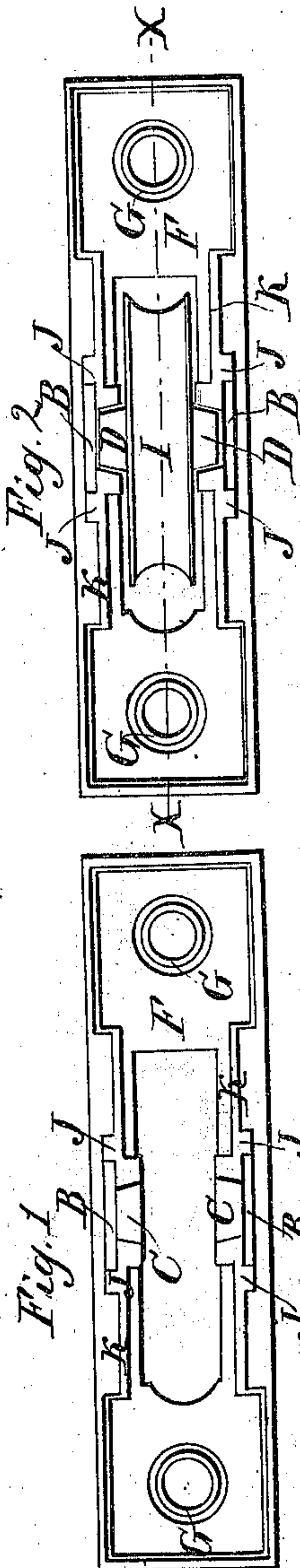


*C. B. Clark.*

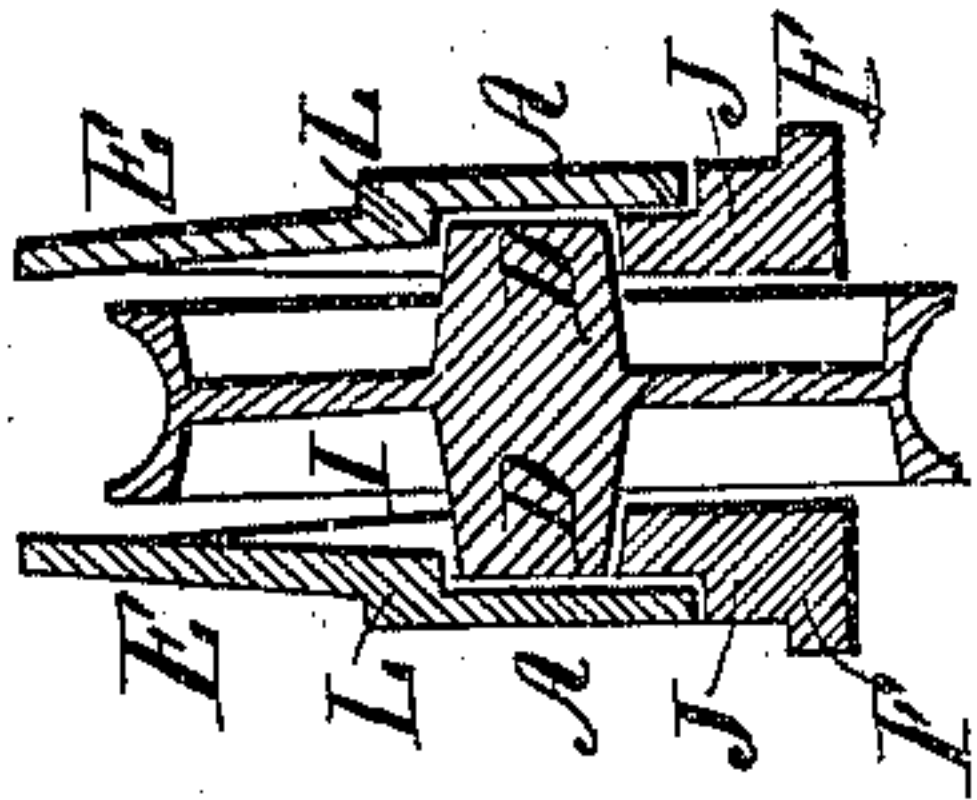
*Window Sash Pulley.*

*N<sup>o</sup> 94,945.*

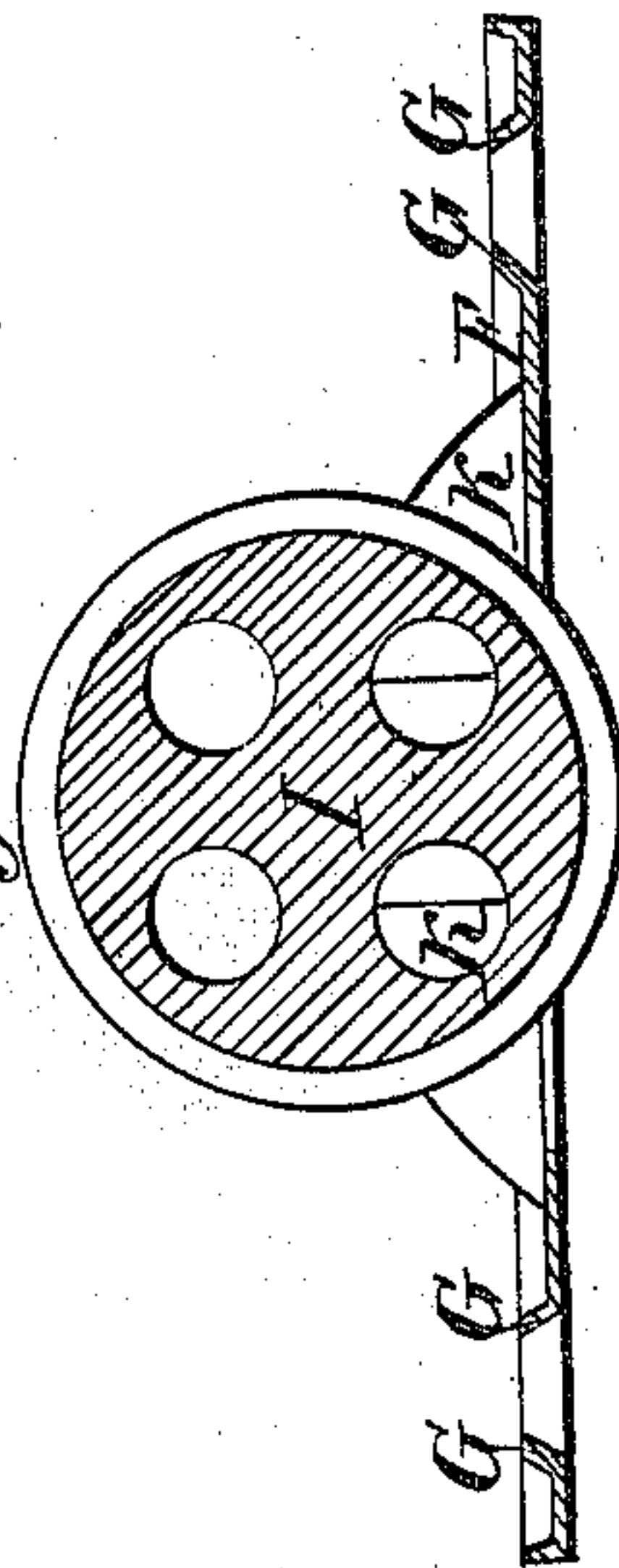
*Patented Sep. 21, 1869.*



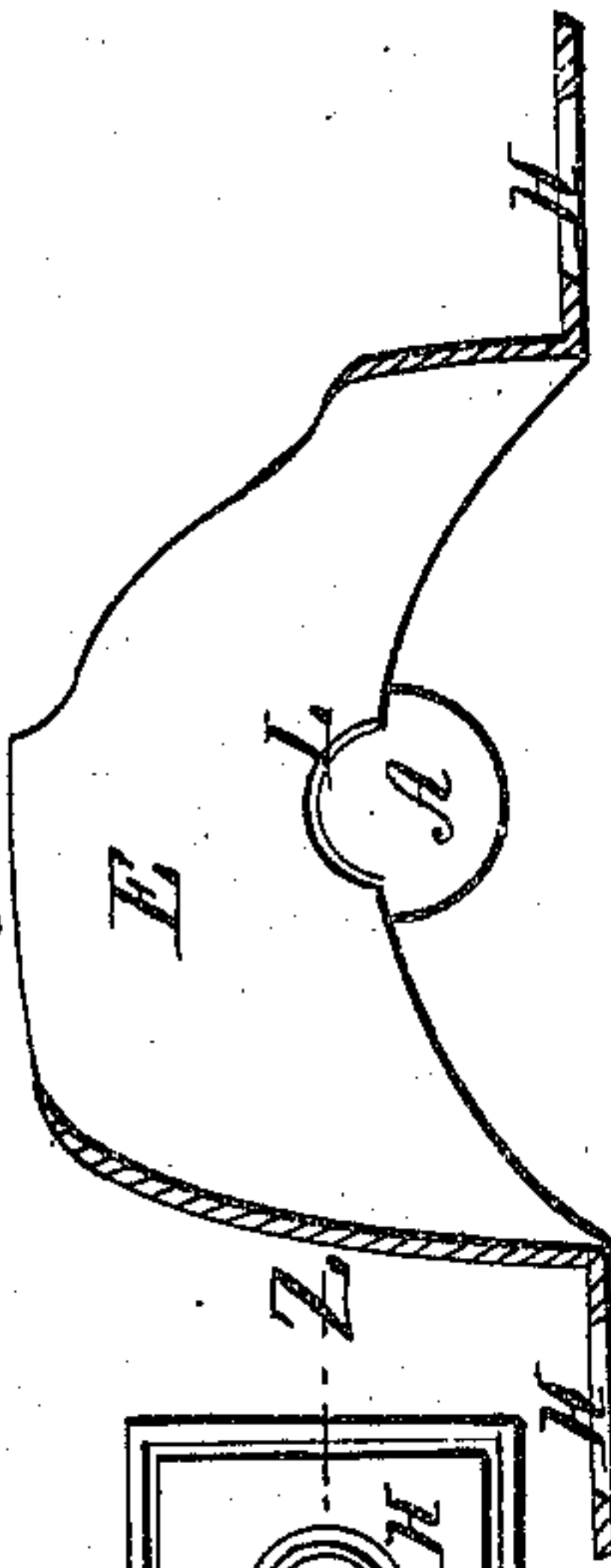
*Fig. 6*



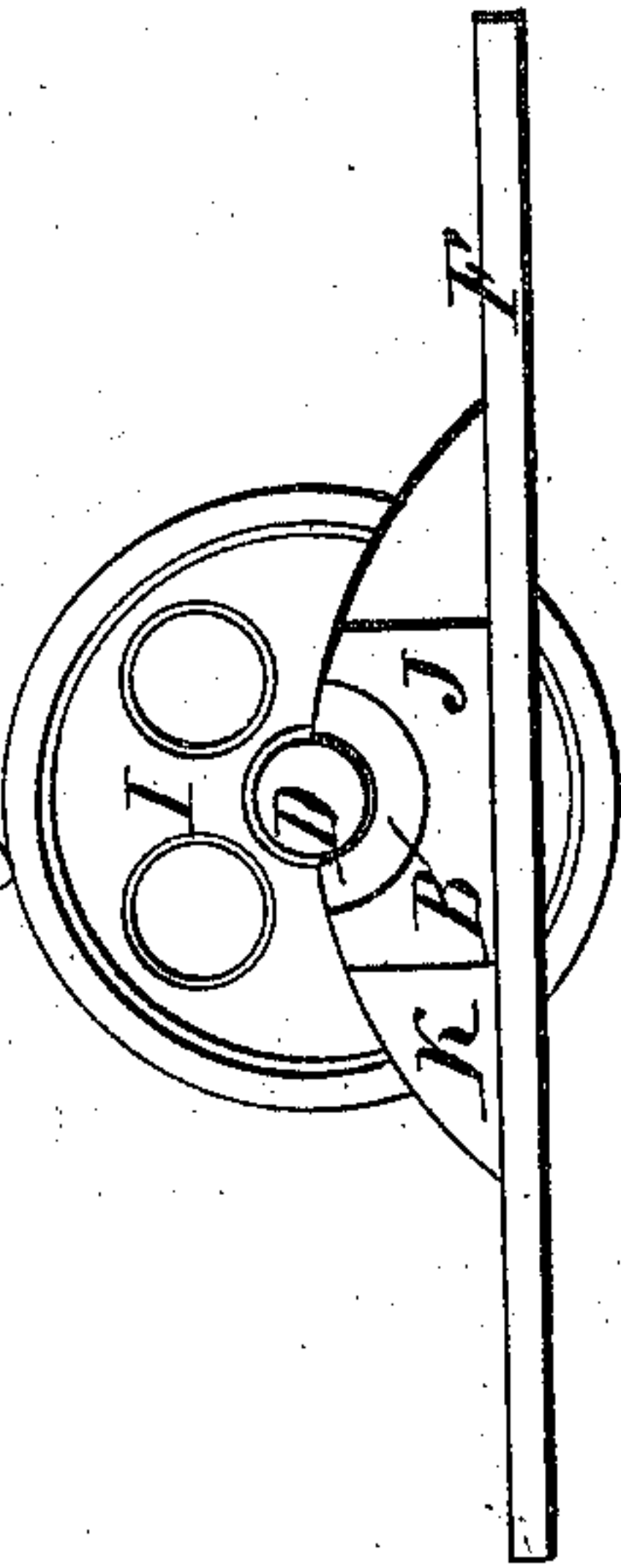
*Fig. 5*



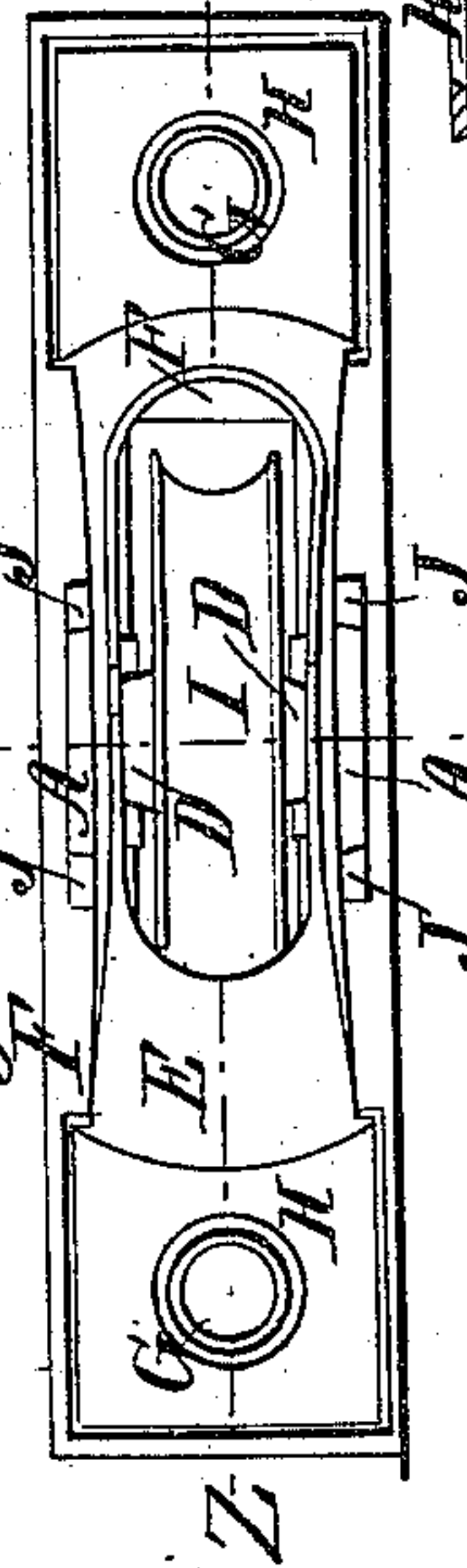
*Fig. 8*



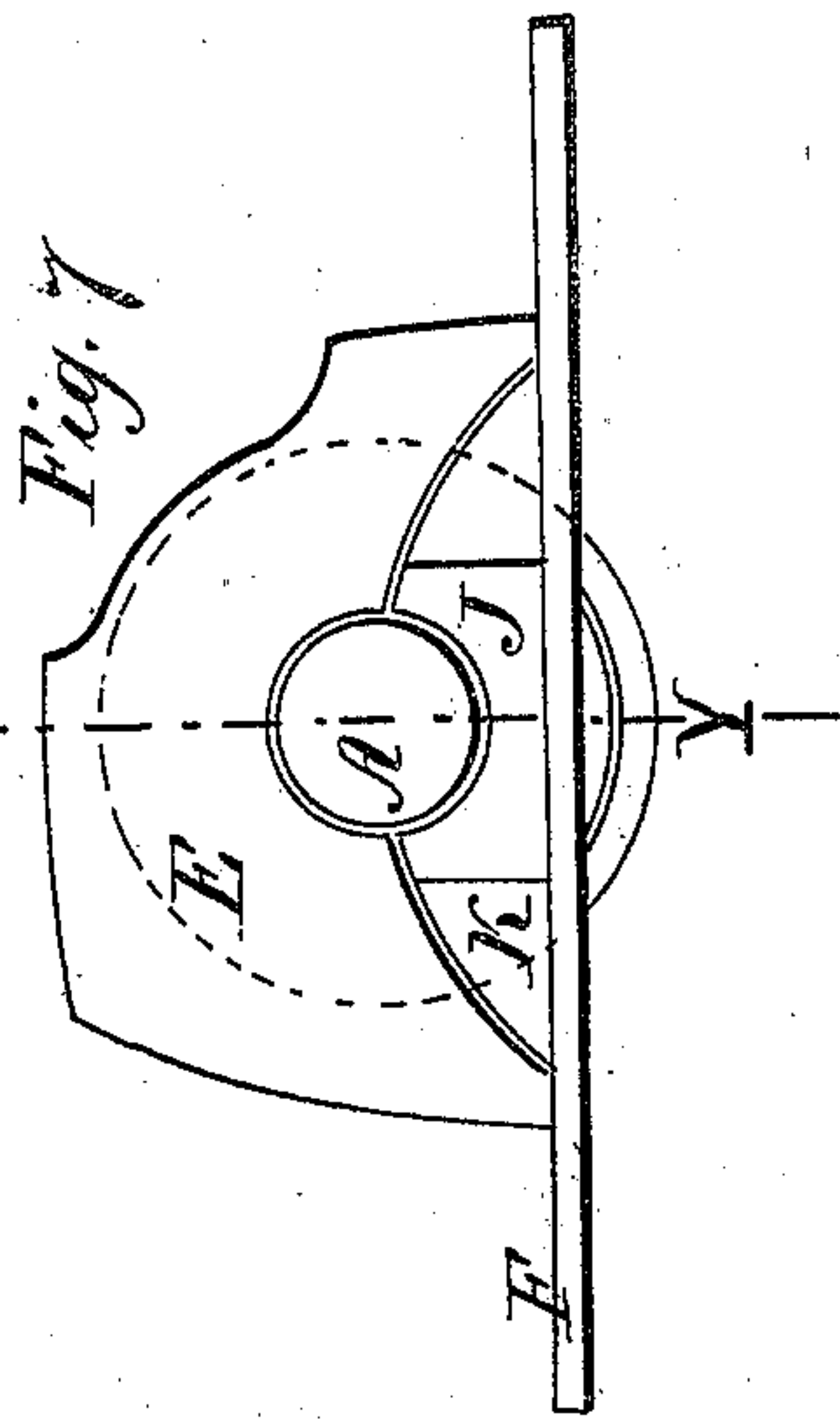
*Fig. 4*



*Fig. 3*



*Fig. 7*



*Witnesses*  
*E. B. Clark*  
*C. H. Carter*

*Inventor*  
*Charles B. Clark.*



# United States Patent Office.

CHARLES B. CLARK, OF BUFFALO, NEW YORK.

*Letters Patent No. 94,945, dated September 21, 1869.*

## IMPROVEMENT IN SASH-PULLEYS.

The Schedule referred to in these Letters Patent and making part of the same.

### *To all whom it may concern:*

Be it known that I, CHARLES B. CLARK, of the city of Buffalo, county of Erie, and State of New York, have invented a new and useful Improvement in Window-Sash Pulleys; and I do hereby declare the following to be a full and exact description thereof, reference being made to the accompanying drawings, making part of this specification, in which—

Figure I is a plan, with the cap and wheel removed.

Figure II is a similar view, with the wheel in position.

Figure III is a plan of the pulley complete.

Figure IV is a side elevation, with the cap or case removed.

Figure V is a central longitudinal section of Fig. IV.

Figure VI is a transverse section in line Y Y.

Figure VII is a side elevation of the pulley complete.

Figure VIII is a longitudinal section of the case-portion in line Z Z.

Like letters of reference designate like parts in each of the figures.

My improvement belongs to that class of axle-pulleys, the frame or case of which is divided into two parts, the division extending the length of the base and through or near the axle-bearing; and

The improvement consists in providing one part of the case with projecting disks or flanges, which slide into corresponding recesses in the other part, when the pulley is complete.

The object of my invention is to form an axle-pulley that can be easily cast, and readily put together, without drilling or riveting, and that will remain whole while being packed or handled in adjusting it to the frame.

In the accompanying drawings—

F indicates the base-portion of the pulley-case;

E, the adjustable or guard-portion; and

I, the grooved wheel over which the sash-cord passes.

The base F is provided with semicircular bearings, O O, which receive the ends of the wheel-axle D D, as shown in Figs. II, IV, and VI.

The case E is also provided with semicircular bearings, L L, which, when the pulley is together, enclose the journals D D, of the wheel I.

The case E is further provided with disk-like projections, A A, as seen in Figs. VI, VII, and VIII.

These ear-like projections overlap the corresponding portions B B, of the upper edge of the flanges K of the base F.

The thickness of these flanges may be increased around the recessed portions B, as shown at J J, so as to be flush with the face of the ears A.

The ends of the base-part F have countersinks, G

G, to receive the heads of screws by which the pulley is secured to the frame.

These countersinks are deepened by circular flanges, as seen at G G, which extend through apertures, H H, in the ends of the case E.

The case E and base F are held together by the friction of the disks A A against the face of the recesses B B, which friction is effected by simply pressing the case E over the base-portion F. By slightly narrowing the distance between the disks A A, the sides of the case E will yield enough to make the adhesion of the parts very firm.

The disks A A may be cast on the base-portion F, but are preferably cast on the case.

The axle-bearings can also be made wholly either in the base or case-portion of the pulley.

I am aware that axle-pulleys are in use having the case divided into two parts, at or near the bearing of the axle. But so far as I know, they are all cast loosely, and the parts will not, unless riveted, hold together before being adjusted to the frame. This is a great inconvenience to builders, and riveted pulleys are in consequence preferred.

My method remedies this objection, and I am enabled to produce a compact, light, and durable article, equal to any, and much cheaper than the drilled and riveted variety. Besides, the castings of each size will all interchange, being cast so as to require no fitting or finishing. This is an essential feature, as any part broken by accident or otherwise can be readily replaced, and only the broken part lost.

In pulleys with double base, the plates are required to be thin, so that, together, they will not be so thick as to mortise too deeply in the frame. Countersinks made in these plates are so shallow as to require a certain-sized screw-head. If too large a head, it will protrude so as to interfere with the working of the sash; and if too small a head, it will pass through the countersink.

I obviate this difficulty by making the countersinks the depth of both plates combined, allowing a great range of screws to be used, while I strengthen the outer plate and prevent its liability to break.

I do not claim, broadly, dividing the case of an axle-pulley into two or more parts, as I am aware that this is not new; but

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

The overlapping ears A A of the cap, combined and operating with the corresponding portions B B of the base-portion, substantially as set forth.

Witnesses:

CHARLES B. CLARK.

E. G. CLARK,

C. H. CARTER.