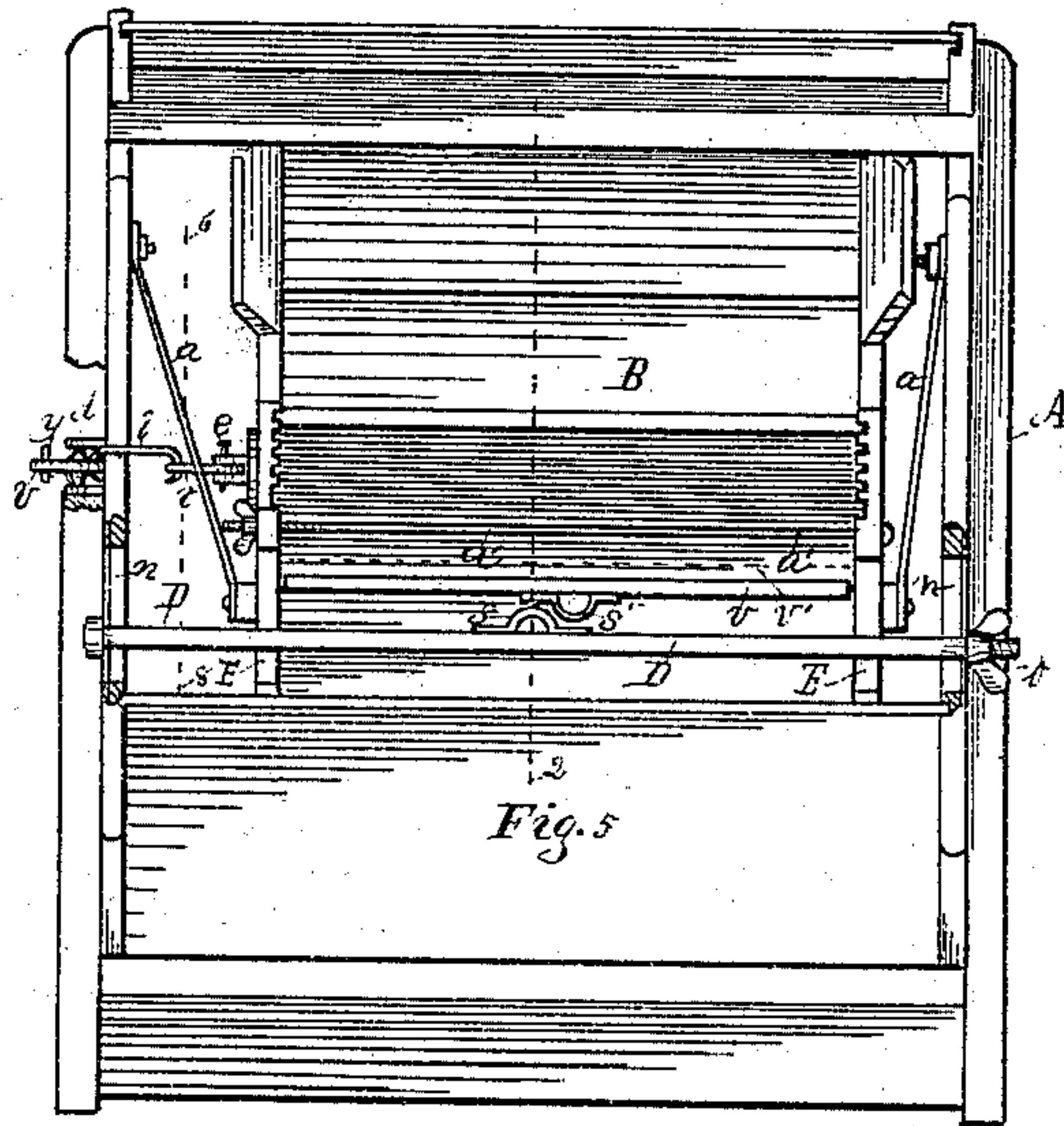
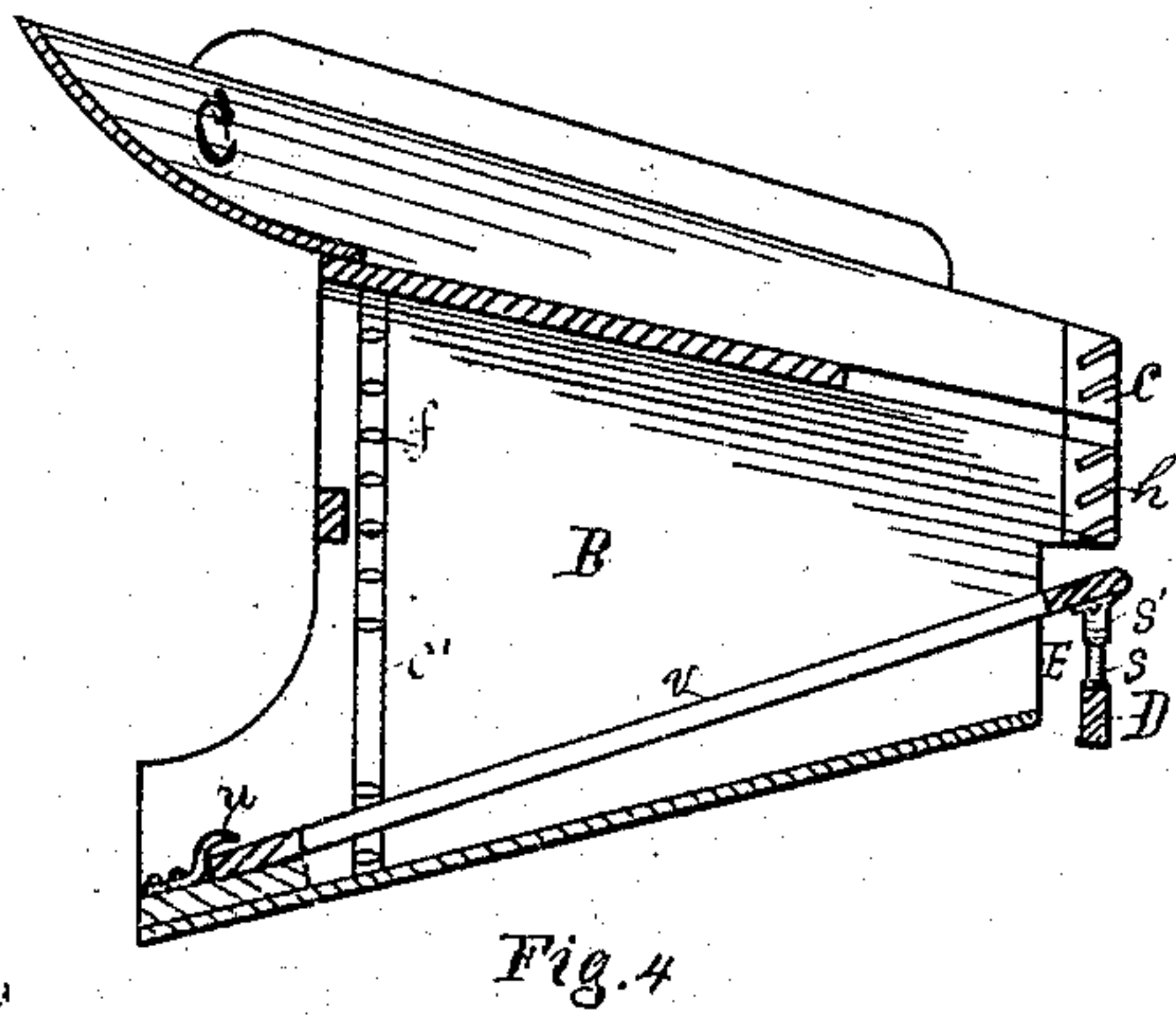
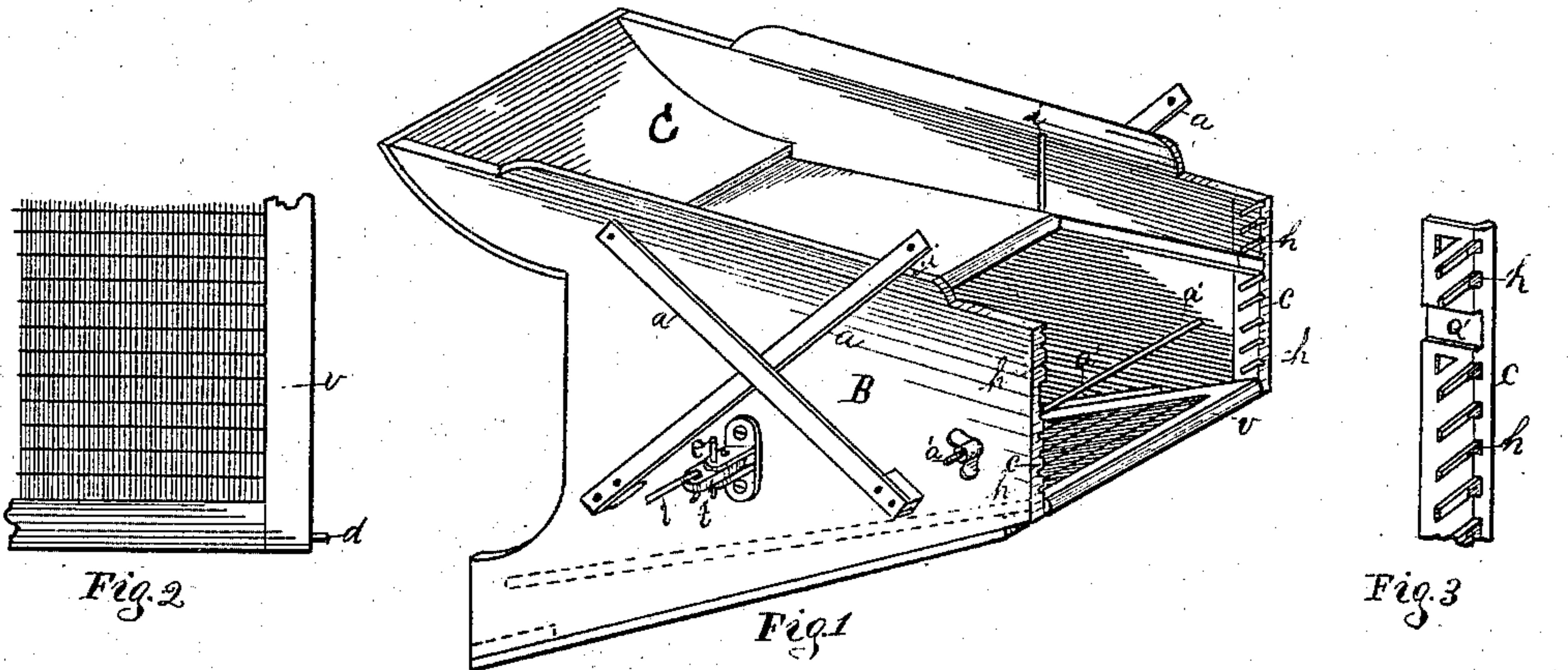


(No Model.)

P. POYNEER.  
FANNING MILL.

No. 255,812.

Patented Apr. 4, 1882.



Attest.

John C. Perkins

Eugene S. West

Inventor.

Perry Poyneer

By Lucius C. West

Atty.



# UNITED STATES PATENT OFFICE.

PERRY POYNEER, OF KALAMAZOO, MICHIGAN.

## FANNING-MILL.

SPECIFICATION forming part of Letters Patent No. 255,812, dated April 4, 1882.

Application filed December 23, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, PERRY POYNEER, a citizen of the United States, residing at Kalamazoo, county of Kalamazoo, State of Michigan, have invented a new and useful Fanning-Mill, of which the following is a specification.

My invention for its object certain improvements hereinafter described, and specifically pointed out in the claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective view of the shoe or that part of a mill which contains the sieves and screens; Fig. 2, a broken portion of a screen; Fig. 3, an enlarged detached portion of Fig. 1; Fig. 4, a sectional view on dotted line 1 2 in Fig. 5; Fig. 5, a rear end view of the mill; Fig. 6, a top view of mechanism for operating the shoe; Fig. 7, a broken rear end of one side of the mill, and Fig. 8 a broken rear portion of Fig. 4.

A illustrates the main frame or outer inclosure of a fanning-mill, and B the shoe, both of which resemble in general such parts in all mills of this class. *a a* are spring-metal bars, secured at their lower ends to shoe B, crossing each other and secured at their upper ends to frame A, Figs. 1 and 5. By means of this construction each end of shoe B, instead of only the rear end, is vibrated laterally, and as there are no frictional bearings to the suspending mechanism, and the same being elastic, the vibration is accompanied with less noise and jarring. In lieu of the old method of placing the sieves and screens in the shoe B, I provide the rear end with casting *c*, having inclined grooves *h h*, and near the front end, at *c'*, I secure studs *f f*. I provide the sieves and screens at each side of the rear end with studs *d*, Fig. 2. Thus the screens or sieves may be located at given points and angles by locating them on studs *f* and inserting studs *d* in grooves *h h*. Studs *f f* have previously been employed for holding up each end of a screen; but by means of the short inclined grooves, in connection with studs *f f* and the studs in the sides of the screens, said screens are conveniently operated and are better kept in place.

*a'* is a rod located through the sides of the shoe B, and is provided with a thumb-screw, by means of which the sides may be compressed, if necessary, which effectually holds the screens from rattling, Figs. 1 and 5.

It is sometimes desirable to locate a screen temporarily on the shoe-hopper C beneath the hopper tray or spout. In Fig. 1 grooves *i i* are shown formed in the sides of the shoe beneath the spout, in which grooves the studs *d d* of the screen are located when thus using a screen. By the arrangement and construction the screen may be thus located and detached again readily, and is held secure in place while in use. The screen is not shown located on the hopper; but its construction for this purpose is shown in Fig. 2 at *d*, and its location and use are readily understood by those skilled in the art.

In Fig. 4 a modification from Fig. 1 is shown, a portion of the sides of the shoe being cut away at E to accommodate the adjusting-bar D, Fig. 5. The ends of this bar are located in the vertical slots *n n* of plate *x*, secured to frame A, Figs. 5 and 7. The end of bar D is threaded and provided with thumb-screw *b*, by which means it can be located at any point between the two ends of slots *n n*, and as said bar supports the rear end of screen *v* in this construction, the pitch of said screen can be readily adjusted from one degree to another. *u* is a fixed support for the lower or front end of screen *v*.

It is sometimes desirable to impart a vertical oscillation to the lower screen in connection with the lateral oscillation, the effect of which is to cause an increased flow of foul grain or seed through it, and to clear the screen of straw and like accumulations. I effect this by providing the screen with a semi-circular bud or projection, *s'*, and the support of said screen with a similar projection, *s*. This support (shown in the drawings) consists of bar D. In mills not employing said bar the projection *s* may be secured to the frame below or to a fixed support provided for the purpose.

The operation is shown in Fig. 5. As shoe B moves laterally back and forth the screen *v* alternately rises and falls the distance indicated by dotted line *v'*. Some conditions of grain require less distance in the lateral movement of the shoe than others. To effect this in a single mill I have provided the following adjustable mechanism:

*v''* in Figs. 5 and 6 is a bell-crank pivoted to a support at *d*.



*y* is the rod used in fanning-mills for connecting the bell-crank with the crank or propelling arrangement located in the front end of the mill. (Not here shown.) With this mechanism I combine an adjustable joint, *t*, rounded at one corner and pivoted at *r* to a support secured to shoe B. This joint is jointedly connected with the bell-crank by link *l*.

*e* is a detachable pin holding joint *t* stationary at either of its two different points of location, said joint being provided with two holes, *z*, to receive it. When joint *t* is adjusted as in Fig. 6 rod *y* is connected with bell-crank *v''* at *m*. When in position shown in Figs. 1, 5, and by dotted lines in Fig. 6 rod *y* is located in hole *m*. In thus changing joint *t* from one position to another, pin *e* is changed from one of the holes *z* to the other, as indicated in the drawings. When the device is in the latter position the lateral oscillation or movement of shoe B is as indicated by dotted line 6 8, Fig. 5; but when in the former position the degree in distance is diminished and a more jarring or trembling motion imparted to it.

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

1. In a fanning-mill, a laterally-shaking shoe provided with a screen loosely located therein,

said screen provided with the semicircular projections, in combination with an adjustable bar provided with a similar projection and supporting the rear end of said screen, all substantially as described.

2. A fanning-mill shoe, the adjustable joint having pin-holes, and a pin for locking it in different positions, said joint and shoe being pivotally connected, all in combination with the bell-crank and connecting-link, substantially as described and shown.

3. The mill-frame, bell-crank, shoe, elastic metal bars, the adjustable joint pivoted to the shoe, means for connecting said joint with the bell-crank, and means for locking said parts in different positions, all constructed and combined substantially as described, for the object set forth.

4. The combination of a shoe the top of which forms a hopper, provided with the grooves in the sides beneath the hopper-spout, with a screen provided with studs for detachably securing it on the shoe-hopper, substantially as described.

PERRY POYNEER.

Witnesses:

EUGENE S. WEST,  
B. F. STULTZ.